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CAST technology… redefining high end audio

Daniel D'Agostino
C.E.O. and Chief Designer
Stereophile is finally collectible. Either that, or I'm the biggest audiophile sucker out there. A few weeks back, I finally caved into temptation and signed up for an account on eBay, the website via which millions of folks buy and sell stuff in an online auction, and on which someone once tried to sell a human kidney. (It was not allowed.)

I was looking for mint copies of original Liberty Records pressings of Martin Denny LPs from the late '50s (a long story for another time). But eBay is addictive: I began entering all kinds of words into the search engine to see how much people would pay for various LPs. A mint, sealed copy of the original mono pressing of Sgt. Pepper's Lonely Hearts Club Band went for almost $2400 last week, while "Exotica, Yma Suma's 45 Boxed Set RARE Lounge," from 40 years ago, went for $33.

Of course, I eventually typed in "Stereophile," and back came a list of 29 current auctions. Most were of equipment whose sellers used Stereophile as a reference for quality, as in "recommended by Stereophile's Chip Stern," but buried among the amps and speakers for sale were assorted back issues from the last few years.

One listing stood out like crazy: "STEREOPHILE: First Twelve Issues. J. Gordon Holt's Stereophile. Still going strong almost 38 years down the road. Issue 1, Sep./Oct. 1962 through Issue 12, Dec. 1964. In mostly good to excellent condition. Issue 7 has a small (2" by ¾") patch of white where a piece of tape was pulled off, and a 1½" split on the top folded seam... that's the worst of it. All have very slight wear, Issue 1 has a slight dogear on the upper seam. Lots of reviews and articles, mostly on tube equipment and late-'50s to early-'60s speakers."

Back when I was in retail, we had the reprinted versions of these elusive issues, but nobody I knew had the real thing. I called the Stereophile office right away and found that they have only two complete sets, and no, they weren't of a mind to sell even one issue.

Three days before the auction ended, I entered an offer of $50 and quickly took the lead among several bidders. That didn't last long, and before I knew it, others were competing. Bidding eventually shot up to over $120, with 12 of us going at it. Some of you reading this may even have been in on the hunt.

To make a long story short, giving up was out of the question — even on my meager writer's wages. I ended up paying the seller $180 for the short stack of stapled pages. He was a nice guy, very into retro tubes and horns, and a week later the issues arrived, in astonishingly good condition; they'd obviously been preserved with loving care and kept someplace dry and dark. The original address labels read John D. Schick of San Francisco.

For the last several days I've picked through the magazines, reading a few articles and letters, and have been amazed to discover that a lot of it could have been written last week. In response to Stereophile's very first subscription solicitation, several readers sent in notes with their checks. A sample from the very first issue:

"Sirs: You are out of your minds. Your magazine is a failure before it starts, and I'll tell you why. First, everyone knows that the hi-fi fad is dead. The do-it-yourselfers who used to sustain magazines like AudioCraft have turned to other, newer ways of wasting time and money. ... The last thing this business needs right now is a publication that is going to criticize what the manufacturers do. The hi-fi industry is supposed to be in trouble already. Your condemnations of it can only worsen an already bad situation."

— R. Johnson, Newark, NJ

Funny thing — if, by chance, R. Johnson's son (grandson?) is now into audio, he could very well have written the same letter this month, and prompted a concerned reply from John Atkinson.

Or how about this gem, from an article in Vol.1 No.6, written by Philip C. Geraci and titled "The Home Recordist... Hobbyist or Hooldown?":

"Back about 1953, when the first of the "sophisticated" home tape recorders began to appear, I had an idea for a nationwide club of tape enthusiasts who would record events indigenous to their localities and exchange the tapes by mail..."

Geraci goes on to describe how he traded tapes with folks from all around the world, sending out playlists of what he had and hooking up everyone involved so that they could trade with each other. Most of the tapes were of music recorded from LPs or radio broadcasts. Substitute "MP3 coders" for "tape recorders," "MP3s" for "tares," and "e-mail" for "mail," and you've practically got an article that just appeared on www.stereophile.com, decrying the death of the music business at the hands of young MP3 pirates. Geraci continues:

"My concept of the legalities of such a tape exchange doubtless was that of the average amateur. I know it was unlawful to sell recordings made from discs or copied from the radio. But since profit never was a goal of my tape exchange, I innocently assumed that was all that mattered."

Grad-student Geraci found out — as have some of our most recent generation of college students — that copying music infuriates The Man, who will flash a lawyer at anyone brave enough to go public with their activities.

"The law undoubtedly will, however, make things a lot tougher for the genuine infringer," concludes Geraci. "Staff lines almost certainly will be levied against the out-and-out record pirates. If anybody tries to threaten you, tell him to sue you. He just might." Also scattered throughout the first 12 issues are ruminations about why women aren't interested in hi-fi, and what manufacturers should do to get them involved. "Blend equipment in with the décor," is one suggestion. Finally, from Vol.1 No.2, an article about a 1962 audio show in New York complains: "Year after year... the fact that nobody can really demonstrate much of anything at an audio show discourages few of the participants. Gabbling crowds, the booms and thuds from adjacent rooms, and the acoustic absorption of hordes of jostling people raise hoot with the ambient noise level and the room acoustics to the point where the exhibitor whose stuff sounds even passably good considers himself twice blessed by fortune. Some exhibitors request specific rooms, but there are never enough good ones to go around, so the maker of really topnotch equipment is just as likely as not to find himself across from a loudspeaker manufacturer who has just discovered the tremendous emotional impact of pistol shots reproduced at three times their original volume."

Hmmm... maybe I could use that in my next CES report and get my Stereophile investment to really pay off..."

1 Eat your heart out, JL. I retrieved those issues from a dumpster when J. Gordon Holt relocated to Boulder, Colorado in 1989.

—JA

Stereophile, June 2000
Features

High-End Audio is Here to Stay!
In the tumult of modern living, it's all too easy to forget that the purpose of an audio system is to get you closer to your music. And as long as it does so, decides Gigi Krop, high-end audio is in no danger of extinction.

Climbing Everest Barefoot
Wes Phillips talks with the Emerson Quartet, who, after the triumph of their Beethoven cycle, have set their sights on the heights of Shostakovich.

Benjamin Britten Live on the BBC
BBC Music has released the first batch of live recordings from England's finest composer from the second half of the 20th century. David Vernier gives them a listen.

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Stereophile, June 2000
Since its introduction in 1996 Paradigm\textsuperscript{®} Reference's rise to prominence has been nothing short of astonishing! Never before have a range of high-end speakers been so quickly embraced by listeners and critics alike.

But even with the many raves and awards, our engineers never ceased in pushing toward further improvement. And now the result is the next generation of Paradigm\textsuperscript{®} Reference. New speaker systems that are, in a word, spectacular! Sound reproduction is even more natural, detailed and clear. Imaging is more spacious; localization, more precise. And – since high-end speakers should be visually, and not just sonically, arresting – sleek, elegant enclosures were created to house the technological advances. Whether for music or home theater, there is no more sonically coherent choice than Paradigm\textsuperscript{®} Reference.

With all of the tremendous accolades it would have been easy to become complacent, but we simply refused to be lulled by success into a state of lingering satisfaction. Why? The pursuit of perfection is relentless; even excellence itself must be exceeded!
Oops
Editor:
Can I safely assume that you have received zillions of letters regarding the mix-up (May 2000, p.53) between Agatha Christie’s detective character Hercule Poirot and erstwhile presidential candidate Ross Perot (who argued that implementation of NAFTA would cause a huge sucking sound as jobs left the US to go to Latin America)?

The first rule of journalism is that when a real goof-up happens, it will happen in a headline.  

Paul A. Alter
Pittsburgh, PA
palter@juno.com

Oops redux
Editor:
No doubt I will be one of many to let you know, but A Gaelic Blessing is not on Rutter’s Requiem album (May, p.73), but on his Gloria: The Sacred Music of John Rutter. (The harp sounds okay on my Sonus Faber Extremas as well.)  

John Shaw
Shaw@ao.com

Both mistakes were mine. Sorry, gentle readers.  
—JA

Get real, guys!
Editor:
You know, you guys are ridiculous not to put up old reviews on www.stereophile.com. Yeah, like I’m going to pay for a back issue that’s four years old just to read one equipment review? Get real . . . we all know you are out to make money, but do you have to charge your devoted readers for a back issue when they just want to read a past review?

Equipment reviews are what your customers want when they go to your website, not the useless news stories.  

Graham Leftwich
Camel, NY
lefty785@com

If you click on the “Archives” button on the www.stereophile.com home page, Mr. Leftwich, there are currently almost 250 articles and reviews from past issues of Stereophile available online, and two or three more are added each week. These reviews are available free of charge — unlike, say, The Absolute Sound, which charges websurfers to download editorial material. But yes, until a review is posted on the website, the only way for a reader to access it is to buy the back issue. And while you personally may not appreciate the news stories, the large surge in hits our website gets every Monday morning when the new stories are posted would seem to indicate that you are in a minority.  
—JA

Stereophile samples?
Editor:
Please consider adding sound samples on the “Recordings” pages on www.stereophile.com. No matter how much well-written text I can read, I don’t consider buying a music recording until I’ve heard some of at least several tracks.

Greg Zupcsics
gzupcsics@mediaone.net

A Stereophile sampler?
Editor:
Have you guys ever considered producing a Stereophile Sampler CD showcasing all the Stereophile recordings done thus far? It should be a pretty interesting mix, and it would be a great way to introduce all the recordings that Stereophile has done.

Harry
hgibian@singnet.com

Stereophile’s Rendezvous CD
Editor:
I received my copy of Rendezvous (STPH013-2) today. I haven’t stopped playing it since it arrived. Thank you for this wonderful recording of deserving music.

Jim Chambers
jimchambers@surfcom

Those Rendezvous cymbals
Editor:
I just got Jerome Harris’ Rendezvous disc. I have only 10 or so audiophile-quality CDs, but your jazz disc has the best recorded cymbals I have ever heard. (I play drums, by the way.) I’m playing the CD over a Wadia 850/Pass Aleph 5/Thiel CS2.3 rig, and the timbre differentiation of the cymbals and the feeling of wood on metal is awesome.

Babak Nivi
nivi@media.mit.edu

Thank you for your comments on Rendezvous, Mr. Nivi and Mr. Chambers. I noticed Billie Drummond’s Gretsch kit and Zildjian cymbals with a reasonably distant ORTF pair of B&K (now DPA) 4011 cardioids, with a close Shure Beta 57A for the snare and a close AKG D112 for the kick drum. The B&K 4011 is my preferred mike for drums and piano because of its superbly natural mid-treble register, and I used it on this recording with the sweet-sounding HV-3B preamp from Millennia Media.

The making of Rendezvous, like that of all the recordings I have engineered and produced for Stereophile, is described in full on www.stereophile.com. Regarding Mr. Zupcsics’ request for sound samples to accompany these articles, this is something we are working on. And yes, Harry, a Stereophile sampler disc (perhaps a 24/96 DVD) is something I have in mind for 2001.

Enjoy it, guys!
Editor:
I am 30 years old and have been reading Stereophile since I was 21. It seems that every issue has a letter or two worrying that home theater will eventually kill our beloved two-channel high-end world.

Let me clue you in on what seems to be the trend in my generation. I entered high-end audio through home theater. Yup, that's right — through it, not despite it. Yes, my first college setup was built around the promise of all the explosions I could generate in my room to wig out my neighbors, but do you know what? I noticed I spent more time listening to music than watching movies, simply because there aren’t enough good movies to watch! Besides, unlike movies — unless you are a certified Godfather, Star...
one bell, one whistle,

and a button to turn them off.

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Wars, or Star Trek nut — you can listen to music over and over again. As I slowly upgraded my system, leaning more toward rock and pop, I started noticing how many of these LPs and CDs sounded worse on my better system because of stupid producers and sound engineers in love with their compressors. Refusing to return to boombox land, I sought out better recordings, and found them in the worlds of jazz and classical music. Needless to say, I learned to love these genres as well.

Remember, I said this was a trend, not a personal anecdote. I see it happening in just too many of my friends and acquaintances. The same story: home theater to music to jazz to classical. All in a third-world country (Philippines), where our gear costs maybe 20% more than retail prices in the US.

So, is the High End dead? I don't think so. Is home theater killing high-end audio? Nope. Is classical music dying? Nah. Is home theater killing the audio specialist? No — it will give him the cash flow to pursue his true love, if he can only develop good personal relationships with his clients.

There has never been a time that we as consumers have had so much access to so much good music and equipment. Enjoy it, guys!

Jack Duavit
Manila, Philippines
mrduavit@broline.com

E-commerce . . .

Editor:
In the May issue's "Letters" (pp.7-8), Jason Dorazio attempted to denounce e-commerce with respect to hi-fi gear. As Mr. Dorazio is a bricks'n'mortar audio dealer, it shouldn't be necessary to comment on his obvious conflict of interest. He was quick to commend the "specialty audio store" and its inherent benefits to the consumer, like "human interaction," something that cannot be replicated via the Internet. Well, the last two times I walked into my local "specialty audio stores" outfitted in blue jeans and a T-shirt, I was treated like a leper with hepatitis.

When I think of my local hi-fi stores, human ostracism, not human interaction, comes to mind. But when I call various hi-fi places on the Internet, I am judged not by the brand of shoes I have on but by what comes out of my mouth. When I have questions, I am not talked down to like a child, but am engaged in a polite and often, for both parties, educational conversation. I have developed a good relationship with two salesmen at one of the Internet hi-fi stores I shop at.

I can call them and ask questions about certain items with the understanding that I will not be buying something just then, but am researching for future considerations, and the salesman has no problem at all with this. Whenever I set foot in my local store, if I don't walk out the door with something in my arms, well, they don't exactly make me look forward to my next visit.

Furthermore, I am exposed to and given the opportunity to purchase a wider variety of products over the Internet. I am not just left with the ones that have been hand-selected by my dealer. Nor would I, the local dealer consider a 30-day trial period, unlike most e-tailers. Through e-mail, I am able to correspond with the actual engineer of the unit I am contemplating buying, enabling me to get a straight answer about a product.

It's obvious that Mr. Dorazio must have been hit hard by the e-commerce revolution. His referring to me, and millions of others, as "e-idiots" only serves to expose him and the majority of his industry's ultimate downfall. This is the attitude that has helped put him in this quandary in the first place. If we were happy with the results we were getting before, then e-businesses would have had no vacuum to fill. David "e-diot" Soriano
dsoriano30@hotmail.com

... and e-idiots

Editor:
Jason Dorazio's letter in the March 2000 Stereophile illustrates why bricks'n'mortar dealers are becoming obsolete. The "foundation" of this "community of like-minded enthusiasts" is the music lover, not the dealer. He needs to come to a rather common business epiphany: If you are not essential and competitive, you are irrelevant. Are specialty audio dealers essential or competitive?

Mr. Dorazio states that the Internet is a "tool for unlimited information gathering," and he's right. Everything from specs to amateur/professional reviews is available on the Internet. Dealers are no longer essential for giving out information about high-end products. Nor are they essential for trying out components. Home use is the necessary and critical part of the auditioning process, not a dealer audition. Online dealers with a liberal return policy satisfy this requirement more than adequately, and wipe out the trip to the store. Again, the dealer is not essential.

Furthermore, there are no snotty salesmen on the Internet to deal with. Perhaps Mr. Dorazio should take the remarks made about snotty, snobby salesman seriously, given his remarks about "this kind of person," or "e-diot," who would buy Kenwood or Symphonic. I suppose Mr. Dorazio popped out of the womb with an all-Krell system wrapped up in his umbilical cord. Most of us are not so lucky.

In short, Mr. Dorazio offers no reason why a person should use their local dealer, other than some idea of loyalty and human interaction. The interaction at the dealer is usually with humans, but it is a business relationship based in mutual advantage, not some Knightly code of conduct. I will not use a dealer's services if I don't intend to buy something there if it turns out I like it. But I'm ethical. Some people are not, and that's part of the game. If I can get a better value elsewhere, I'll use that service. I'll not pour my dollars into a black hole because of loyalty to a person I don't know, and who is more often than not snotty to me because I choose to dress in jeans and flannel.

The manufacturers that refuse to deal on the Internet will shrink, and they deserve to pay the consequences of their poor decisions just as their opponents deserve to reap the benefits of theirs. The dealers that work to make themselves essential and competitive will survive, and will likely do so as intermediaries specializing in value-added packages exclusively, such as installation and any point-of-sale possibilities that come with that role.

The dealers that continue to cling to an outdated and unsustainable economic position, especially the ones like Mr. Dorazio, and who do so while being flippant and denigrating to potential customers, will find themselves deservedly unemployed.

Richard H. Aranjo
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New Blue

Editor:
I am surprised that no one has brought to your attention the fact that the Sumiko Blue Point Special (April 2000, p.89) was modified around 18 months ago by changing it to a solid-body cartridge. The P-mount version is long gone. The new version sounds better.

John Dorsey
Soundscape, Baltimore, MD

Avatars & serious rabbit holes

Editor:
I think it would have been only fair for you to have warned readers that Chip Stern's April review of the VAC Avatar integrated amplifier (pp.175-184) contained a serious rabbit hole (and I'm
not talking about the layout error that resulted in several paragraphs being out of place).

I dipped into Wonderland at about the sentence that begins, "But thoroughbreds can be a little high-strung..." The reviewer then goes on to describe a series of instances of "mild tube distress," including a tube failure, noises, blown fuses, and other odd happenings that somehow did not "detract from my esteem" for the amp under review.

Do I understand this correctly? Here we have an amplifier priced at $3600 that does not function properly, and not only does Stereophile give it a rave review and a Class A rating, you also document the fact that it malfunctions and then expect us not to notice!

I have owned tube amplifiers for 25 years, so I'm not naive about the pitfalls of tube gear ownership. In fact, I have owned three Audio Research tube amps over that period of time—a D76A, a Classic 60, and a VT60—and I don't recall having as many problems in 25 years as Mr. Stern had in a few months with the VAC. Now, I'm not trying to say Audio Research is superior to VAC, and I'm not bashing VAC—I know they make some great stuff. But dear sirs, I find it nearly mind-numbing that you would not at least hold pieces of high-end gear to a simple baseline standard: that the stuff should work without blowing tubes and making noxious sounds within a few months of normal operation.

Am I being unreasonable? Would I be wrong in deciding that, no matter how wonderful this amp sounds, I can never seriously consider its purchase? Am I being overly cynical in thinking you are putting commercial considerations above even your own credibility?

Tony Biancardi
Pittsboro, NC

The due to your puzzlement, Mr. Biancardi, is in your own confirmation that we documented the problems we had with the Avatar. If it is mightily impressed with a component's sound quality, a Stereophile reviewer is entitled to pull all the stops in his recommendation, as the Chipster did in his review. But unlike most other audio magazines, everything that happens in a Stereophile review is "on the record." You didn't find out about the problems from another source; you found out from us. Thus the review brought our readers all that they needed to know with respect to the Avatar: that this amplifier was capable of Class A sound; but at least to judge from our review sample, VAC may be having some QA problems. —JA

The antidote to inflationary rhetoric?

Editor:
I am a lapsed reader of Stereophile who picked up your March issue and was happily reminded of a major attraction of your publication: the excellent writing of all your contributors. John Marks' thoughtful musings on the future of high-end audio (p.5) was the perfect antidote to the inflationary rhetoric that fills the pages of The Absolute Sound, which was so neatly punctured by George Reisch in that issue's "Undercurrents." Tom Hughes' letter on "the ultimate audio tweak" (p.9) is a wonderful parody of this style of criticism.

I have an informal theory about writing and conversation that says the choice of words and expressions is often made unconsciously, as it were, but is nonetheless very appropriate to the context or the writer's area of interest. So I was particularly grateful to your resident viniophile Michael Fremer for the sentence on p.45: "This list of 100 albums only scratches the surface."

Literally, I hope not. John McCallum
Waterloo, Ontario, Canada

He can't dance

Editor:
I have never sent a letter to an editor regarding what is printed. However, this time I must make an exception for the March 2000 "As We See It" by John Marks. I must compliment Mr. Marks for an excellent article. I have rarely ever read an article, by anyone, that I have agreed with more.

I have been an audiophile from the very early days of stereo and multiplex FM broadcasting, back when it was not fashionable to consider the listening room and speaker placement as factors in getting good music. I have seen high-end audio go through many ups/downs, variations, and extremes. I have helped many people set up or improve their systems. I also have a respectable system of my own in a dedicated listening room, for which I have received many compliments. I still can sit and listen to the music for several hours at a time. However, I know very few individuals whom I would consider audiophiles.

In the past three to four years I, too, have watched high-end audio start to lose its importance in regard to music, not because of any significant failing on its part, but because the "others" have significantly caught up. (The extremely high cost of some of the high-end equipment has probably contributed to this problem.) This phenomenon can most accurately be referred to as the "law of diminishing returns." This has been true of every medium or technology that has ever come along.

There is certainly nothing wrong with pursuing perfection. The sound that many people have in their homes is "good enough," as far as they are concerned. With all the "stuff" out there to keep up with and be aware of, it is understandable that perfection must remain in the hands of the few who are willing to dedicate the time and effort to make it happen. (I won't attempt to define exactly what "perfection" is.) Just don't expect everyone to start beating a path to your door.

I agree with Mr. Marks: "Let's face the music and dance." But I can't dance.

John E. Evans
jeogle@nsi.com

His juices aren't going

Editor:
John Marks' "As We See It" in March summed up my feelings on the current state of our hobby. Those of us who love music will continue buying new music. Like Mr. Marks, I wish Sony nothing but success with Super Audio CD, but I'm not likely to be an early adopter. Even if the player cost only $1000 rather than $5000, there simply isn't enough music available. The 100 or so recordings represent fine music, but I'm not likely to see (hear?) the titles I want best. I tend to buy the newly remastered old recordings either to fill in a missing link in my collection or to replace a well-worn LP. What I want to hear comes from the artists and independent labels who, like Mr. Marks, cannot make the economics work. Would we see SACD releases from Greg Brown, Guy Clark, Dave Alvin, Kevin Welch, Fred Eaglesmith, or Bruce Cockburn? Not likely, not new or re-releases.

As for equipment, I have a pretty nice two-channel setup that represents about 20,000 of my hard-earned bucks. The equipment reviews I see in Stereophile seem to lean heavily on the ultra-high-end. Even if I could afford them (I can't with kids in college), the sound improvement isn't enough to warrant the expense. There isn't much out there that's new, affordable, a marked improvement, and gets my juices going.

Like others, I'm getting into home theater, not as a replacement for two-channel listening, but for the fun it brings to movies. My family members aren't obsessed with music the way I am, but they get a kick out of the home theater, and we can all enjoy watching
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things together. (How often do most audiophiles actually share their music and systems with family members?) Plus, I can have some extra music fun with the Eagles’ Hell Freezes Over or James Taylor’s Live at the Beacon Theater DVDs. I wish there were a broader selection of well-recorded live performances on DVD-Video, things really worthy of multiple viewings.

SACD doesn’t look like it’s going to save the High End. Neither does DVD-A. Should we all get morose? Nah, just go enjoy the good stuff that we have.

Paul Malkoski
Paul_Malkoski@igcom.com

The High End does have a future
Editor:
The answer to John Marks’ question in March, “Does high-end audio have a future?,” is yes. High-end audio has always been the future, and only a fool would think there would be any improvement in any technology without a “leading edge.”

I also think Mr. Marks was wrong to damn Sony and Philips’ SACD format. First, Sony and Philips have, for the first time, introduced a new audio medium that can be back-compatible with the format it proposes to replace. Second, SACD provides an archival method of digital recording that is, for all practical purposes, equal to analog with regards to bandwidth, sampling rate, and transfer in the future to new media. Third, low-grade audio media like MP3 have only one enemy, superior sonics, which will be delivered by SACD.

For economic reasons, I am not an early adopter of SACD, but I hope to have an SACD player as soon as possible.

Andrew E. Allen
Oak Park, IL

Catch ’em when they’re young
Editor:
I do agree with the perspective John Marks gives us concerning high-end audio’s future (“As We See It,” March 2000). I would like to bring a different view concerning teenagers. Of course, many of them dream of buying a $3000 personal computer to play Tomb Raider or to surf the Net. Others dream of buying an $8000 Honda CBR racing motorcycle or, in a winter country, of buying a $2000 snowboard. But some of them prefer music.

That’s why each year, as a science teacher in a high school, I bring 10 students to spend a day in my favorite store, Audiolight in Quebec city (YBA, JMlab, MartinLogon, Oracle, etc.). And I assure you that, from that day, those teenagers start to dream of getting an $8000 high-end audio system.

Maybe we should put more energy into making teenagers discover the high-end audio world. Young people can’t be interested in (and so won’t invest in) a field they don’t know. At the beginning, they won’t spend a lot of money. But they will eventually upgrade, or maybe they will choose second-hand material, and so on.

Manufacturers and retailers would certainly find a financial return in that kind of promotion. As an audiophile, I organize this activity for the passion of music. But most of all, I would have liked to discover those products at 16 years old instead of 22. My first stereo would not have been the same.

Gilles Dugay
La Malbaie, Canada
gilles@eslaure-conan.qc.ca

Voodoo audio?
Editor:
I think the recent demise of Audio magazine should give all audio lovers pause for thought. I believe I know why times are tough in audio. The core readership of Audio always comprised technically inclined individuals. Over the last decade, I believe this base has been badly eroded, which bodes ill for the whole industry and the hobby, not just for a particular magazine.

Specifically, during the last decade the prevailing idea that arose is that audio is a branch of voodoo, not of technology. The standard review for entire categories of products became: “Wow! This [cable, power supply, ebony disc, etc.] violates all laws of physics, yet it clearly makes audio much better. Go buy a dozen.” A small cadre of individuals did exactly that. A larger group said “Whoa.”

Please note that in no way am I advocating that we should have stagnated with Julian Hirsch. The relationship between actual acoustic perceptions and circuit measurements has hardly been perfect; thus, a great deal of progress has been needed, and continues to be needed.

But that was not what was being offered to buyers of audio magazines over the last decade. (My hat’s off to Ben Duncan of Hi-Fi News & Record Review, who is the only exception I can think of.) Looking over any magazine that I know of over the last decade, apart from the Journal of the Audio Engineering Society, one simply found very little documentation of efforts to bring together acoustic perceptions and electrical measurements. Instead, one saw PT. Barnum all over, and very little Ben Duncan.

Stereophile and every other surviving audio magazine should look at the hard realities that the death of Audio implies. I think there are only two options: 1) return to the idea of audio being a technological pursuit; or 2) follow the business model of Maxim or FHM magazines. For those who might not have seen these, they are very successful magazines selling shiny yuppie trinkets to financially successful young males who like looking at pictures of scantily clad ladies.

I think people will continue to want to hear very-well-reproduced music. There also is a dynamically growing market for exceptionally pretty “lifestyle accessories,” and the latter is not limited to males. Serving either of those markets would appear to be a viable business decision, but I think the realization should be starting to sink in that a business model of selling extraordinarily expensive aids to voodoo audio is doomed.

Perhaps this idea has already reached the manufacturers. Two companies that have been receiving good press very recently have been PS Audio and Perpetual Technologies. Both appear to be turning the tide, offering fairly priced, innovative devices that are sold on the merits of their advanced technology, not on their defiance of the laws of physics. And they look good, to boot!

Vytenis Babrauskas, Ph.D.
Issaquah, WA

High-end mumbo jumbo?
Editor:
At the risk of sounding practical, I’m not surprised that double-blind tests are so unpopular with Stereophile’s readers. Such tests illustrate only how much money people waste on high-end mumbo jumbo. Nobody wants to hear that their $400/foot speaker cable sounds the same as Monster Cable, or that those cones on top of their speakers really aren’t magic after all.

Tim Noble Bend, OR
in@bendnet.com

Pseudoscience
Editor:
You’ve done it again. Two issues in a row, Stereophile has run letters from pseudoscientists who claim audiophiles are being duped because: 1) they do not follow the “scientific” principle of double-blind testing; and 2) they are naïve and ascribe sonic worth to an item according to how expensive it is.

I find both propositions offensive. Had these “scientists” done their research, they wouldn’t be so condescending toward audiophiles. As a group, audio-
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Some fine tunes

Editor:
This letter concerns Jonathan Scull's "Fine Tunes" in the February Stereophile, and his previous mentions of the use of damping materials to create a nonresonant listening environment.

I'm fully aware of the use of sand for this purpose, as 30 years ago, a sand-filled pedestal supporting my turntable completely eliminated some vicious low-frequency feedback that had been introduced by an 18" subwoofer. I thought the woofer was going to blow up, but the damping solved the problem.

Since I went digital, the thought of providing resonance correction for my system did not occur to me until I read Jonathan's February article. I am using a Wadia 860 sitting on a Target rack and going direct to MartinLogan Monoliths, with the two amplifiers on Target platforms. The initial modification to the rack was placing a glued-and-screwed 1.8" by 20" by 1/8" steel plate on the underside of the CD shelf. In addition, I poured sand into all hollow areas. It took only 15 lbs of sand to fill the rack, but the ringing disappeared when I tapped the metal surfaces with my fingernail. The rack also became more rigid.

The following benefits were easily heard: Listening to voice, the center image was improved, and outer edges of vocals now seemed "flared." There was more air between voice and instruments, and between instruments. The soundstage widened and went deeper. The bass was more dynamic and seemed to go lower.

Because there were 35 lbs of sand left in the sack, the next step was to fill the legs and frames of the two amplifier platforms. Bass response was further improved. It became tighter, blending better with the electrostatic top end, and there was less "smearing," with more defined impact.

All of this enabled me to increase the distance between the speakers; now they really breathe. Any improvement of sufficient magnitude in one area always beneficially impacts other acoustic factors.

You can quote all the superlatives. This was the most effective tweak I had tried since I began listening in 1964 — much better than lifting the cables off the floor, which resulted in a small plus for the system. When some friends visited, they said it was hard to imagine improving the sound of the Monoliths. My comment to them was, "When you hear it, you'll know it."

In the context of maximizing the benefits of hollow tube racks, it would be nice if manufacturers provided sufficient access — say, an opening about ½" in diameter that can be sealed with a threaded screw cap. This will enable easy filling with sand or shot.

Outstanding, Jonathan. Well done.

Harvey Fleishman
Boynton Beach, FL

Edifice Wrecks

Editor:
Jonathan Scull's advice in the February issue about jacking up the floor of a Victorian house is, at the very least, ill-advised, and at worst downright dangerous.Floor-jacking is not something to be lightly attempted, or used as a cure for some imaginary audiophile syndrome. It should be done by a qualified home-restoration contractor, who will have proper floor jacks and the correct bases on which to set them.

Once the floor has been slowly (about half a turn of the jack handle per week) brought level, the contractor will install appropriate lolly columns to support and stabilize the floor. He or she will also scavenge and shim joists as necessary.

The haphazard method that Jonathan advises, at the very least, badly cracked plaster and sprung floorboards, and could in rare cases cause catastrophic failure of nonbearing walls and other interior structures. In addition, the use of piled-up cement blocks and trailer jacks (not designed for the loads involved in raising house joists) is a recipe for collapse and injury to the people working on them.

I have been reading Old House Journal and Victorian Homes for many years, and neither of these has presumed to advise on stereo components. Stereophile ought perhaps to exercise the same judgment.

Les Berkley
wogears@fast.net

Thanks, Mr. Fleishman, Les, sorry to have so provoked your ire. As all readers who follow "Fine Tunes" know, I offer cost-effective or, whenever possible, zero-cost options for getting better sound out of your system. I was, I thought rather obviously, talking about lightly and selectively reinforcing certain small areas of spring floor plans to prevent tonemarks from being launched into wild gyrations by heavy audiophile footfalls.

This is hardly an "imaginary syndrome." I know one infamous reviewer on Lon Gualdoni who would certainly benefit from such a fix, and two or three others who have quite successfully solved their analog problems in just this way. They didn't wildly jack up their floors to a attic level, or even actually "raise" the joists — they just applied light additional bracing at one or two strategic points, et voilà: Zen stylus.

However, I agree with you: When a project involves the proper leveling of the floorboards in general, a restoration contractor is just the ticket. Just make sure the truck doesn't say "Binford," and that your contractor doesn't go by the name of Tim the Tool Man! — J-10

No more foot massages

Editor:
After reading Jonathan Scull's "Fine Tunes" in February, I decided to do something about the annoyingly springy suspended floor in my listening room.

I purchased two screw-type floor jacks from my local home center and placed them under the floor in the crawl space. I put them at approximately one-third points along the length of the room and at the center of the joists. I tightened the jacks until they were snug, then added approximately one more turn. Total cost $30.

Results: 1) tighter bass; 2) the room no longer swallows up deep bass at low to moderate levels; and 3) no more foot massages!

Brian Remington
brf@dmw.com
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DENMARK/TEXAS
Jon Iverson

One of the world’s largest semiconductor manufacturers is expanding its presence in digital audio. Texas Instruments announced March 16 that it has acquired Toccata Technology ApS, a small, privately held company based in Copenhagen, Denmark. Toccata is “one of the leading developers of digital audio amplifier technology and board solutions,” according to a TI press release, and will become part of TI’s Digital Speakers Business Unit, continuing to operate from Denmark. Audiophiles will be most familiar with Toccata’s “Equibit” technology for taking a PCM input signal and using it to drive a PWM output stage from its use in TaCT digital amplifiers.

With the acquisition, Texas Instruments will push into the market for “all types of audio equipment, including personal computer speakers, A/V receivers, car stereos, and home theater systems,” according to the release. “This is a powerful combination,” said Dr. Keh-Shew Lu, senior vice president for mixed-signal products at TI. “Toccata has developed a high-quality, high-efficiency digital audio amplifier solution. When combined with TI’s programmable digital signal processors (DSPs) and other digital speaker components, customers will have an all-digital audio solution with performance that is unmatched by today’s audio systems.” Dr. Lu’s enthusiasm is understandable, but he may not be familiar with the performance available from the high-end audio industry, especially the levels achieved by digital systems using conventional analog amplifiers such as Meridian’s.

Toccata’s amplifier is said to use “only digital technology, eliminating analog feedback and the need for analog signal processing or amplification at any stage.” Lu said it “delivers cleaner, crisper sound while allowing easy-to-use plug-and-play connections.” His department’s goal is to develop digital speaker technology that will “eventually bridge the gap between high-end and low-end audio systems.”

“By joining forces with TI, the world leader in DSP and analog, we now have the manufacturing prowess and marketing reach to achieve our goals,” said Toccata CEO Niels Anderskov. Dr. Lars Risbo, the company’s chief technical officer, founded Toccata in 1997 with the purpose of developing the ultimate in digital amplification. Research firm Forward Concepts predicts that 65% of PC and consumer speakers will have digital speaker technology by 2003.

FRANCE
Peter van Willenswaard

The 108th AES Convention, held last February in Paris, saw another presentation to the press of Sony’s SACD technology. Sources were either Sony’s CD-1 or Marantz’s SA-1 two-channel SACD players, or a hard-disk-based system for recordings not yet released on SACD. Philips showed a prototype of a 5.1-channel surround SACD/DVD-A compatible player, the SCD2000, to be released in September. Philips is following Pioneer, who announced a dual-format player at the beginning of the year, and Sharp is next in line with an SACD player. [Michael Fremer is currently auditioning the Sharp machine for a review of their matching “digital” amplifier.—Ed.]

As of the time of writing, about 120 SACD titles had been released, half of them dual-layer hybrids containing both CD and SACD datasets. Many of these are remastered classics, but some are new, high-sampled digital recordings. All were on display at the SACD stand at AES, and Sony has opened a website (www.superaudio-cd.com) with an overview of available software; titles can be ordered directly from there.

The demos consisted of comparisons of the CD and SACD formats from the same hybrid disc—i.e., Mitsuko Uchida playing Schubert piano works, issued on Philips Classics—and a number of 5.1-channel surround recordings directly from hard disk. The Uchida recording underlined SACD’s sonic superiority over CD. The surround recordings were of two types: one striving for as natural an acoustic representation as possible, the other less subtle because of using spatial “effects.”

A fine example of the former was Both Sides Now, a new Joni Mitchell recording (analog master mixed to 5.1, then con-

Those promoting audio-related seminars, shows, and meetings should fax (do not call) the when, where, and who to (212) 886-2810 at least eight weeks before the month of the event. The deadline for the August 2000 issue is June 1. Mark the fax “Attention Jonathan Saul, Dealer Bulletin Board.” We will fax back a confirmation. If you do not receive confirmation within 24 hours, please fax us again.

ARIZONA
• The Arizona Audiophile Society

Stereophile, June 2000

C L A R I F Y I N G   Q U E S T I O N S

Those asking questions or reviewing material should fax the who, what, where, when, and why to (212) 886-2810 at least eight weeks before the month of the event. The deadline for the August 2000 issue is June 1. Mark the fax “Attention Jonathan Saul, Dealer Bulletin Board.” We will fax back a confirmation. If you do not receive confirmation within 24 hours, please fax us again.

Arizona Audiophile Society

Stereophile, June 2000
verted to DS1), which has been released on SACD, CD, and LP (and which was Stereophile’s “Recording of the Month” for April). When we listened to “A Case of You,” Mitchell’s voice was projected rather forward, which caused me to leave my seat and stand behind the last row of chairs. From there, the result was quite impressive—goosebump stuff, to be honest. The soundstage was enormous, a somewhat cinema-like experience.

Other SACD news: Augus Instruments, dCS, and Kompas CD Multimedia (with Philips in the background) have developed an eight-channel DS1 recording system that comes in three flight cases. It can be hired by studios that want to do a DS1 production, be it two-channel stereo, 5.1-channel surround, or both. It consists of four stereo dCS, DSD-compatible ADCs, an Augus OMX24 H1 recorder, and four stereo dCS DACs.

During the AES Convention, Philips announced that Sonopress in Germany has now installed an SACD hybrid production line, making it the second in Europe, after Sony’s plant in Austria. By contrast, DVD-A was manifestly invisible at the Paris Convention.

US/KOREA
Jon Iverson
At the end of March, JBL Consumer Products (a unit of the Harman Consumer Systems Group) and Korea’s L.G. Electronics (manufacturers of Gold Star and L.G. Electronics brand products) announced that they have entered into a strategic alliance to jointly develop and market a “broad range of new consumer electronics products.” The companies say that the partnership “builds upon the respective strengths of both manufacturers” and will enable both companies to expand their offerings into areas outside their traditional product categories.

Harman’s Sidney Harman explains that “the partnership of JBL and L.G. Electronics will enable JBL to offer a series of innovative ‘cyber-age’ products for a new generation of consumers. The product collaborations planned for development reflect the particular skills and resources of each company, in a mutually reinforcing arrangement that will facilitate the creation of products that neither company alone could produce.”

According to JBL’s Paul Bente, “our alliance with L.G. Electronics better prepares each company to meet the challenges of the digital future, where audio, video, multimedia, home automation, and computer technologies are converging at an increasingly rapid rate. By combining JBL’s expertise in professional and consumer audio with L.G. Electronics’ advanced technological and manufacturing know-how, we expect to offer consumers a whole new world of innovative products—and even create entirely new product categories.”

Both companies say that details of initial product offerings are to be announced in the coming months. Bente adds that “we expect to make a major showing of several new products at CES 2001, and may even have selected products on our retailers’ shelves as early as this fall.”

US: CALIFORNIA
Jon Iverson
They may sing about death and destruction, releasing albums with titles such as 1983’s Kill ’em All, but underneath the menacing exteriors, Metallica is really just a group of sensitive artists.

Or so it would seem. Metallica drummer Lars Ulrich explains, “With each project, we go through a grueling creative process to achieve music that we feel is representative of Metallica at that very moment in our lives. We take our craft—whether it be the music, the lyrics, or the photos and artwork—very seriously, as do most artists. It is therefore sickening to know that our art is being traded like a commodity rather than the art that it is. From a business standpoint, this is about piracy—aka taking something that doesn’t belong to you; and that is morally and legally wrong. The trading of such information—whether it’s music, videos, photos, or whatever— is, in effect, trafficking in stolen goods.”

What has the group’s hacksles up are illegally copied MP3 audio files being traded around the world via the Internet. Instrumental in accelerating the distribution of unauthorized MP3 files is the controversial software program called Napster, which has taken off like a rocket on college campuses everywhere. In response, Metallica, E/M Ventures, and Creeping Death Music revealed last week that they had filed suit in US District Court's Central District of California against Napster, the University of Southern California, Yale University, and Indiana University. (E/M Ventures and Creeping Death Music are the copyright owners of sound recordings and musical compositions created by Metallica.)

The suit alleges that Napster and the other defendants—by encouraging and enabling visitors to its website (www.napster.com) to unlawfully exchange with others copyrighted songs and sound recordings without the knowledge or permission of Metallica—have violated the law by committing continuing copyright infringements, unlawful use of digital audio interface devices, and violations of the Racketeering Influenced & Corrupt Organizations Act (RICO).

Further, the suit states that “Napster

**Calendar**

audio club holds monthly meetings to discuss topics of interest and listen to music. Join the fun by e-mailing stkjoe@hotmail.com.

**Massachusetts**

- Thursday, May 25: For its monthly meeting, the Boston Audio Society will sponsor a tour of WCVB-TV. For details on upcoming meetings and samples from their publication, The Speaker, call (603) 899-5121, visit http://bostonaudio.home.att.net, or e-mail dbservice@ibm.net.

**Michigan**

- Superior Sight & Sound (6266 Pinecroft Dr., West Bloomfield) is pleased to announce that it has been appointed the Michigan dealer for Jeff Rowland Design Group electronics, and has been named the Eastern Region Showcase for Wisdom Audio’s Adrenaline Rush Line Source Speaker Systems. Please call (248) 626-2780 for more info or to schedule a private audition.

**Missouri**

- Wednesday, June 7: Best Sound Audio/

**New Jersey**

- The New Jersey Audio Society welcomes anyone interested in high-performance LP and CD playback systems to become members and participate in

**Video** (227 N. Lindbergh Blvd., St. Louis) is hosting John McIntosh of B&H to discuss and demonstrate the technology behind the B&H Nautilus 800 series and the CASA Whole House Audio System. Call (314) 997-7644 or check www.bestsoundsdouis.com for more information.
has devised and distributed software whose sole purpose is to permit Napster to profit by abetting and encouraging the pirating of the creative efforts of the world's most admired and successful musical artists. Facilitating that effort are the hypocritical universities and colleges, who could easily block this insidious and ongoing thievery scheme. The last link in the chain are the end users of the stolen musical works, students of these universities and others who exhibit the moral fiber of common looters loading up shopping carts because 'everybody else is doing it.'

Dozens of colleges have already banned the use of Napster on their campus networks, claiming that the software eats up bandwidth and slows other online activities. But USC came out defending the program last February, attempting to steer clear of meddlin in students' online activities. Napster, which claims on its home page that it supports the rights of artists and copyright holders and seeks to comply with applicable laws and regulations governing copyright, itself has already been hit with a suit from the Recording Industry Association of America, which alleges that Napster violates the Digital Millennium Copyright Act, a new law that bars devices that could be used to circumvent copyrights.

**US: NEW YORK**
**Barry Willis**

The legal molasses in which MP3.com is mired got thicker and deeper in mid-March, when MPL Communications launched a lawsuit against the Internet music company, MPL, ex-Beatle Paul McCartney's publishing house, joined the attack begun months ago by the Recording Industries Association of America. McCartney's firm filed suit in a New York US District Court against the San Diego-based startup over copyrights on intellectual properties owned by MPL, whose catalog includes McCartney's solo work, as well as the works of Buddy Holly, Hoagy Carmichael, Sam Cahn, and other songwriters and performers. MPL was joined in the suit by Peer International, which owns the work of the late Latina star Selena.

MP3.com provides an archiving service for its members, who can upload their favorite songs to a server computer and then access them from any Internet-connected computer, thereby saving themselves the necessity of carrying player, headphones, and discs with them. Members are supposed to have purchased the discs they wish to archive, but are not required to prove their ownership. MP3.com has archived more than 80,000 recordings, according to the Reuters news service.

The legal move against MP3.com is "the first lawsuit undertaken by independent publishing companies," according to McCartney spokesman Paul Freunlich. Other labels and publishers may follow. McCartney isn't personally involved in the litigation, but his association with the plaintiff raises the ante in the anti-piracy crusade.

MPL's action was welcomed by the music industry, but at least one law professor looked askance at the thrust of the action, pointing out that such litigation could hinder the development of new technology. "The danger of lawsuits like these is that [they] attempt to control and shape the development of technology to serve an existing business model," said New York University law professor Yochin Benkler. "The business models need to change to fit the technology, not the other way around."

Benkler claims that the fact that music can be copied illegally is a "side effect" of MP3.com's database, not its intended purpose. MP3.com officials and attorneys would not comment on the cas.

**US: THE GOLDEN AGE**
**Jon Iverson**

On March 14 Capitol Records released expanded DVD and VHS editions of Endless Harmony: The Beach Boys Story. The documentary, produced by Stephanie Bennett and directed by Alan Boyd, made its US television debut on VH1 in 1998. A soundtrack CD of Endless Harmony, originally released to coincide with the VH1 airing, is also available.

But what may prove most interesting to Stereophile readers, especially in light of many of the comments on the www.stereophile.com "Vote" page in early March, is that in addition to the typical DVD bonus materials, there will be several new 5.1 surround-sound mixes of seven of the Beach Boys' classic songs: "California Girls," "Kiss Me, Baby," "God Only Knows," "Surf's Up," "Long Promised Road," "Sail On Sailor," and "Do It Again."

The DVD will hit shelves March 14, and will also include five bonus video clips, including recently rediscovered and previously unreleased footage from the vaults. Among the newly added highlights is a 1980 concert performance of "Do It Again" in Knobworth, England, one of the few times a concert with all six Beach Boys—Brian, Carl, Dennis, Mike, Alan, and Bruce—was recorded and videotaped.

In "California Girls," longtime fans will recognize outtakes from the All Summer Long LP photo session, while "Kiss Me, Baby" features shots from a take of late-1965 recording sessions at 4545 Island Crest Way, on Mercer Island. For more information, call Tom at (425) 481-8512 or Earl at (206) 907-8026.

**CANADA**

• Thursday, May 25, 6:30pm: Toronto Home of Audiophile (100 Steeles Ave. W., Unit 22) is hosting a seminar featuring all Gershmans Acoustics loudspeaker models, including the new Opera Sauvage 88-X and the Gershan Home Theater. Call (905) 881-0101 or (905) 669-5994, or check www.gershamanacoustics.com for more information.
Among the extensive list of superlatives commonly showered upon high-end music systems, the word “integrity” is seldom used. But we have noted the comments from audio enthusiasts around the world who are comfortable paying the price for Mark Levinson® because of its integrity.

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Western Europe footage appearances, including King Curtis on saxophone; Mike Pinder (Moody Blues) on tambourine; Jim Gordon on drums; Joey Molland and Tommy Evans (Badfinger) on guitars; and, of course, the ubiquitous Phil Spector.

The 63-minute film, produced and directed by Andrew Solt and with Yoko Ono as executive producer, was edited from 16mm film footage shot by John and Yoko and hidden from public view for nearly three decades. Capitol says the DVD version will contain both a stereo soundtrack and a 5.1-channel surround-sound mix plus approximately 40 minutes of unique studio/visual interview material recorded at the time of the album sessions, as well as an album discography enabling the listener to hear a sample of one track per album.

"The film covers a lot of ground," claims a press release, "from priceless demo rehearsal sessions in Ascot to a madcap bookstore autographing session for Yoko's *Grapefruit*; from John leading a peace march down city streets, brandishing a bullhorn beneath a poster for his and Yoko's subsequent single, 'Happy Xmas (War Is Over),' to a confrontation at John's front door with a vagabond hippie who is taken in and fed; from the kitchen breakfast that started it all to a gala party at Ascot shot by noted avant-garde independent filmmaker Jonas Mekas, capturing such notables as Jack Nicholson and Andy Warhol, while John plays basketball with Miles Davis in the driveway."

**US: THE INTERNET**

**Barry Willis**

Last year, Internet commerce schemes were the darlings of venture capitalists and small investors alike. For months, it seemed that almost any business plan, no matter how half-baked, could attract millions of dollars with the simple mention of "online retail sales"—otherwise known as "e-commerce" or "e-tailing."

The mood began to change late last fall when e-commerce startups discovered it was becoming increasingly difficult to secure financing for their sometimes ill-conceived ventures, which offered everything from groceries and auto parts to sporting goods and electronics for sale at deep discounts, sometimes below cost, simply to gain market share. In most cases, the presumably low overhead of running an Internet retail site was offset by enormous promotion al costs, and the estimated time to profitability stretched out toward infinity.

Earlier this year, some highly positioned analysts began to question the hysteria for Internet stocks. Some even went so far as to dismiss them as "Ponzi schemes." The message finally trickled down to individual investors early in April, and tech stocks took a beating shortly after the court decision against Microsoft.

One company left in the lurch is music retailer CDnow Inc., which early in the year was poised to merge with Time Warner and Sony Corporation's Columbia House music club. The deal stalled, partly because of a prolonged antitrust investigation, and then was scuttled altogether when America Online and Time Warner announced their impending marriage. CDnow, which was flying high last July with its stock at $23.26 a share, began a long slide shortly after the TV/Sony deal was announced, and had yet to recover at the time of writing. CDnow stock closed at $4.44 a share on Friday, April 7, after hitting an all-time low of $3.40 on March 29.

The company that pioneered sales of CDs over the Internet may not last the year, according to several reports. Browing away from the merger, Sony and Time Warner pumped $51 million into the operation as "strategic partners," but the transfusion may not be sufficient to sustain it. In April CDnow was again searching for a merger deal, toward which purpose it has hired investment bank Allen & Co.—which assembled the failed merger with Columbia House. The company has enough cash to last through September, assuming it can sustain its present rate of business, but without a partner it may disappear from the screen. The Wall Street Journal quoted sales figures last year of $157 million for CDnow, while mentioning that it probably needs to do at least a billion dollars annually in order to be profitable.

CDnow's problems are compounded by the move of multinational entertainment conglomerates into the arena of music sales (see the following story on BMG). The major players can fund their own operations, and make their own deals with retailers both traditional and online, without outside help. Thus the value of any long-term relationship with an e-tailer like CDnow becomes, at best, questionable.

CDnow chief Jason Olim has told interviewers that he is "as confident as ever that we will find" a merger partner. Unfortunately, investors have become
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Throughout, different cabinet sizes and driver complements vary the scope and scale of the performance, but the refinement remains the... **PURE UTOPIA**
wary of business plans that take seriously the old joke about losing money on every sale but making it up in volume. Almost every Internet retailer has spent far more per customer landing that customer than the customer ever gives back in sales. Despite all the marketing theory about “branding” and creating “sticky” sites, Internet customers have proven amazingly fickle when it comes to making purchases, reinforcing the simple observation that the only two reasons anyone buys anything on the Internet are price and convenience.

The next few months may be the swan song for CDnow and other Internet retailing pioneers, as they give way to huge corporations with long histories of adeptness at moving vast quantities of merchandise. Companies on the scale of BMG, Sony, Philips—even Circuit City—will likely dominate online retailing. The day of instant millions for startups may be over.

US: THE INTERNET
Barry Willis

The age of downloadable digital music is showing signs of maturing. Territory that was explored by hobbyists, pirates, and startup companies eager to stake their claims will soon yield to the irresistible force of multinational conglomerates.

On April 6, BMG Entertainment announced a sweeping plan to offer its enormous catalog of artists and performers over the Internet this summer “through an open network of retail partners.” Bertelsmann Music Group, with more than 200 record labels under its umbrella, including RCA, Windham Hill, and Arista, has long operated one of the biggest and most successful music clubs, and has experimented with offering promotional and test recordings over the Net.

The move into full-scale secure downloading by one of the music industry’s “big five” heralds a new era in the distribution of music. “This is the biggest commitment a big five record label has made to downloads, especially in terms of offering their most popular, most lucrative content,” commented International Data Corporation analyst Malcolm Maclachlan. “BMG has been preparing for this for a while. It will be interesting to see if the solutions they come up with will work without being too cumbersome and confusing to consumers.”

“BMG strongly believes that the retail channel will be a critical element to connecting our artists with their fans in the electronic distribution environment,” said Pete Jones, president and CEO of BMG Distribution and BMG Associated Labels. To date, the downloadable music phenomenon has been dominated by the relatively low-resolution and low-security MP3 format. User-friendly Napster, which enables the easy sharing of music recordings, is another recent threat in the side of the music industry. BMG intends to counter the free-music movement with its own authorized formats.

“What we’re offering is an effective alternative to the existing marketplace, which is largely pirated music,” said Kevin Conroy, BMG’s senior vice president for marketing and new technology. “We’re offering an alternative that works and will build what we believe will be a very significant market for digital downloading.”

Beginning this summer, downloads of hit singles by BMG artists will be offered through individual labels’ websites as well as through affiliated retailers, Conroy stated. The program will be expanded as the year wears on, with full albums to be offered by the winter holiday season. Other major music companies—notably Universal Music and Sony—have made moves recently to offer their wares over the Internet. Sony has announced a plan to launch its own downloadable music operation, to be known as Label Gate Company. BMG has signed deals for digital-rights management with several competing companies, in effect spreading the risk and responsibility among all of them. Partners include IBM, Microsoft’s Windows Media Technologies, Silicon Valley’s InterTrust Technologies Corp., Reciprocal, Digital World Services, and Liquid Audio, which will work to ensure compatibility among competing formats. What BMG has done is “focus on creating a competitive marketplace,” commented Liquid Audio vice president Andrea Fleming, “without handing the keys to the kingdom to any one digital download company.”

SCOTLAND
Paul Messenger

Hi-fi as a mainstream, mass-market product might be a global phenomenon, but the further one moves upmarket, the more the contrasts between different countries of origin stand out. While the US has set the international high-end agenda for the past 20 years or so, the serious end of British hi-fi has evolved along a quite different path.

Disregarding the speaker specialists (B&W, Tannoy, KEF, etc.), the “big three” of upmarket British hi-fi are Linn, Naim, and Meridian. These companies have totally distinct characters, but also some key elements in common. For example, all three have long adopted a “complete system” approach, in which the most upmarket packages feature full active drive.

Over the years, these companies’ products have tended to be relatively modestly priced by US high-end standards, but in the last two or three each has made significant moves to close the gap by introducing new “flagship” products at much higher prices than previous top models. The most expensive Linn and Naim stereo systems now cost £50,000 and up, while a multichannel Meridian music package can cost significantly more.

One consequence of pushing the price and performance envelopes seems to be a greater appreciation of the subtleties of interconnect cabling. Until recently, Linn and Naim have tended to take an essentially pragmatic and cost-effective approach to connecting cables, believing that many of the distinctions between exotic recipes were more matters of flavor than of fundamental quality. Since the development of their latest CD players and power amplifiers, however, both seem to be taking a closer look at interconnects. Naim cables, with their nonconformist DIN-type connectors, are of interest only to Naim users; but for that select band, last summer’s introduction of the new Black SNAIC interconnect was a notable event.

However, Linn’s new phono-to-phono Silver interconnect could well be of more interest to the greater audiophile community. Developed with the Sondek CD12, active crossover, and Klimax monoblock power amps very much in mind, the Silver costs almost four times as much as Linn’s “standard” interconnect: $300 for a 1.2m phono-terminated pair. It’s also available in custom lengths from Linn dealers, as a key reason behind its inception was to minimize noise and hum pickup when using long runs between the active crossover unit and the power amps. Linn has looked into balanced operation, but prefers the simplicity of unbalanced for domestic use, provided sufficient care is taken to minimize the ground resistance and maximize the screening performance and quality of the cable.

Linn spent two years auditioning samples of every cable type it could get its hands on before settling on the Far East–sourced Silver interconnect, and Linn’s Martin Dalgleish makes no secret of the fact that it was specifically chosen for its all-around performance with a Linn active system. The Silver is an
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US: CALIFORNIA
James Bongiorno

This is an obituary for a great engineer and a fine gentleman. His name was Ed Miller, and he passed away last fall. He was somewhere around 80 years old, and I have not seen one word in any audio publication anywhere concerning his life and demise. Ed was one of audio's early pioneers. He was also one of the few graduate engineers in audio's early ages. His early career, beginning in the late '40s, was spent at the General Electric research laboratories. He then moved to Chicago and founded Radiocraftsmen, which back then was quite a famous company. Ed had a knack for finding and hiring some of the brightest engineers around. At Radiocraftsmen he hired a young man by the name of Sidney S. Smith, who went on to become the director of engineering at Marantz, and who designed all that fabulous Marantz gear in the '50s and '60s.

Always antsy, Ed then became one of the four founders of Sherwood Corp. A dozen or so years later he got antsy again, sold out, and moved to southern California, where he was unfortunately involved in a few failed non-audio ventures. Then, in the early '70s, he became director of engineering at a young company called SAE. During his two stints there he designed the very nice Mark VII D tuner, among many other tuners.

In 1973, Ed hired a young engineer to replace himself as director of engineering at SAE: me. He then moved on to Acoustic Control, but a few years later I lured him back to be vice president of engineering at GAS, which I was just forming. When I later sold out and GAS went down the tubes, I hired Ed to be my engineering manager at Sumo. But Ed got antsy yet again and went back to SAE. Sumo's first new owners couldn't make it work and sold the company to Caliphone. Ed soon followed, to run Sumo for Caliphone. A couple of years ago Ed had two strokes and never fully recovered. He and his lovely wife, Nan, then retired to Florida, where he passed away. Ed was one of the nicest men that I have ever known, and a very smart and clever engineer. If someone were to design a circuit using 10 transistors, Ed would surely find a way to do exactly the same thing using only four. I owe most of my RF training to Ed, as that was his true specialty. He will be missed.

UNITED KINGDOM
Paul Messenger

Speaker Hoods — how did we ever live without them? Now the wait is over, courtesy a new British operation called Clearsound, based in rural Worcestershire, from whence flows the sauce! Superficially, the Clearsound Hood looks and sounds like a thoroughly weird and wacky idea, but scratch its surface and you can find some sound engineering logic. Thinking it through a bit more thoroughly brings up several questions about how loudspeakers are built.

The Clearsound Hood is designed to improve a loudspeaker's sound by blocking and absorbing some of the speaker's cabinet colorations. This is done by encasing all but the front panel in a five-sided "sleeve" made of specific materials. To quote the brochure: "The Hood is lined with a sound-absorbing composite comprising a lossy membrane, or membranes, separated from the Hood by layers of acoustic foam. The Hood is designed to fit snugly without actually touching the speaker panels, leaving a narrow gap around the front panel which may be filled with a foam strip."

The Hood itself is constructed of 12mm MDF, and can be finished to order. Clearsound is initially targeting owners of B&W's 601, offering Hoods to match this longstanding, big-selling budget bookshelf speaker in either cherry or black vinyl for £99.95/pair ($160/pair). When I spoke to inventor and hi-fi enthusiast Richard George, who has applied for patents on the idea, he admitted that sales hadn't been exactly brisk. There's also an element of "work in progress" — George recently modified the design, having found that a small-pore melamine foam performed rather better than the foams initially used.

However, there's no denying that cabinet colorations are the major constraint on loudspeaker performance, especially at the budget end of the market. There's 1 Clearsound: Tel: (44) (0)1684-833155. Fax: (44) (0)1684-833775.
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Stereophile Guide to Home Theater, Vol.3 No.3

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also no doubt that adding a Hood to an existing loudspeaker does modify the sound. Clearsound’s brochure goes into some detail discussing the (naturally very positive) results of its own listening tests on and measurements of several loudspeaker models, and that alone makes interesting reading.

But there are paradoxes. The designer of a good budget loudspeaker will certainly be aware of the enclosure’s limitations, and will try to take these into account, at least during the final voicing of the design. A Hood will absorb some of the anticipated cabinet-radiated sound and is bound to change the balance, probably resulting in more upper-mid and top-end net output. This could well prove advantageous under some room and system circumstances, even if not what the speaker designer intended.

A Hood will also increase a loudspeaker’s size — not likely to improve its popularity. And increasing the size of the front panel, and hence the spacing between drivers and baffle edges, is itself likely to disturb the voicing in the upper midband. Down at B&W HQ, Mike Gough was skeptical that the Hood would effect an improvement.

I suspect that Clearsound could well get its patent, as this is the first instance I can recall of an extra enclosure layer being offered as an accessory — though it’s by no means the first example of multi-layer cabinets. The Naim NBL uses a “hood” arrangement around its mid/treble enclosure, if for quite different reasons. And, of course, double-layer enclosures go back to the sand-filled “sandwiches” used by Briggs at Wharfedale in the 1950s, and in many large horn systems.

The Hood got me thinking about the way most loudspeakers are built: That stereotypical wood-composite rectangular cuboid with some form of internal damping “fill” is now so universal it’s almost taken for granted. Perhaps the time is ripe for some radicalism.

Irregular enclosures offer indisputable advantages over regular shapes because of the way they diffuse rather than focus internal reflections and standing waves (and can also smooth dispersion transitions on the outside). However, they’re still very much the exception, no doubt primarily because of cost, but also because it’s hard to sell something that looks too different, however good the reason for that difference.

Internal damping materials are another double-edged sword. “Can’t live with ‘em, can’t live without ‘em” is the attitude of sensitive speaker designers, who are aware that some damping is needed to avoid colorations created by the first reflection from the back panel, but that too much can damage the sound. Indeed, when I recently auditioned a deliberately undamped speaker from Indigo, I found that the immediacy of its sound was arguably more than fair compensation for its “boxiness.”

Damping the enclosure panels themselves is usually done only in upmarket speakers, probably because it’s quite difficult, hence expensive, to do the job properly. Beyond the odd brace to control “hot spots” in larger enclosures, mainstream loudspeakers tend to rely purely on the self-damping properties of the chipboard or MDF.

One technique that never seems to be tried is to apply damping to the outside of the speaker enclosure. This would be easier to do, and probably more effective than putting it on the inside, though I guess there are problems in making the end result look good, even with modern soft plastics. Still, technology products look increasingly soft and squidgy these days; maybe the time is right for a squidgy-looking/feeling loudspeaker.

You could outer-damp a loudspeaker box as an aftermarket accessory. A hefty strip of some soft elastomer, self-adhesive on one side and preferably with the option to add distributed mass loading, could be sold in lengths off a roll. I haven’t patented it — cos I think it would be too ugly to catch on — and something rather like it is probably already available for sound deadening down at the motor accessory superstore. For additional mass loading, try roofing flashing.

Technology products look increasingly soft and squidgy these days; maybe the time is right for a squidgy-looking/feeling loudspeaker.

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*2 Maybe not, at least in the US, due to the existence of prior art. Watkins Engineering was offering a similar product, the Echo-Muff, in the 1980s — see Stereophile, Vol.10 No.3, April 1987.*
In 1990, Cary Audio introduced the legendary CAD-300-SE, 300B-based, single-ended, class A triode mono blocs. Now, ten years later, Cary Audio introduces another legendary classic - the new Cary CAD-1610-SE, 100-watt, class A, triode vacuum tube amplifiers. Over fifty different circuit configurations and topologies have emulated themselves in these new magnificent CAD-1610-SE amplifiers. These towering audio amplifiers can best be described as “the high fidelity amplifiers that bring the music to one’s heart.”

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"Dad, my Marantz 8 isn’t working any more. What do I do?"

It was my son, David, now 33. Fourteen years ago, while in college, he glommed onto a Marantz 8 that I’d picked up secondhand but let languish because I had so much stuff to review.

"Can I take the Marantz to college, Dad?"

I don’t recall actually giving it to him, but that’s the way it worked out.

Now, after 14 years of heavy use, the amp needed repair. What to do?

My first thought was to get in touch with Sid Smith, who’d designed the amp in the first place. And so, searching for Sid, I called Dick Sequerra, who’d worked with Sid at Marantz during that all-too-brief tubular golden age.

"How’s Uncle Sid?" I asked. "Does he still repair and rebuild amplifiers?"

"No, Uncle Sam. Sid’s doing just fine, but at the age of 76, he’s no longer so hot with the soldering iron. But I tell you what—bring the amp over here and I’ll look at it."

Look at it he did.

"The amp was built in 1962," said Dick, "shortly before the 8 became the 8B. This was one of the last 8s. It’s in good condition for a 38-year-old amp. But, look, there are several leaky capacitors, and I’ll bet some of the tubes aren’t so strong."

A week later, Dick had finished the repairs. As I paid the bill, he said, "Listen to it for a while before you give it back to your boy. It’s right up to original specs. Or better."

Listen I did. Dick called a few days later.

"So how do you and your boy like the amp?"

"It’s terrific. Amps don’t get much better than this."

"I know. How many amplifiers being made today will still be around playing music 38 years from now?"

Actually, I think, perhaps a few. I mentioned to Dick the Sun Audio SV-2A3 amplifier, which I’d just received from Japan: $3550.

"Three and a half watts!" he exclaimed. "That’s ridiculously underpowered, considering the dynamic range of today’s digital recordings."

Underpowered or not, there’s a magic about this amp—as, indeed, there is a magic about the Marantz 8 and the 8B. Especially as restored by Dick Sequerra.

Sun Audio SV-2A3
SET tube power amplifier

According to Mitsuru Uchida, of Sun Audio, the SV-2A3 is the Japanese firm’s best-selling amplifier. No surprise, perhaps, given the popularity of the 2A3 output tube and the tendency of many SET (that’s single-ended triode) enthusiasts to think small.

For those with more powerful ambitions, Sun Audio produces a range of tube amplifiers—including monoblocks using push-pull pairs of 2A3s or 300Bs that put out as much as 15–20W.

You can check out the full line at Sun Audio’s website (http://www2.big.or.jp/~sunaudio). Most models are available as kits or assembled, but until recently, the only way for people in the US to buy Sun Audio products was to order directly from Japan. Judging by the Internet, a number of US audiophiles have done just that. Now you can order through Yong S. Kim, Sun Audio’s agent in America. Sun consolidates orders and makes periodic shipments to Kim, in Beaverton, Oregon. Kim, in turn, ships the products to each customer in the US. Service, too, is handled through Kim, who tells me there is a one-year warranty, parts and labor, and a six-month warranty on tubes, if supplied. I see nothing in writing about a money-back guarantee. If you’re concerned, ask Kim. But I don’t think you’ll want to send this baby back.

With tubes, the SV-2A3 costs $1436.20 as a kit or $2199.90 assembled. This includes freight from Japan and customs clearance charges, but not the shipping from Beaverton to you. Sun Audio accepts credit cards.

You can buy the unit with or without tubes. If you have a stash of rare NOS tubes of the right type, here’s a great way to use them. Uchida supplies two Sovtek 6SN7s, a Sovtek 5U4G rectifier tube, and two generic Chinese 2A3 output tubes. You can save about $50 by forgoing the tubes. But why not take them and have cheap spares?

I’d opt for an assembled unit, but that’s me: lazy and clumsy. Not so hot with a soldering iron, either—no longer so steady of hand and sure of sight. I recall a post on the Internet from someone who built the SV-2A3 kit. He said he studied the circuit diagrams for several hours, then spent about eight hours.
...so easy on the ears that you can listen deep into the night without the slightest fatigue...listening to music becomes subtly but surely elevating, elating in the quiet sort of way that nourishes and strengthens the spirit. And that is what music was meant to do.


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- Alan Sircom, Hi-Fi Choice, October 1997

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- Martin Colloms, Hi-Fi News, June 1997

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- Tom Millier, The Audio Adventure, June 1996

...one of a kind. The ART establishes new standards for reproduction of instrumental tonality, dynamics, liveliness, and even soundstaging...

- Myles Astor, Ultimate Audio, December 1997

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hours assembling his unit.

All Sun Amplifiers are hard-wired, by you or by Sun Audio, and all use Tamradio (Tamura) transformers. (You'll find Tamura transformers in Air Tight amplifiers, too.)

If you look at the photo of the amp, you'll see there are, left to right, two output transformers: a tiny "mystery" transformer and a power-supply transformer. Some folks on the Net have assumed that the "mystery" transformer is an interstage transformer. Not so, according to Uchida; it's a power-supply choke. The two capacitor-coupled 6SN7s swing enough AC voltage to drive the grid of the 2A3s to full output. The choke helps even out power-supply ripples and improve the sound. Rectification is by tube — that Sovtek 5U4G. No transistors. No circuit board.

The SV-2A3 uses no loop negative feedback and is self-biasing. If you order an assembled unit, you just pop in the tubes and fire it up. Do watch how you install the 2A3s: large pins forward. Put the tubes in wrong and you'll destroy the tubes and damage the amp.

Impressed by this little beauty — it's small and austere but beautifully finished and built — I took it over to Art Dudley's place. He's editor of Listener magazine. (I was on a business trip nearby.) Art owns a pair of Medallion II speakers from Lownater America: high sensitivity.

We removed the amp's bottom plate. "Real simple," said Art. "Good parts quality, but nothing extravagant. Looks like nice value for money."

Art noted the presence of some polycarbonate capacitors and suggested that the sound might be improved with the right choice of equivalent-value polystyrene caps. But for now I wanted to listen to a stock unit: no mods, no tube rolling, even though I'd purchased some choice NOS tubes from Kevin Deal, of Upscale Audio. I'll save them for later.

Is the Sun Audio SV-2A3 too beautiful to be real?

Gee, I don't know.

Reproduced sound isn't real, is it?

Ultimately, I don't care.

Enjoyment is the thing.

Sound?

Wonderful on Art's Medallion II s. I can't wait to try some high-sensitivity speakers myself. (Several may be on their way.)

Meanwhile, back at the Tellig ranch, I used no fewer than four speaker models from Triangle Electroacoustique: their Titus, Comete, Zephyr II, and Antal models. All four did surprisingly well on 3.5W ... as did Dick Sequerra's Met 77 stand-mounted speaker ($795/ pair plus shipping).

I phoned Dick to rattle his cage. "Your speaker sounds great on 3.5W."

"That's great, Uncle Sam," said Dick ironically.

"I promise to review the speakers with some more powerful amplifiers, too."

I also tried the PSB Alpha A/V speakers that John Atkinson raved about in the April issue. Jeez. I had these in the basement for six months and still let Atkinson scoop me — on a cheap pair of speakers. I delighted in telling John that these speakers can fly on 3.5W.

Back to the SV-2A3.

There are two attenuators on the front of the amplifier, so you can run a CD player straight in if you like. I wanted to switch sources, so I used my Purest Sound Systems Model 500 passive "preamp." A Cary CD-303 CD player was my digital source. For analog, I used my trusty combination: AR ES1 turntable, SME 309 tonearm, Shure Ultra 500 cartridge, and AcousTech phono stage.

So, Sam, how did the Sun sound?

Glorious! Superb resolution of low-level deals. Spacious soundstage and pinpoint imaging within the soundstage. Harmonic presentation to die for — a lovely liquidity that I can describe only as ravishing, especially with woodwinds and female vocalists. It's amazing what great sound you can get for a modest sum of money when you think small.

Too beautiful to be real?

Gee, I don't know. Reproduced sound isn't real, is it? I do know that brass instruments had some blattiness, some bite — as they should. I don't think the sound was too good to be true. Ultimately, I don't care. Enjoyment is the thing.

The SV-2A3 was not a dark-sounding amp. In fact, it had some of the qualities I normally associate with a 300B amplifier. There was a certain light and life to the music. But with a 300B, I sometimes feel the sound is too brightly lit, too insistent. The 300B output tube is like my first wife. The 2A3 output tube is Marina.

I played Leonard Slatkin and the St. Louis Symphony's out-of-print recording of Tchaikovsky's Symphony 3 (RCA 60433-2)—a favorite of mine, but not necessarily for its sound quality. The louder, more densely orchestrated passages can sound congested, even with plenty of solid-state amplifier power. Don't blame the engineers: this was Powell Hall, which simply sounds that way.

But this is a beautifully played, superbly shaped performance, particularly in the quieter passages that feature woodwind solos. There, the Sun Audio SV-2A3 produced an extraordinarily beautiful sound — the kind of sound that haunts me long after I've finished listening. Like real music.

Exquisite detail. Spacious soundstage. Pinpoint imaging (with the Triangle speakers, anyway). And a harmonic presentation to die for: liquid, lush (like me, sometimes), but vivid and immediate, too.

The other day, Roy Hall of Music Hall and Mike Creek of Creek Audio dropped by for a visit. Mike had a new integrated amp that sounded wonderful.

"When are you going to make a tube amp, Mike?"

"Never."

Roy looked at the SV-2A3 and scowled, as only a Scot can.

"You and your wee watts," he said.

Yep, wee watts, all right. But the 2A3 output tube is funny — it can sound more powerful than you might think. Dennis Had, of Cary Audio, suggests that the 2A3 might be able to put out
"They produce a sound that combines refinement and excitement in equal doses - a difficult balance indeed. Build quality is great and their appearance is elegant, which makes the Crestas worthy winners indeed."

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Check out the new Cresta 2 from KEF, and you'll see what we mean. According to What Hi Fi? magazine, they deliver "the sort of precision and realism unknown at this price".

Not surprising, really. Cresta 2 was designed by the same engineers as the legendary Reference Series, using KEF's exceptionally smooth, natural-sounding 25mm (1") silk dome tweeter, partnered by a 130mm (5 3/4") long throw bass/midrange driver and a sophisticated crossover.

Inside, unique cabinet bracing virtually eliminates distortion - and stylish chamfered cabinet edges minimise diffraction effects. And unusually for a speaker of this price, Cresta 2 can be bi-wired to improve its performance still further.

No wonder the sound is so "immensely involving". No wonder the bass response has such "fine weight and impressive power". Concluding that "we rate these speakers very highly indeed", the reviewer summed it up in two words: "a steal".

Give your ears a treat.
several times its rated power for very brief periods of time. Maybe so.

There’s something else surprising about the 2A3. (I speak of the tube itself, and of 2A3 amps in general.)

Great bass.

I know that “flea-sized” amps aren’t supposed to do bass. But that’s not quite true. As long as I didn’t ask the SV-2A3 to do the impossible—drive a pair of B&W 803 Nautiluses, for instance—the bass was surprisingly tight, extended, and always tuneful. Could I get the amplifier to clip? Of course. But I enjoyed the music so much at moderate listening levels that I had no desire to push the amp that far. I didn’t have to get cheap thrills, audiophile style, by cranking up the volume.

I can’t wait for Dick Sequeria to visit.

Assemblage SET-300B
SET tube power amplifier
**Pst.** Wanna own a great 300B amplifier cheap?

| After all, there’s something to be said for 8Wpc instead of 3.5Wpc. Most 300B amplifiers are not cheap, of course, and that’s partly due to the high prices for various versions of “the tube of the century.” That century, not this one. The 2A3 may be the tube of the 21st century. I quote from the Parts Connection’s price list for 300Bs (US$ for matched pairs): Western Electric, $900; Svetlana, $385; JJ Tesla, $300; Sovtek, $180; Valve Art (regular), $150.

Originally, I was going to audition the SET-300B with a pair of WE 300Bs I had on hand, but one of the tubes started sputtering and the channel went dead. Oops. I immediately turned off the amp, waited for the tubes to cool, then removed the 300Bs. One of them just popped open. I had a tube, but no more vacuum.

I’m not blaming anyone, except perhaps myself. I had tried these tubes in more than a dozen amplifiers, and maybe I’d been a little rough pulling them out. But here I was now with a single WE 300B and looking at a replacement cost of $450. Argh.

I used the other 300Bs I had on hand: the Sovteks, the Valve Arts, and some brown-bottomed Chinese, which immediately started doing what inexpensive Chinese 300Bs have so often done for me in the past: they sputtered. (Inexpensive Chinese 2A3s, on the other hand, have proven very reliable in my experience.)

You may know Assemblage better as the Parts Connection, aka Sonic Frontiers. These guys are steeped in tubes, and they’re a great source for tubes and tube-related parts. You might call them tube believers. And they sell direct. Check with the Parts Connection for their menu of prices and options.

The basic Assemblage SET-300B kit is $799. (All prices in US dollars.) Add $200 for an assembled unit, and another $299 for a parts upgrade, kit or installed. The “Signature” upgrade includes polystyrene caps, Vishay and Caddock resistors, Cardas binding posts, Kimber Kable RCA jacks, and Kimber AGSS silver wire used throughout. I received an assembled unit with the parts upgrade—the deluxe version, if you will. It goes for $1298.

But the 300B output tubes are on you. Pst, you’re probably looking at $25–$50 shipping from Canada to the US. UPS also billed me an additional $49 for customs clearance by mistake.

The SET-300B comes with a 30-day money-back guarantee. Assemblage will refund your purchase price, but not, apparently, the shipping costs. Return shipping, too, is on you. All told, if my calculations are correct, you may be out as much as $100 if you decide to send your amp back over the border for a “refund.” So be sure you want the SET-300B in the first place.

And you might.

I’ve heard other 300B amplifiers, some of them for more than double the price, that don’t sound all that much better than the Assemblage SET-300B. Here’s what it gave me:

Immediate sound. Vivid. Alive in a way that could make your present amplifier sound dead, especially if it’s solid-state. The sound was very smooth through the midrange, if perhaps a tad brightly lit in the upper midrange and treble. This, to me, is the typical 300B sonic signature, regardless of tube brand.

I like the fact that the SET-300B uses tube rectification. To my ears, tube-rectified sound always sounds better than solid-state: more dynamic, pure, clean. I also like the fact that Assemblage supplies a pair of Mullard CV378 rectifier tubes as standard. (You can substitute 5AR4 or 5U4G tubes without modification.)

You get the other tubes, too: a single 6SN7 input tube and a pair of 68X7 driver tubes, these capacitor-coupled to the grids of the two 300Bs of your choice (and at your expense).

You can order the SET-300B with a pair of attenuators, if you like, which might allow you to bypass a preamp. But the attenuators, if supplied, are inconveniently located on the rear of the amplifier, meaning you could burn yourself on the 300Bs trying to adjust the volume.

In my listening room, the Assemblage SET-300B was able to drive all the aforementioned Triangle speakers to greater sound-pressure levels, with more ease, than the Sun Audio SV-2A3. The Assemblage amp even made a credible go at driving the power-thirsty B&W 803 Nautilus.

What I missed was ultimate resolution. I heard more low-level rez with the Sun Audio SV-2A3—and with the new McCormack DNA-125 solid-state
amp, for that matter. I heard more air, more where, more there— you know, more of the recording.

I also missed the midrange “magic” of the 2A3 output tube. This is no reflection on Parts Connection, of course. But perhaps they might consider offering a 2A3 version at some point, what with more 2A3 output tubes going into production. The 300B can put out more power, though.

The SET-300B sounded more powerful than the SV-2A3, and it is. As for the SET-300B’s resolution, perhaps I would have heard more low-level rez if I hadn’t lost half of my WE 300B matched pair. An orphaned tube!

The SET-300B has a printed circuit board. This is good news if you’re assembling the kit yourself, as some of the amp is already built for you. (The kit instructions appear excellent, by the way.) It’s not such great news if you believe, as I do, that printed circuits aren’t the best way to achieve the ultimate in tube amplifier sounds. Some negative feedback is used in the circuit. The circuit is self-biasing for the 300Bs.

There are a lot of ways to do the 300B thing, most of them more expensive than the Assemblage SET-300B. It’s a great value, with excellent build and parts qualities for the price. The amp sounds fairly powerful, considering its rating—subjectively more powerful, perhaps, than the Audio Electronic Supply SE-1, which is a smaller amp with smaller transformers. Indeed, the Assemblage SET-300B is an attractive alternative to the AES SE-1. (With the SE-1, though, you can use 300B or 2A3 output tubes.)

If you decide on the SET-300B, think about keeping your costs down. Consider the standard version or a partial parts upgrade—Vishay resistors, polystyrene caps—but maybe not the expensive speaker binding posts and RCA jacks. Consider Sovtek 300Bs. Think about getting your cost closer to $1000 than $2000. Then you’ll have a terrific bargain.

Athena Technologies S2 loudspeaker

Remember the Athena S3/P3 combo I reviewed in April?

Athena sent me their S2 monitors, which I docked atop the P3 powered subwoofers. The S2 sells for $375/pair, the P3 for $1200/pair. If that’s too much money, the P2 powered subwoofer costs a mere $750/pair.

The tweeter is the same 1” “Tetoron” (synthetic silk) driver used in the S3. The woofer/midrange is a 6.5” paper cone treated with Viagra—oops, with a stiffening agent.

I sent a line-level signal from my Musical Fidelity A300 integrated amp to the two subwoofers and powered the S2 monitors directly from the amp.

In many respects, the S2 pleased me even more than had the S3. First, the imaging seemed more precise, more focused. The transition from woofer/midrange to tweeter, at 2kHz, seemed more... well, seamless. This is the same crossover point as on the S3, so I’m not sure why the S2 should have sounded slightly better-integrated. Two-way speakers are simpler, though—even easier to design, easier to build.

You might prefer the larger, threeway S3, however, so be sure to audition both. It plays louder, with less obvious strain, than the S2. The S3 can handle gobs of power. The S2s, on the other hand, didn’t like to be driven so hard. The soundstage collapsed, the dynamics were constrained, and when I pushed the speakers really hard, they just plain overloaded, begging me to ease up on the volume. (I doubt that the A300 amplifier was clipping.)

Considering its low price and good looks, the S2 was outstanding: Good resolution. Imaging. Neutrality. Good tonal balance. Of course, the S2 sounded somewhat bass-shy when used on stands, without subwoofers. The upper bass hasn’t been boosted to make up for what’s not there below.

As with the S3, I feel that the extreme treble was attenuated. If a super-crisp, super-clean treble is your thing—if you like a tipped-up top—you might be happier with a metal-dome than a Tetoron tweeter. But few metal-dome tweeters sound so smooth, so sweet, so free from any hint of hardness or breakup.

Ultimate resolution? Nyet—the S2 didn’t have it. For $375/pair, how could it?

Lars visited the other day. We’d been out with our wives, wining and dining. I sat him down in the listening chair and played the third movement of Mahler’s Symphony 1, where the sound is quite soft.

The Swede liked the music so much he fell asleep. Started snoring.

Then, slowly, as the movement ended, I turned up the sound. The fourth and final movement erupts in a clap of thunder—the music stormed, the windows rattled, and the floor shook, thanks to those P3 subwoofers. (I doubt the P2s would go so low.) Lars was jolted out of his slumber, and almost out of his seat.

“Yipes! You’ve never had bass like that.”

“Precisely, Lars. And you are listening to a $1500 Musical Fidelity A300 integrated amp with a monitor/subwoofer combination that costs $175/pair.”

(Hey, if I want nuances, delicacy, harmonic beauty—if I’m listening to Beethoven’s string quartets—I can listen to a little SET amp, like the Sun SV-2A3.)

At very loud levels, I did feel that the S2 monitor had a tough time keeping up with the P3 subwoofer. No surprise, considering that the P2 is intended as a closer match.

Still, I think I might consider the S2/P3 combination over the S2/P2. The bass from the P3 subwoofer was phenomenal, and the interface is easy: You just mount the S2 atop the P3 and engage the docking rails. Choose the appropriate setting on the subwoofer so its frequency response is automatically set to complement the S2. Then adjust the bass-level control according to your room and tastes. The S2 runs full-range, to the limit of its ability, while the P3 fills in from the bottom.

Good sound. Clever engineering. Terrific value.
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Newfound Bass Transducer System. A new 5-1/4-inch three-way system with a full 12-inch subwoofer. Built on a transducer system, complete with a dual voice coil, a new center channel, a 1-1/2-inch dome titanium tweeter, state-of-the-art Passive Crossover Technology System, and 90°x90° dispersion.

The result was amiable clarity and freedom from distortion. It is as if you have been fitted with a whole new pair of ears, at once intimate and vital.
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### NOTES

- **Dimensions:** 250W x 200mm
- **Frequency Response:** 20Hz - 20kHz
- **Sensitivity:** 90dB
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Additional details and specifications can be found on the Infinity website or by contacting their customer service.
If you were preparing to archive your LPs to CD-R, what would you do first? Right. You’d scrub your records and whip your turntable into shape — maybe even upgrade your cartridge and/or phono section. In March, the New York Times “Circuits” section published “Janis and Jimi, Come Back from the Attic,” an article about digitizing and archiving vinyl that I don’t think even mentioned the word “turntable.” Obviously, analog is news unfit to print.

The piece was saturated with the usual LPs-in-the-past-tense clichés and trite word associations: “LPs” = “dusty,” “LPs” = “old,” “LPs” = “attic,” “LPs” = “ticks and pops,” “LPs” = “fragile.” According to the piece, which was written by a computer guy, only people of a “certain groovy generation — you know who you are — still find it hard to part with their large collections…”

Today’s reasonably priced digital recording systems make it possible and, perhaps, desirable to take those treasured analog platters for “…a last spin.” What’s more, the article continues, if you become proficient with sound-editing software, you “can even create CDs that sound better [my italics] than the album because they can reduce… the hisses, snaps, cracks, and pops.” Isn’t that special? Are we talking about vinyl or cereal?

Elsewhere in this issue of Stereophile you’ll find a review of the Apogee Electronics PSX-1000, a pro-audio 24-bit, 44.1–96kHz A/D-D/A converter that is finding favor with audiophiles interested in digitally archiving their LPs. But first, here’s the scoop on cleaning records.

**Nitty Gritty 2.5Fi vacuum record-cleaner**

I use a vacuum machine on my LPs, but not to clean them. Here’s why: If you put a dirty LP on a cleaning machine of any brand, much of the filth (dust, dandruff, nicotine, THC, body oil, dog hair, etc.) will end up on the cleaner’s “velvet”-lined lips, from which it will simply be deposited on the next record you “clean.” The stickier and more pernicious the substance, the more likely its transfer to the next LP — even if you clean those lips regularly. And you can’t see this kind of contamination on the record.

A better method is to pre-clean your dirty LPs. I do so with my record-cleaning fluid of choice: The Disc Doctor’s Miracle Record Cleaner, which contains no isopropyl alcohol. (The Disc Doctor, Duane Goldman, has a Ph.D. in chemistry and is convinced that isopropyl is not good for vinyl.) Once the fluid has been spread on the record (I use Disc Doctor’s applicator pad), I remove what I can of it with Allsop’s Orbitrac cleaning device.

Once the record has been cleaned of surface dirt and the crud at the groove bottom has been lifted closer to the surface, I wet it with distilled water. Only then do I use a vacuum machine to remove the water, and with it (I hope) what little dirt and other contaminants may still be lurking in the grooves. Of course, you have to change or wash the Orbitrac pads regularly, but what’s most important is that the final vacuuming step results in the least amount of contaminants being deposited on the lips for later redistribution onto your “clean” records.

The much simpler cleaning regimen recommended by VPI and Nitty Gritty consists essentially of applying the fluid to the dirty record and vacuuming it off. Sort of like “Drop on Freezone, lift off corns.” I wish it were that simple. It can be, but don’t expect clean records to result from a simple such treatment — at least not for long, unless you clean or change those lips often. Even then…

The Nitty Gritty 2.5Fi ($529) in black wood grain, $599 in oak) is, like all Nitty Gritty machines, compact and very easy to use. The Nitty Gritty system uses fixed but easily replaceable lips attached to the unit’s chassis. Nitty Gritty’s drive system features a small, flanged, spring-loaded rubber capstan drive with a groove cut in it wide enough to accept the edge of a 180gm LP. You use the record to push the pulley back, which allows the spindle on the machine’s surface to access the LP’s center hole. If you don’t insert the LP’s edge carefully into the groove and the pulley slips out when you push back, the spindle can skid across the surface of your record.

Once the LP is seated on the spindle, you flick a rocker switch to set it rotating. The 2.5Fi includes a fluid reservoir and a hand-operated pump. Once the pump is primed, eight to ten depressions of its piston should be sufficient to wet the underside of the LP, the fluid being applied to the record from the first of the two lips. There are two problems, however. First, in order to be sure you’ve covered the entire LP with fluid, you have to bend down and inspect the...
Critical Acclaim for
Aegis Loudspeakers

"If I hadn't known it costs just $299 a pair when I first heard it, I would have estimated its price as at least twice that. ...the Aegis One is an astonishing value. Highly Recommended."  John Atkinson, Stereophile May 2000

"...the Aegis Ones are capable of jaw-dropping performance. Their ultra-light 13cm aluminum alloy cones give them a crisp, dynamic quality unparalleled at the price, impressing with exceptional levels of clarity and presence. Hard driving tracks are supplied with gripping energy, while a spot of classical shows their instrumental resolution to be the best in their class."  ***** What Hi-Fi? September 1999

"The Aegis Twos wow with a stunningly natural and enchanting sound – worth every penny...We love 'em."  ***** What Hi-Fi? December 1999

"...there is no doubt in my mind that the Aegis Three is right up at the head of the pack, simply because it has the best bass and the best balance I've encountered at the price. A splendid budget loudspeaker."  ***** Paul Messenger, Hi-Fi Choice February 2000

"The $299 Aegis One loudspeaker is one of the greatest buys in the audio realm"  – etown.

Visit www.aslgroup.com/june/aegis.htm for the complete review.
record’s underside with a flashlight, or use a mirror and light— you simply can’t take a chance that you’re leaving part of the record untouched by fluid. Second, the lips become saturated after the pumping action. That makes not putting a truly dirty LP on the Nitty Gritty even more critical. Otherwise, all you’ll be doing is spreading wet schmutz all over the record. (VPI’s Model 17 pumps fluid onto the record through a separate nylon-bristle brush.)

Once the fluid is evenly spread across the record’s surface, you reverse the rocker switch to activate the vacuum. In three to five spins over the lips the record is dry; you remove it, turn it over, and repeat the process. One advantage of the platterless Nitty Gritty system is that the cleaned side doesn’t end up on a dirty platter, where it can be recontaminated with dirt. If you use a VPI, I recommend you put a clean mat on the platter each time you turn the record over so the just-cleaned side doesn’t become re-contaminated.

I fill the 2.5Fi’s reservoir with distilled water rather than cleaning fluid. I first clean both sides of the record on an auxiliary platter. (Never mind that I used the VPI HW-17’s; you can use a garage-sale turntable.) Then I put the record on the Nitty Gritty, pump distilled water onto the surface, and vacuum it dry.

While you might think the saturated lip would leave a line of moisture on the vacuumed LP, I found that it didn’t, though occasionally it did leave a few minuscule drops. These were easily removed and collected in an easily accessed waste-fluid tray.

Nitty Gritty recently introduced a $54.95 movable spindle adapter that lets you clean 7” and 10” records with equal ease and convenience. A set of four pairs of new lips is reasonably priced at $15. VPI gets $20 for a single pair, which come attached to a new suction tube. Nitty Gritty is quick to point out that its four-pair lip kit can be used with the VPI tube. Instead of chucking the entire tube, just peel off the old lips and replace.

Nitty Gritty vs VPI

Though I haven’t tried the Moth unit that was on display at HI-FI ’99, I think the VPI HW-17F is probably the best record-cleaning machine available. With its built-in fan, bidirectional motor, integral nylon brush, electric fluid pump, and very strong vacuum, it is a true workhorse that can clean almost endlessly without overheating; and, given my cleaning routine, the platter is convenient.

Unfortunately, not everyone can afford to spend $1100 on a record-cleaning machine. If you want to spend less than $500, there are the VPI 16.5 ($495) and a number of competitively priced Nitty Gritty machines. The VPI 16.5 requires you to manually squirt fluid on the record, while Nitty Gritty’s $519 1.5Fi — which gives the same mechanical performance as the more costly 2.5Fi, but has sidepanels of plastic oak veneer instead of the 2.5Fi’s genuine wood — includes a convenient reservoir and manual pump. You can get the 1.5 without pump for $442.

Or you can “roll your own” with the totally manual Record Doctor II machine, made by Nitty Gritty for online retailer Audio Advisor, which sells all of these machines at a small discount. After a while you’ll find turning the record by hand tiresome, so why not save up the extra couple hundred bucks and buy one that does it automatically? Nitty Gritty also makes machines that clean both sides at the same time — a real timesaver.

If you don’t want to go crazy with the cleaning regimen I’ve described — actually a highly simplified version of one described in an article by Michael Wayne in issue 3 of The Tracking Angle (R.I.P.) — Nitty Gritty’s 2.5Fi cleaning scheme is fast, easy, and works reasonably well, as long as you clean the lips after each dirty record. The advantages of the Nitty Gritty system are compactness, fewer moving parts, less expensive lip replacement, and the convenience of a fluid pump, all for about the same price as VPI’s 16.5, which omits the pump. The advantages of the VPI system include the platter (a disadvantage if you don’t keep a clean mat handy for the just-cleaned record side) and what appears to be a stronger vacuum. (Nitty Gritty recommends you clean no more than 10 records per session to avoid overheating the machine, then let it cool down for 15 minutes before resuming. That should give all but the most anally compulsive, hand-washing-obsessed audiophiles enough cleaning time — and even some leftover time to actually listen to music.)

Some reviewers claim that one machine “sounded better” than the other, but gimme a break. Even with the difference in vacuum strengths, I seriously doubt any reviewer could, by only listening, identify which machine had cleaned a record. If used properly — ie, not as instructed — either machine will do the job.

In Heavy Rotation

1) Jimi Hendrix, Axis: Bold As Love, Classic mono LP, 180gm
2) Iggy Pop, New Values, Arista/Sundazed LP, 180gm
3) Iggy Pop, Soldier, Arista/Sundazed LP, 180gm
4) The High Llamas, Snowbug, V2 LPs (2)
5) Van Morrison, The Skiffle Sessions, Exile/Virgin LP, 180gm
6) Clifford Brown Allstars, Emarcy/Speakers Corner LP, 180gm
7) Led Zeppelin, BBC Sessions, Atlantic/Classic LPs (4), 180gm
8) The Who, BBC Sessions, Polydor LPs (2)
9) Kinks, Kinda Kinks, Castle LP, 180gm
10) Various Artists, Voices of the Real World, Real World CD

Stereophile, June 2000
As for Nitty Gritty's Pure 2 cleaning fluid, it smelled of isopropyl alcohol, as do a number of other commercially available products. So I didn't try it. Given how inexpensive are the alcohol-free fluids from Disc Doctor and other firms, why would you want to start messing with your own concoctions? Disc Doctor even sells his fluid in highly concentrated form so you don't have to pay for shipping water all over the country.

My conclusion? Any vacuum machine beats no machine at all. The Nitty Gritty 2.5Fi worked well using the methodology I've described. I don't think using it per the instructions does an effective job, nor do I think saturating one of the lips is the best way to spread liquid on the record, but I was pleasantly surprised to find that the cleaned record was dry, and that the wet lip didn't leave a smear on the record. If you're serious about your vinyl and about the long-term health of your precious stylus, you can't afford to be without such a machine.

**VPI's Cure for the No VTA Blues**

Roy Gandy is a swell guy, and his Rega Planar turntables and separately available RB250, 300, 600, and 900 tonearms are among the best values in analog audio. This is why so many turntable manufacturers use OEM versions of Rega tonearms for their designs.

Rega's loudspeakers, amplifiers, and digital gear are equally fine performers and reasonably priced, but Gandy has some decidedly iconoclastic ideas, one of which is that records don't need to be cleaned. He believes the stylus pushes the dirt out of the grooves as it plays. No comment. (ScanTech's Jonathan Carr, designer of Lyra cartridges, has commented, though his remarks can't be printed in a family magazine.)

Gandy also believes that the importance of adjustable VTA is overblown, and he's got the math to prove it. Furthermore, he believes that tonearm rigidity is far more important, and that it is usually precluded by VTA adjustability. That's why his arms have fixed mounts. He also believes that most of the sonic differences noted from adjusting VTA are really a result of the other geometrical changes that occur when you loosen and tighten things while changing VTA.

A number of aftermarket devices are available for adjusting VTA on Rega arms, including ones from Basis, JA Michell, and now VPI. To my eyes, the VPI seems to maintain the desired rigidity while allowing for about a full inch of vertical adjustability. It's nicely machined from aluminum, has a sturdy mounting collar that attaches to your 'table via three screws, and costs a very reasonable $150.

The only downside is it doesn't fit the standard Rega opening. If your armboard is removable, you can send it to VPI and they'll drill it out for you, or you can do it yourself.

**Tough Love for Unruly Electrons**

Must have been a room full of yuks when Alexander Fleming held up a piece of bread and proclaimed to his peers, "This mold will save millions of lives." But who laughed last? Holh that thought as you read about the $299.95 Symphony line conditioner from Quantum Products.

The problem, according to QP's literature, is that as soon as "a musical or visual signal comes into contact with electricity, it inevitably becomes scrambled and distorted... due to the inaudible noise being generated by the chaotic, random motion of the electrical current along the signal path." This, according to the literature, "radically contributes to raising the noise floor." Worse, it leads to what QP calls "signal indecision," which I guess is a kind of electrical angst from which untreated power suffers. The noise and angst destroy "edge harmonics, resolution, timbre, and front-to-back imaging," resulting in "a flat, two-dimensional impression."

Enter the Symphony. "After years of exhaustive research" (seems like all research is "exhaustive," doesn't it? No wonder scientists look so gaunt and unhealthy!), "Quantum Products has developed an honest, timely solution to... electromagnetic noise in small signals." Just by plugging the Symphony's wall-watt power supply into an outlet on the line from which your audio system draws power, you will hear "increased timbral clarity, higher resolution, elimination of high-end harshness, greater bass definition, [and] better front-to-back imaging... Your audio system will produce expanded dynamic range, enhanced imaging, and spatial realism." Music "will maintain... the crystal clarity of digital along with the warmth of analog." Don't forget that moldy bread.

Can't beat all that for 300 bucks, right? So what's in the box and how does it work? "The technology employed in Symphony is based upon an electromagnetic processing method" that makes "coherent the random, chaotic motion of the electrons in the components of the circuit design."

In other words, for the most part, the circuitry inside the box doesn't do anything. It's simply a carrier for the effect, because it has been treated in some way with the mysterious "electromagnetic processing method." Look, I'm not endorsing this—I merely regurgitate here the technical roughage I've been forced to ingest.

Once the processing renders the electrons in the circuitry "coherent," whatever that means, they remain that way, apparently indefinitely. When you plug in the wall-watt, "it is theorized that a synergism of interaction between the atoms of the house wiring (and of connected electrical devices) and the electrons in the current stream flowing through them takes place."
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The value of any loudspeaker cable should not be judged on the company’s propaganda or on its advertising budget. The true value lies in its ability to orchestrate a euphonious amplifier-to-loudspeaker relationship and accurately convey the emotions and color of any given recording.
Apparently what happens is that the "coherent" electrons whip the incoherent ones into place upon contact. This occurs in a few minutes and affects "all of the electricity in your home... from the power meter forward."

The device also contains "microprocessor circuitry" that functions as an efficient "carrier" of the technology while emitting "specific preprogrammed frequencies to pulse the AC [via] an inductive/resistive circuit [that] acts to couple the frequencies to the AC line via an external transformer" (the wall-wart).

So is the Symphony moldy bread or penicillin? I had two Symphonies and a $600 Symphony Pro, the latter said to have a more pronounced effect. It looks nicer, too, and plugs directly into the wall instead of using an outboard transformer.

I first heard the "effect" about a decade ago, when Tice claimed to have put this "technology" into a RadioShack digital LED clock (the famous Magic Clock). I could swear I heard a difference almost immediately when the clock was plugged into the wall, as did the other reviewers present. The difference was—and I hate to use the word—a more, um, coherent sonic picture, a kind of subtle "rightness" and "jelling" that I could then identify only by its disappearance upon my pulling the plug on the device.

I know I'm opening myself up to humiliation here, but I've now heard the same effect with the Symphony and the Pro... or at least I think I do. The placebo effect is pretty potent in these kinds of circumstances, so who knows? But with Symphony in-circuit, the sound feels "right"; when the plug is pulled, the "zone" collapses.

Yes, that was a mocking tone in my description of Quantum's product and technology. I know I should dismiss QP's pseudoscientific mumbo-jumbo and ridiculous claims for sonic improvements, but just because they can't adequately explain what's going on doesn't mean that it isn't going on. [See the May issue's "Undercurrents."—Ed.]

I don't think the Quantum Products folks are charlatans. I think they really believe they have created a process that improves the sound. They could be wrong, and I could be wrong in thinking I hear an improvement or even a difference when the device is plugged in. But since QP guarantees your satisfaction or your money back (excluding shipping and less a 15% "restocking fee"), it'll cost you about $45 to appreciate the sonic effects or feel like a fool. Even though I think I hear and appreciate the effects, I'm not keeping either model around—even at accommodation prices. You might feel otherwise.

This just in...

I've just received a test pressing of Classic Records' all-analog monophonic reissue of Jimi Hendrix's Axis: Bold As Love. If you're a Hendrix fan, you need this stupendous-sounding record. For sheer visceral musical pleasure, it stomps all over the stereo editions, whether original British Track, Reprise "pink steamboat," or Japanese. Not convinced about mono? Axis will make you a believer!

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It was Saturday, and we were doing the usual Saturday things around the house. My audiophile popped his head into the living room as I was putting up new curtains and asked if I wanted to grab lunch in the city before going to the gym.

"Sounds good to me!" I shouted over the voice of Tom Waits.

We arrived on the East Side at 3:00, cutting lunch just a little tight—we were meeting our trainer at 5:00. As we walked over to Hor’n’Crustys, my audiophile asked, "Honey, do you mind if I stop in HMV for a minute? I just got an e-mail about two really good CDs that I want to pick up?"

I must have been lightheaded from hunger. I agreed without first converting the requested "minute" from audiophile time to mere mortal time. I browsed the "New Releases" rack near the cashier as my audiophile disappeared into the bowels of HMV.

Ten minutes passed, and my stomach was growing. I went downstairs to see what was holding things up.

"They moved the sections around!"

"So why don’t you ask the guy at the information booth over there?"

My audiophile looked as if I’d asked him to listen to a cassette on a boombox. Ask directions? Never. The CD was here somewhere and he was going to find it. But the clock was ticking, and by now my stomach’s complaints were audible—a sort of midrange (midriff?) hootiness.

"I’ll help you look," I offered. "What’s the title?"

He looked down at a crumpled e-mail printout. "’s okay, I got it. Must be over there somewhere …"

Half an hour passed. I could now recite the artist and title of every CD on the "Recommended" rack. I spotted my audiophile as he whipped past the Country Music section. "How about using the MUSE machine?" I shouted after him. Using MUSE is like using a cell phone to get directions while driving. There’s no direct eye contact with humans, which makes it acceptable to even the most manic man.

At the MUSE kiosk he typed in the title of the first CD, and the information popped up. He typed in the title of the second CD. Nothing. He tried again. Again, nothing.

He went off to retrieve the first CD. I waited by the cashier, killing time by comparing AA and AAA batteries. My audiophile finally arrived, Elvis Presley CD in hand. One down, one to go.

Luckily, Hor’n’Crustys was only a few blocks away. We ordered turkey burgers, which caused major confusion as the guy behind the counter tried to get it straight that my audiophile wanted lettuce in his and I didn’t want lettuce on mine. After we’d repeated the order five times, he finally got it. We wolfed down the burgers and ran to the gym, arriving just in time to meet our trainer.

Ten minutes into our abdominal exercises I began to think the turkey burger hadn’t been such a good idea. I started to feel nauseated. "Hurling on the trainer is not permitted!" our trainer helpfully reminded us. "This will result in additional reps."

Two hours later, my head was spinning. I swore to never again eat before training, if only I didn’t have to do the last set of triceps push-downs. The trainer laughed an evil trainer laugh. "Hope that CD was worth it, heh-heh-heh. Now let’s get busy with that last set."

We’d dragged ourselves out of the gym and were driving cross-town when my audiophile, with a gleeful shout, suddenly turned onto Broadway. "I bet Tower has it!"

We circled the block a few times, but no parking space—the Lincoln Center area on a Saturday night. Finally, we gave up and pulled into one of those $25/hour rip-off garages. The attendant told us we were "lucky"—we were the last car in, he said, as he set up the "full" sign behind us. Yeah, right. "Lucky" us.

Tower was buzzing with dateless singles, still in the dark as to what CD we were looking for. He checked with MUSE again, first by album title, then by artist, then label. Nada. We made it back to the garage just before the second hour kicked in for an additional lucky $25.

Well, at least we’d found Elvis’s Such a Night. Back home, as he loaded it in the CD player, my audiophile logged onto AOL to e-mail his friend. "Got the Elvis CD, but couldn’t find Dennis Lecorriere’s Out of the Dark. Are you sure you gave me the right information?"

My head still spinning from the turkey-burger/workout combo, I dragged myself over to the couch, where Elvis’s voice had just filled our living room. But before Elvis had finished singing his second word, my audiophile hit the remote and we were on to track 2. One guitar chord, then track 3. In two minutes we’d reached track 8.

My audiophile sat back and listened for a minute to the last track, frowning. Suddenly, he looked at me.

"Hun? About the new curtains …"

"Yes?" I was thrilled. He must have noticed how the dark green color tied in with the piping on the couch.

"The acoustics were better with the old ones. You didn’t throw them out, did you?"

Before I could say anything, the computer chimed. "You’ve got mail."

As my audiophile retrieved his e-mail, I leaped up to smuggle the old curtains into the garbage. I returned to the living room just as the Elvis CD ended.

"No wonder we couldn’t find the other CD. It’s available only in the UK. But the Elvis was worth the trip. What’d you think of it?"

I considered for a minute. Okay, maybe I’d heard only half a verse and a blur of chords, but the turkey burger was finally settling in, and my new curtains were safe. Life was looking pretty good, and now Johnny Cash was singing.

"Loved it!" I shouted.
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I t was 2am on January 8, 2000, and I was sitting at the bar of the Paris Hotel in Las Vegas. I'd just arrived for the Consumer Electronics Show and was recovering from a stressful day of travel. The airlines have a new computerized ticketing technology called the "electronic ticket": you get a reservation and a confirmation number, but no physical plane ticket, itinerary, or the feelings of security that accompany those pieces of paper.

When I arrived at my designated departure gate on the morning of January 7, I was informed by the attendant, "Sorry, I don't have you scheduled for this flight."

"I have a reservation. Here's my confirmation number."

"The computer shows your reservation for tomorrow."

"That's impossible! I have a hotel reservation for tonight, a rental car reserved for tonight. There must be some mistake."

"Without an itinerary or a ticket, there's nothing I can do. This flight and your connecting flight are booked."

"I want a manager now!" My voice was loud, angry.

She walked away, and returned 10 minutes later. "I can give you a standby ticket on both flights. You have priority seating. Don't worry—you'll get a seat. We always have non-shows."

Luckily for my traveling companion and me, there were seats available on both flights and we were able to sit together.

Back at the bar of the Paris Hotel, I'd ordered my favorite cocktail and was trying to forget about the airlines' inefficiency and their "new" computerized ticketing, when suddenly I was surrounded by three young men.

"Where are you from?" asked the large guy with the southern drawl.

"I'm from New York."

The tall, slender guy said, "I'm here for Mobile; we manufacture chips. What about you?"

"I'm into high-end audio."

It was the oriental guy's turn. "How many MP3 players have you sold?"

It was late, I was tired, and the Cosmopolitan I'd just drunk was taking effect. "I'm into high-end audio—speakers, amplifiers, quality stereo systems."

"Yes, but how many MP3 players do you sell a month?"

"Do you know what an MP3 player is?"

The oriental guy: "I just know it's the newest thing."

At that point the bartender interrupted. "Are these guys bothering you? I'll get rid of them."

A few minutes later they walked away.

The technology tornado is picking up speed, devouring everything in its path. Pick up an audio-video magazine and look at the cover. "THE FUTURE IS HERE," it screams in big red letters. Inside are stories about a refrigerator that buys its own food, a floor that cleans itself, and stereo speakers that adjust themselves to a room's acoustic.

The cover of a computer magazine brags about 100 useful websites. You flip through a few pages and stop at a black-and-white photo of a beautiful woman. There's something strange about her, and after a few minutes' study you realize that her pupils have been replaced by a pair of digital camcorders.

That image remains implanted in your brain as you turn the page in search of the cover article. On the very next page is a large photograph of the back of a man's head. He has very short hair and a 64MB hard drive attached to his skull.

Your mind fills with images from Terminator 2 and the battle for survival between humankind and the machines: The earth is a burning, smoking, barren wasteland. It feels as if a knife is stabbing you between the eyes. Your ears ring from the excruciating highs, your head pounds from the sounds of war. The chair is vibrating from the rumble and boom of the bass. Your heartbeat races and your entire body begins to shake.

Stop everything. Turn off the HDTV with the ear-splittingly painful self-adjusting speakers. Shut off the computer with its plasma screen and metallic, digital, distorted sound system. Turn off the lights, open the curtains, and take a deep breath. Watch the trees blowing in the breeze and enjoy the moment.

Walk into your listening room and close the door. Savor the sounds of silence, the peace and quiet, the joys of acoustical tiles and sound treatments. Take

**High-End Audio is Here to Stay!**

by Gigi Krop

*Stereophile, June 2000*
Vienna Acoustics

"Of the many speaker that have passed through the system, and the list includes Wilsons, Ensembles, Alons and Aerials, none even remotely approaches the realistic holographic soundstage thrown by the Mahlers." —Ultimate Audio

Vienna, Austria conjures up images of grand composers, the finest music. Indeed, the best of life. So it should surprise no one that the "City of Music" has produced a world-class loudspeaker firm; dedicated to constructing a range of speakers capable of thrilling with their musicality and transparency.

As befits a culture obsessed with perfection, the design and build quality of every speaker that leaves our factory is exquisite. We produce our cabinet in European furniture joineries, so when we say our cabinetry is "furniture grade", we mean it.

Our formula for success relies upon using the finest speaker drivers and crossover components extant. And when nothing else meets our exacting standards, we design and build the necessary components ourselves.

Only in this way can we produce to this standard of quality, yet keep our prices affordable: Because we know that one of the best things in life is owning a great musical experience at a reasonable price.

The new Beethoven 3.2 $3990/pr.
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a few steps over to the preamplifier, turn it on, and set the dial to Phono. Flip on the mono tube amplifiers and watch the tubes glow. While the system warms up, flip through the pile of LPs on the floor and choose your favorite album. Study the playing surfaces. Are they scratch-free and clean? Yes. You smile as you admire the symmetrical beauty and technological artistry of your custom-made turntable. Carefully, you place the record on the platter and set the mechanism in motion. You drop into the soft comfort of your listening chair and are surrounded by beautiful music.

It's the year 2000, and the sound quality of audio equipment has improved greatly over the 50 years since the dawn of hi-fi. The build quality is better, the parts are hand-picked and custom-made, the technology has grown simpler and purer. But the goal has remained the same: The raison d'être of high-end audio is the beauty of the music.

Close your eyes and you're transported to the concert hall of your dreams. The soundstage is wide and deep: violins on your left, woodwinds on the right. You recognize the style of your favorite pianist. The emotion of the music takes you on a roller-coaster ride of crescendos and arpeggios, and ends with a roll of the bass drum. You open your eyes—the orchestra disappears, and the steady lights of the preamplifier faceplate and the glow of the amplifier tubes appear before you.

This is better than virtual reality because, in its purest form, music is the divine spark of creativity. Music elevates the spirit, touches the soul. No technology can replace that feeling. As long as it stays connected to the music, high-end audio is here to stay.

Gigi Krop is married to that Dark Knight of the Internet newsgroups, Steve Ziper. Together they run high-end audio retailer Sunshine Stereo in Miami Shores, Florida.

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**The raison d'être of high-end audio is the beauty of the music.**

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“These speakers (UNO 2.0) are so good, it’s scary.”
—Gordon Rankin, Wavelength Audio

“The new Series 2.0 Avantgardes have raised the reference level for loudspeakers.”
—Geoffrey Poor, National Sales Manager, Balanced Audio Technology

“It’s true; I spent a considerable amount of time auditioning the Duo 2.0 at the St. Tropez… The combination of clarity, lack of distortion, and stupendous dynamics was most impressive. Easily, Best Sound at Show, and I mean anywhere in Las Vegas!”
—Dick Olsher, CES 2000 report, EnjoyTheMusic.com

“Heard the DUO 2.0s for myself and totally agree—they are truly stunning. Yes—one of the finest sounds at the show as well as anything I’ve ever heard… period!!”
—Bill Wells, The Audiophile Voice

“The Avantgarde Acoustic room…afforded me my first listen to the stunning DUO Series 2 horn loudspeaker. Driven by all BAT components, the DUOs sounded glorious, and far less colored than any other speaker I’ve heard employing horn-loaded drivers. The sound of massed choral voices was particularly sumptuous, the speaker conjuring an eerie apparition of the original event. A true achievement. Not to be missed.”
—Andrew Chasin, Groovenoise.com

“I walked into the Nirvana and Wavelength Audio room to be greeted by a pair of eye-popping Avantgarde loudspeakers. This was my first experience with these horn loudspeakers and I was rewarded with a positive experience. The midrange did not have that cupped-mouth, hollow sounding hoot that most people associate with horn loudspeakers. In fact the midrange was open and clear with a slight warmth to the sound that added balance to the overall sound…this system will really change audiophiles’ perceptions of good sound.”
—Gregory Kong, CES 2000 report, planethifi.com

“Absolutely Amazing… The response of those who have heard the unbroken-in speakers (DUOs). Imagine after they are broken in.”
—Jamal Instrum, Foss Audio

“Needless to say, they are awesome. I totally agree with your premise that the music’s message comes through! Two quite obvious events convinced me:
1) I constantly tapped my feet while listening—even to music I normally wouldn’t listen to.
2) When it became time to leave, I really didn’t want to go. It was leaving the music that was traumatic.
They are certainly everything you said they were. I don’t ever recall listening to any speakers that were more totally satisfying.”
—Dr. Ron Stroud

“I have NEVER experienced anything that seems to so closely tie the listener to the emotions the artist is expressing. It was as if you were wiring your preamp to my brain. Sound staging, timber, speed, dynamics...
are all there, but these horns do something else to the listener that I have never experienced.

I was overwhelmed, especially with the sad, emotional music we were playing at first. Indeed, I found them powerful—emotionally...

—Dr. Patrick Conner

"As far as soundscape and imaging goes, the UNOs ability to "pressurize," or fill my room with a full and complete soundscape, was awe inspiring....

Imaging was...properly sized and each instrument also had its own sphere of acoustic reverb (or "hall sound").... Depth was realistically portrayed of course. Even more amazing was how well the UNOs in my room disappeared to the point that, when dictated, instruments/sounds were easily produced outside the speakers (and not just between them)

The upgraded SUB 225 CTRL PRO as supplied with my pair of (Series 2.0) UNOs sounded very fast and clean.... The UNO is the very first speaker where I felt my prized M+K MX2000 subwoofer was never needed during pipe organ or music's other low frequency needs.

These speakers are so transparent that they will, I repeat, will tell you about the synergy of your system or lack thereof. In my listening room the UNOs' unbelievable all out clarity and immense dynamic capabilities was enough for me to part with my own hard earned cash. You just might too. In the end what really matters is that you... Enjoy the Music."

—Steve Rochlin, EnjoyTheMusic.com

"Up until now I have had reservations about horns. ...As a consequence I had expected the DUOs to sound coloured, ultra-dynamic, and to a certain extent the sum of two rather obvious parts. That is not the case.

...They can exhibit stunning ranges of subtlety, dynamics and ultimate loudness...exemplary imaging to recordings...pretty much seamless top-to-bottom even frequency response in-room...very uncoloured...transparency that many speaker systems are still striving for. They have an uncanny presence and immediacy ...dynamic range matched more closely to real life than anything else I have heard.

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The Emerson String Quartet defies conventional wisdom. They like to take risks, and they use the adrenaline that creates to hone their music-making to a fine edge.

This extends to the composition of the quartet itself. Formed in 1976, the group gave its first concerts in 1977 and settled into its current lineup in 1979, when cellist David Finkel joined. But the Emerson has never settled on a permanent first violinist—Eugene Drucker and Philip Setzer alternate those duties.

“We've just always done it that way,” Philip Setzer explained. “On my last day at Juilliard—I mean literally, classes were over and I was returning some books to the library—I ran into Gene, who I knew from Oscar Shumsky's class, and he said, 'Do you want to be in a quartet next year?' I said, 'Sure.' And as I was leaving and the door was closing, he said, 'We'll switch.' And I said, 'Okay.'

“It seems natural to us, even though people kept telling us that we'd have to make a decision eventually. I expect we both have an appreciation of that from when we were kids. Both of our fathers were second violinists in quartets—Eugene's father in the Busch Quartet, and my father in the Smithsonian Quartet.

“I love playing second violin; it requires a different kind of playing than the first part. I wouldn't want to give it up. I wouldn't want to play either first or second all the time. And there's a practical side to it as well—sharing the greater demands of the first parts has allowed us to do more repertory.”

Ah yes, the repertory. The group has been fairly adventur-
After the triumph of their Beethoven Quartets cycle, The Emerson Quartet set their sights on the heights of Shostakovich.

ous there as well. In addition to the standards of the quartet form—Beethoven, Mozart, Debussy, Schubert—their output has been generously leavened with challenging works by Webern, Ives, Cowell, Harbison, Wernick, Imbrie, and Piston. Nor are they intimidated by the new and offbeat, as shown by their recording of Edgar Meyer's enchanting String Quintet, which they paired, contrary to conventional crossover wisdom, with Ned Rorem's austerity sonorous Quartet No.4.

Even when recording from the quartet canon, the Emerson's approach is unconventional, to say the least. In 1988, they recorded all six of Bartók's quartets, which they had begun performing as a single concert program. Their bravura performances were certainly well-received. The disc won two Grammys, one for Best Classical Recording—the first time a chamber-music ensemble had ever taken the top honor—and Best Chamber Music Recording. It also was voted Gramophone's "Record of the Year."

In 1994, the group was awarded another Best Chamber Music Recording Grammy, for its superlative performance of American Originals: the two Ives quartets, plus Barber's haunting Op.11 quartet.

In 1997, they released the complete Beethoven Quartets in one fell swoop. Most ensembles attack this towering edifice of chamber music one opus at a time—but the Emersons felt the need to confront the quartets as an integrated whole. The group has frequently performed the cycle in chronological order, illuminating the growth and development of Beethoven's personal voice over the course of five evenings. That recording won them another Best Chamber Music Recording Grammy, and was also a Stereophile Recording of the Month (May 1997, Vol.20 No.5).
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Climbing Everest Barefoot: The Emerson Quartet set their aim on Shostakovich

In January, Deutsche Grammophon released the group’s latest major undertaking, a complete traversal of Dmitri Shostakovich’s 15 string quartets. The first digital recording of the complete Shostakovich cycle, it was recorded in concert over the course of four years at the Aspen Music Festival. Yes, recorded live — specifically because the Emerson believes that the audience’s intense concentration brings an audible energy to the recordings.

Why Shostakovich?

“Back when we began the Beethoven cycle, someone asked us exactly the same question — Why Beethoven? — although the reasons there were very different,” said violinist Larry Dutton. “Many people knew the Beethoven quartets, many amazing musicians had recorded them, so our decision was based upon our need to confront those pieces. With Shostakovich, it’s a little different. We love the music, of course, but it’s not all that well-known, and perhaps our interpretations of it will make it possible for people who haven’t heard it before to become Shostakovich listeners, which would be very gratifying.”

“Shostakovich had a profound influence on the 20th century, both musically and politically,” violinist Eugene Drucker maintained. “Those two categories overlap in this case — that’s because he was under so much pressure for large portions of his career to somehow satisfy the demands of the cultural authorities in the Soviet Union to sound optimistic, to produce music of the masses, for the masses. I think he did that more through his symphonic works and his film scores. In the string quartets, perhaps, he was under a bit less scrutiny than in some of the larger works.

“That left him somewhat freer to explore all the possibilities of harmonic language. He found a way, within the constraints that were imposed upon him, to express the full range of emotion. He found a way also to express some particularly 20th-century kinds of feelings. Some of his music is full of intensity and extremes of harmonic tension that you don’t associate with music from the previous century — although certainly there are moments in Beethoven and Wagner where the harmony seems pushed to the extreme. And Shostakovich was able to do that in what was basically a tonal language.”

“At first, I’m not sure that all of us really ‘got’ Shostakovich,” Philip Setzer said. “I don’t mean understanding the music, but understanding what the music was really all about. Shostakovich rarely wrote exactly what he meant, except when he was in great pain and expressing that. His humor is very dry and sarcastic. He’d say really outrageous things with a totally straight face, musically speaking.

“Then, there’s the whole experience of performing Shostakovich. There are places where he creates a tremendous amount of tension; this is almost like Chekhov, where there are a lot of people on stage, but not much seems to be happening, and yet, if it’s well-acted and well-directed, you can just feel the tension building. Shostakovich is like that — it’s

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**Emerson Quartet: Discography**

**American Originals**

Barber: String Quartet, Ives: String Quartets 1 & 2, Scherzo ("Holding Your Own").

DG 435 864-2

**BARBER:** The Complete Songs, Dover Beach

**HARBISON:** String Quartet 2

**SCULLER:** String Quartet 3

**WERNICK:** String Quartet 4

Thomas Hampson, baritone

DG 437 537-2

**BARTOK:** String Quartets 1–6

DG 423 657-2 (2 CDs)

**BEETHOVEN:** String Quartets 1–16

DG 447 076-2 (7 CDs)

**BEETHOVEN:** String Quartet 11

**SCHUBERT:** String Quartet 14 ("Death and the Maiden")

DG 423 398-2

**BEETHOVEN:** String Quartet 16

**SCHUBERT:** String Quartet 15

DG 429 224-2

**BORODIN:** String Quartet 2

**TCHAIKOVSKY:** String Quartet 1

DG 427 616-2

**BRAHMS:** String Quartet 1

**SCHUMANN:** String Quartet 3

DG 431 650-2

**CADOPPO:** Monsterslayer

Curt Cadoppo, piano

Capstone CPS 8652

**DEBUSSY:** String Quartet

RAVEL: String Quartet

DG 427 320-2

**DVOŘÁK:** Piano Quartet, Op.87; Piano Quintet, Op.81

Menahem Pressler, piano

DG 439 868-2

**DVOŘÁK:** String Quartet 12 ("American")

**SMETANA:** String Quartet 1 ("From My Life")

DG 429 723-2

**COWELL:** Quartet Euphometric for Strings

**HARRIS:** String Quartet 2

**IMBRIE:** String Quartet 4

**SCULLER:** String Quartet 2

**SHEPHERD:** Triptych for Soprano & String Quartet

Betsy Norden, soprano

New World 80453

**MEYER:** String Quintet

**Rorem:** String Quartet 4

Edgar Meyer, double bass

DG 453 506-2

**MOZART:** Flute Quatuets 1–4


Carol Wincenc, flute

DG 431 770-2

**MOZART:** String Quartets 14–19 ("Haydn")

DG 431 797-2 (2 CDs)

**MOZART:** String Quartets 17, 19

**HAYDN:** String Quartet, Op.76 No.3

DG 427 657-2

**PISTON:** Concerto for String Quartet, Winds, & Percussion

Julliard Orchestra

Composers Recordings S-248

**PROKOFIEV:** String Quartets 1 & 2, Sonata for 2 Violins

DG 431 772-2

**SCHUBERT:** String Quintet, Late Quartets

Mstislav Rostropovich, cello

DG 459 151-2 (3 CDs)

**SCHUBERT:** String Quintet

Mstislav Rostropovich, cello

DG 431 792-2

**SCHUMANN:** Piano Quintet, Op.44; Piano Quartet, Op.47

Menahem Pressler, piano

DG 445 844-2

**SHOSTAKOVICH:** String Quartets 1–15

DG 447 076-2 (7 CDs)

**WEBERN:** Works for String Quartet

Slow Movement (1905); Movements, Op.5; String Quartets, "1905" & Op.28; Six Bagatelles, Op.9; Rondo (1906); Three Pieces; Movement for String Trio, Op. post.; String Trio, Op.20.

DG 445 828-2

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Climbing Everest Barefoot: The Emerson Quartet set it all in life.

Karl Dutton, editor of Stereophile, and the four members of the Emerson Quartet have earned a reputation for recording music of the greatest extremes. They’ve said that what this evaluation is gone — because you don’t have the chance to compare. A painter can paint something and then look at it for weeks before deciding if it was what he wanted to do — he doesn’t have to do it in one day, and then somebody puts it on a plane and away it goes. Because Da-Hong uses the technology so capably, we were able to hear all of what we did immediately and take it home with us, which allowed us to make decisions as a quartet.”

“I thought it was neat to go about it this way,” said Setzer, “as opposed to doing it in the studio, which gives you a snapshot. In a studio, you go in and you record the first movement four times, and by the fourth time you’ve already gotten tired of it. When you base it on live performances, it becomes a much more creative process. When you have to wait to hear things, you lose a lot. After about 10 seconds, an emotion becomes a memory, you can’t actually feel it any more. The technology we used for this project was really liberating.”

The gamble has paid huge artistic dividends. The Shostakovich recordings have extraordinary presence — a sense of intimacy that in no way interferes with their re-creation of the acoustic of the Aspen Music Festival’s Joan and Irving Harris Concert Hall. Instrumental timbres are bright and filled with color, and Da-Hong Seetoo has captured a near-perfect balance of instrumental detail and realistic image size. Save for the applause at the end of each performance, you’d never guess these were recorded with an audience present, unless you accept the ensemble’s insistence that their presence imbues these recordings with a palpable tension.

Perhaps it does. The ensemble plays with a muscular intensity that delivers the music with startling visceral impact. Yet for all of the intensity with which they approach these works, the musicians play with remarkable precision and purity of intonation. It’s hard to imagine these works played at a higher technical level. I’m not sure such a thing exists.

The Emerson’s Shostakovich will not sit well with all listeners. I’m sure. Many will prefer the Borodin Quartet’s brawny interpretations, or the refined, comprehensive Fitzwilliam Quartet recordings from the ’70s. Both of those cycles certainly have much to recommend them, but in terms of sound quality alone, the Emerson’s stands head and shoulders above all. As to the performances, different tastes will hew to different interpretations; all I can say is that I find these enthraling and convincing.

It’s early in the year yet, but by anyone’s standards, the Emerson String Quartet’s complete Shostakovich cycle has got to be reckoned one of the most significant recordings of the year. Sometimes the biggest risks produce the sweetest victories. Savor this one for yourself.
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Although Kentucky loudspeaker manufacturer Thiel has produced some standmounted models for home-theater use, all of their serious music speakers have been floorstanders. Enter the PCS: even though styled to match every Thiel speaker since the groundbreaking CSS of 1989, the 19"-high PCS sits on a stand, not the floor.

All the PCS's drive-units are made in-house by Thiel, and the heart of the speaker is the coaxial tweeter-midrange unit, similar to that used in the Thiel CS2.3. As Brian Damkroger discussed this unit at length in his January 1999 review of the '2.3 (available free of charge in the www.stereophile.com "Archives"), I will refer you to his description. The important fact to note is that it uniquely uses a single motor and a mechanical crossover between the tweeter and midrange diaphragms.

This unit crosses over below 700Hz or so to a metal-cone woofer, reflex-loaded by a shallow, flared port on the sloped-back front baffle. The woofer has a massive 2.5-lb magnet and features Thiel's traditional long-gap, short-coil construction to minimize magnetic nonlinearities. The electrical crossover is a two-way, first-order type, but still appears complex, to judge from the number of components used. These components are mounted behind the single pair of terminal posts. High-quality plastic-film capacitors and air-cored coils are used, and the internal wiring appears to be relatively small-gauge Kimber.

The enclosure is made of veneered 1" MDF, with the 2"-thick front baffle painted black and carefully contoured to optimize the dispersion of the compound upper-frequency driver. The sloped baffle brings the acoustic centers of the drive-units into time alignment. There is extensive internal bracing, and the airspace is packed with fiber batting of some kind. The vestigial grille is held to the baffle by small magnets glued to its thin steel frame, which adhere to the heads of the bolts holding the drive-units in place. (Some of these came unglued during the auditioning.) In any case, the PCS is handsome enough without its grille.

### Sound

When the Thiel PCSes were first set up in my room, I was using the relatively inexpensive AudioQuest CV-4 speaker cables, which had worked well with the PSB Alpha A/Vs and Acoustic Energy Aegis Ones that I reviewed in April and May. With the speakers toed-in to the listening position, the sound was quite bright. There was superb presentation of detail, but just too much treble in absolute terms. Pointing the speakers straight ahead brought the high frequencies into better balance with the midrange, but there was still too much HF energy. There was a slight exaggeration of sibilance that I thought indicated the presence of a small resonant peak in the mid-treble, as well as a slight treble grain that would be fatiguing over the long run.

What did I have to lose? I changed the cables to AudioQuest's ultra-expensive Sterling.

Well, to those benighted souls who "know" that "wire is wire," I just wish I could drag you into my listening room to experience what happened. The

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**Description:** Three-way, stand-mounted, reflex-loaded loudspeaker. Drive-units (all anodized aluminum): 1" (25mm) dome tweeter coaxially mounted in 4" (76mm) cone midrange; 6.5" (165mm) cone woofer. Bandwidth: 55Hz–23kHz, –3dB. Frequency response: 57Hz–18kHz, ±2dB. Phase response: ±10°, minimum. Sensitivity: 87dB/2.83V/m. Impedance: 4 ohms nominal. 3.3 ohms minimum. Recommended power: 50-200W.

**Dimensions:** 19" (483mm) H by 725" (185mm) W by 11.5" (292mm) D. Weight: 30 lbs (13.6kg) each.

**Serial numbers of units reviewed:** 367, 368.

**Finishes:** Standard: Walnut, Black Ash, Natural Cherry, White Oak, Black Laminate; other finishes available at extra cost.

**Price:** $3000/pair (East Coast), $3030/pair (West Coast). Approximate number of dealers: 96. Warranty: 10 years.

**Manufacturer:** Thiel Audio Products, 1026 Nandino Boulevard, Lexington, KY 40511. Tel: (606) 254-9427. Fax: (606) 254-0075. E-mail: mail@thielaudio.com. Web: www.thielaudio.com.
PCS's highs fell into the appropriate balance with the mids and the grain disappeared, leaving a smooth but superbly detailed treble. Recorded sibilance was no longer exaggerated but sounded natural. What I had taken to be a speaker defect was actually associated with the inexpensive cable. But the silver-conductored Sterlings also tightened up the low frequencies slightly, and though the perceived bass was now more extended, this was a step in the wrong direction.

When Jim Thiel subsequently visited Santa Fe and listened to this comparison, he told me that he had exclusively used the flat Goertz cables during the development of the PCS, and recommended them highly. He arranged for Goertz to send me a set of their AG3 Divinity cables, which I used for the remainder of the review period.
Another transformation! The treble balance became even smoother, and the lightweight bass became more fleshed-out in the upper bass. Stanley Clarke's aggressive double-bass solo on "Nevermind" (on Stereophile's Test CD 3, STPH 006-2) had beautiful definition and sufficient weight to be convincing.

But there still wasn't any deep bass, nor was there the "rounded" quality to the upper bass that I had found appealing with the Mirage MRM-1, reviewed elsewhere in this issue. On the ½-octave warble tones on Test CD 3, the speaker really didn't want to "give" any lower than the 63Hz band in-room, and was producing some doubling at lower frequencies. The end result was a rather "gruff" quality to the Thiel's low registers.

This surprised me, given the efforts Jim Thiel makes to minimize distortion in his woofers. Part of the problem seems to be "chuffing" coming from the shallow port. While the outside of the vent is flared, the inside is not; I suspect that this sharp lip gives rise to air noise with high-level low-frequency tones. Unfortunately, in my zeal to investigate this aspect of the speakers' performance, I hit them with some high-level LF sinewaves, after

**Measurements**

To judge from his speaker designs—all of which feature generally low impedances—Jim Thiel has no sympathy for amplifier designers. While not as demanding as some Thiel speakers, the PCS's impedance magnitude (fig.1) hovers between 4 and 6 ohms over most of the band, and drops to 3 ohms in the lower midrange. Note also the punishing combination of 4 ohms magnitude and 55° capacitive phase angle at 120Hz. This is a speaker that needs to be driven by an amplifier rated into 2 ohms to give of its best. But at least that amplifier doesn't have to be very powerful; the PCS's B-weighted sensitivity comes in above average at an estimated 89.5dB/2.83V/m.

A couple of wrinkles in the impedance traces are worthy of comment. The one around 4kHz is presumably due to the mechanical crossover between the midrange cone and the tweeter dome, while the one at 26kHz is due to the tweeter dome's oil-can resonance. There is also a slight discontinuity just above 300Hz that might be associated with a cabinet resonance of some kind. Fig.2, a cumulative spectral-decay plot calculated from the output of an accelerometer fastened to the center of the cabinet sidewall, reveals that there are actually two strong modes present in this region. The saddle in the impedance-magnitude trace at 63Hz indicates the tuning of the port, which in turn implies modest bass extension. The fact that the lower of the two impedance peaks is much higher in magnitude than the upper peak tends to suggest an overdamped reflex alignment, which can also be seen to the left of fig.3. The port output is lower in level than usual, and the woofer output doesn't recover below its minimum-motion frequency as expected. As a result, the PCS's low frequencies roll off below 80Hz, giving it a light balance. Fig.3 also reveals a resonant mode in the port output at 250Hz, the frequency of the lower of
which one of the pair developed a buzz in the 80-100Hz region.

But it was higher in frequency that the PCS lived up to its pedigree. The PCS is balanced to be more forward in the mid-treble than the Mirage or the B&W Silver Signature, which, in combination with its low impedance, is probably why the Thiel is so sensitive to cables. Recent it may not be, but there was still an easy, open, natural, unforced nature to the Thiel's highs that I found very appealing over the long run.

And oh, the soundstaging! The PCSes threw a large, stable, well-defined image. Recordings had their walls of the hall exposed to a greater extent than I have been used to, which meant that image depth was enormous. Perhaps — and just perhaps — the extreme highs were less well-defined than the lower frequencies, with central, dual-mono images widening in the top octave. But this is not too important when you consider the PCSes' astonishing ability to open a wide, clean, transparent window into the recorded acoustic.

I have mentioned before in these pages the recordings I made last January of Canadian pianist Robert Silverman per-

the two cabinet modes seen in fig.2, and there is a mild glitch in the nearfield woofer output at this frequency.

Higher in frequency, the PCS's on-axis midrange and treble balance is basically flat. Though there are some mild peaks and dips evident in this graph, their audi-

bility will probably be minimal. The PCS treble appears to be better-behaved than that of the CS2.3 reviewed in January 1999, which uses a similar coaxial midrange-tweeter unit. The midtreble does rise a little, though not enough to correlate with why I found the speaker's balance to be so critical in this region. This subjective effect was probably due more to the lateral dispersion (fig.4), which does show a flare at the bottom of the tweeter dome's pass-

band. But note otherwise the very even spacing of the "contour lines" in this graph, which always correlates with precise, well-defined stereo imaging.

In the vertical plane, the PCS's disper-

sion pattern (fig.5) indicates that it is very important not to sit with your ears above the tweeter, as a deep suckout appears around 700Hz (presumably where the woofer crosses over to the coaxial unit) even as little as 5° above that axis. High stands will be better than low ones. The spatially averaged in-room response (fig.6) ties in pretty well with my auditory comment: a basically flat balance with restricted bass extension and perhaps a little too much energy in the region covered by the coaxial unit.

As is typical of Jim Thiel's speaker designs, the PCS's impulse response (not shown) is time-coherent, though overlaid by ultrasonic ringing from the tweeter. Accordingly, the speaker's step response (fig.7) is excellent, with a per-

fect right-triangle shape. The cumulative spectral-decay plot (fig.8) is similarly superb, with a clean decay other than above 20kHz, where the tweeter dome displays the usual misbehavior. Howev-

er, there is a slight resonant ridge at the cursor position, 4.6kHz, that might be due to the mechanical crossover.

—John Atkinson

Fig.6 Thiel PCS, spatially averaged, ½-octave, free-field response in JA's listening room.

Fig.7 Thiel PCS, on-axis step response at 50° (5ms time window, 30kHz bandwidth).

Fig.8 Thiel PCS, cumulative spectral-decay plot at 50° (0.15ms risetime).
forming the complete Beethoven sonatas, and which will initially be released on CD on a Canadian label (I'll keep you informed as to when). But to keep options open regarding future release on whatever hi-rez audio media will be available, I recorded the sessions with four microphone channels at 24-bit resolution and 88.2kHz sample rate. I had some test two-channel mixes stored on my PC's hard drive, as well as 16-bit/44.1kHz, CD-standard versions, and a 128kbps MP3 version that I had e-mailed to Bob Silverman to get his feedback on the balance.

When Jim Thiel visited, I took the opportunity to show off the 24/88.2 files, played back from the PC and re-clocked by the dCS 972. (I think Bob's reading of the sonatas, the culmination of his life's work, is some of the finest musicmaking I have been involved with.) The sound of Bob's Bösendorfer as reproduced by the Thiel PCSes was effortless. The piano breathed as it had in real life, and while the left-hand register was lightweight, the overall dynamics appeared unrestricted. It was hard to believe that so much unrestrained sound was coming from two small speakers!

I then played the CD-standard version of the same file. Peak levels were identical, and I must admit that the sound quality was pretty close to the original. There was some loss of low-frequency definition — one of the paradoxical but consistent effects of downsampling hi-rez audio data, I have found — and the piano's relationship with the small Santa Monica performing space became slightly less clear. But all in all, if I hadn't heard the original, I would have thought the CD's rendition was excellent. Then we played the MP3, which I had made using the kosher Fraunhofer codec.

To say that MP3 sucked the life out of the music would be an understatement. No matter how high-resolution, a recording is still a shadow of the original musical event. But the MP3 is a mere shadow of that shadow. The 24/88.2 presentation dragged listeners into the performance despite themselves. "Look, I can't say. I'll just listen to a few measures ... phew, that was awesome. Could I hear some more?" By contrast, the MP3 of the same performance may have sounded like a piano, but there was no piano substance there. It was a cartoon compared with a photorealist painting, the music happening not just at arm's length but in another county. And on the PCSes, these differences were effortlessly laid bare, to an extent I had not experienced even over my reference B&W Silver Signatures. This is truly impressive transparency.

Conclusions
Beautifully made and handsome-looking, the Thiel PCS is undoubtedly expensive for a minimonitor. And as much as I respect what it achieves in terms of clarity, stereo imaging, soundstaging, grain-free reproduction, and sheer insight into recordings, its rather gruff lows, somewhat forward tonal balance, and sensitivity to cables make it a tricky recommendation. But with the Goertz cable and high-quality sources and amplification, it is indeed a contender. And as a nearfield monitor, or as the ultimate desktop speaker to use with a computer fitted with a high-end soundcard, the PCS is without peer.
Paradigm Reference Studio/100 v.2 loudspeaker

They may come as a surprise to relative newcomers to the field of audio, but some loudspeaker manufacturers are manufacturers in only a limited sense. They buy drivers, off-the-shelf or custom-built, from companies like VIFA, SEAS, Focal, etc.; cabinets from a woodworking shop; and crossovers from an electronics subcontractor. While the system design will have taken place in-house, actual manufacturing is restricted to assembling the components, perhaps tweaking the crossover, and final QC. Even some highly successful loudspeaker manufacturers use this approach, which can work well as long as the suppliers do their jobs properly.

Still, if you want to make certain that a job is done properly, you do it yourself. This means manufacturing drivers, cabinets, and crossovers in-house, which gives you control of every stage of each operation. The downside is that, in order to make this process economically feasible, it must be done on a large scale, with expertise in several areas.

Paradigm is one of the few speaker manufacturers with the resources to take such a “vertically integrated” approach to manufacturing. Virtually every part of every speaker bearing the Paradigm logo is made in their own manufacturing facilities. They even machine the metal molds that they then use to make the plastic parts. The manufacturing enterprise is supported by an extensive research lab that features a huge anechoic chamber, as well as a listening room for double-blind listening tests.

Over the years, Paradigm has acquired a reputation for offering high-quality loudspeakers at very reasonable prices, and the company has the policy of turning profits back into research and increased automation of manufacturing facilities. Most Paradigm speakers fall into the low-priced category (eight of their models sell for less than $400/pair), but their upmarket Reference series is intended to compete with high-end audiophile speakers. The Reference Studio/100 v.2 is the top of this line, and represents everything Paradigm knows about the design and manufacture of loudspeakers.

Description and Design

At first glance, the Reference Studio/100 v.2 seems to be merely a mild cosmetic upgrade of the original Studio/100, reviewed by Tom Norton in August 1997 (Vol.20 No.8). The enclosure’s side walls are now curved, and there are a couple of pieces of plastic trim. The speaker is still a ported three-way, and its drivers look much the same.

But there’s much more to the “v.2” designation than meets the eye. The speaker has gained 23 lbs—its new, 110-lb heft reflects changes in cabinet construction. Previously, there was one vertical brace, interlocking with three horizontal braces; now there are a second and third vertical brace for added strength. The midrange enclosure used to be a section of the cabinet partitioned off from the rest; now it’s a separate MDF chamber attached only to the front baffle, providing better isolation from the woofer. The thickness of the side walls remains the same at ¾“, and the grille thickness was changed from...
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The big Paradigm's sensitivity measured 89.5dB(2.83V/m, 1dB more sensitive than the earlier version we reviewed three years ago. This is within the margin of error of the older speaker but is still almost 3dB higher than average. The impedance, however, drops below 4 ohms between 55Hz and 210Hz, with a minimum value of 3 ohms at 90Hz (fig.1). A good 4 ohm-rated amplifier should be used with the speaker. The glitch at 26kHz in this graph's traces indicates the frequency of the metal-dome tweeter's ultrasonic resonance, but the graph is otherwise free from any evidence of resonant behavior. Fig.2 shows a cumulative spectral-decay plot calculated from the output of a simple accelerometer fastened to the center of the back panel. The earlier speaker had quite a strong mode present at 300Hz on this panel; the v.2 was much better behaved in this respect.

The saddle in the impedance-magnitude trace at 20Hz implies that the big port is tuned to a very low frequency. The speaker is also over-damped, as can be seen from fig.3, which shows the individual responses of the port, woofers, and midrange/tweeter section. Note the broad but suppressed output of the port, and the merely vestigial notch in the woofers' output at the nominal port-tuning frequency. Given the usual amount of low-frequency boost present in a typical room, this is probably a good decision.

The woofers cross over to the mid-range unit at about 200Hz, with symmetrical third-order acoustic slopes. Their general output is a little higher than the reference level — this will be due partly to the nearfield measurement technique, which assumes a 2pi environment for the radiating surfaces — but the drivers are well-behaved above their passband. The midrange and low-treble regions are smooth on-axis, but the tweeter is a little "hot" in its top octave.

Fig.4 shows the response of the 1997 sample of the Studio/100, averaged across a 30° window on the tweeter axis and spliced to the complex sum of the low-frequency nearfield drive-unit responses. Fig.5 is a similar plot taken for the 2000 sample of the loudspeaker. In broad terms, the responses of the two speakers are very similar. But if you look closely, the v.2 has a smoother, flatter treble region, and better-damped low frequencies. Both aspects tie in nicely with RD's auditioning comments.

The Paradigm's lateral dispersion (fig.6) is generally well-controlled, though there is a slight off-axis flare around 6kHz, which might make the sound too "zippy" in small, under-damped rooms. I note that RD found the speaker's mid-treble balance very neutral, however. Vertically (fig.7), the dispersion has been changed from 1° to 1.5°, but the coil still weighs the same because of the use of copper-clad aluminum wire. High-gauss, low-viscosity ferrofluid was added to the midrange driver. Only the woofer was left unchanged; still, its tuning was adjusted slightly through changes in damping material and a 2" increase in port length.

The crossover is still a simple quasi-Butterworth design, with the same crossover frequencies, but almost everything else about it is different. In particular, the midrange crossover is all new, both high- and low-pass sections being revised to take into account off-axis measurements. Similarly, the tweeter high-pass was changed to blend better with the midrange, both on- and off-axis. The crossover's physical layout has

**Measurements**

The Paradigm's reference measurements are shown in the accompanying figures. Fig.2 shows a cumulative spectral-decay plot calculated from the output of an accelerometer fastened to the cabinet back panel. (MLS driving voltage to speaker, 7.5V; measurement bandwidth, 2kHz.)

![Fig.2 Paradigm Studio/100 v.2, cumulative spectral-decay plot calculated from the output of an accelerometer fastened to the cabinet back panel. (MLS driving voltage to speaker, 7.5V; measurement bandwidth, 2kHz.)](image)

**Fig.1** Paradigm Studio/100 v.2, electrical impedance (solid) and phase (dashed). (2 ohms/vertical div.)

**Fig.3** Paradigm Studio/100 v.2, acoustic crossover on-axis at 50°, corrected for microphone response, with the nearfield midrange, woofer, and port responses plotted below 500Hz, 300Hz, and 500Hz, respectively.

**Fig.4** Paradigm Studio/100, anechoic response on-axis at 50°, averaged across 30° horizontal window and corrected for microphone response, with the complex sum of the nearfield midrange, woofer, and port responses plotted below 300Hz.
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been changed, with the midrange and tweeter filters moved to the top of the cabinet and the woofer filter to the bottom, reducing interference between the circuits. The crossover’s inductors and resistors are much larger and are now placed farther apart for optimal cooling, and the quality of components is higher.

Despite all these changes, which represent substantial costs in development time as well as materials, the price of the Studio/100 v2 is only $100 higher than its predecessor’s—a testament to Paradigm’s vertical integration of manufacturing.

The cosmetic changes themselves should not be dismissed too lightly. My impression of Paradigm’s speakers has been that they may offer good sound for the money, but the look is pretty utilitarian. The Studio/100 v2, and other speakers in the new Reference Series, change that. Although you couldn’t mistake the Studio/100 v2’s wood finish (rosenut on the review samples) for something from Sonus Faber, it is now quite attractive, and the curved sides soften what otherwise would be a severely boxy look. A lam-

Studio/100’s balance doesn’t change much over quite a wide window—just as well, given that the tweeter is a rather high 42° from the floor.

In the time domain, the tweeter and midrange outputs are in negative polarity, as can be seen from the step response (fig.8). The lazy positive-going part of the trace at 4.5ms is due to the positive-polarity woofers. Note that the crossover and the time delay ensure that each drive-unit hands over smoothly to the next lower in frequency in this graph, which correlates with a smooth, flat frequency response. The cumulative spectral-decay plot (fig.9) is very clean, other than some low-level delayed energy at the top of the midrange unit’s passband.

As we have come to expect from Paradigm, this is excellent measured performance at a very competitive price.

—John Atkinson

**Measurements**

<table>
<thead>
<tr>
<th>Frequency File Display</th>
<th>Log Frequency - Hz</th>
<th>(Smoothed to 0.10 octave)</th>
</tr>
</thead>
<tbody>
<tr>
<td>300.0</td>
<td>1000.0</td>
<td>10000.0</td>
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<tr>
<td>-5.78 dB, 4439 Hz (46)</td>
<td>25.000 dB</td>
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</tbody>
</table>

**Fig.6** Paradigm Studio/100 v2, lateral response family at 50°, normalized to response on tweeter axis, from back to front: differences in response 90°–5° off-axis, reference response, differences in response 5°–90° off-axis.

<table>
<thead>
<tr>
<th>Frequency File Display</th>
<th>Log Frequency - Hz</th>
<th>(Smoothed to 0.10 octave)</th>
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<tbody>
<tr>
<td>300.0</td>
<td>1000.0</td>
<td>10000.0</td>
</tr>
<tr>
<td>2.85 dB, 4439 Hz (58)</td>
<td>18.000 dB</td>
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</table>

**Fig.7** Paradigm Studio/100 v2, vertical response family at 50°, from back to front: differences in response 15°–5° above axis, reference response, differences in response 5°–15° below axis.

<table>
<thead>
<tr>
<th>Cumulative Spectral Decay</th>
<th>Log Frequency - Hz</th>
</tr>
</thead>
<tbody>
<tr>
<td>9.85 dB, 2441 Hz (55)</td>
<td>8.000 msec</td>
</tr>
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</table>

**Fig.9** Paradigm Studio/100 v2, cumulative spectral-decay plot at 50° (0.15ms risetime).

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nate-finished version sans curved sides is available for $300 less, but I'd recommend spending the extra for the veneered version, which may also have some sonic benefits because of its thicker side walls.

Setup
Setting up speakers can be a difficult chore requiring endless tweaking of position, toe-in, and adjustment of the room's acoustical treatment. I've never encountered a speaker with which ¼" made the difference between sonic disaster and Nirvana, but speakers definitely vary in terms of how critical setup parameters are to optimal sound quality.

The Reference Studio/100 v.2s turned out to be exceptionally unfussy to set up. I plunked them down in what is my more-or-less standard position: along the long wall of my 16' by 14' by 7.5' listening room. With a bit of tweaking, I had the speakers form an angle of about 70° from the listening seat, with the front of the speaker out about 40° from the back wall and the tweeter about 35° from the side wall. Toe-in was not critical; I aimed speakers almost—but not quite—at the listening seat. Once I was satisfied with the basic setup, I installed the spikes and locknuts. The speaker is provided with four spikes, which are hidden by what look like gold-plated feet but are actually large locknuts.

The Studio/100 v.2's five-way binding posts appear to be the same as the ones that Tom Norton complained about: able to be tightened only by hand and too thick for many audiophile spade lugs, they still worked fine with the Nordost bananas that I use. Paradigm recommends biwiring, and that's how I listened to the Studio/100 v.2s. The grille is an integral part of the front-baffle design, so it's intended to be left on; I listened to the speaker with the grille off just long enough to confirm that the sound was, indeed, better focused with the grille on.

I used both solid-state (Bryson 9B-ST and Thule PA-250B) and tube (Balanced Audio Technology VK-60) power amplifiers; although all the amplifier-speaker combinations worked well, the Bryson gave the best overall results, keeping the bass under control while providing a clean top end. Paradigm recommends a break-in period of about 50 hours; indeed, the sound had become more open and relaxed after about that long.

Sound
According to Scott Bagby, head of Paradigm's design team, designing the Reference Studio/100 v.2 was, to a large extent, a process of elimination. The extensive measurements and listening tests were aimed at identifying problem areas, measurable and/or audible, in the speaker's behavior, with changes then made to reduce or eliminate these problems. Presumably, if you eliminate all the unwanted resonances and colorations, what remains is a speaker that just reproduces the input rather than having a sound of its own.

That's pretty much what I heard when I listened to the Studio/100 v.2. In my experience, every speaker has some sort of distinctive sonic character that becomes evident sooner or later, but I had a difficult time getting a sense of the Studio/100 v.2's. Its top-to-bottom tonal balance was exceptionally even, with no part of the spectrum given undue prominence. The midrange, in particular, had a most pleasing neutrality, which allowed the distinctive quality of voices and instruments to be preserved. The treble was not quite as silky-smooth and airy as that of the $10k/pair Vienna Acoustics Mahler (see my review in the April 2000 Stereophile), but was at least on a par with such topnotch competitors in its own price range as the Hales Revelation Three ($2195, reviewed in February 1998, Vol.21 No.2), and beat the Hales in the avoidance of sizzle at high levels.

In his review of the original Studio/100, Tom Norton noted an occasional edge in the mid-treble; this seems to have been tamed in the v.2. Vocal sibilants—which I find to be the most revealing indicator of problems in a speaker's treble response—were presented cleanly, without exaggeration or noticeable softening. The top end was even sweeter when the speaker was driven by the Balanced Audio Technology VK-60 tube amp, at the cost of some loss of bass control.

The Studio/100 v.2's bass performance was also first-rate: extended and powerful, the quality of the bass approaching that of the $7995/pair Dunlav SC-IV/A, which has dual 10" woofers in a much larger cabinet. The Studio/100 v.2 had no trouble coping with my usual bass test pieces. The synthesizer note at the beginning of track 7 of Mickey Hart's Planet Drum (Rykodisc RC-10206) energized the air most convincingly, and bass drums had proper weight.

My listening room's acoustics seem to interact in unpredictable ways with speakers that have extended bass response: with some (eg, the Dunlav SC-IV/A), the bass is quite smooth; with others (eg, the Vienna Acoustics Mahler), I've had audible peaks and/or suckouts, even when—as in the case of the Mahler—indentified quasi-anecdochoic measurements indicated no problem in the speaker's bass response. My room's interaction with the Studio/100 v.2 was fortuitous: bass extended to the mid-20Hz range, and what I know to be the room's 50Hz standing wave was not noticeable as such.

Although there are still audiophile speakers that sound comfortable only up to moderate levels, one of the more positive effects of the advent of home theater has been that most speaker manufacturers are developing products capable of higher SPLs, even when the speaker is designed primarily for stereo.

The Studio/100 v.2's bass performance was also first-rate: extended and powerful.

Associated Equipment

**Analog source:** Linn LP12 turntable (fully updated), Ittok tonearm, AudioQuest AQ-7000xms cartridge.

**Digital source:** PS Audio Lambda II transport, Muse Two Ninety-Six digital processor, Illuminati Orchid digital link.

**Preamplifier:** Convergent Audio Technology SL-1 Ultimate.

**Power amplifiers:** Bryson 9B-ST, Thule PA250B, Balanced Audio Technology VK-60.

**Cables:** Interconnects: Nordost Quattro Fil, TARA Labs The Two. Speaker cables: Nordost SPM Reference, TARA Labs The Two. AC cord: TARA Labs Decade.

**Accessories:** Argent Room Lenses (5), PS Audio P300 Power Plant AC synthesizer (used with analog and digital sources, preamplifier), Bright Star Little Rock atop CD transport, Nordost PP4 Ti and PP4 Al Pulsar Point component supports, Arcici Suspension Rack, PolyCrystallite amplifier stand, Furutech RD-1 CD demagnetizer.

—Robert Deutsch

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use, as is the Studio/100 v.2. (The word from Paradigm is that more than half of the Studio/100s sold end up in home-theater systems.)

The Studio/100 v.2 not only sounded good at low to moderate levels, but maintained its composure at levels where most speakers sound strained. Assuming that the amplifier is up to the task (the best amplifier I had on hand for high-level listening was the Thule PA-250B in its 250Wpc stereo mode), turning up the volume — within reason — resulted in the Studio/100 v.2 just playing louder, but without audibly compressing or acquiring a hard edge. If anything, the speaker sounded a bit reticent at lower levels, becoming more lively when supplied more power. At high levels, the Studio/100 v.2 sounded more comfortable than the Dunlavy SC-IV/A or the Hales Revelation Three. Among products of my recent acquaintance, the only speaker that outpointed it in this respect was the Vienna Acoustics Mahler.

As far as soundstaging and overall transparency went, the Studio/100 v.2s made a good showing without being in the very top class. Their soundstage was wide and deep (when the recording had this information), and the sound had a generally open quality, seeming to originate in space rather than being confined to the speakers. The Dunlavy SC-IV/As give even greater specificity and three-dimensionality to images within the soundfield, but the differences are fairly small — and the gap in price is wide. Listening position was less critical than with the Dunlavy and other speakers that specialize in pinpoint imaging, with a good semblance of a soundstage being evident even when I listened considerably off-center.

Prior to my experience with the Reference Studio/100 v.2, the best speaker I had encountered in this price range was the Hales Revelation Three. I still hold the Revelation Three in high regard, but now I'd have to say that the Studio/100 v.2 offered a somewhat different but equivalent set of virtues. Both speakers are exceedingly neutral in tonal balance, the Paradigm perhaps even more than the Hales. (That is, if memory serves; I didn't have the Hales around for comparison.) The Hales can sound a bit sizzly on top when driven hard, a problem avoided by the Paradigm; in fact, the Paradigm generally sounded more comfortable than the Hales at high levels. However, I remember the Hales as having a somewhat more immediate, more dramatic presentation at moderate levels than the Paradigm, which could sound a bit polite and reticent at these levels. The Paradigm pulled ahead in the low bass, which had greater weight and extension.

Paradigm's Studio/100 v.2 is most certainly a serious high-end contender, and a formidable one for just about any speaker in its price range.

I'd have a tough time choosing between these speakers. I strongly advise anyone considering the Hales Revelation Three to also listen to the Paradigm Reference Studio/100 v.2 — and vice versa.

Conclusions

Audiophiles can be a snobbish lot, prone to select products on the basis of exclusivity and prestige rather than just performance. Paradigm speakers are widely available, and most of them are relatively inexpensive, which could lead some audiophiles to dismiss the Reference Studio/100 v.2 out of hand as a high-end contender. Nor is the Studio/100 v.2's perceived audiophile credibility helped by the fact that dealers tend to demonstrate it with moderately priced electronics.

But Paradigm's Studio/100 v.2 is most certainly a serious high-end contender, and a formidable one for just about any speaker in its price range and even well above. While the Studio/100 v.2 is forgiving of less-than-pristine electronics, it benefits from being combined with a top notch digital source, electronics, and cables. Although I didn't have a pair of the original Studio/100s available for comparison, there is every indication that the v.2 represents a significant improvement over the speaker that had Tom Norton asking — rhetorically — whether it was the best speaker in its price range. As Tom noted, this question is impossible to answer, given the number of speakers out there, and given that the definition of what's “best” is inevitably complicated by individual preferences about the importance of different sonic attributes.

But if tonal neutrality is at the top of your list of priorities for speaker performance, and you want a speaker that can play loud without sounding stressed, then you really must listen to the Reference Studio/100 v.2. You may well decide that it is, indeed, the best speaker in its price range.
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Mirage MRM-1 loudspeaker

The Mirage OM-6 loudspeaker, from Canadian manufacturer Audio Products International, mightily impressed Stereophile's Tom Norton when he reviewed it back in November 1997. But with its "omnipolar" design and powered woofer, the OM-6 wasn't a speaker for those of us with more conventional tastes in speaker design. So when I heard that Mirage's Ian Paisley was working on a high-performance two-way minimonitor based on the OM-6's drive-unit technology, I asked API's affable PR man, Jeff Percy, for review samples.

Meet Mr. M-1
The MRM-1 may not be very big, but at 35 lbs each it is more than a handful. The sides, top, and base of the 1"-thick MDF carcass are lined and stiffened with steel plate, while the 3/4" MDF front baffle is faced with a 1" layer of black Corian, its upper edges rounded to reduce acoustic obstructions around the tweeter, and giving the impression that the speaker tapers toward its top. The woofer is reflex-loaded, with a flared port mounted on the rear panel above the terminals—at 8" deep, this extends almost to the tweeter magnet. The airspace is filled with three rolled-up pieces of acrylic fiber.

The drive-units are hi-tech in conception and construction. The 1" tweeter—descended from the unit first seen in the Mirage M1-1i—has a dome made from a titanium alloy, with the voice-coil wound on the "skirt" of the dome. The cloth surround is compliant enough to allow operation to a lower frequency than usual, the tweeter taking over from the woofer above 1.8kHz. The woofer itself is constructed on an injection-molded copolymer basket, this said to be acoustically inert compared with the usual metal basket. The straight-sided cone is injection-molded from polypropylene, which has been impregnated with graphite and mica to maximize stiffness. A butyl-rubber composite surround is used to allow large excursions, and a concentric mass-loading ring covers the inner diameter of the cone to damp cone resonances. There is no dust-cap, the polepiece being formed into a conical phase plug. The voice-coil is wound in a bifilar, two-layered manner for the most even current distribution.

Description: Two-way, stand-mounted, reflex-loaded loudspeaker. Drive-units: 1" (25mm) "Pure-Titanium Hybrid" (PTH)—dome tweeter, 5.5" (140mm) carbon/graphite- and mica-impregnated polypropylene-cone midrange/bass unit. Crossover frequency: 1.8kHz. Frequency response: 40Hz–22kHz, ±2dB. Sensitivity: 85dB "in-room." Nominal impedance: 8 ohms. Recommended power: 50–150Wpc maximum.

Dimensions: 13" (331mm) H by 7.6" (193mm) W by 10.875" (270mm) D.

Weight: 35 lbs (16kg) each.

Serial numbers of units reviewed: none visible (name plate states "Andrew Walker, Ian Paisley, Designers").

Finishes available: Black Ash, Cherry (add $100/pair), Tigerwood (add $200/pair) veneers.


The complex crossover — I counted 18 elements — is mounted on a printed circuit board fastened to the inside of the two pairs of terminal posts. It features mainly air-cored coils and high-quality Solen capacitors. Internal wiring is specified as being by Cardas. Electrical connection to the drive-units is via gold-plated spring clips rather than solder joints.

The vestigial grille is fabricated from black cloth stretched over a metal-tube frame. The review speakers were finished in a dark "Tigerwood" veneer that was very handsome, to say the least. The

**Measurements**

The MRM-1's designers apparently chose to optimize the design for bass extension, which means that its sensitivity will be low. I estimated 2.83V to raise just 83dB at 1m, which is about 4dB lower than average. However, the speaker's impedance curve (fig.1) is relatively benign, dropping below 6 ohms only in the lower midrange. The saddle at 52Hz in the magnitude trace indicates the tuning of the reflex port, which in turn implies quite good bass extension. I assume the impedance peak at 21kHz is due to a notch filter used to kill the tweeter's ultrasonic resonance.

The wrinkle in both traces just below 400Hz is presumably due to a cabinet resonance of some kind. Fig.2 shows a cumulative spectral-decay plot calculated from the output of a plastic-tape accelerometer attached to the center of a side wall. A single resonant mode can be seen at 387Hz, which may well be high enough in both frequency and Q to affect sound quality. I could certainly hear this mode with a stethoscope and a sinesweep. I could also hear it as an added hollowness on the 315Hz and 400Hz 3-octave tones on Stereophile's Test CD 3, but it did not otherwise make its presence known on music.

Fig.3 shows the individual outputs of the tweeter, woofer, and port. The latter is the highpass curve centered between 50Hz and 60Hz and coincident with the woofer's minimum-motion point at 52Hz, as expected from the impedance plot. There is a broad peak apparent in the port output at 700Hz, but the audibility of this will be minimized by the fact that the port is on the rear panel. The woofer peaks a little in the upper bass, and crosses over to the tweeter at a low 1.5kHz. A 3.5kHz mode in the woofer's output is well-suppressed by the crossover. The tweeter suffers from a slight lack of presence-region energy, but then rises steadily on-axis in its top two octaves.

How these individual responses sum across a horizontal 30° window on the tweeter axis is shown in fig.4. The speaker's overall balance is flat though the top octave is still a little high, something on which I commented in my auditioning. The mid-to-upper-bass re-
matching 28" stands were finished in the same veneer. About my only gripe was that the supplied spikes were not long enough to pierce my rug and pad to reach the tile beneath.

Sound
After the mellow-balanced Acoustic Energy speakers that I reviewed in the May Stereophile, my first impression of the MRM-1s was that they had considerably more top-octave energy—not brightness as such, but more high-frequency air. The downside was that analog tape hiss was emphasized, and there was some occasional extra sizzle on

The lack of presence-region energy can still be seen in this graph; whether or not it affects the MRM-1s balance will depend on how it persists off-axis. As can be seen in figs.5 and 6, which show the lateral dispersion, the on-axis depression does fill in to the speaker's sides, which means that the room sound will be better-balanced in the mid-treble than the on-axis response. Nevertheless, in my room at least, I couldn't escape the MRM-1's laid-back nature. In the vertical plane (fig.7), the MRM-1 maintains its balance over a wide window, the inevitable crossover suckouts appearing well above and below the tweeter axis.

In my listening room, the Mirage's balance (fig.8) was very flat, with good bass extension apparent. But if you compare this graph with those of other speakers I have reviewed, the slight excess of top-octave energy and the laid-back mid-treble can be seen.

As expected from its crossover topology and flat baffle, the MRM-1's step response (fig.9) is perfectly conventional: both drivers are wired in positive acoustic polarity, and the tweeter's output leads the woofer's by a fraction of a millisecond. The speaker's cumulative spectral-decay plot (fig.10) is superbly clean through the upper midrange and treble, which presumably contributes to the lack of grain.

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cymbals. I experimented with less toe-in, but ultimately felt that this took away some of the image focus. However, if the extreme highs are lifted, they still sound very clean.

At the other end of the frequency spectrum, the MRM-1 was surprisingly big-bottomed. Despite its small size, the speaker made an impressive effort at reproducing orchestral fundamentals. On my 1984 Ely Cathedral recording of Elgar’s Dream of Gerontius (excerpted on Stereophile’s Test CD 2, STPH004-2), the composer uses the organ to swell the orchestral scoring at climaxes. The Mirages didn’t hold back from giving good measure to the organ pedals. And well-recorded jazz double bass had a fat, rounded quality to it that was very appealing. The warble tones on Stereophile’s Test CD 3 (STPH006-2) were reproduced down to 50Hz without audible doubling, and even the 32Hz tone was usefully high in level (with a little help from my room). The 25Hz and 20Hz tones were missing in action, of course, with high excursions apparent from the now unloaded woofer cone.

But with its woofer having a radiating diameter of just 4", the speaker is definitely having to work hard in the bass, and the inevitable tradeoff is LF definition. Back in 1997, during the sessions for Rhapsody (Stereophile STPH010-2), I recorded my brother-in-law, Steven Stoner, playing drums at 24-bits/96kHz. I used distant mikes to capture a solid image of his Remo drumkit in the Albuquerque church. The downside of this mike technique is that the kick drum sounds intrinsically rather indistinct. Not only did his high-level kick-drum pounding result in high-velocity air pulsing from the MRM-1’s port—fortunately without audible chuffing—but Steve’s fragile kick-drum image lost some of its leading-edge definition. While it did not sound particularly one-note, the Mirage’s low-frequency tuning did sacrifice speed for weight and extension. This balance between what are too often mutually exclusive properties is managed more capably by my reference B&W Silver Signatures—at four times the price, of course.

It was in the all-important midrange that the little Mirage excelled. The speaker simply lacked grain or any kind of gritty edge. Voices were superbly naturally voiced, as was acoustic piano. Cyrus Chestnut’s beautifully recorded Earth Stories (Atlantic 82876-2) has been spending a lot of time spinning in my Mark Levinson CD transport. On the stride-style “Nutman’s Invention No.1,” the Hamburg Steinway lies solidly between and behind the speakers, treble notes to the right—as if I was peering over Mr. Chestnut’s broad shoulders. Every note was in its place, no tones jumping out of the soundstage at me. And with those generous low frequencies, when Cyrus hammerdown with his left hand, the piano spoke with great authority through the MRM-1. And Steve Kirby’s double bass and Alvester Garnett’s kick drum had big, fat presences that were well-suited to the music.

Stereo imaging was stable and precise, with a well-defined soundstage lying between and behind the speakers. On the live Mozart flute quartet recording on Stereophile’s Serenade CD (STPH009-2), the positions of the three string players relative to flutist Carol Wencenc on the stage of Santa Fe’s St. Francis Auditorium were made explicitly clear: pure musical virtual reality.

While there was no sense of discontinuity between the MRM-1’s midrange and treble, all through my auditioning I couldn’t escape a laid-back character in the mid-treble. On most classical music this wasn’t a problem. I mean, a Mozart mass does demand a certain calm, contemplative mood, and the emotional distance of the Mirages’ presentation was just right. But with rock music, this lack of involvement had me turning up the volume a little too often. When it was time to get down’n’dirty, the speaker just didn’t want to “give” enough of itself.

Compounding this reticence was a lack of ultimate dynamic range in the low frequencies. When I simply had to have a hit of Joe Walsh’s “Rocky Mountain Way” (from The Smoker You Drink, the Player You Get, MCA MCD-5869) with the volume control set to Stun, that little woofer ran out of grunt at too low a level for visceral satisfaction. There was a sudden crack as the voice-coil banged against the end stops that had me diving for the Mute control.

But people who buy minimonitors probably don’t own “Rocky Mountain Way”—at least not on 12" 45rpm vinyl, as I do. They are looking more for intellectual stimulation from their music, as indeed do I most of the time. But this lack of low-frequency loudness was a definite limitation of the speaker. On my Gerontius recording, for example, there is a moment in Part Two of the work when all hell is literally beaten out of a large bass drum. When the playback level was set to avoid the MRM-1 woofers bottoming on these elemental thwacks, the general orchestral and choral level was too subdued.

And while my review samples were from very early production, and therefore might be more fragile than current examples, my occasional abuse did finally result in one of the pair buzzing on sustained tones at around 320Hz.

**Conclusions**

The Mirage MRM-1 is drop-dead gorgeous. However, with its laid-back midtreble, low sensitivity, and ultimately limited dynamic range, it is not going to be a loudspeaker for all seasons. Competition is strong in this category and at this pricepoint, B&W’s Nautilus 805 (reviewed last October by Larry Greenhill) being a leading contender. But the MRM-1’s generous low frequencies, overall clarity, and freedom from grain make this exquisitely made miniature ideal for a lover of classical music or acoustic jazz who has a relatively small room.

---

**Associated Equipment**

**Digital sources:** Mark Levinson No.31.5 CD transport and No.30.6 D/A processor, connected with Illuminations Orchid AES/EBU data-link, dCS 972 upsampler; California Audio Labs CL-20 DVD player, Pentium MMX 166MHz with Digital Audio Labs CardiDeluxe soundcard connected to D/A via 75 ohm SPDIF link, running Windows 98, WinAmp 2.5, and CoolEdit 2000.

**Analog sources:** Linn Sondek LP12 with Lingo power supply, Linn Ekos tonearm, Linn Arkiv phono cartridge.

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

**Power amplifiers:** Mark Levinson No.33H monoblocks.

**Cables:** Madrigal CZ Gel-1 balanced interconnects, AudioQuest Sterling loudspeaker cables.

**Accessories:** PS Audio Power Plant 300 (preamplifier only), Audio Power Industries 116 Mk.II and PE-1 AC line conditioners (not power amps), ASC Tube Traps, RPG Abbissors, 28" Mirage speaker stands with pillars filled with sand and coupled to the speakers with Blu-Tack. —John Atkinson
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Apogee Electronics PSX-100 two-channel A/D–D/A converter

C an a piece of studio gear find happiness on an audiophile's equipment stand? More important, can an audiophile derive satisfaction from its sound?

That’s what I was determined to find out when I took delivery of this $3900 converter, which, though designed for professional recording studios, has found favor with audiophiles (so far, mostly Japanese) wishing to transfer their LPs, 78s, lacquers, and other analog source material to a high-density digital format.

The PSX-100 is an extremely flexible two-channel, 24-bit/96kHz A/D and D/A converter featuring Apogee’s exclusive UV22 processing, which the company says translates 24-bit audio to 20- or 16-bit with “minimal quality loss… while maintaining much of the detail of the original 24-bit signal.” This is key — Apogee claims the PSX-100 converts all analog source material at 24-bit resolution (for 117dB of dynamic range), and can sample at 44.1, 48, 88.2, and 96kHz. That accomplished, the end user sets the digital output to conform to the capabilities of the storage medium being used.

Apogee trumpets UV22 processing as being superior to dither, noiseshaping, Bit-Mapping, and other attempts at shoehorning greater-than-16-bit performance onto a CD. As for HDCD, Apogee is willing to admit that “Encode/decode systems may sound good if they are decoded, but almost nobody owns a decoder!” That’s not true in audiophile circles, where most high-end processors sold in the past five years have featured HDCD decoding, but if Apogee’s claims for UV22 are valid, you can’t really argue with their logic.

According to Apogee, word-length reduction is “a tricky business at best”; they suggest leaving a signal at its highest resolution until the final 16-bit mastering step. When you merely truncate 24 bits to 16, you get distortions that are higher in level than the signals you’ve removed, and that create audible artifacts.

For the CD and DAT formats, the PSX-100 uses UV22 to “capture 24 bits of information onto a 16-bit/44.1kHz medium,” in the words of an Apogee spokesperson. Apogee claims that UV22 is useful even when making copies of 16-bit recordings — in other words, when copying CDs — and that UV22 processing “smooths out the rough edges on even the most inexpensive CD player or external converter” to actually improve their sound.

What, exactly, is UV22? According to the spokesperson, it’s a proprietary algorithm analogous to bias on an analog tape recorder. By adding narrow-band noise at around half the sample frequency — 22.05kHz in 44.1kHz-sampled data — as the digital word-length is reduced, it encodes the +16-bit data in that high-frequency energy. Again according to Apogee, UV22 creates a “constant white noise floor, very similar in character to analog tape noise, no matter what the input source. If you listen to the noise on a UV22-encoded recording, you can hear a stable, accurate soundstage and faithful tonal balance more than 24dB into the noise — just as you do on analog tape. Yet the low audible noise floor sits at the theoretical limit for a 16-bit system. Nothing is lost — but a great deal is gained.”

Hardware
The PSX-100 is slim, compact, sturdily built, and sports a front panel that’s as busy as the Gowanus Expressway during rush hour (an analogy our Brooklyn-bound editor will soon appreciate). Out of necessity, studio gear must be ultra-flexible; the PSX-100 can interface with just about every format known to man, and do just about everything possible in terms of A/D and D/A conversion.

You home audiophiles can ignore many of the possibilities and be ready to go with the push of a few buttons, as long as you’re equipped with RCA/XLR adapters or a preamp with balanced tape-out jacks: the converter is fully balanced, including its analog inputs. The unit comes set for pro-audio +4dBu input and output levels, but those are easily changed to –10dBV consumer settings via two rear-mounted DIP switches.

The PSX-100 can accommodate all of the most common digital formats — AES/EBU, Alesis ADAT, TDIF (Tascam interface), and S/PDIF (coax and optical) — and its unique Apogee Bit-Splitting feature (ABS) allows 16-bit ADAT and Tascam DA88 MDM recorders to store 24-bit signals by using up to four tracks for each channel. You could pick up a used Tascam or ADAT for under $2000 and archive your LPs or other analog recordings at full 24/96 resolution. Unfortunately, I did not have access to either of those, so I made CD-Rs using a Marantz DR17 as a transport/recorder. Of course, I could also A/B the analog signal from the phono section with the twice-converted output of the PSX-100.

The PSX-100 operates in three modes: Confidence Monitor, Analog Monitor, and Digital Copy. In Confidence Monitor mode, the A/D and D/A converters operate independently,


**Dimensions:** 19” W by 1.75” H by 14.25” D. Weight: 12.5 lbs.

**Serial number of unit reviewed:** 2078.

**Price:** $3995. Approximate number of dealers: not given.

**Manufacturer:** Apogee Electronics Corp., 3145 Donald Douglas Loop South, Santa Monica, CA 90405-3210. Tel: (310) 915-1000. Fax: (310) 391-6262. E-mail: support@apogeedigital.com. Web: www.apogeedigital.com.

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each using one of the unit's two low-jitter clocks. With the appropriate recorder, you can monitor your results as you would with a three-head analog machine. Or you could archive an LP to CD-R while using the D/A to listen to a CD from another transport.

In Analog Monitor mode, the A/D input is routed directly to all of the digital outputs and to the D/A converter. This lets you, among other things, determine the transparency of the A/D-D/A conversion process. Digital Copy mode feeds the input to all of the outputs as well as to the D/A converter. Both clocks are synchronized to the digital input. So, for example, if you've archived an LP to your ADAT or DA88 at 16/44.1, you could play it back, and cut a CD-R.

From the front panel you can set the A/D sync source (44.1/88.2, 48/96, etc.), the output resolution (UV22 16, UV22 20, 24-bit), the optical output

**Measurements**

In the main, the Apogee PSX-100's D/A section was tested using the digital AES/EBU digital output of an Audio Precision System One Dual Domain. I also made use of a two-card PrismSound DS-cope v2.02 and a Miller Audio Research Jitter Analyzer, which runs on a National Instruments DSP PC card.

Looking first at the Apogee's D/A section, with its output set to -10dBV (which is how MF used the converter), the front-panel multturn pots can still be adjusted to give a maximum output level of 73V. With the pots set to a standard CD output level of 2V RMS, switching the rear-panel DIP switch to +4dBu also gave a maximum level of 73V RMS. The source impedance was extremely low: less than 1 ohm. However, the unit would not drive 600 ohms at its maximum output, the highest level into this load before clipping being around 5.5V, which should be plenty high enough. A rear-panel DIP switch allows you to define pin 3 or pin 2 of the XLR jacks as positive. With either setting, the D/A output inverted polarity with the Audio Precision's pin-2-positive input.

Fig.1 shows the D/A frequency response with a 44.1kHz sample rate, at -12dBFS. The lower traces in the treble are without pre- and de-emphasis, and are impressively flat. However, the upper pair of traces are with pre-emphasis data, and reveal that the Apogee does not apply the correct de-emphasis with such data. On the very small number of CDs that have been recorded with pre-emphasis, the tonal balance will be audibly skewed toward the highs.

Fig.2 shows the D/A response at 0dBFS with 48kHz and 96kHz sample rates. (The source was the Apogee's A/D section converting the Audio Precision's analog output.) At the higher sample rate you can see a gentle roll off above the audioband, before the plunge at Fs/2, which will correlate with good time-domain behavior. Channel separation (not shown) was superb, at better than 110dB across the band, with only a slight rise in the top audio octave.

Fig.3 shows a 1/2-octave spectral analysis of the D/A's output while it processed data representing a dithered 1kHz tone at -90dBFS. The top traces were taken with 16-bit data, the bottom traces with 24-bit data. The increase in word length gives about a 10dB reduction of the noise floor, suggesting an ultimate noise-limited dynamic range of closer to 18 bits, which is still excellent. (Only a very few of the D/A converters I have measured have achieved better dynamic range than this, and these are still limited to around 20 bits of dynamic range when processing 24-bit data.) Replacing the 1kHz tone with digital black and extending the measurement bandwidth to 20kHz gave the curves shown in fig.4. The right channel has a slight amount of energy apparent at the sampling frequency, but the traces are otherwise free from spuriae.

The PSX-100 offered superb D/A linearity, as can be seen in fig.5. The amplitude error remains below 2dB down to around -114dBFS. This graph was taken with dithered 16-bit data; extending the word length reduced the level at which the amplitude error reached 2dB to -120dBFS.
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Connecting the PSX-100 is straightforward: I ran the single-ended tape outs of the Ayre K-1 preamp to the A/D inputs using RCA/XLR adapters, and the balanced D/A outputs to one of the K-1's balanced source inputs. A digital coax cable went from the PSX-100's S/PDIF out to the Marantz DR17's digital in, and for good measure I ran the Marantz's digital out to an input on the EAD DSP-9000. Toward the end of the review period the Audio Research Reference 2 line stage arrived; it has balanced tape outs, and its remote-controlled source selection permitted A/B comparisons from my listening position.

Methodology and Madness

Pacific Microsonics doesn't yet offer an affordable processor like the PSX-100, but the comparison in the Apogee instruction booklet of UV22 and HDCD got me thinking about including some sort of sonic comparison in this review. With Apogee converters and UV22 processors and Pacific Microsonics' HDCD encoder/converters in studio use around the world, I had a good selection of UV22-mastered and HDCD-encoded CDs to compare. I also had something better: a unique CD-R that Classic Records' Mike Holmson had given me back in 1996. It contains analog master-tape transfers done by Bernie Grundman comparing three converters: an early HDID encoder, a K2 (used by JVC for its 20-bit transfers), and an older Apogee 20-bit converter fed to a standalone UV22 processor.

Each selection is recorded three times, once through each converter. The music includes an unidentified vocalist (Quincy Jones, producer), "Sweet and Pungent" from Duke Ellington's Blues in

The excellent linearity and low noise resulted in an accurate reproduction of the waveform of an undithered 1kHz tone at -90.31dBFS (fig.6). (The data representing this signal consist of just -1LSB, 0, and +1LSB.) The three discrete voltage levels can be easily perceived in this graph, along with the Gibbs Phenomenon "ringing" at the bit transitions. Extending the undithered word length to 24 bits gave the waveform shown in fig.7—quite a good facade of a sinewave at the very low signal level.

The Apogee's D/A section was superbly linear, a full-scale 50Hz sinewave output into 100k ohms producing just one distortion harmonic above the analyzer's noise floor: the benign second harmonic, at an even more benign -94dB (0.002%). Dropping the test load to 600 ohms led to clipping at the PSX-100's maximum output level of 73V RMS; reducing the output level to 5.5V (fig.8) resulted in a second harmonic at -84dB (0.006%), which is still excellent, though the third, fourth, and fifth harmonics can now be seen at lower levels. High-frequency intermodulation (fig.9) was also superbly low in level.

Only when I examined the effects of word-clock jitter in the PSX-100 D/A's analog output signal did this superb measured performance stumble. I use a 16-bit analytical signal developed by Julian Dunn when he was at Prism-Sound, and implemented by Paul Miller. It consists of an 11.025kHz tone (44.1kHz/4) at -6dBFS, over which has been overlaid the 16th, or least-significant bit (LSB), toggling on and off at 229Hz. The Miller Jitter Analyzer averages sixty-four 32,768-point FFTs on the processor's analog output while it

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Orbit, and two excerpts from Witches' Brew, the RCA Living Stereo classic.

All three processors did a reasonably good job, though HDCD (decoded by the EAD DSP-9000) sounded noticeably harsh and brittle compared to the other two, with indistinct image focus and a slight gauzy overlay. The K2 and Apogee converters sounded more analog-like, with greater liquidity and image dimensionality. If I had to pick one of the two as marginally better, it would be the K2, but the differences were trivial to my ears. (I'm told that Pacific Microsonics' latest processor, the HADC Model 2, is a considerable sonic improvement.)

Archiving precious lacquers of Who's Next and Buddy Holly were first on my list of priorities. These gems still sound incredible even after many playings, but between wear, dirt, and lacquer "spring-back," it would be reassuring to have clean copies, which would also give pretty good indications of the Apogee's transparency.

While transferring Who's Next I ran the PSX-100 in Analog Monitor mode, comparing the original analog signal with the 24/96 A/D-D/A conversion. Of course, any time you divert a signal and pass it through two cables and a complex piece of electronics, there will be differences. But the differences I heard were not what I'd call fundamental. One signal did not sound "analog," the other "digital." It was more like a minor loss of liquidity and/or transparency. I wouldn't want to have to tell you which was which in a blind listening test.

Next, I listened to the UV22-processed CD-R of Who's Next—not in comparison to the lacquer, but just as a listening experience. I'd purposely recorded the sound of the stylus hitting the lead-in groove—it was very strange watching the dormant turntable as it played back. The CD-R wasn't as rich and open as I remembered the lacquer sounding, and lacked the lacquer's transparency and rich, velvety textures. But the only way to be sure was to do an A/B comparison of the lacquer and the CD-R through the Apogec's D/A. I did so, taking the opportunity to make another CD-R, this time using the A/D converter built into the $1600 Marantz DR17 to hear how it would fare against the PSX-100.

**Measurements**

decodes these data, and looks for symmetrical pairs of sidebands on either side of the high-frequency tone. An excellent low-jitter spectrum can be seen in my review of the Mark Levinson No.306 in November 1999 (p.178): the overall noise floor is close to –130dBFS, the central 11.025kHz peak is very narrow, data-related sidebands at 229Hz and its harmonics are all below –120dBFS, and the total jitter is just 153 picoseconds peak–peak.

By contrast, fig.10 shows the jitter spectrum for the Apogee PSX-100's D/A section. The source was the analytical signal stored on a low-timebase-error CD-R, played on a PS Audio Lambda transport connected to the Apogee's S/PDIF data input by 6' of Apature cable. (Because the National Instruments card accepts only single-ended signals, I used the XLR's pin 2 output.) The jitter level is a very high 9.5 nanoseconds (9500ps), and there is a significant rise in the noise floor either side of the tone, implying the presence of low-frequency random jitter. While data-related jitter is fairly low—the highest-level component at ±229Hz, marked in this graph with a red "11," contributes 370ps—there are very strong sidebands present at the harmonically related frequencies of ±164Hz, ±328Hz, and ±492Hz (purple "8," "16," and "22" markers) that contribute almost all of the measured jitter. A pair of AC-power-supply–related sidebands at ±120Hz (dark blue "6") can also be just made out.

To say I was puzzled by this is an understatement. Apogee has an excellent reputation in the pro audio field, and in fact made its name in the 1980s by upgrading Sony PCM-F1 A/D converters with better filters and clocks. (Sterophile's J. Gordon Holt was a big fan of these modifications.) Thinking, therefore, that perhaps the PS transport and the Apature S/PDIF cable might be incompatible with the Apogee, I repeated the measurement using a Meridian 500 transport connected to the processor with 6' of 110 ohm Canare AES/EBU cable. Sadly, the jitter level rose to just under 12.67ns. The ±120Hz components disappeared, and while—most unusually—the sidebands at ±164Hz and its harmonics vanished as well, these were replaced with high-level sidebands at ±350Hz, ±700Hz, and ±1051Hz.

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Fig.10 Apogee PSX-100 D/A, high-resolution jitter spectrum of analog output signal (11.025kHz at –6dBFS with LSB toggled at 229Hz). Center frequency of trace, 11.025kHz; frequency range, ±3.5kHz. Source: 16-bit data, PS Lambda transport connected with 6' Apature S/PDIF cable.

Fig.11 Apogee PSX-100, high-resolution jitter spectrum of analog output signal (11.025kHz at –6dBFS). Center frequency of trace, 11.025kHz; frequency range, ±3.5kHz. Source: 24-bit data from Apogee ADC (Grayed-out trace is 16-bit data from Meridian 500 transport connected with 6' Canare AES/EBU cable.)
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The lacquer was as I remembered it; the PSX-100-generated CD-R simply wasn’t an “archival” copy. But it was close, and certainly closer than the Marantz edition, which was softer, smoother, and less detailed, but still impressively true to the lacquer’s “spirit.” The biggest difference was the PSX-100 edition’s better rendering of ambiance and low-level detail than the Marantz’s, its more brazen transient performance and superior bass extension. If I want to hear the lacquer, I have to listen to the lacquer—neither CD-R will do. Still, I’m glad to have stopped the ravages of time and wear, one of these days, after all, the CD-R will be preferable.

I performed the same comparison with Classic Records’ absolutely monumental mono reissue of Jimi Hendrix’s Axis: Bold As Love. What a brilliantly finessed mix! Big, solid, three-dimensional images are laid out crisply and nearly from front to back, and possess harmonic and transient details that make listening to this familiar record a brand-new experience. I was transported back to the apartment where I first heard this album as an explosion of long-buried sensory memories accompanied the music.

Played back through the Apogee’s D/A, the Marantz DR17’s D/A, the EAD DSP-9000’s processor, or through a Musical Fidelity X-Ray CD player, the CD-R, while sounding impressive, was not a clone of the original. None of the digital renderings could compete with the vinyl’s pristine transparency and rich harmonic bouquet. A direct A/B of LP and CD-R reinforced the sensation that the harmonic envelopes surrounding instruments and voices extended just so far, then stopped short. The LP’s warmth and richness were not “colorations.” The coolness of the CD-R was.

I made a CD-R of the Doug Sax-mastered LP of Janis Ian’s Breaking Silence and heard the same differences: the LP sounded richer, warmer, more velvety-smooth than either the 16-bit, UV22-processed CD or a Marantz-recorded copy. The latter, though warmer, sacrificed low-level detail, air, and, seemingly, high-frequency extension.

I then compared the CD-R of Breaking Silence with Acoustic Sounds’ gold

It appears that the Apogee’s D/A section is unusually sensitive to the data sources and cables with which it is used. As the unit offers a direct link to its D/A section from the A/D section, I was able to perform a third measurement. While I could not synthesize the 229Hz LSB toggling in the analog domain, I used the Audio Precision System One to generate a low-distortion 11.025kHz tone and fed this to the PSX-100’s A/D section, sampling at 44.1kHz with 24-bit precision. These 24-bit data were fed straight to the D/A, with the analog output fed, as before, to the Miller Analyzer.

The result is shown in fig.11, with the Meridian/Canare specgram grayed out for reference. Obviously, there are no data-related sidebands to be seen, but all the high-level sidebands have also disappeared! However, the rise in the noise floor on either side of the tone remain visible. In addition, some power-supply-related sidebands can be seen, at ±120Hz (dark blue “3”), 180Hz (brown “5”), 240Hz (dark blue “6”), and 300Hz (brown “8”). This suggests that, low-frequency noise-related jitter aside, the PSX-100 has problems with its AES/EBU and S/PDIF data receiver circuitry.

Fig.12 shows the frequency response of the A/D section at both 48kHz and 96kHz sampling rates, measured with the Apogee’s AES/EBU data input feeding the System One’s digital input. By comparison with fig.1, it can be seen that the A/D section is actually flatter up to the band limit than the A/D section.

Fig.13 shows the A/D’s digital-output amplitude error plotted against the analog input level, in dBFS. The error remains below 2dB down to around −115dBFS, which is excellent performance for an ADC.

Finally, fig.14 shows the action of the UV22 processing on the PSX-100’s A/D conversion. The source was an analog 1kHz tone just below the level needed to drive the A/D to full scale (−0.2dBFS). The Apogee’s AES/EBU output was fed to the digital input of the PrismSound DScope, which was used to average thirty-two 8192-point FFTs on the digital data. (The FFT window used was Prism’s “7-term,” which has sufficient dynamic range to analyze 24-bit data.) The bottom trace was taken with the Apogee outputting 24-bit data: the noise floor hovers around the −140dBFS level with some very-low-level harmonics visible, the highest of which (the second at 2kHz) almost reaches a still-negligible −100dB (0.001%).

Reducing the output word length to 20 bits but switching in the UV22 processing, which adds narrow-band dither noise at around the Nyquist Frequency, gave the middle trace above 15kHz. The noise floor remains unaffected by the reduction in word length, the UV22 dither doing its stuff. Only when the word length was reduced to 16 bits (top trace) did the noise floor below 15kHz rise, by about two bits’ worth. UV22 works, but does not appear to be as effective in preserving audioband resolution as the more aggressive noise-shaped redistiners, such as Meridian’s Type D.

—John Atkinson

Fig.14 Apogee PSX-100 A/D, digital-domain spectrum of 1kHz sinewave, DC–22kHz, at −0.2dBFS (from bottom to top above 15kHz): 24-bit word length; 20-bit word length with UV22 processing; 16-bit word length with UV22 processing (linear frequency scale).
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NAD L40 CD Receiver, PSB Alpha Mini loudspeaker, PSB Alpha SubSonic 5 subwoofer

The spiritual experience of immersion in music remains paramount for me, and anything that deepens such encounters or makes them more involving motivates me to reach out to my fellow music-lovers, to help them create a viable aural synergy of their own.

Yet sometimes it seems as though we spend most of our time preaching to the choir about the benefits of quality electronics, well-designed speakers, and musical source components—not to mention strategic tweaks, thoughtful room setup, and acoustic treatments. Nevertheless, some potential converts come away with decidedly mixed messages, thanks in part to the pernicious banter of audio elitists and pseudo-populist naysayers.

Listening to the elitists, one might conclude that it’s all a matter of how much money you can spend, and since you’ll never be able to afford it, why

NAD L40 CD receiver: Remote-controlled FM-only receiver with CD transport, two line-level inputs (tape in, aux) and two line-level outputs (record out and preamp out), tone controls, and NAD Link comms jacks. Amplifier: Output power: 20Wpc (13dBW), continuous average power into 8 ohms, both channels driven. IHF dynamic power into 2, 4, 8 ohms: 80W, 60W, 40W, respectively. IHF dynamic headroom at 8 ohms: 3dB. Frequency response: 20Hz–20kHz, ±0.5dB. THD: 0.05%. S/N ratio: 93dB (A-weighted, ref. 1W). Damping factor: >100 (ref. 8 ohms, 50Hz). Tuner: Usable sensitivity: 1.5µV, 50dB quieting: 2.5µV mono, 30.0µV stereo. Capture ratio (45dBf): 4.5dB. Selectivity, alternate channel: 78dB. CD player: D/A conversion: single-bit. Frequency response: 5Hz–20kHz, ±0.5dB. De-emphasis error: <0.3dB. THD (0dB, 1kHz): 0.0025%. Dynamic range: 98dB. Linearity: ±0.5dB, 0 to –90dBFS. Wow and flutter: unmeasurable. Dimensions: 17.14" W by 3.74" H by 11.23" D. Weight: 16.1 lbs. Serial number of unit reviewed: G8XL4004280. Price: $599. Approximate number of dealers: not known. Manufacturer: NAD Electronics International, 633 Granite Court, Pickering, Ontario L1W 3K1, Canada. Tel: (905) 831-0799 (worldwide), (800) 263-4641 (North America). Web: www.NADelectronics.com. E-mail: nad@NADelectronics.com.


The output impedance from the pre-amplifier outputs averaged around 810 ohms across the audio band, which is suitably low. The amplifier section was non-inverting, and the voltage gain from the Aux input with the volume control wide open was a high 39.3dB. (Note that the amp clips into 8 ohms with the volume control set to 11.5.) The remote’s Mute button didn’t reduce the output to zero, but by 55dB, which is almost zero.

Channel separation from the main outputs was identical to that from the pre-out jacks, except that, with the volume control at its maximum, the L-R crosstalk increased dramatically in level. This will not be an issue in normal use. I got some anomalous results when I tried to measure the amplifier’s output impedance. At 1kHz and above, this measured below 0.1 ohm — very low, considering the L40’s minuscule power supply. I assess source impedance by seeing how much the output voltage rises when I remove an 8 or 4 ohm load and leave the amplifier’s output open-circuited. But when I tried this at 20Hz, the L40’s output voltage dropped, which suggests a negative output impedance.

I have not experienced this before with a solid-state design, but in the days When Tubes Ruled the Earth, some commercial amplifier designs used high levels of negative feedback to achieve a negative source impedance to better control errant woofers. I assume that Erik Edvardsen has done something similar to force the L40 to mimic an amplifier with a much larger power supply. This will work as long as the power demands are slight. But if you look at fig 7 on p.93, which shows the waveform of a low-duty-cycle 1kHz toneburst (10 cycles on, 400 cycles off), with the L40 driven close to its current limit into 2 ohms, you can see that each successive cycle is lower in level than the one before, due to the power supply running out of steam. (This uses just two pairs of 100µF reservoir capacitors.)

The frequency response from the main outputs with the Tone Defeat button pushed (not shown) was the same as from the pre-out jacks (though the top octave was better matched between channels) before rolling off to -3dB around 15kHz. Unpredicting the tone controls and setting the treble and bass controls to their central detent positions dropped the level at 1kHz by 0.5dB. Their action, set to their maximum boost and cut positions, can be

---

**Measurements: NAD L40 amplifier section**

The slender, compact L-40 is made in China and houses a host of useful features configured for simplicity of installation and use. The receiver can be put on full standby employing the L-40’s elegant little remote, which duplicates the manual control functions to select source components. Stop, Play/Pause, Mute, skip through CD tracks or stored FM-tuner pre-sets (up to 30 in stereo or mono), and adjust volume. To the power switch’s right is the CD drawer, and below it a headphone jack.

Among the manual control options are: a repeat function for one track at a time or the entire disc; controls for random play, tone-control defeat, and bass EQ; store and cancel buttons for CD or tuner programming; a mono control; and, for the tuner, a search/tune control.
Just below an illuminated remote volume-control knob are the treble, balance, and bass controls. Highlights of the back panel include the NAD Link input/output jacks for use with other NAD components, plus tape in/out, aux in, and preamp-out connections.

As I told Kal, it all comes neatly packaged in a single box with a pair of PSB Alpha Minis. This remarkable little speaker ($199/pair when bought separately) is a smaller sibling of the $249/pair Alpha AN that JA raved about in April. It combines a 3/4" dome tweeter and a 5/4" mid/woofer in a ported enclosure.

**Drive Time**

My last conjugal visit with NAD took place many, many moons ago, via an integrated amp I auditioned in the early 1980s. At that time I found the NAD sound to be fat and dynamic, but fairly compressed and boxy compared to the demo-model Luxman L-11 integrated I ended up buying.

So I was keen to hear how NAD's sound had evolved since then. While 20W may not seem like much, the NAD L40 put out a nice, meaty sound.

seen in fig.8. They apply a sensible ±8dB maximum correction in the top octave and midbass.

Also shown is this graph is the action of the Bass EQ button. It applies 7.5dB boost at 35Hz, with a sharp rolloff below that frequency. It should usefully extend the PSB Alpha Minis' bass response at moderate listening levels. The L40's reproduction of a 1kHz squarewave into 8 ohms (fig.9) was almost textbook, with just a faint hint of overshoot visible. The 1kHz squarewave had just a slight downward slope to its tops, correlating with the infrasonomic rolloff visible in fig.1.

The L40's distortion/noise percentage at low levels was low overall (fig.10), though with the usual rise at higher frequencies as the amplifier starts to run out of feedback gain margin. But even into 2 ohms at 20kHz, the THD+N figure was below 0.2%. And as can be seen from fig.11, the harmonic content of the distortion, at least at low levels and in the midband, was predominantly the benign second harmonic. Unusually, there appears to be just one output device used per channel, which implies single-ended operation. If so, the L40's low distortion is quite remarkable.

At low frequencies the third and fifth harmonics make an appearance, though these stay at low levels even at moderate output powers (fig.12). But as the output power starts to approach clipping (fig.13), not only do the harmonics rise in level, but so does the entire noise floor, with many power-supply components suddenly visible. As I said before, the negative-feedback loop may still be in action, but the power supply has run out of "power" at this point. I suspect that this behavior correlates with CS's description of the amplifier offering a "polite belch" as it clips. These power-supply spurious can also be seen in the spectrum of the L40's output as it drives an equal combination of 1kHz and 20kHz tones into a 4 ohm load just below the visible clipping point on a scope (fig.14). The traditional intermodulation spurious are actually still quite low in this graph, however.

On continuous tones with both channels driven (fig.15), the L40 basically met its specification, putting out a hair under 20W into 8 ohms (13dBW) at 1% THD+N. Into 4 ohms, just 22W was available, while with one channel driven, 32W was available into 2 ohms. Both of these figures again imply a rather small power supply. But on the low-duty-cycle 1kHz toneburst used to generate fig.8, the L40 lived up to its NAD 3020 heritage, putting out 35.7W into 8 ohms (fig.16, black trace), 64.5W into 4 ohms (red trace), 102.3W into 2 ohms (blue), and even 110W into the punishing 1 ohm load (green).

—John Atkinson
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with a smooth top end, a clear, open midrange, and enough dynamic headroom to handle a variety of quality speakers without strain. And while the $199/pair Alpha Minis seemed an ideal match, when I hooked up the $1799/pair Joseph Audio RM7si two-ways and began blasting the title track from Andy Summers’ Green Chimneys (RCA Victor 63472-2), with its huge bass transients, the surrounding frequencies remained coherent, and the soundstage didn’t go all to hell. When the amp clipped, I began to experience harmonic doubling —like a sort of polite belch—in the presence region.

So: $1800/pair speaker vs $200/pair speaker. A ridiculous comparison, right? Not necessarily. As with prime real estate, when it comes to system synergy, the three key provisos remain location, location, and location. The Alpha Mini more than held its own in an extreme nearfield setup, which is how I auditioned this system for several months, my computer rig in the middle. The speakers sat atop a teak writing table (doubling as my keyboard worktable) roughly 40” wide and 28” high, with the Alpha Minis on the corners a little more than 2’ apart and a foot and change from my ears (which were only a few inches above tweeter level). My computer monitor was behind the soundstage, while the subwoofer was under the desk, in the middle, a foot forward of the Alpha Minis. I employed EchoBuster absorptive panels to create an artificial back wall.

Then, for the last few months of auditioning, the speakers left my desk. I placed them well out into my 12’ by 20’ room, about 4’ from the short wall opposite my computer. The tweeters were roughly 3’ off the floor with the Minis on the spiked SP-25 speaker stands, spaced 6’-7’ apart. I moved the subwoofer deeper into the listening space to create a shallow V-alignement with the satellites, and isolated it from the floor with a trio of the big PolyCrystall cones.

With these changes in setup and orientation came new perceptions of the NAD/PSB system’s performance limits. As the Alpha Mini’s frequency response is rated at 68Hz–21kHz, I generally crossed over to the SubSonic 5 at around 70Hz (using the L40’s pre-outs for the best integration between subwoofer and satellites, though this leaves

**Measurements: PSB Alpha Mini**

Despite its high specified sensitivity, I estimated the Alpha Mini to raise just 84.5dB (2) for 2.83V at 1m. This is after all, a small speaker, with a woofer having a radiating diameter of just 3.5”.

However, its impedance plot (fig.17) suggests it is a kind load; just as well, given the pedigree of amplifier with which it will be partnered.

The wrinkle in the impedance traces at 200Hz suggests some sort of cabinet-wall resonance, while the saddle at 65Hz indicates the tuning of the rear-facing port. This is confirmed by fig.18, which shows on its left both the band-pass port output and the woofer output with the appropriate notch at the port-tuning frequency. The port is free from upper-frequency modes. If you eyeball the overall bass rolloff in this graph and compare it with the L40’s Bass EQ curve in fig.8, you can see that this does extend the Mini’s low-frequency output. Higher in frequency, the Mini’s overall on-axis balance is flat, though with a series of peaks and dips.

The plot of how the Alpha’s response changes to the sides of the tweeter axis (fig.19) indicates that the on-axis suckout in the mid-treble fills in off-axis. But the restricted dispersion above 10kHz,
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25Hz, so that, on a ported speaker like the PSB Alpha Mini, it won't drive the thing into high distortion below its resonant frequency. Its moderate boost (+7dB at 35Hz) is just enough to give small speakers a bit more extension.

We've all heard about how audiophiles disdain tone controls. Still, I found the NAD's Bass EQ to be a musical, unobtrusive way to maximize the soundstaging and give the speakers some forward presence as I moved them out into the room, where one can more clearly discern the differences between $200/pair and $2000/pair speakers. Moving the Alphas farther into an acoustic space away from the back wall accentuated their softer, more euphonic qualities at the expense of transient snap and dynamic punch — without the subwoofer you can drive these speakers only so hard.

Bass EQ gave them a lift, while a bit of treble boost with the L40's tone control elicited more air and sparkle from the warm, dry-sounding preamp, for a more open, dimensional presentation. Two-way loudspeakers possessing more depth of detail, robust dynamic range, and extended frequency response (such as the $1200/pair Soliloquy 5.0 and the $1799/pair Joseph Audio RM7si) are plenty revealing with a flat amp, don't get swallowed up by the room, and, to my ears, require less tone contouring.

This is where folks who want to fill a room with sound will appreciate the coupled with a slight on-axis shelving-down in the same region, is presumably what led CS to use a touch of treble boost. In the vertical plane (fig.20), a large crossover suckout develops below the tweeter axis. Low rather than high stands will work best with this speaker.

The step response (fig.21) is, as expected, not time-aligned, with the sharp spike of the tweeter's output leading the slower woofer step. The cumulative spectral-decay plot (fig.22) is pretty clean overall, though two ridges of delayed energy can be seen at 5kHz and 6kHz, as well as some hashy behavior just below 20kHz, which might make the speaker more suitable for elderly gentlemen like CS and me than for keen-eared teens.

— John Atkinson

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**Measurements**

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**fig.21 PSB Alpha Mini, on-axis step response at 50° (5ms time window, 30kHz bandwidth).**

**fig.22 PSB Alpha Mini, cumulative spectral-decay plot at 50° (0.15ms risetime).**
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cost-effective attributes of the quick, articulate Alpha SubSonic 5, which PSB claims is capable of 150W dynamic power in a 10" bass-reflex system. It was the speed and focus of the old SubSonic 1 that had originally impressed me. That little sub could deliver larger-than-life effects, but I was more impressed by its ability to add depth to the foundation of the overall soundstage, and to "disappear" in the process.

For the same money, the new SubSonic 5 offered more dynamic control and articulation. On The Artist's proto-funk recordings I was able to push the leading edge of bass transients harder than I could with the SubSonic 1 without the SubSonic 5 blurring, self-limiting, or compressing the entire soundstage. Yet on a vocal performance like Ella Fitzgerald's romp through Nilsson's "Open Your Window" (from Ella Fitzgerald in Budapest, Pablo PACD-5308-2), the SubSonic 5 helped snap the soundstage into sharp focus, further articulating her sumptuous phrasing at more modest volume levels. The SubSonic 5 let me hear more live room cues, images were rendered with greater detail and stability, and the whole system was more revealing.

Conclusions
The overall sound of the NAD L40 CD Receiver was warm, smooth, and full. I favored some treble boost just to crisp things up a bit, because the PSB Alpha Mini's top-end presentation was otherwise too laid-back. But listening to the L40 with my rich-sounding Grado RS-1 headphones, I found that there was ample air and high-end detail with the tone controls defeated.

The CD player offered excellent resolution without being too etched or analytical, and, like Old Man River, he just keeps rollin' along, rarely glitching or succumbing to errors save for the odd bump on some messed-up CDs that make my more expensive transports buck like hungry goats.

And while my inopportune northern alignment a few blocks east of the George Washington Bridge and my lack of anything to supplant the humble dipole antenna mean that I rarely listen to FM broadcasts, I enjoyed the L40's tuner performance on the basis of those few stations I could zero in on: It produced very coherent images while rendering vocals without spitting, added sibilance, or megaphone effects.

Why tarry, aural pilgrims? The price is right and this is fun. May you never hear another department-store system.

What don't you get from a $1337 high-resolution system? At this price, the art is in divvying up the tradeoffs in such a way that the presentation is relatively linear, natural, and musical. Limitless reserves of power? No. Nor do you enjoy the endless depth of detail and soundstaging, the surreal transparency, the effortless presentation of spatial cues you might get with a well-matched set of ultra-hi-rez separates.

Still, this modest, high-resolution system really boogies. The NAD L40/Alpha Mini-Monitor/SubSonic 5 is everything a high-end system should be: clear, open, detailed; articulate, accurate, stable; textured, musical, involving; and eminently affordable — all at a price that will encourage even the most budget-conscious music-lovers to invest in their first high-end system, while seasoned campaigners contemplate just how involving the sound might be in their kitchens, studies, bedrooms, and summer houses.

So why tarry, aural pilgrims? The price is right and this is fun. May you never hear another department-store system.
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Richard Gray’s Power Company 400S AC line conditioner

The Richard Gray’s Power Company 400S arrived on the audiophile scene last year with a bang. Weighing in at a hefty 20 lbs and $700 a pop, this four-outlet power conditioner, according to the paperwork, “effectively ‘positions’ audio, video, and home theater equipment ‘electronically closer’ to your utility company transformer, without introducing any type of series electronic ‘traps’ or capacitors into the circuit, which we feel degrade the performance of certain equipment, and severely limit the amount of current they can handle.”

They go on: “Richard Gray’s Power Company increases the dynamics and performance of audio systems by providing a short-term supply of high current on demand to satisfy power-hungry transients required of the AC line by your stereo equipment.” They cite the 400S’s “unique ability to ‘fill in’ the AC line when demand momentarily overcomes supply,” and explain that it “tends to ‘even out’ small line anomalies. This electronic flywheel ‘fill-in effect’ enables Richard Gray’s Power Company to suppress or quench the back EMF or ‘fingerprint’ of the equipment connected to it.” The 400S also “quenches AC line noise caused by internal crosstalk between digital and analog electrical devices within the circuit,” and is said to “greatly improve” home-theater systems.

Audio Line Source lobbied hard for a review. Here it is.

What is it?
Each Richard Gray’s Power Company 400S comes in a powder-black rectangular housing with four gray (of course) Hubbell AC sockets on its face and an IEC mains-in fitting on the side. Whether you plug your components straight into a 400S or plug it into your system’s power receptacles, the heart of the beast—the inductor—is wired in parallel, “bracketing” the AC. It offers, says RGPC, little or no resistance to the line: “Theoretically it can be placed anywhere within a circuit to provide high current on demand to all equipment within the same AC circuit. The closer your equipment is placed to the unit, the more quickly effective it becomes.”

I looked at a few drawings supplied (I believe) as part of the patent application, and the 400S appears to be a large, iron-core inductor or choke. I understand that there’s also a metal-oxide varistor (MOV) sitting across the hot and neutral lines to provide protection against voltage spikes.

If you need more than four outlets, RGPC suggests plugging the “overflow equipment,” both analog and digital, into a good-quality power extender, “one that does not contain any form of power-line conditioning,” and use that into the 400S. Start with the front-end, they counsel, listening as you go, with the power amps last. One is exorted in no uncertain terms that best use is made with “star clusters” of two or more 400Ses in multiple arrays. “While the system is playing, merely plug a second [400S] into the primary unit for almost instant delivery of twice the power-on-demand.” (my italics)

For the audiophile flush with the necessary cash, “additional units may be added, with the only limitation being that of how many spare plugs you have available on the unit.” They recommend one on each amp in the system after the front-end is treated, “because each amplifier plugged into the combined system will benefit from a doubling (2 units) or tripling (3 units) of thousands of watts of high current-on-demand.” (my italics again) “To our knowledge, [the 400S] is the only device that provides high current on demand without limiting the dynamics of any amplifier, regardless of power rating or design!”

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**Description:** Inductor-based AC line conditioner working on 100-135V AC at 60Hz, 14-gauge internal wiring, 15 amp IEC connector and plug. Detachable power cord.

**Dimensions:** 5.5" W by 9" H by 4.75" D. Weight: 20.5 lbs.

**Serial numbers of units reviewed:** none found.

**Price:** $700. Approximate number of dealers: undisclosed.

**Manufacturer:** Audio Line Source LLP, 2727 Prytania Street #6, New Orleans, LA 70130. Tel: (800) 880-3474, (504) 897-6688. Fax: (504) 891-0102. E-mail: info@audioline source.com. Web: www.audioline source.com.
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Gray's Anatomy
In the “Gray Paper,” which “contains some technical Information, some not,” Richard Gray, “Partner and Inventor,” describes how he “re-invented” power. Ahem. He points accusingly (and correctly) at the rumble line of modern devices hung on the AC line these days, to mix metaphors! The problem is the rabid, high-reactance load of modern electronics, which top up their capacitors at the top and bottom of the 120V, 60Hz AC sinewave, but only there.1 Like little starving piranhas, the sudden multiple reactive loads create a sort of fizz at the top and bottom of the waveform, where the dinner bell rings. That is also where you'll find asymmetric notching due to uneven loads. And since you and everyone else on the party line insist on pulling maximum juice for all the contemporary electronics we take for granted, the waveform can wind up with a top as flat as the Intrepid's flight deck. Not to mention that capacitors then can't charge to peak voltage. The end result is some percent of harmonic distortion riding the line.

Devices such as the 400S, as well as others now on the market, attempt to “fill in” and smooth out the hashy distortion: power-factor adjustment, the buzzword of the day. Gunshoering

around for this review and “Fine Tunes,” I've learned some amazing things. Did you know the public utilities use large capacitors to resonate the AC line to present a more “old-fashioned” and resistive load? Do single-ended guys know something we don’t?

Mr. Gray further stipulates that resistance in the line robs the music of dynamics, and that any series devices — air-core chokes, isolation transformers, sinewave regulators — just add resistance to the AC line.

So, all the rest of you power-conditioners out there — forget it. You're not needed. Buh-bye.

Another flywheel!
How does this thing work? As explained by Gray, “an inductor . . . resists changes in current flow in the circuit by storing energy in a magnetic field. When current flows through the inductor, a magnetic field builds up in the core and around the coil. When this current ceases, the magnetic field collapses and returns the stored energy to the circuit. Theoretically, the current in an inductive circuit lags behind the voltage by 90°; realistically, the lag will always be a little less due to the small amount of resistance in the coil of the 400S. It is this lag that allows it to perform as a reservoir of current available to the circuit during the time period when the AC line is dropping.”

Transients are said to be aided by this energy stored in its “proprietary” core. “Simply put, this effect is very much like that of a flywheel used in mechanical equipment. It extends the charge time during which the power supply in an electronic component can replenish its stored energy. What makes my RGPC unique is its ability to ‘fill in’ the AC line when demand momentarily overcomes supply and tends to ‘even out’ small line anomalies.”2 This process suppresses or quenches the reflected back EMF or ‘fingerprint’ of the equipment connected to it. Although back EMF is usually small, it is nonetheless damaging to the quality of the reproduction and interaction of audio/video equipment.

The Richard Gray's Power Company 400S manifested the same voice or coloration no matter how I used it.

2 Paul McGowan of PS Audio covered some of this ground in the May 2000 issue of Stereophile (pp.50-59). The question is: how much energy storage is necessary to restore the flat top of the AC waveform to its correct peak value?

---

Issues
The following will come as no surprise: I'm no engineer. But I've met some fascinating people and learned just enough to be dangerous. (To me, learning is like music: It keeps you alive.)

With the Richard Gray's Power Company, certain issues immediately presented themselves: First, what exactly is the energy-storage capacity of the 400S? This is actually a question of relatively simple physics and mathematics, and neither subject is a forte of mine. But they are of Stereophile's Shannon Dickson, who explains it quite succinctly:

“...The calculations are simple equations that define many of the parameters of any parallel inductor. Using a 120V power line, a 6-Henry inductance, and a DC resistance of around 9.8 ohms (my direct measurement of the device) yields a maximum RMS current of around 53 milliamperes. Then, to find the magnetizing current of the device or energy-storage potential of the magnetic field around the inductor, you apply: ½ x L x I (one-half times inductance times current squared), which results in a maximum of just 0.01VA per second, otherwise known as Joules.

“When you daisy-chain extra Power Companies, this stored energy value is additive, so two paralleled units would provide only 0.02 joules of energy storage, and three would provide just 0.03 joules. Compare this to the typical large current demand of a power amp during a large transient demand, which can be measured in multiple joules.1 Yes, the 400S does store some energy, but apparently not very much.”

And which way will that energy, of whatever magnitude, flow? If the impedance the parallel inductor sees toward the service panel is lower than that “looking” at your audio rack, back it goes into the power grid.

Another issue is that of surge protection. Shannon again: “MOV's provide decent lightning protection for at least one or several nearby transient events, but the claim that the parallel inductor itself absorbs or shunts to ground lightning and transient surges requires more thought. For one, since protective earth ‘ground’ forms part of a current loop, it is therefore not a bottomless pit into which unwanted currents can be made to disappear.”

Nothin's black'n'white.

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1 It is fair to point out that almost all that energy comes from the amplifier's reservoir capacitors. The 400S is intended to ensure that the recharging current for those capacitors not be negatively impacted by the typical AC waveform flat-topping.

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Richard Gray's Power Company 400S

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Stereophile, June 2000

105
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As regards surge protection, Mr. Gray provides. "We have one of the most effective surge-protection systems available, and [it] has proved to be completely invisible to eyes and ears. It is designed to blow its internal fuse whenever a surge greater than 280V hits your system."

Delores, tell everyone in the waiting room to go home. All positions are filled.

**Methodology**

I tried my four review samples of the 400S every which way but loose. On the amplifier side, I used them mostly on the Lamm ML1s (see review in the May 2000 issue) and the dual-monophonic Forsell Statement, an amp that's always been very sensitive to mains quality. I also tried them with the Linn Klimax, but the Linns' new-age switch-mode power supplies aren't affected by the quality of the incoming mains AC. I used one 400S in parallel with each channel of the amp(s), then added them, one by one, until I'd reached the maximum of four. I tried plugging the amps directly into one 400S, with a second one daisy-chained to it. I also used a high-quality Cardas power extender on the amp, and plugged in one, then two, then one paralleled pair, then two parallel pairs, allowing for "quick switch" comparisons. (During play, I could plug one in, plug a second into it, add another to the extender, then plug another 400S into the second one. I even tried them all stacked up one into the other. My back, my back...)

On the front-end, I tried the 400S on the high-current BAT VK-50SE preamplifier and the Accuphase DP-75V 24-bit/192kHz upsampling CD player, which was used almost exclusively for front-end evaluation. (The Mark Levinson No.32 Reference preamplifier regenerates its own AC, so it wasn't used for this review.) I tried the 400S straight into the dual-quadrature 20-amp lines that serve our front-end components, and plugged into the "pass-through" amp sockets of the Audio Power Industries Ultra Wedge. Our front-end components are normally run through. I also tried the Accuphase player directly into a 400S and then into the wall for direct rather than parallel operation, and I tried it this way into the amp sockets on the Ultra Wedge. I also removed the source components from the Wedge and powered them directly from the wall, then put everything on that Cardas extender into one socket.

**Sound**

The Richard Gray's Power Company 400S manifested the same voice or coloration no matter how I used it. It sounded like your windshield looks after a big rig blows by in a rainstorm: The first swirl of the blades cleans things up, but the view remains somewhat obscured. Unfortunately, sweep light, slightly obscuring, but smooth-sounding scrim, the upper mids through lower treble were similarly laid-back and slightly recessed, the very top seemed to lunge forward, and was a bit grainy as well. In spite of this, the 400S imparted an overall smoothness to the sound through its "effective area": that broad sweep from midbass through upper treble.

But I can see where it might impress on first blush. The plumped-up bass could be attractively bloomy, and the slightly smoothed-over mids were easy on the ears.

I can see where the 400S might impress on first blush. The plumped-up bass could be attractively bloomy, and the slightly smoothed-over mids were easy on the ears.

Associated Equipment

**Digital source:** dCS 972 DDC and Elgar DAC at 24/192, Forsell Air Reference CD transport, Accuphase DP-75V CD player.

**Preamplifier:** BAT VK-50SE/VK-P10.

**Power amplifiers:** Forsell Statement, Lamm ML1s.

**Loudspeakers:** JMLab Utopia.


**Accessories:** ASC Studio Traps; Argent Room Lenses; API Power Wedge Ultra 116, Ultra Enhancers; PolyCrystal amp stand, equipment racks, cables, cable towers; Signal Guard platforms; Black Diamond Racing shelves, cones; Nordost Pulsar Points; Bright Star Air Mass, Big Rock.

—Jonathan Scull

What does it all mean?

In general, if the AC in our area was taking a direct hit in the middle of the day, the Richard Gray's Power Company 400S could sound...all right. Other times? Didn't care for it. A lot of money for not very much benefit.

If you have an early-CD-sound solid-state system and you want to smooth off its rough edges, be my guest. The 400S would probably work well in that context. But if you have anything resembling a carefully set-up, high-resolution system, I suggest you spend your money elsewhere.
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Sitting in a big plush chair, smiling and talking with me in the lobby bar of the Driskill Hotel in Austin, Texas, Mitch Cantor doesn’t look crazy—he doesn’t drool, his eyebrows don’t twitch, there are no electroshock burnouts on his temples. But Mitch has definitely got a bolt or two loose somewhere—a death wish, some might say: Cantor is one of those crazed but courageous music-business characters who regularly test the limits of their own human endurance: He owns an independent record label.

Cantor wears at least a half dozen hats. Harnessed by a very limited budget, he labors incessantly to find, press, sell, market, and distribute records he likes. Along the way he deals with a multitude of thorny personalities: artists’ managers, graphic designers, CD pressing plants, mastering labs, distribution gangsters, radio-promotion weasels, etc. And he does all this knowing that his chief competitors are huge multinational corporations that could squash him like a bug. But he says he still loves it.

In the usually short, unhappy life of an indie label, there comes a moment when it makes a splash or begins to fade quietly and expensively away. Happily, for Gadfly Records—whose biggest-selling releases had been reissues of Tonio K. albums—that moment has suddenly and unexpectedly arrived. On March 7, Gadfly released Best of British (Gadfly 260), by former Rolling Stones and Faces piano player Ian McLagan; and Invisible Man (Gadfly 262), by longtime producer and cult artist Don Dixon. Two weeks later came Western Electric (Gadfly 261), by Gram Parsons devotee and former Long Ryder Sid Griffin; and Tunnel Into Summer (Gadfly 259), by guitarist Kimberley Rew, a key member of both the Soft Boys and Katrina and the Waves.

Taken together, these four records are exactly the kind of “get noticed” detonation that could and should put Gadfly on the map—at least for a moment. While they’re never going to sell like Thriller, they also constitute one of those rare instances in the record biz when a small company has used luck and smarts to beat its big-money opponents and get to the show. One listen and you know there have to be ears at the major labels, saying, “Why didn’t we do this?”

Cantor began his adventure in 1995, when, after years of working at record distributors and putting out albums on the side, he officially launched Gadfly in Burlington, Vermont. The name came from a nickname given Cantor by an elementary school teacher, who, when it became clear that Cantor didn’t know the meaning of the word, asked him to write a report on it. The research proved to have repercussions that, later in life, seemed to fit to a T what Cantor wanted to do in the music business.

“I chose to focus on the positive aspects of the word,” Cantor says with a sly smile. “Someone who stirs the pot, who gets things going, who doesn’t like the status quo. In the music business, there’s a lot of room for that. [With most Gadfly releases,] if we don’t do it, no one else will. It’s part of the ethos of the label.”

Since 1995, Gadfly has released approximately 15 discs a year. By the end of 2000, the catalog will number nearly 80 discs. Like most proprietors of indie labels, Cantor is a one-man A&R department: If he likes it, he signs it. He says that, instead of the money and connections that major labels supply, what he and most indie offer are label owners who care about music, and who give artists a greater share of the control.

“I look for projects I love. I like them to be unique. Sometimes it’s something I can verbalize and sometimes I can’t. After that, can we make it work? Will it sell? Will it bring in other projects? Will it bring us increased visibility?”

His quartet of recent releases share some key similarities. All are the work of mature, accomplished artists who’ve had some measure of fame, and who have a certain amount of name recognition among fans and in the business. When Cantor first heard them, all were already-completed, mostly artist-produced discs, and the products of years of work. And each one features all-star guests.

When it comes to guests, the winner among the four is Ian McLagan’s predictably rowdy Best of British: Ronnie Wood adds his very identifiable guitar to three songs, Billy Bragg sings on the title track, and Damnations TX, an up-and-coming Austin alternative band, guests on one cut. Now living in Austin, where he plays with his Bump Band—a collection of Austin heavyweights including bassist Sarah Brown and guitarists Gurf Morlix and Jud Newcom—pianist/singer McLagan strikes a rocking, very Faces-esque groove in “She Stole It!” (about his record collection), and a sloppy Stones honk in “Hello Old Friend.” And when you listen to “Suzie Gotta Sweet Face,” for a minute you can believe that pub rock is back.

Don Dixon is a North Carolina native best known for co-producing (with fellow North Carolinian Mitch Easter) R.E.M.’s classic debut album, Murmur, and a pair of early Smithereens discs (Especially For You and Green Thoughts). He’s an aficionado of melodic, guitar-edged Britpop (think Elvis Costello), this sensibility filtered through his southern punk/pop upbringing—which means that tunes like the opener, “Invisible & Free,” end up sounding a bit like a crusty John Hiatt. Dixon plays every instrument on Invisible Man, and is aided vocally by his wife, singer Marti Jones, and Easter.

The obvious touchstone for Sid Griffin’s Western Electric (also the name of the band) is the Byrds. But while Griffin nails the Byrds’ trademark ringing guitars and vocal harmonies in tunes like “Memory Captures Time,” the rest of this left-of-center British disc of country-Americana is a bit weak. Griffin tends toward moody, ill-conceived pop tunes, a problem that afflicted many of his efforts with his previous band, the Coal Porters. Still, a previously unreleased tune by Byrd Gene Clark, “Straight-from the Heart,” features Robyn Hitchcock on vocals.

The most accessible of the four is Kimberley Rew’s Tunnel Into Summer. The man who wrote such infectious hits as “Walking on Sunshine” and “Going Down to Liverpool” falls easily back into his power-pop groove with such knockout as “Simple Pleasures.” Produced by fellow Soft Boy Andy Metcalfe, Tunnel also features the ever eccentric songstere (and ex leader of Soft Boy) Robyn Hitchcock on three tracks.

According to Mitch Cantor, the response to this blockbuster quartet has been very encouraging. They’re being played on radio, for example, even though Gadfly has yet to spend a dime on radio promotion. Still, Cantor’s hopes and dreams for these records remain realistic. Make a little money for himself and the artists, and raise Gadfly’s profile in the biz.

But despite the challenges inherent in his chosen profession, Cantor still likes being small and independent.

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Benjamin Britten Live on the BBC

It may seem ironic that Benjamin Britten, a composer who believed in the value of “occasional music,” and whose primary focus was writing in the present for living artists and listeners, should, nearly a quarter-century after his death, continue to be one of the 20th century’s most widely performed artists, and likely will turn out to be one of history’s most enduring musical geniuses. Indeed, Britten’s stated belief in “letting the future take care of itself” at least partially explains both his music’s timelessness and its contemporary relevance.

By not worrying about his place in history, Britten was free to write music undistracted by responsibilities borne by leaders of movements, and uninhibited by adherence to any established “school” of composition. Instead, Britten developed his own style, a blend of originality and accessibility that never veered off the course set by his teacher, Frank Bridge: Find yourself and be true to what you found; say clearly what is on your mind; and always pay scrupulous attention to technique.

Britten’s command of technique was evident even in youthful works, such as Quatre chansons françaises for voice and orchestra, written when he was only 14 but showing the maturity of a seasoned composer in both text setting and orchestration. A succession of phenom-}

By living and creating for the moment, composer/conductor Benjamin Britten (shown here circa 1955) has been accorded his own timeless place in musical history.
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significant part of his involvement would be in conducting and performing as a pianist in the festival’s song recitals and chamber-music concerts.

Fortunately, this also was a time in which Britten’s recording activity was at its peak. Both Decca/London and the BBC eagerly and regularly made recordings of Britten conducting his own works and, particularly at Aldeburgh, of Britten in collaboration with some of the greatest artists of the day: cellist Mstislav Rostropovich, pianist Sviatoslav Richter, hornists Dennis Brain and Barry Tuckwell, guitarist Julian Bream, violinist William Primrose, harpist Osian Ellis, and singers Elly Ameling, Janet Baker, Heather Harper, Galina Vishnevskaia, and, of course, Peter Pears. These documents are priceless accounts of some of the most memorable live performances ever recorded.

During this past year, BBC Music has issued 15 compilations drawn primarily from various Aldeburgh Festival concerts from the ‘60s and early ‘70s. Three of the more important selections, featuring Britten and Pears together in song recitals, and with legendary horn player Dennis Brain, are from the late ‘50s; a few more were made in the studio; and one was recorded live at the historic opening of Queen Elizabeth Hall in London in March 1967.

Although each recording has its highlights, perhaps the most significant is one made in June 1967, at the opening of The Maltings, a building once used to malt barley for beer and which proved perfect in size, shape, and acoustics for a premier concert and recording venue for the Aldeburgh Festival. Its stage was large enough for orchestra performances and opera productions, but its legendary acoustics allowed for solo recitals and chamber music. The opening concert, on June 2, was celebrated with the Queen in attendance, complete with royal fanfare and Britten’s own arrangement of “God Save the Queen.” Two days later, the concert was essentially repeated (without the Queen) and recorded (BBC 8007), and its highlight is the new overture Britten wrote for the occasion: The Building of the House, for orchestra and chorus. You can feel the excitement in the hall and get a real sense of the energy in the air—just the effect that Britten intended his piece to achieve. He conducts it with unstoppable, irresistible, infectious vivacity.

The program is filled out with selections from various Aldeburgh concerts from 1961, ’67, ’69, and ’71. Overall, the performances—which include Britten conducting two significant works by his teacher, Frank Bridge, and Imogen Holst conducting a rarely heard work by her father—range from outstanding (Bridge’s Enter Spring and The Sea) to very good (Holst’s A Fugal Concerto) to adequate (Britten conducting Holst’s Egdon Heath). The sound also varies, from dry 1961 mono to the detailed, vibrant ambience of the Maltings in 1967 and 1971.

That same opening concert in 1967 featured Handel’s Ode for St. Cecilia’s Day (BBC 8009), with a cast of soloists that shows the high caliber of talent Britten was able to attract to Aldeburgh each year. Vocal soloists were Heather Harper and Peter Pears, with trumpeter Philip Jones, lutenist Julian Bream, and organist/harpist/chordist Philip Ledger. Although there are no period instruments in the orchestra, the performance is clear and cleanly articulated, and the singing is nothing less than eloquent. The sound reveals some of what the celebrated Maltings’ acoustic must have been like, and the solo voices (and the superb cello in the soprano aria “What passion cannot music raise and quell?”) have a special warmth and presence; but the orchestra and chorus are somewhat confined and limited in dynamic range. The chorus also seems a bit heavy for this music, but, after all, this was 1967. Harper and Pears are excellent enough in the Ode, but when Pears performs the solo tenor sections of Britten’s Choral Dances from Gloriana, a selection from a concert given three months before to celebrate the opening of Queen Elizabeth Hall in London, you really appreciate the tenor’s affinity for Britten’s own music. Rounding out the program is Britten’s charming little orchestral dance, Hankin Boooy, also performed at the Queen Elizabeth Hall concert, and which later was incorporated into Britten’s Suite on English Folk Songs.

A third recording (BBC 8010) from 1967 features two Mozart performances, one with pianist Sviatoslav Richter performing at Aldeburgh, the other from a November Queen Elizabeth Hall concert with violinist Norbert Brainin and violist Peter Schidlof performing Mozart’s Sinfonia Concertante, K.364. Richter’s reading of the Piano Concerto 22, with Britten conducting the English Chamber Orchestra, presents a grandeur and wide-angle scope that returns a perspective that may not be purely Mozart, but suggests a latent power in this score that’s very much of the 20th century and that can easily be appreciated by 20th-century ears. Even Britten’s cadenza has a decidedly neo-romantic flavor. Given Britten’s and the ECO’s multicolored
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palette, the whole thing works very agreeably, and seems wholly appropriate in this context. Of course, pianist Richter, with whom Britten had established a close musical and collegial relationship, is technically assured and characterful, and although the piano sound is too distant, we hear every detail of fingering and phrasing. Britten and the ECO add a ravishing Adagio and Fugue in c, K.546, whose dramatic elements are played to the hilt—it sounds for all the world like Beethoven. Brainin and violist Peter Schidlof are a terrific team, performing the Sinfonia Concertante with romantic flair and dazzling technical virtuosity. The sound is quite good, even if the orchestral sections are sometimes unnecessarily prominent.

A fire completely gutted The Maltings in June 1969, only hours after the festival's opening concert had ended, and only two years after the building's celebrated renovation. An announcement from the festival management had just reported that the famous concert/record hall was now completely paid for, and everyone was talking about the uniqueness of the venue and its fabulous acoustics. The festival went on—other sites were found, mostly in local churches—and, miraculously, through the heroic efforts of the festival's directors (including Britten and Pears) and many local supporters, the Maltings was restored to its former glory in time for the 1970 festival opening.

One of the most memorable events to take place in the reborn Maltings was a performance of Shostakovich's Symphony 14, with Britten, the symphony's dedicatee, conducting (BBC 8013) —the first time the work had been performed outside the Soviet Union. Even more interesting was the fact that Britten and the ECO were joined by the two soloists who had premiered the work: soprano Galina Vishnevskaya and bass Mark Rzhetin.

Britten was fully aware of the momentousness of the occasion, and was fully engaged in the work's intensely personal yet powerful drama. The singing is idiomatic and often chillingly powerful, always full of feeling, and the orchestra makes an impressive effort to rise to the demands of a work that not only was brand-new (the world premiere had taken place only nine months before), but spoke a language all its own, one inside the poetic texts and "behind" the notes. For a live concert recording from 1970, the impact of this performance is remarkable, due not only to the performances, but to the recording's amazing presence, detail, and dynamic range. When Rzhetin first enters, you can easily believe that you're in the same room with him. The orchestra, too, gets impressive attention, from the flesh-on-string realism of the pizzicatos in the seventh movement to the strikingly vibrant percussion throughout.

On the same disc is Britten's Nocturne, written for Pears and scored for seven obbligato instruments and string orchestra, on texts by Shelley, Tennyson, Coledige, Wordsworth, Keats, Shakespeare, Thomas Middleton, and Wilfred Owen. Pears premiered the complex and craggy eight-movement piece in 1958 and recorded it for Decca the following year, but this 1967 performance shows that the 57-year-old tenor's voice had grown a slightly darker, warmer resonance. In some measure this change was attributable to Lucie Manen, the teacher with whom Pears had been studying since 1965, who convinced him to work on the "baritone" part of his range and

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**Benjamin Britten: The BBC Discography**

**BRAMHS: Liebeslieder Waltzes**
**ROSSINI: Songs & Duets from Les Soirees musicales**
**TCHAIKOVSKY: Four Duets, Op.46**
Heather Harper, soprano; Janet Baker, mezzosoprano; Peter Pears, tenor; Thomas Hemsley, baritone; Claudio Arrau, Britten, piano
BBC 8001

**BRIDGE: Enter Spring, The Sea**
**BRITTEN: The Building of the House**
**HOLST: Eogon Heath, A Fugal Concerto**
Imogen Holst (A Fugal Concerto), Britten, English Chamber Orchestra, London Symphony Orchestra; New Philharmonia
BBC 8007

**BRITTEN: Miscellaneous Works**
Our Hunting Fathers, Who Are These Children?, Canticle III, Stills Falls the Rain, Lachyrmae
Peter Pears, tenor; Dennis Brain, horn; Margaret Major, viola; Britten, piano, London Symphony Orchestra
BBC 8014

**BRITTEN: English Folksong Arrangements**
**FAURE: La Bonne Chanson**
**PURCELL: Songs (realizations by Britten)**
**SCHUBERT: Three Songs**
**SCHUMANN: Liederkreis, Op.39**
Peter Pears, tenor; Britten, piano
BBC 8006

**BRITTEN: Choral Dances from Gloriana, Hankin Booby**
**HANDEL: Ode for St. Cecilia's Day**
Heather Harper, soprano; Peter Pears, tenor; Chorus of East Anglian Choirs (Handel); Ambrosian Singers (Britten); English Chamber Orchestra, Britten
BBC 8009

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**BRITTEN: On this Island**
**WOLF: Morgen Lieder**
Shakespeare songs by Arne, Quilter, Tippett, Warlock
Peter Pears, tenor; Britten, piano
BBC 8015

**BRITTEN: Nocturne, Op.60**
**SHOSTAKOVICH: Symphony 14**
Galin Vishnevskaya, soprano; Mark Rzhetin, bass; Peter Pears, tenor (Nocturne); English Chamber Orchestra, Britten
BBC 8013

**MAHLER: Symphony 4**
Lieder eines fahrenden Gesellen, Two Songs from Des Knaben Wunderhorn
Elly Ameling, soprano (Wunderhorn); Joan Carlyle, soprano (Symphony 4); Anna Reynolds, mezzo-soprano (Lieder); London Symphony Orchestra (Symphony 4), English Chamber Orchestra, Britten
BBC 8004

**MOZART: Piano Concerto 22; Adagio & Fugue in c, K.546; Sinfonia Concertante, K.364**
Norbert Brainin, violin; Peter Schidlof, viola; Swatoslav Richter, piano; English Chamber Orchestra, Britten
BBC 8010

**SCHUBERT: Lieder**
"Der Strom," Auf der Donau, "Der Wanderer," "Fischersweise," "Der Hirt auf dem Felsen," six others

**WOLF: Three Poems of Michelangelo, Three Christmas Songs**
Heather Harper, soprano; Peter Pears, tenor; Dietrich Fischer-Dieskau, John Shirley-Quirk, baritones; Thea King, clarinet; Britten, piano
BBC 8011

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[Stereophile, June 2000]
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whose efforts seemed to significantly open and broaden and release tension from his voice. No doubt Manen's work with Pears was one of the reasons his voice remained in such fine form for so long, enabling him to take on the demands of the role of Aschenbach in Britten's Death in Venice at age 63, of Vere in Billy Budd at 68, and to continue singing with apparent ease until 1980, when a stroke ended his singing career.

If these BBC recordings carried only the few song-recital selections by Pears and Britten, the series would be more than worth the effort and expense of production. But not only does it include incomparable performances of some of Britten's original songs, song cycles, and several folksong arrangements, there are also Schubert, Wolf, and Schumann, all performed with rare interpretive insight. What is heard is true artistic collaboration—the culmination of the creative instincts and lifelong experience of two mature artists who are comfortable in their technique, their understanding of the music, and their communicative interaction with each other.

Three essential discs for Pears/Britten fans are primarily drawn from Aldeburgh Festival recitals from the years 1956–72. Perhaps the best of these (BBC 8015), taken from performances in 1969 and 1972, includes the recording of Britten's Warlock's Son, one of Britten's most evocative, intense, and delightfully spooky creations. The Schubert and Wolf songs (seven of each) are marvels of pure musicianship. But for most listeners, the disc's highlights come with the Shakespeare songs by Arne, Quilter, Warlock, and Tippett, which are alternately breathtaking, flirtatious, and fun. It's amazing to think that Pears was nearly 62 when he gave this youthful, effortlessly lyrical performance. The program ends appropriately with Britten's arrangement of "The Salley Gardens," a favorite of the two performers and their fans. As you might expect, the sound varies due to different dates and locations, but in general it's a good, live concert-hall sound with proper balance between singer and piano. As is unfortunately typical of this series, there are informative liner notes but no song texts.

Another essential Britten-Pears recital is compiled from two earlier concerts, one from June 1958, the other from a year later (BBC 8006). The performances have exceptionally good mono sound, particularly regarding the quality of Pears' voice, which, although spatially rather confined, is clear and warm and rings with a natural resonance. The Aldeburgh Festival provided marvelous opportunities for Britten and Pears to perform the music they loved, and Purcell always was dear to their hearts. This program features five Purcell tunes, with Britten's keyboard "realizations," and Pears truly relishing this music's dancing, life-loving rhythms, playful texts, and often florid lines. Likewise for Britten, who adds just the right amount of dash and drive to his accompaniments. Every track on this disc is a "highlight," from Schubert's "Nachtviolen" and Schumann's "Mondnacht" to Britten's four lovely folksong arrangements. No one should miss this chance to hear two of the world's greatest musicians at the top of their forms.

No less compelling is a disc including several of Britten's most deeply felt statements on themes that inspired and disturbed him all his life: violence, destruction of the earth and its innocents, and the incomprehensible incongruities and cruelties of war (BBC 8014). In reference to Our Hunting Fathers, one commentator describes Britten's writing as unique among English composers of the period for its "shocking virtuosity." Indeed, the London Philharmonic players who premiered it were more than a little bewildered by the technical challenges of this brazenly adventurous work. But the 23-year-old Britten seemed to know exactly what he was doing in setting Auden's fierce, and relentless in his energy.

The hunting of animals is a theme that appears again in the title poem of Britten's last song cycle, Who Are These Children?, written 30 years after Our Hunting Fathers. These 12 songs, to poems by Scots poet William Souratt, make unforgettable impressions with their images of the careless bombing of civilians, the suffering of children, and the mindless felling of a 200-year-old oak. Pears' 1971 reading, with Britten at the piano, was recorded three months after the premiere. It is unforgettable — and the only one in the catalog. The disc concludes with a 1956 performance of Canticle III, a setting of Edith Sitwell's "The Raid, 1940" for tenor (Pears), horn (Dennis Brain), and piano (Britten), plus Britten's masterful Lachrymae (Reflections on a Song of John Dowland) for viola and piano, thoughtfully and beautifully performed by violist Margaret Major at BBC studios in 1963, with Britten accompanying. The sound varies from very fine stereo to acceptable mono.

Beyond the Britten-Pears recitals, a number of other collaborations drew considerable attention. Not surprisingly, in view of the incredible caliber of artists

As part of their collaboration in writing the opera Billy Budd, about a seaman, Benjamin Britten (second from right) and E.M. Forster (second from left) spend leisure time on a boat at sea.
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Stereophile, June 2000
that regularly visited Aldeburgh at festival time, many of these events produced their own special, one-time-only magic. One of these was the performance of Brahms's Liebeslieder Waltzes, part of a 1968 concert titled Four Voices and Four Hands (BBC 8001). The ensemble was a dream matchup: singers Heather Harper, Janet Baker, Peter Pears, and Thomas Hensley, and pianists Britten and Claudio Arrau. Yes, there are many recordings of these fine vocal quartets in the catalog, but none more fun and spirited than this. Despite the ravishing Brahms, many listeners will be drawn to the four very lovely and rarely heard duets from Tchaikovsky's Op.4. Heather Harper and Janet Baker work wonders with these gems, and do the same for four songs by Rossini, two of which are also duets. Britten again proves his astonishing pianistic powers, giving added life and lyricism to the vocal lines in this 1971 concert. The audience was clearly engrossed in the performances—you can barely tell they're there. The sound from both concerts is exemplary.

At the 1972 Aldeburgh Festival, Britten heroically conducted an abbreviated version of Schumann's Scenes from Goethe's Faust, a huge and demanding work for soloists, various choruses, and orchestra, and which he recorded in complete form for Decca two months later. “Heroic” because Britten was beginning to suffer the symptoms of the heart disease that would kill him four years later. In fact, after the week-long Schumann sessions, he did not conduct again. Among the last of his recordings were a profoundly moving reading of Mahler's Songs of a Wayfarer with mezzo-soprano Anna Reynolds (BBC 8004), and a Schubert song recital with one of the world's finest lieder singers, Dietrich Fischer-Dieskau (BBC 8001). Both are from the 1972 Aldeburgh Festival and show that Britten's musical powers were undiminished—as were those of his two singing partners and the ever-versatile and reliable ECO.

Britten had been impressed with and influenced by Mahler since very early in his creative life, and although Britten's name is not associated with Mahler's music as a conductor, he did get the chance, in 1961, to conduct Symphony 4. His deeply personal and passionate reading, which also appears on the disc with Songs of a Wayfarer, features a dramatic and rich-toned Joan Carlyle partnered by the London Symphony, performing in a Suffolk church. The rest of the program offers a tantalizing glimpse of another of those brief but magical partnerships: with Elly Ameling, in a 1969 performance of two songs from Des Knaben Wunderhorn. Again, the sound varies from 1961 mono to 1972 stereo, but the standard for all of these recordings is very high and never disappoints.

The Fischer-Dieskau recording contains a couple of bonuses, one being a performance of Schubert's "Der Hirt auf dem Felsen" (The Shepherd on the Rock) for soprano, clarinet, and piano. It's a wonder that this dramatic and tuneful work isn't performed and recorded more often, except that it does require virtuoso singing and playing. Soprano Heather Harper, clarinetist Thea King, and pianist Britten dash it off with dazzling flair and ease, with only a couple of live-performance glitches along the way. Baritone John Shirley-Quirk adds Hugo Wolf's Three Poems of Michelangelo, and Pears finishes the program with three more Wolf songs, gorgeously and tenderly sung. There's some undue echo and distortion in the Fischer-Dieskau selections, and in general the sound on these two discs is a little too live and not as well-focused as the best in the series—but it doesn't distract from the sheer pleasure of the performances.

Five other recordings in this series contain repertoire ranging from Tchaikovsky's Serenade for Strings to Purcell's Dido and Aeneas to Mozart, Debussy, Haydn, and Beethoven—all of them recommendable and worth the price of admission. It's probably safe to say that never again will conditions exist to bring composer and performers together in such a long-lived, mutually inspiring, and phenomenally productive shared experience. We are fortunate to have such well-preserved accounts of some of these moments, in which the atmosphere is charged with the energy of live, unedited performance. Although most of us weren't fortunate enough to be in attendance at these concerts, these somewhat flawed but faithful and highly recommendable recordings make us wish all the more that we had been.
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Stereophile, June 2000
Instantaneously attainable toys, such as MP3, game-stations, and the like. A pity, because if you really care about music reproduction, the great leap forward can't happen soon enough.

Cases in point are a pair of 24/96 DVDs recently arrived on my doorstep from an Italian label, Arts — not more relishes of archival materials, but brand-new 24/96 recordings. They're stunning, especially Percussion XX, a percussion recital (I'm a drummer; so sue me). There are 10 richly detailed, edgy, complex modern compositions herein, but for those with a sense of adventure, this disc is the last word in aural immediacy and excitement. It was recorded using a Neumann M149 tube mike, direct to hard disk (something old, something new), and the purity of tone, clarity of resolution, depth of soundstaging, and visceral impact of percussionist Jonathan Faralli's recital are unlike anything I've ever heard — incredibly lifelike. Some of the transient depth charges captured by engineer Valter B. Neri — such as the timpani strokes in Elliot Carter's Canto and the ratcheted, industrial metal sound that introduces John Cage's Cartridge Music — make the cannon shots from Overture 1812 sound like Iris DeMent whispering from The Tibetan Book of the Dead.

But it's not simply the transient impact of a big drum, or the incredible dynamic range from the softest rolls to the loudest rimshots. It's depth of image within an acoustic space — as on the selections from Carter's Eight Pieces for Timpani, where I could hear and almost see the beautifully panned semicircle of timpani, and clearly discern the movement of Faralli's hands as he crosssticks between high- and low-pitched drums. Then, on Eric Tanguy's Towards, there's the pinpoint resolution of skin and metal sounds, the wealth of low-level acoustic cues and reverber trails, the incredible low-end extension. Or the telling use of ambience and perspective on Hans Werner Henze's wacky Prison Song. And Reginald Smith Brindle's Orion M 42 illustrates soundstage depth, variations in timbre, and the relative powers of ppp and ff. (Tread carefully, pilgrims, or you'll blow your speakers to kingdom come.)

Trio Italiano's disc of Schubert piano trios was recorded using pairs of Schoeps MK-21 and MK-2S mikes and a Tascam DA-38 digital multitrack recorder. While that medium doesn't seem quite as pure or pristine as going live to hard disk, this, too, is a stunning recording. The Schubert touch reveals itself in the most sublime brand of melodic floatation through the Piano Trio's four movements, concluding with a folkish Rondo that dances with such engaging abandon it often seems on the verge of transcending Earth's gravitational field as violin, cello, and piano parts weave in and out of each other in a manner more redolent of symphonic development than of chamber music. By contrast, the Adagio in E-flat has a more dusky spiritual gravity, with strings providing the impetus for fervent, song-like phrases and harmonic development by the piano.

Sonically, the sense of an acoustic space and associated room cues, of holographic depth within the soundstage, of clearly delineated images, is involving in a manner I usually associate with analog. Some bell-like piano phrases toward the end of the second movement blossom from the center of the soundstage as Rigon's touch becomes more emphatic, and come forward to intersect with the violin to the right and the cello to the left, then recede as they touch and register change — much as one might experience it in concert.

Stereophile, June 2000
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To keep the spirit of audio alive, TOYS FROM THE ATTIC will be hosting an audio visual seminar highlighting Anthem’s new AVM pre-amp processor, their very musical multichannel amp, Totems new in-walls and Fujitsu’s spectacular 42” HDTV Plasma screen. Both music and film will be demonstrated. Please call for exact dates and further information. Custom installations available, please call for details.

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Then four extra bits sure provide a whole lot more air and holographic resolution than the fine 20-Bit Mosaic masters of Complete Communion released a few years back as part of The Complete Blue Note Recordings of Don Cherry. On the airborne swing of “Our Feelings,” Van Gelder’s particular gifts for balance, clarity, and midrange articulation really shine. The 24-bit master retains more of the light and tone of Blackwell’s bass drum, the distinction of each instrument in his kit, and varied spatial cues. Drums hard right, piano hard left, and bass in the middle represent a vintage Van Gelder soundstage, and with no piano on this session, the engineer pans Cherry’s cornet and Gato Barbieri’s tenor much closer than usual to the speaker source, and much farther away from the center.

The absence of piano opens up the soundstage, and the relative paucity of low and midbass energy gives bassist Henry Grimes’ short, punchy attack and percussive phrasing a lean, muscular presence, thus preserving the transparent, airy quality of the midrange—albeit with fundamental tradeoffs in terms of weight and tonal distinction. Vintage Van Gelder was always a bit light in the loafer when it came to deep fundamentals; likewise those Blue Note titles he personally remastered, which were richly detailed but uniformly bright. Still, despite the slight thinness of tone and lack of body, his sense of bass focus, localization, and pace are superb, allowing the horns to speak and sing with unequivocal presence, clarity, and timbral realism.

Word has it that, for these vintage sessions, Van Gelder liked to employ a Fairchild compressor on the bass. This makes sense, given his predilection for midrange detail, and likely reflects prevailing concerns about LP mastering. Likewise, Van Gelder invariably captured the flow and sonic detail of a drummer’s snare drum and cymbal phrasing, yet conveyed the false impression that post-bop drummers were all hands and no feet—the presence of bass drums is fairly ambiguous.

Nevertheless, Van Gelder’s trademark sound retains its magic—a homy, emotionally involving representation of an idealized club sound. And while the bass sound varies from disc to disc, as a rule good bassists make themselves heard.

Still, it’s worth remembering that these sessions were done quickly; careful listeners will detect strategic adjustments made on the fly, such as on the February 11, 1963 Jackie McLean sessions for Vertigo, Tony Williams’ first recording date. The sound is slightly grainy at the outset; on the high-flying “Marney,” the leading edge of bassist Butch Warren’s transients are relatively indistinct, while Williams’ drums are faded well back. But by the time we get to the earthy abstractions of pianist Herbie Hancock’s “Yams,” Warren and Williams are locked: the bass’s attacks are more focused, the drum sound better delineated. Sonic nit-picking notwithstanding, the surging rhythmic pulse of the title tune, with its angular starts and stops, is thrilling.

A session from the previous June fills out Vertigo, and features the underrated piano stylist Sonny Clark, a connecting link to earlier Hackensack sessions, from which emerged My Conception and Minor Move. “Iddy Bitty” is the best-sounding selection, as Clark’s coy, guitar-like strumming lights a fire under McLean and trumpeter Kenny Dorham, and Billy Higgins’ hypnotic sizzle-cymbal and dancing snare work hold everything together.

Sonny Clark’s engaging 1959 date at Van Gelder’s makeshift Hackensack studio reveals how much more vivid and involving the sound of the engineer’s living room was compared to the Englewood studio. The trademark clarity of the horns (Donald Byrd and Hank Mobley) remains a constant, but the extra air and presence make rhythm-section details

**Blue Note Connoisseur Series**

**DON CHERRY: Complete Communion**
Don Cherry, cornet; Lee Dorsey, guitar; Sonny Clark, piano; Butch Warren, bass; Tony Williams, drums S 22673 2 (CD). 1965/2000. TT: 40:17

**JACKIE McLEAN: Vertigo**
Jackie McLean, alto sax; Donald Byrd, Kenny Dorham, trumpet; Herbie Hancock, Sonny Clark, piano; Butch Warren, bass; Tony Williams, Billy Higgins, drums S 22669 2 (CD). 1962/63/2000. TT: 75:51

**SONNY CLARK: My Conception**

**TINA BROOKS: Minor Move**
Tina Brooks, tenor sax; Lee Morgan, trumpet; Sonny Clark, piano; Doug Watkins, bass; Art Blakey, drums S 22671 2 (CD). 1959/2000. TT: 47:36

**LEE MORGAN: Taru**
Lee Morgan, trumpet; Bennie Maupin, tenor sax; George Benson, guitar; John Hicks, piano; Reggie Workman, bass; Billy Higgins, drums S 22670 2 (CD). 1968/2000. Francis Wolff, Duke Pearson, prods. TT: 38:11

**ANDREW HILL: Grass Roots**

All above (except as noted): Alfred Lion, prod.; Rudy Van Gelder, eng. AAD.

To many aficionados, the recordings of Rudy Van Gelder represent a paradigm for the manner in which a jazz combo is supposed to sound. So definitive and distinctive was Van Gelder’s aural signature that the sole difference between a Prestige and a Blue Note session was characterized as one day’s rehearsal, which is indicative of the care and intimacy that impresses Alfred Lion and Francis Wolff brought to every recording date. That vibe is evident in this latest limited-edition release of rarities from the Connoisseur Series, ranging from 1957 to 1968. Taken as a whole, these 24-bit remasterings encapsulate the depth of stylistic range and musical adventure that made up the Blue Note legend, while the relative success of the Van Gelder touch from session to session suggests that a critical reassessment might be in order.

Comprising two extended suites, Don Cherry’s classic 1965 quartet date, Complete Communion, is the pick of this litter. While the other recordings represent works in progress, aborted experiments, or transitional materials that fell just short of an album’s worth of materials (and were subsequently released as vault rarities), Complete Communion is an “R2D4” experience, a perfect blend of lyric chants and bluesy open forms, of breathtaking swing and free improvisation.

Stereophile, June 2000
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Lee Morgan’s unexpected dance partners lend these dates a certain retroactive charm: guitarist George Benson on the trumpeter’s Tanta, and the legendary tenor saxophonist Booker Ervin on pianist Andrew Hill’s Grass Roots. On Tanta, bassist Reggie Workman, drummer Higgins, and pianist John Hicks set a diverse groove on the opening “Avotica One” as Benson comes charging out of the gate with a raw, bluesy cry, but Morgan is clearly not in top form here, and oppressive studio reverb obscures the overall sound with a milky veil. Morgan rights himself on his ballad “Haeschen,” and everything comes together on the righteous hosannas of “Dee Lawd,” a formulaic but irresistible gospel turn.

Still, while Morgan had a trend-setting hit with “The Sidewinder,” and most of the label’s artists subsequently gave funk a tummy, it’s surprising to hear house antivardist Andrew Hill operating in this territory on Grass Roots (and a likely explanation of why these two sessions weren’t included in Mosaic’s “complete” Blue Note retrospective). There’s a probing, unfurnished quality to this music that I found quite engaging, not to mention the butter-and-eggs affinity of Morgan and Ervin. Sonically, it signals a sea change in the Blue Note/Van Gelder sound — on the August 1968 session, Ron Carter’s bass (lightly amplified, I suspect) is fat, forward, full-bodied, and focused, yet the overall soundstage retains a clear, open quality.

Both the April and August 1968 takes of “Venture Inward” suggest the elliptical, morphing quality of Hill’s classic Blue Note recordings. Even with such a strong underlying groove, Hill manages to maintain his trademark melodic fluctuation, never quite alighting on strong beats, and the April session is notable for some ferociously bluesy guitar work by Jimmy Podner on “Soul Special” and the bumblebee phrasing of trumpeter Woody Shaw. But the sonic mix is murky, the groove powerful but somewhat unsettled — suggesting why Hill revisited the same material again in August with Morgan, Ervin, and Carter. The manner in which the music and the overall sound evolve from tune to tune is a fascinating snapshot of the creative process, of the balance between structure and spontaneity.

**Reference System**

*Analog source:* Rega Planar 3 turntable, tonearm, Grado Reference Master cartridge.

*Digital source:* California Audio Labs CL-20 DVD/CD player.

*Preamplifier:* Musical Fidelity Nu-Vista, Blue Circle BC3 Galatea.

*Power amplifiers:* Musical Fidelity Nu-Vista 300, Mesa Baron.

* Loudspeakers:* Joseph RM7si minimonitors, Soliloquy S10 powered subwoofer.


*Accessories:* Signal Guard II Isolation Stand (turntable), Shakti Stones, Polycrystal Cones, Argent Room Lens, EchoBusters Bass Busters, EchoBusters Absorptive and Diffusive Panels.

— Chip Stern

MAHLER: Symphony 5, Songs from Des Knaben Wunderhorn

Georg Solti, Chicago Symphony Orchestra; Yvonne Minton, mezzo-soprano

KJIC 9234/5 (2 LPs), 1970/1999, David Harvey, prod.; Gordon Perry, eng. AAA: TT: 81:16

SIBELIUS: Symphony 2

Loren Maazel, Vienna Philharmonic Orchestra

KJIC 9236 (LP), 1964/1999, Eck Smith, prod.; Gordon Perry, eng. AAA: TT: 45:02

FRÜBECK DE BURGOS: Orchestral Concert


Rafael Frübeck de Burgos, New Philharmonia Orchestra; Nati Mistril, mezzo-soprano


I’m sure we could engender a lively debate as to Solti’s place in the firmament regarding the ideal interpretation of Mahler’s Symphony 5, but as an analog experience, when the heraldic trumpet gives way to the tumbling fanfare of the intro like a snapshot of creation, the sonics of this 1970 performance are to die for. The high-quality mastering job on this Super Analogue Disc is readily apparent in the explosive opening movement, densely textured and full of resoundingly dynamic percussive strokes and low-end details from the bass fiddles, timpani, and bass drum. It’s a real musical workout for your cartridge and tonearm, but sometimes the low-end details are so bloody immense

Stereophile, June 2000
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that I wonder if I'm not also hearing the excitation of certain room nodes or elements of mike saturation.

The mood lightens considerably with the dancing, more Viennese passages of the second movement, and some of my favorite aural moments occur in the opening of the third, where fulsome pizzicato bass passages are set off by airy harp accents and the strings' plaintive rise and fall. The richness of detail in the final movement is quite involving, particularly the manner in which Mahler plays off deep brass against rumbling percussion, then peels it all away to revel in bucolic little details of double-reeds and triangle before building anew to the massive denouement.

Over several months, the sheer aural power of this recording—its awesome scale, larger-than-life dynamic gestures, and holographic depth—drew me repeatedly into the spiritual journey of this adventurous work. It is among the most sensual, seismic recordings I've ever experienced. The depiction of low-end information in an acoustic space is so vivid and involving as to make its purchase mandatory for serious analog freaks.

The opening strains of Sibelius' Symphony 2 seem to evoke the colors of dawn: pipe-organ–like tremolos in the strings, spry woodwinds, glowing brass, and the gently fattening thunder of tympani. Another classic analog event, this 1964 recording benefits musically from a lighter, more relaxed play of textures, and sonically from a more telling use of space. The Vienna recording venue seems to possess a much quicker, livelier sound than that in which Solti's CSO rendered Mahler; with a sunnier tonal signature to match its subject, this superb recording doesn't possess the burgeoning power and teeth-grating dynamics of Mahler's enormous orchestra, but what it lacks in transient slam it makes up for in its sparkling presence and more transparent acoustic. Conductor Loren Maazel's depiction of pizzicato strings in an acoustic space is particularly airy, life-like, and involving, and provides something of an emotional anchor for the more moody, hymn-like bowed tones and harmonic turmoil to come.

Sonically, Orchestral Concert seems to fall somewhere between the Solti and Maazel recordings: it's warm, dynamic, and richly detailed, though without the slam of the Mahler or the sparkle and transparency of the Sibelius. Beginning with orchestral effects redolent of guitar techniques, Falla's El Amor Brujo proceeds through a series of dance movements seemingly rooted in the flamenco tradition, with torrid vocal interludes by mezzo Nati Mistral, her voice vividly depicted front and center. The lavish string sound is punctuated by such isolated solo spotlights as a gypsy violin episode halfway through. This acts as a bookend for some lush development: from top to bottom, each section of strings is beautifully delineated across the soundstage as oboe, French horn, trumpet, and voice blossom in turn above the burgeoning orchestra. The warmth and glow of the string sound is particularly stirring on Granados' Coyeras and Ravel's Pavane for a Dead Princess, both of which benefit from de Burgos' firm control of texture, which reveals all manner of intimate, chamber-like inner details and the hall's mellow acoustic signature.

Reference Recordings

Eiji Oue: Boléro! Orchestral Fireworks
Works by Boléro, Brahms, Dvorak, Klemperer, Liszt, Ravel, others
Eiji Oue, Minnesota Orchestra

I know that the idea of some faux-Edwardian gent appearing on a late-night infomercial and promising you cultural certitude if only you pick up your phone and put these 50 Unclaimed Melodies on your credit card is a bit of a stretch for some of you. But the notion of a classical compilation proferring, like some combination plate of digital sushi, tidbits of orchestral favorites as a means of showing off your sound system or getting some of you to make the first provisional steps into the classical tradition, is nevertheless a legitimate way of doing something creative to promulgate the tradition and engender consumer curiosity.

Boléro! Orchestral Fireworks is an excellent collection built around Ravel's Boléro and Liszt's Les Préludes, and fleshed out with 10 orchestral miniatures for those with short attention spans, or who simply want a quick aural nosh: "Give me a powerhouse orchestra, a capacious soundstage, some state-of-the-art resolution, and some generous helpings of low-end extension to kick it up a notch and make my system happy-happy — BAM!"

Like M. Fremer, I find myself turning to analog renditions of classical performances, having often found digital recordings too cold and analytical. But this HDCD recording by engineer Keith O. Johnson is really terrific, and, in terms of depth, dynamics, and transparency, suggests my recent 12th-row-center experiences with the London Symphony at Carnegie Hall. Oh, when I crank it up, I suppose I'm aware of a touch of gleam, but more often I'm drawn to the resounding scale, dimension, and impact of the acoustic event. In comparing Johnson's portrayal of the Minnesota Orchestra's rendition of Les Préludes with Nature's Realm, Kavi Alexander's analog recording of the Philadelphia Orchestra (on his Water Lily label), I'm struck by how the hall acoustic influences the music's pace and articulation. Where the dry acoustic on Alexander's analog Les Préludes yields a warmer, more leisurely performance, I get more of a sense of hall reverber, wet reflections, and rich acoustic cues from Johnson's recording, in which Liszt is given a brisker portrayal, with more dramatic sonic gestures. Both are musically involving, but I find Alexander's analog version a touch more supple and sensual, Johnson's digital one more vivid and exhilarating.

Some of the miniatures are pretty cool—such as conductor Otto Klemperer's "Merry Waltz" (containing a not-so-subtle suggestion of where de-composer John Williams lifted his "Love Theme from Superman")—and some, like Emmanuel Chabrier's Habanera, are the quintessence of corn. But I find myself returning again and again to Ravel's Boléro: images pop in crisp detail all over the soundstage against the breathtakingly quiet backdrop of the insistent snare motif until, about 10 minutes in, the large-scaled thematic gestures come to the fore over pumping brass and pulsing bass, and build to a swelling climax with so much acoustic energy that the percussive strokes cause me to bottom-out my driver and hit the end-stop of my right-channel Joseph RM7Si — no mean trick, given the dynamic headroom of my high-powered Musical Fidelity Nu-Vista rig.
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Recording of the Month

SHOSTAKOVICH: String Quartets 1–15
Emerson String Quartet
Performance *****
Sonic *****

Time to refill your Zoloft prescription: There's a new set of Shostakovich string quartets on the market, and it's by the Emerson Quartet, which means these musical progeny of the composer's most repressive, depressive, anxiety-ridden moments will be rendered with the unflinching clarity we've come to expect from the group's recordings of Bartók and Ives.

Half-joking aside, this set may represent a breakthrough in the performance history of the quartets. If you hear a note of doubt there, it's because the world is still coming to terms with these inward, enigmatic works; one can't be sure exactly what a "breakthrough" might sound like. When Shostakovich was alive, this music was known almost exclusively through the recordings of the Borodin Quartet, and was rarely heard in concert here. No doubt Western audiences were particularly puzzled by their seemingly inconsequential surfaces, intermittent lack of thematic argument, warped folk dances, and formal mutations.

Indeed, it seems that, in these spontaneous, mercurial works, anything goes. Numbers of movements range from one to six (some last as little as a minute), and total playing times from 16 to 35 minutes.

And who knows what it all means? Shostakovich biographers have revealed that the quartets were meant to be even more subversive than the symphonies — thicker with double meanings, and deeply personal in their expression of his inner torment at the hands of Stalin and others who attempted to control the character of his output. Scholars say with authority that Quartet 8, by far the most popular of the 15, was written as a musical suicide note. It's loaded with quotations from other works, but assembled with such intensity, economy, and desire to communicate that the act of composition probably headed off the despair that inspired it; Shostakovich survived to write seven more quartets. Knowing this makes us listen more intently and sympathetically for extramusical references.

The problem is, if these works are indeed written as a coded soundtrack to the collective secret consciousness of Shostakovich and his generation, what about musicians and listeners who weren't part of that world? In many ways, Shostakovich's world is more remote to us than Mozart's Vienna. The Borodin (BMG 40711 2) and Beethoven (Consonance 81-3005/5) quartets worked with the composer, and in those recordings, one hears subtext that can never be written, and can't in good conscience be copied by other quartets without such interpretative touches sounding second-hand. So is it possible that these recordings are the only form in which the music can be fully experienced? Previous cycles by westermers have been inconclusive: the Brodsky Quartet's slick cycle (Teldec 9031-71702-2) suggested that the answer was "yes."

And the Emerson set? In the majority of the quartets, it's "no," while in some of them, it's "yes." And when the answer is "yes," it's due to the composers creative ups and downs.

The most obvious feature of the Emerson's performances is the Quartet's harmonic awareness. Though Shostakovich borrowed from other composers, Debussy has never seemed to be one of them — but the opening moments of Quartet 1 suggest that sort of harmonic sensibility, as illuminated by the Emersons' tight chord tunings and bold coloring. Musical expression isn't prettified; in fact, the piece takes on a wider than usual coloristic palette with which to make its interpretative points. The early quartets are revelations in the Emerson set; Quartet 2, in particular, seems to be one of the most substantial of the entire 15 as Shostakovich eagerly transforms and personalizes classic string-quartet techniques at every turn. It simply has everything one hopes for in top-drawer Shostakovich, and then some, with an uncharacteristic theme and variations in the final movement.

The Emersons reveal Quartet 8's thematic unity, and their brisk, cogent tempo schemes make the music's innate drama positively frenetic. The set hits a full with Quartets 11, 12, and 13, which often cover emotional territory explored more eloquently in the other quartets. These three works fare better in the Borodin set, but the Emersons trump the Borodin in 14 and 15. In a particularly striking passage in 14, all four parts bounce off each other antiphonally. The Borodin players seem to enjoy this for its own sake, while the Emersons convey the impression of trouble coming from all sides. The Emersons' keen sense of musical organization is put to particularly good use in the remarkable Quartet 15, in which the composer, seemingly beyond pain, lets the individual instruments wander about with a private sense of fantasy.

The fact that the Emerson set was recorded live at the Aspen Music Festival is more of a key factor in its success than one might think. Though the acoustic has a rather neutral personality, the audience may have helped the quartet to maintain the kind of emotional honesty while walking these fine interpretative lines. That doesn't often happen in the recording studio.

— David Patrick Stearns
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Edwards captures a style not far removed from Delta cotton fields. Like the mosquito trapped in amber, Honeyboy still possesses the simplicity of purpose within the mind of an authentic Delta creator.

Can there be another Delta blues musician who has seen more than Honeyboy Edwards? From playing Southern jukes to standing on Beale and Maxwell Streets to recording for Alan Lomax in the 1940s, then Sun, Artist and Chess records in the 1950s, it is only fitting that 84-year-old Edwards should be the first to record the future of blues technology.

David “Honeyboy” Edwards, Shake ‘Em On Down

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normally don't like compilations of any kind—a little of this, a little of that. But this collection of music by nearly every one of Finland's great composers, living and dead, originally recorded between 1990 and 1999 in universally glorious, big, honest sound, is a gem. Just as Finland, sitting between Sweden and Russia, has steadfastly refused to speak its neighbors' languages or surrender its individuality, so might it be argued that *Aurora Borealis* contains music that is peculiarly Finnish, with a Finnish sound and feeling. The amount of talent coming out of such a small country is staggering: From Rautavaara's Concerto for Birds and Orchestra through Nordegren's glowing and homespun *Fiddler*, to Sibelius' stormy "Storm" and Merikanto's lushly Romantic *Lento*, this CD enchants consistently. About the only stereotype one can find here is that nature is omnipresent in Finnish music. Still, all of these composers were obviously well-schooled in the music that preceded them; one can catch a bit of Debussy here, a hint of the Russian Romantics there. Whatever—this is ravishing and highly recommended. —*Robert Levine*

---

**PArt**

*I Am the True Vine*

*(Collected Works, 1989–1997)*

Theatre of Voices, Pro Arte Singers; Paul Hillier, dir.; Christopher Bowers Broadbent, organ; Harmonia Mundi HMU 907342 (CD), 2000. Robina G. Young, Stephen Johns, prods.; Brad Michel, Mike Hatch, engs. DDR, TT: 57:42

Performance: ******

Sonics: ******

If you want to hear what choral singing should be, leave all of your prejudices (if any) against modern composers at home and listen to the quality of singing on this CD. Paul Hillier and his singers have worked with Arvo Pärt since the composer's first recordings, and they sing his lines as if born to do nothing else. The purity of their tone and their sensitivity to nuance are absolute joys to hear. Each word and phrase appears as if it arose newborn from the fundamental breath of sound.

Some of the shorter works on this disc are settings of English texts, a new departure for Pärt. He might perhaps disagree with me, but I hear in these recent compositions a clear echo of the Tudor tradition, which dominated English Catholic sacred music in the 16th and early 17th centuries. The composer himself has admitted, speaking of his settings of Old Slavonic texts, that the nature of language itself dictates some of the structure of the music surrounding it. I would go a bit further and argue that no one composes in a vacuum, that tradition informs all significant art. So it is with Arvo Pärt, and by no means to his detriment.

As I've said before, Pärt does not write pastiche; his melodies and harmonic patterns are full of originality, derived from his tintinabuli technique. (Descriptions of this are found in the liner notes to several of his previous CDs, but the basic nature of the technique is apparent on hearing alone.) In spite of this, however, there are strong echoes of older musical styles. The educated lay listener could easily assume that parts of the gorgeous *Bogorodite Djese* are early Orthodox polyphony. (This piece, the first track on *I Am the True Vine*, is a perfect introduction to Pärt's work.) On this disc, Pärt's considerable skill as an orchestral colorist, evidence in such works as *Festina Lente* for strings, is applied to the unaccompanied choir and results in a richness of tone.
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that few contemporary composers have even attempted, much less achieved.

This disc also includes a performance of the Berlin Mass for choir and organ, based on an earlier version of the work than that recorded by ECM a few years ago. In this case, I prefer the orchestral version, although I enjoyed hearing the individual vocal lines as presented here. The balance between organ and choral sound is also beautifully preserved on this disc, and represents a considerable achievement in recording. The value of I Am the True Vine is ultimately in the shorter works, however. These are universally lovely in an age in which beauty has become somehow déclassé.

I am going to risk a triple jump on a lightly frozen pond here (not the first time). I suspect that very few ordinary classical-music listeners play recordings of late-20th-century works simply for the pleasure of listening. This disc presents a real possibility of forever changing their attitude toward contemporary classical music. Put another way, this CD costs about the same as a large pizza, or one percent of the cost of a piece of wire for the average audiophile. Given that, isn’t it worth a try? —Les Berkle

STOCKHAUSEN
Helikopter-Quartett

hortly after German composer Karlheinz Stockhausen, the "father of electronic music," was commissioned to write a string quartet in 1991, he had a dream. In it, each member of a string quartet climbed into one of four helicopters, which then flew off in different directions. During flight, a television camera in each 'copter focused on the face, hands, and instrument of the player, the video signal then transmitted to four giant TV screens at a performance area. A contact microphone was affixed to the bridge of each instrument, a vocal mike near each player's lips, with a third mike attached to the helicopter's exterior to capture the sound of the rotors. The audience on the ground would be able to see all four players and hear all the sound, with the instruments slightly louder in the mix than the helicopter itself.

Incredibly, the commissioners agreed to fund Stockhausen's dream, and while it took until the June 1995 Amsterdam Festival to get the piece off the ground, as it were, it did indeed come to pass. The current disc is a studio recording of Helikopter-Quartett, with the performers each in a separate room and the four helicopters recorded separately. The piece harks back to the 1980s, when Anthony Braxton was composing works in which whole groups were recorded simultaneously in widespread locations. Braxton even wrote a work, as yet unperformed, for orchestras on separate planets. Helikopter is a bit more down-to-earth.

The helicopters are key elements in the piece. The players imitate and elaborate on the rotors' sound, patterns of interaction, and changes in pitch over the course of the flight. These clashing pitches and overtones are likewise reflected in the music. The players employ a variety of tremolos as they mimic the rotor speeds of their respective aircraft: as a 'copter climbs, there is a corresponding sense of rising. Over the course of the piece, microtonal slides are introduced without interrupting the various tremolo pulses. Short and crisp, numbers spoken by the musicians enter the sonic mix with some sense of urgency. Roughly 15 minutes in, a gypsy-like theme gives way to harmonic squeals. As the craft descends, the cello seems to oscillate, and throughout there are segments in which the bow is dropped on the strings to simulate bursts of acceleration.

While one would be hard-pressed to lift out anything close to traditional themes, melodies, and harmonies, the music has an undeniable sense of drama and a palpable rush. The liner notes shed ample light on the technical aspects of this musical "happening" and none on how much of the score is improvised and how much notated.

As with all experimental music, one must ask in the end if the idea works on a strictly sonic basis. This one does. There is a strange and appealing beauty to the interaction of man and machine. Plainly, Stockhausen has studied well the helicopter's aura of sound, and created a work that interacts with that aura in interesting ways. But the disappointment in this disc is that the ultimate recording reflects so small a part of the experience. It's like hearing an opera on disc vs seeing it live. —Daniel Buckley

TORMIS
Litany to Thunder
Eva Hämm, Raili Jaanson, Kadri Ratt, Kaia Urb, sopranos; Karin Salumäe, contralto; Tilt Kogermann, Matti Turi, Mikl Ööega, tenors; Allan Vurma, bass; Mirit Gerretz-Traksmaa, piano; Toivo Kivi, shaman drum; Madis Metsmart, gran cassa; Estonian Philharmonic Chamber Choir, Tönis Kaljuste

his is the second release on ECM devoted to the Estonian composer Veljo Tormis. The first, a two-CD set entitled Forgotten Peoples, was reviewed in Stereophile in August 1992, and was named as a "Record To Die For" in February '93. Here as there, Tormis is intent on not allowing this ancient and not-so-ancient music—of the Baltic region, the Gulf of Finland, and on into the parts of Russia where Finnish is still spoken—to be overlooked or, worse, forgotten.

Litany to Thunder makes, as did Forgotten Peoples, a superb case for Finnish folkloric tunes, and traditions, as well as for Tormis himself. Tormis claims that he leaves the melodies of these folk tunes pretty much intact; it's what he does around them that makes this music crucial. Parts of this CD are as delightful and catchy as nursery rhymes; other selections are downright awe-inspiring and fearsome. Not all of it is tonal, but then again, issues of tonalism and atonality do not seem to be Tormis's concern.

The opening and closing pieces are scored for two sopranos and piano; the melodies are simple, but change subtly every couple of lines. The closing work, The Lost Goose, is 139 lines and 16 minutes long—an odd, enchanting, almost hypnotic experience in which the piano

Stereophile, June 2000 135
part by turns agrees with, cajoles, and defies the vocal lines. *Curse Upon Iron* is huge; scored for solo tenor, solo bass, mixed choir, and shaman drum, it explicates the origin of iron to iron itself, thereby conquering it (in shamanistic belief) and what is made of it: instruments of work and war. Textually, some listeners will find this and the other pieces either too abstruse or too simple; the closest musical resemblance may be Off's *Carmina Burana*, but Tormis is far more worthy and thoughtful than Off.

*The Singer's Childhood*, for solo soprano and female choir, is sweet and melodious; *Liutan to Thunder*, for tenor, bass, male choir, and bass drum, comes from a prayer originally heard in 1644 in Southern Estonia during a drought. The prayer, amplified by the sacrifice of an ox, resulted, it is said, in a rainfall that saved crops and soil. By far the wackiest work is the 10-minute *The Bishop and the Pagan*, for countertenor, two tenors, and male choir. The story of St. Henry, martyred by a mad peasant with an axe on a frozen lake in 1158, is told first in Gregorian chant, from the viewpoint of monks, and then by the peasant himself. Tormis uses a type of *Sprechstimme* at times; the piece lulls, chants, and wails.

Those who know Manfred Eicher's work as a producer will know what to expect: amazing clarity and balance without artificality, with whispers as audible as the earthquake-like outbursts. This disc is unique; it will stun you.

---

**Record Reviews**

**TEDDY MORGAN & THE PISTOLS: Lost Love and Highways**


*Performance ***1/2

Sonic ***1/2

**BILLY BACON & THE FORBIDDEN PIGS: Pork Que?**


*Performance ***1/2

Sonic ***1/2

**LONG JOHN HUNTER: Ooh Wee Pretty Baby!**


*Performance ****

**DOUG SAHMH: San Antonio Rock**


*Performance ****

Sonic **

Perhaps the biggest trend today in roots music is the tendency of performers like Teddy Morgan and Billy Bacon to do a little bit of everything. In the process, they point up the common links between blues, honky-tonk, swing, Cajun/zydeco, roots rock, and the other musical forms known under the collective moniker of "American Roots."

Austinite Teddy Morgan is probably best known as the archtop-guitar sideman for swamp-pop legend Lazy Lester, but on his solo debut Morgan hews closely to the honky-tonk side of the roots highway. On *Lost Love and Highways*, Morgan mixes those properties with an eclectic mass of stylistic borrowings from classic Texas blues, honky-tonk, proto-rock'n'roll, and, in the ballad "One More Night," even a touch of the sensitive outlaw singer-songwriter aura that seems to thrive in Travis County. Highlights include "Wish You Were Mine," a jumpy, hard-driving roots rocker, and the old Excello chestnut, "A Word About a Woman," in which Lester sings and plays blues harp.

Although he's been on the road performing for half his life, Billy Bacon (aka William Russell) and his band, the Forbidden Pigs, remain undeservedly unrecognized, a point driven home in the forlorn lyrics of "Chase the Moon," the opener on his latest collection, *Pork Que?* As they have since their 1991 classic, *Una Mas Cerveza* (Triple X), Bacon and the latest incarnation of the Pigs (guitarist Jerry DeMink, drummer Charles Roberts) work their way through a typically stylistically mixed set that includes a rockin' tribute to swing, "(When It's) Cold Outside"; a *norteño*-flavored "Tina Mas Fina"; the full-throttle "Johnny B. Goode"-style raveup, "Red Dress"; and even an alterna-guitar pop tune, "Just Walk In." Another solid set, with good to better sonics, from one of this country's hardest-working bands.

As the number of second-generation blues players continues to decline, more and more of the most interesting blues discs are reissues. Although there are already three Jimmy Reed "best-ofs" that I know of, Rhino's new *Blues Masters: The Very Best of Jimmy Reed* collects most of this powerful performer's seminal sides — "Shame, Shame, Shame," "Baby What You Want Me to Do," "Bright Lights, Big City" — and even adds a few oddball tidbits like "Odds and Ends" (which features a violin solo). The result is a Reed compilation that will leave you bowled over by his prodigious gifts.

If you can stand the fairly primitive, one-dimensional sound, the sides cut by border bluesman Long John Hunter in the early '60s for the obscure Yucca label are the sort of raw, heartfelt blues artifacts that today are fewer and farther between. Born in Louisiana, the guitarist and singer held court for many years at The Lobby, a club in Juarez, Mexico, where original tunes like "El Paso Rock" became local hits on both sides of the border. Norton Records' 21-track collection gathers most of those electric blues blasters, in the process capturing some of the frenzy that Hunter's live show must have engendered.

Another sweaty, impassioned obscurity from Norton, an indie label that's made a name by digging out rare slabs of rock'n'roll history, is *San Antonio Rock*, a collection of mid- to late-'50s recordings by the late Doug Sahm, of the Sir Douglas Quintet and the Texas Tornadoes. These singles—leased from long-
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inventive musicians who collectively broke onto the recording scene playing off-kilter, jazz-steeped renditions of Henry Mancini music. It was a good call by Atlantic staff producer Yves Beaulais, who had the imaginative foresight to match up 29-year-old Baxter with the good-humored Symphonette, three of whom—guitarist Joe Gore, reeds specialist Ralph Carney, and cellist Matt Brubeck—have logged time recording with Tom Waits.

While frog-throated Waits plumbs the dark depths, the velvet-voiced Baxter sings on the sunny side of the street for her debut, *Capable Egg*. Her songs are collaborations: Lutwidge Sedgwick provides the fanciful lyrics and Baxter the melodies, which she then sings with a apropos musical backdrop. Listeners who prefer their pop bottled with the vows, boasts, and yearnings of love probably won’t take to Baxter. Her music will sound trite and, well, ding-a-ling-ish. After all, how often since grade school have you heard lyrics like “Hooray and toodleoo” and “Ee-i-ee-i-oh”? But just as the best children’s stories also resonate with adults, so do Baxter’s disarming naïveté and tender whimsy make for rare pop delight. —Dan Ouellette

**THE GRATEFUL DEAD**

Dick’s Picks, Volume Sixteen:
11/8/69

GODC 4036 (3 Cds), 1999, Owsley Stanley, Jeffrey Norman, engs. AAD7 TT: 3:11:24
Performance *****
Sound ****

The Dick’s Picks series of Grateful Dead concert recordings now numbers 16, and this most recent one is a milestone release in several ways. Most notably, it contains what tape archivist Dick Latvala (whose untimely death came in August 1999) regarded as the single most impressive piece of music ever played by his favorite group. Unfortunately, the tape of this show was afflicted by a sonic gremlin: a clicking noise that occurred about six times per second in one channel. A couple of years ago, Dick sent a DAT copy of the half-inch masters (mastered on a Sony 770-2, mixed on the fly from multiple onstage microphones) to a friend of his, Jim Wise, who painstakingly eliminated each click in “Dark Star” using the “pen” function in Sound Forge (a DSP program from Sonic Foundry), actually “drawing” the click out of the waveform as pictured on his computer monitor. Transfer to and from DAT was done with a Zifilo ZA2 soundcard.

After listening to this example, the Dead’s engineer, Jeffrey Norman, decided to attack the clicks in the rest of the songs using a less time-consuming function of his Sonic Solutions workstation, but Wise’s original decoded version of “Dark Star” was used on this release. This release also marks, therefore, the first major contribution by a Deadhead outside the organization to an official Grateful Dead release.

1969 is still regarded by many fans as the high point of the Dead’s 30-year career, and yet there has never been a completely satisfying release from that year. *Live/Dead*, originally released at the end of 1969, has some great music, but is a pastiche of several shows. More recently, 1997’s *Fillmore East 2-11-69* received mixed reviews from Deadheads because it contained little of the exploratory
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This powerhouse West Coast trio featuring Hawes, along with Red Mitchell and Clark Thompson, matched as collectively as any threesome in jazz.

Wynton Kelly-Piano

This 1958 session by the Wynton Kelly Trio (plus the Mike Davis rhythm section) with special guest Kenny Burrell on guitar, captures fully the joy and blues feeling of Kelly at his best.

Ray Bryant Trio

Ray Bryant has accompanied virtually every modern jazz great, from Charlie Parker to Sonny Rollins. This trio recording with his bass and Space Weight features Bryant's stride tune Blues Changes.

Kenny Drew Trio

**** A significant and very enjoyable LP****

Art Hershoff-DownBeat

This excellence of this album, featuring Paul Chambers and Philly Joe Jones, was first recognized in Japan where it received a critical acclaim and achieved best seller status.

Don Friedman-Circle Waltz

Planet Don Friedman's vision and melody sense are often compared to Bill Evans although he also has been influenced by classical music. This rare session from 1962 featuring Chuck Israels and Pete Lullias, won the prestigious "Gold Disk" award from Swing Journal in Japan.

Art Tatum Trio

Like no other perform in the history of jazz piano, Art Tatum crystallized everything that had preceded him stylistically, and did so in a supercharged manner. This incredible session, featuring Red Garland and Jo Jones, was recorded just months before his death in 1956.

Phineas Newborn Jr.-Harlem Blues

Phineas Newborn Jr.'s piano articulation, effortless and creativity went in a class comparable only with Art Tatum and Oscar Peterson. This all star session from 1961 features very great Ray Brown and Elvin Jones on bass and drums respectively.

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rhythmic jamming that most feel to be a hallmark of this period.

Dick's Picks Volume Sixteen: 11/8/69, however, finally demonstrates the musical glory of this fertile creative period on an official release. The centerpiece of the show is a 94-minute continuous medley, beginning with "Dark Star" and ending with the old spiritual "And We Bid You Goodnight," with many highlights along the way. "Dark Star" meanders on the theme for about 15 minutes before segueing into "The Other One," in a later-years version without the "Cryptical Envelopment" opening or closing. On his way to a reprise of "Dark Star," Jerry Garcia leads the band into an instrumental "Uncle John's Band" (which hadn't yet been performed in concert). This was followed by the completion of "Dark Star," then the fairly common transition into "St. Stephen" and the "Eleven" in versions very similar to those on Live/Dead, although the "Eleven" is quite a bit longer.

"Caution (Do Not Stop On Tracks)
comes next, and what a version it is! Not only is there Ron "Pigpen" McKernan's usual blues rap, there's also a verse recitation by an unknown vocalist, as well as an early version of "The Main Ten" (the "Playing in the Band" theme). "Caution" is distinctive, bass-driven melody forms the framework for much improvisation, and gradually evolves into space and feedback before the concluding spiritual.

The first part of this show also has some memorable moments (not all good), and some stunning examples of Pigpen's performances with the Dead. "Good Morning Little Schoolgirl" is a killer show opener, and "Easy Wind" is likewise impressive. "Good Lovin'" (a standard in the Dead's repertoire for most of their career) had recently changed lead vocalists from Jerry Garcia to Pigpen, and added a conciso double-drummer solo and an instrumental jam between verses. "China Cat Sunflower" and "I Know You Rider" were just beginning to be performed as a medley, giving an early example of what would become one of the Dead's concert standbys. "Cumberland Blues" is here in its very first performance; the vocal miscues are laughable, although perhaps understandable.

A bonus on disc 3 is a version of "Turn On Your Love Light" from the previous night at the same venue. Almost any version of this tune from 1969-70 is worthwhile, and this one doesn't disappoint, with the band playing a blues vamp behind Pigpen's rap and occasionally bursting forth on their own.

Sound quality is more than reasonable, considering the era and the machinery used. There's some tape hiss in the quieter parts, but the dynamics are excellent. Like all volumes of Dick's Picks except No.15, this concert was recorded direct to 2-track, with all mixing done at the time of recording. Still, the instrumental balance is excellent. Owlsley "Bear" Stanley's description of the recording technique used for Volume Four applies pretty well to this one.

One of Dick Latvala's lifetime goals was to see this show officially released, and it's sad that he couldn't live to see it happen. Nevertheless, Volume Sixteen, perhaps the best Grateful Dead show ever, is now on CD for the world to hear—a fitting memorial to Latvala's work.

—Rob Bertrand

MAGNOLIA & MANN
MAGNOLIA: Music from the Motion Picture
Performance overall ****1/2
Performance, Aimee Mann selections ****
Sonic ****
AIMEE MANN: Bachelor No.2, or The Last Remains of the Dodo
Performance ****1/2
Sonic ****

You'd be hard-pressed to find a rock 'n' roll survivor who's endured more industry horror stories over the years than Aimee Mann. Her albums have been underpromoted, and, after being recorded, have sometimes languished unreleased for years.

Well, there is poetic justice. Fate has finally smiled on this extraordinary singer-songwriter, who has recently transplanted from the east coast to the west and become the featured artist on two new releases.

Until the release of the Magnolia soundtrack album late last year, Mann's discography, which dates back to 1985, listed only five discs: three 1980's releases with her Boston-based band Til Tuesday (the third of which, Everything's Different Now, I proudly picked as one of my "Records To Die For" in February 1999), and two superb solo sets from the '90s, each on a different label. But Mann's been a longtime critic's darling with a rabid cult following; her brainy but lusciously melodic songs, which often deal with grown-up issues like romantic disillusionment and independence and are populated by real, vulnerable people, have considerable staying power.

Magnolia director Paul Thomas Anderson, a big Mann fan, was so inspired by some of her songs that he crafted scenes and even film characters from them. When you see the movie, you can't help but appreciate how good a job he's done of integrating her music. Even better, Mann's literate songs stand, as they always have, entirely on their own. Her lyrics are intimate and full of clever wordplay, and her music is cinematic and painterly, with traces of the Beatles or Bacharach here, the Kinks or the Carpenters there.

But Mann's voice, occasionally reminis-
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cent of Chrissie Hynde's and Sandy Denny's, is her most important instrument. Take "Deathly," a song full of seductive ambivalence, with backup vocals by Juliana Hatfield. Or. "Wise Up," where Mann sings in resignation, "No it's not going to stop, so just give up." (Trivia experts will remember this song from the Jerry Maguire soundtrack, where it was sandwiched between two Paul McCartney selections.) On these songs, and on the slightly brooding "Save Me," Mann's singing is drop-dead gorgeous. 

Of Magnolia's 13 tracks, Mann contributes nine, including a take on Harry Nilsson's "One" that appeared on 1995's For the Love of Harry tribute, and an instrumental version of the Bachelor No.2 track "Nothing is Good Enough." Of the seven remaining, three reappear on Bachelor. If nothing else, Magnolia (which also contains two Supertramp hits and a few other incidental selections) deserves a ton of credit for putting Mann back in the spotlight, front-and-center for the first time since, 15 years ago, 'Til Tuesday hit the Top 10 with "Voices Carry."

Hopefully, with the success of the film and its soundtrack, people will wise up to Bachelor No.2. Mann was already working on material for this album when Anderson began Magnolia, which explains some of the song overlap. Bachelor, Mann's first album since 1995's I'm With Stupid and her first independent release, overflows with the uncompromised passion and songcraft that marked her earlier solo sets, but there's a new sense of confidence this time around. Though her songs probe relationships with touches of irony, sadness, regret, and resignation, this time it sounds as if there's a glimmer of hope and redemption at the end of the tunnel.

"How Am I Different?" opens the album with Mann singing "I can't do it, I can't conceive," her crystalline voice emerging from behind a fuzzy guitar and hi-hat. The song soon evolves into mid-tempo glory with flashes of the Beatles' "White Album" and a chorus that uses a certain expletive so sweetly and matter-of-factly as to totally disarm anyone who might be squeamish about such things. The waltz-tempo "Nothing is Good Enough" follows, sounding like a great lost Dionne Warwick single from the mid-'60s, complete with Carpenter-like background vocals. Bachelor No.2 then continues to unfold, with sweet, lush harmonies, perky storylines, and Mann's patented sense of great, haunting melody. Besides "Deathly" and "Driving Sideways," which reappear from Magnolia, another highlight is "Ghost Town," a rocking, slightly out-of-character slacker anthem that ends, "Yeah, I'm bailing this town — or tearing it down — or probably more like hanging around."

While Mann herself can never be accused of bailing or hanging around, her return to airwaves and record shops has to be one of the happiest musical developments of the new century. Welcome home, Aimee. (This record should be in better stores everywhere. If you can't find it, check out www.aimeemann.com.) - David Sokol

Records Reviews

NRBQ

NRBQ

Two Against Nature

Performance ****
Sonnics ****

NRBQ

Performance ****1/2
Sonnics ****1/2

T he good news is that NRBQ is still the quirky, spontaneous, wildly fun band it's always been. And while they've accumulated three decades of raves for their incendiary club and concert dates, in which the spirits of Sun Ra and Carl Perkins regularly collide, the foursome's albums tend to be slightly more subdued. Well, there's more good news. The Q's self-titled 30th-anniversary release is a rambunctious romp that doesn't compromise the band's playful spirit for a second. These guys get you right in the gut, with everything from great jangly melodies (best is bassist Joey Spampinato's heartbroken "Sail On Sail On") and cuddle-up sentimentality ("Love Came to Me") to a neo-rockabilly ode ("Tired of Your Permanence"), the philosophizing of "Careful What You Ask For" (in which "Dancing in the Street" meets "All I Wanna Do"), and even some loopy primal scream ("I Want My Mommy").

Give the boys credit. They've got a ton of friends in high places — from Paul McCartney and Keith Richards to Elvis Costello and Bonnie Raitt — but rather than turn NRBQ into a star-studded birthday bash, they've kept it in the family and made an organic album that's long on heart and Q through and through. To loosely paraphrase the title of their fine live album from 1987: God bless 'em. - David Sokol

In some respects, it's as if they never left, so completely have Messrs. Walter Becker and Donald Fagen gotten their old groove back. It's almost possible to listen to Two Against Nature and deny that the various trends in music since they split two decades ago — New Wave, pop metal, hip-hop, grunge, teen pop, and all things MTV — ever happened. Idyllic as that may sound to some,
The Critics Agree!

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Martin De Wulf

Audio Ideas Guide (Canada) Winter 97 Issue, (excerpt from the review) “Even if you already use another noise-suppression system, you’ll hear an improvement when you install Quiet-Line.”
Andrew Marshall

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it gives one pause: When these two last recorded an original album together, Jimmy Carter was in the White House, fer Chrissakes. The “Hey Nineteen” chippy they sang of way back when is now a soccer mom pushing 40.

How ironic that Becker and Fagen, notorious for their staunch refusal to tour through nearly all of the band’s original incarnation, actually wound up reuniting to hit the road in the early ’90s. It’s a good thing it went down that way, though. Too often, after long periods apart, former bandmates reunite for the wrong reasons and head straight for the studio, with results predictably bad. (Check out CSN&Y’s recent Looking Forward.)

By hitting the stage first, Becker and Fagen were able to work out the burn notes and bad vibes (witness Alive in America, the lackluster live CD cut from the tour) before heading back to the studio. This way, not only is it clear that they wanted to make a new album together, but by the time they actually got down to business, they were more than ready to do so.

Two Against Nature fairly crackles with creative energy, beginning with the engaging if lyrically obscure “Gaslighting Abbie.” These guys still have the best in-jokes in the business; you can spend happy hours trying to figure out just what the heck they’re talking about. Elsewhere the jokes are not so obscure. “What a Shame About Me” finds the bookstore clerk turning down a fling with his now-famous ex because his life’s accomplishments don’t stack up next to hers or those of their old college buddies. “Janie Runaway” offers a darkly humorous portrait of a lech who picks up a young waif and attempts to romance her with lines like, “Let’s grab some takeout from Dean & Deluca / A hearty gulping wine / You be the showgirl and I’ll be Sinatra / Way back in ’59.”

“Cousin Dupree” is similarly depraved, its protagonist lusting after a young relative and wondering aloud, “What’s so strange about a down-home family romance?”

Not everything is played for yuks. Bad mojo is afoot in the simmering title track, while “Jack of Speed” notes with sadness how some friends and acquaintances have irrevocably changed over the years. And Two Against Nature boasts some fine instrumental work, much of it by Becker, who steps out on lead guitar throughout.

The overall mood is smooth and sophisticated, yet not so cynical and icily aloof as their last studio album, Gaucho. Overall, Two Against Nature is as good a comeback album as exists this side of Santana’s Supernatural. Let’s hope it doesn’t take 20 years to get another one out of them.

—Daniel Durchholz

Hoboken trio Yo La Tengo’s trajectory bears strong parallels to that of one of guitarist/vocalist Ira Kaplan’s heroes, Neil Young. While it’s true that neither Kaplan, drummer/vocalist Georgia Hubley (Kaplan’s wife), nor bassist James McNew can claim platinum record sales or supergroup affiliation, Yo La Tengo, like Young, has navigated a doggedly self-determined career path, issuing records whose trend-escalving idiosyncrasies form the basis of the group’s appeal. In terms of artistic longevity, it seems that surprising oneself and perverting an audience’s expectations often come with the territory.

Yo La Tengo’s tenth album finds our heroes steering decisively away from their familiar sturm und drang and into the valley of the serene, a direction they flirted with on 1997’s I Can Hear the Heart Beating as One. Indeed, folkish introspection and winsome pop balladry have always been present in Yo La Tengo’s overall makeup; it’s just that YLT2K is not only kinder and gentler, but positively beatific and meditational.

In fact, the first half of this CD (or the first LP, if you incline toward vinyl) has virtually no squawk, feedback, or crunch. Oh sure, there’s a snatch of slide guitar and a hint of a minimalist surf lick in the atmospheric “Last Days of Disco,” and a subtle choral chime runs through the waltz-like, ’50s-ish confessional ballad “The Crying of Lot G.” But not until track 9, “Cherry Chapstick,” does the band display any inclination to turn it up. It’s a great strategy — that tune’s throbbuging, maracas-and-power-chords buoyancy affords the listener a crucial release from the sonic tension that’s been building until that point. By carefully structuring their songs with delicacy and nuance — a solemn, hymnal organ speckled with vibraphone in “Our Way to Fall”, abrupt, jazz-like ivories and hissing swaths of percussion (courtesy NYC avant-gardist Susie Ibarra) in “Saturday”; even a cover of George McRae’s disco hit “You Can Have It All” that pits oddly canned-sounding rhythms against warm, doo-woppy vocals — the trio tugs you into their complex, decidedly non-rock arrangements, and leaves you no choice but to make the investment.

Following the electric charge of “Cherry Chapstick,” emotional high notes come quickly: the lush bossa nova of “Madeline,” the noirish electro-spaghetti-surf of “Tired Hippo,” and the closing number, an 18-minute acoustic-folkadelic reverie called “Night Falls on Hoboken.” The latter is so low-key that you barely notice how it slowly transforms into a humming electronic drone full of echoy percussion, backwards effects, and swirly organ. Given the stylistic divergences that have gone down during the previous hour, this almost industrial-sounding ending comes unexpectedly. But, perversely, it’s perfect.

— Fred Mills

Yo La Tengo

And Then Nothing Turned Itself Inside-Out


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"The Montana's $8000/pair pricetag makes it not merely a good deal, but a freaking bargain."

—Bary Willis, Stereophile Vol. 22 / No. 11, Nov. 1999, page 127.
One of jazz’s most renowned and adventurous drummers, Max Roach fired some of the first riffs of the bebop revolution, first alongside Charlie Parker, and later with Thelonious Monk. He then went on to tread jazz avant-garde territory, as well as delve into the classical world. So for Roach—a ripe young 75 when Beijing Trio was recorded—to brand this collaboration with pianist Jon Jang and erhu (two-stringed Chinese violin) virtuoso Jiebing Chen “one of the most refreshing and enjoyable experiences of my career,” in which he “heard and did things musically I had never done before,” is to speak volumes.

Originally conceived as a duo of Roach and Jang, the Beijing Trio was formed when the Shanghai-born Chen was enlisted at the eleventh hour to amplify the Asian-American musical sensibility. The CD is an improvisational gem that not only gives voice to the confluence of cultures but also marks an important next step in the new jazz dialect that Jang and other Asian-American artists have spent the last decade exploring. It’s a music of many surprising intersections, ranging from tender melodies influenced by Chinese traditional songs to fiery avant-garde explosions.

The trio appears together on only three of the seven tracks; the others are duets. But these trios are intimate conversations of shared reflections, frolicksome play, and quiet beauty. On the soulful “Heart in a Different Place,” Chen’s lyrical erhu line is accented by Roach’s melodic drumming and Jang’s gentle dances and fractured dashes on the keys, while on the charged “Now’s the Time!” each player displays call-to-action urgency.

The duets, too, impress. “Moon Over the Great Wall” spotlights Roach, who drums with hushed turbulence, splashing the cymbals for effect as Jang wafts above, tinkling and ringing the keys. “The Flowing Stream” also features the drummer and pianist as they deliver an action-packed ode to Bruce Lee. Jang and Chen together play tribute to ice-skater Michelle Kwan with “When the Blossoms Bloom” (with bird-like chirps and whistles from the erhu), and Chen and Roach offer the gorgeously sorrowing “Fallen Petals.”

This is exploratory music enhanced by improvisational freshness and dynamic cross-cultural fertilization. Not pretty but exceedingly entrancing, Beijing Trio upholds the “no borders” jazz tradition.

—Dan Ouellette

MICHEL PETRUCHIANI/STEVE GADD/ANTHONY JACKSON

Triu in Tokyo

Michel Petrucciani, piano; Anthony Jackson, bass; Steve Gadd, drums


One of the most exciting jazz performances I have ever attended was in 1984, at Meany Hall at the University of Washington, when Michel Petrucciani was barely out of his teens. When an out-of-time free-form prologue suddenly became “All the Things You Are” and flew away, the audience was carried up out of its seats as one. Many were shouting his name: “Mee-chell!”

We lost Michel Petrucciani last year. He died at 36, after an extraordinary life of creativity in which he recorded and performed all over the world for 20 years despite a crippling bone disease, osteogenesis imperfecta, which dramatically stunted his growth and led to more than 200 bone fractures during his lifetime. Once he got to the piano bench, Petrucciani neither expected nor required the slightest accommodation for his disability. But to see him there, grinning ecstatically, his tiny body trying to bounce, his arms and hands whirling, and to hear the music churning forth, was to witness a special testament to the invincibility of the human spirit and human genius.

Petrucciani never realized the vast promise of his early years. His best work was done when he was in his teens and early 20s on the French Owl label, and on Concord Jazz recordings like Live at the Village Vanguard and 100 Hearts (an amazing solo album from 1983, inexplicably never reissued on CD).

If, in the 1990s, Petrucciani sometimes made poor decisions (and was badly advised) about the personnel and formats for his recording projects; if, as he got older and left Bill Evans’ sphere of harmonic influence, his playing lost some of its luminous lyricism to become more heavy-handed, more one-dimensional—well, none of that matters when you hear Triu in Tokyo. It doesn’t matter because this is his first posthumous release; because it was recorded in front of a live audience, where, even more than most jazz artists, he was always best; because all Petrucciani recordings contain moments of magic; and because, sometime soon, the posthumous releases must stop. In the encore, when he takes “So What” far away into spontaneous tapestries that could cascade forever, and the audience at the Blue Note in Tokyo comes out of its chairs, I miss him so. I want to be there. With this recording, I am there.

—Thomas Conrad
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in the life of every audiophile, there comes a day when the inevitable question pops out, usually asked very innocently by someone who has none of the obvious intellectual axes to grind: Are you in it for the music or for the gear?

The question is also central to those who create electronic music, but in their case the frame tilts slightly and the question becomes: Is it music, or a startling manipulation of sound and gadgetry?

The excellent 95-page booklet that thankfully (for novices) comes with Ohm is wise enough to intelligently speculate rather than draw any hard conclusions about whether any of the sounds contained in this three-disc set are music or musical, lasting or ephemeral, bloodless noodling or gut-wrenching, if alien, emotional turmoil.

Written opinions have been solicited from such important electronic artists as Bill Laswell, as well as electronic advocates like Sonic Youth's Thurston Moore, and tracks have been licensed from both individual artists and such well-known label sources as New Albion, New World, and Composers Recordings Inc. (CRI).

As Brian Eno points out in his introductory essay, which is short and to the point (qualities this music often lacks): Since the 1920s and the advent of amplification and recording technology, the majority of music has been electronic music. "John Cage said that any sound could be described by four characteristics: pitch, duration, timbre, and loudness," says Eno, whose "Unfamiliar Winds (Leeks Hills)" closes this set. "One way of thinking about electronic music is as a continuous expansion of all these characteristics." Later in his essay, he captures the essence of the 42 tracks included in this difficult but fascinating collection: "As music, some of it stands the test of time. As ideas, most of it does.

Indeed, ideas are the fuel, and often the object, of the experiments gathered here. Take "Rainforest Version I," from 1968, for which composer David Tudor attached transducers to everyday objects and then proceeded, with the help of friends, to use them to create a universe of sound. One of Ohm's most valuable features is that, in the notes, many of the artists comment on their own works. Tudor calls "Rainforest Version 1" a sociable activity. What actually emerges from the speakers is a rising and ebbing squall of scratching, squeaking, and wheezing that does sound like a futuristic rain forest, and was probably a lot of fun to cacophonize.

Another cerebral work, John Cage's "Williams Mix" (1952), is a wildly complicated and diverse exercise in tape cutting and splicing that sounds like what might happen if you quickly turned the dial of a very crowded intergalactic radio. Some of the sounds on Ohm are undoubtedly musical, both in intent and in practice. The edit from David Behrman's On the Other Ocean, for example, in which live musicians interact with a microcomputer, has a fragile, Eastern-flavored beauty. And Clara Rockmore's famous rendition of Tchaikovsky's Valse Sentimentale is a truly haunting piece. Others, like Alvin Curran's "Canti Illuminati" — which uses human voices in what Curran calls walls of noise — to create the effect of a gargantuan swarm of rhythmically buzzing bees could, if played loud enough, clear Giants Stadium. An early (1969) example of sampling can be heard in former Can member Holger Czukay's "Boat-Woman-Song," which mixes human voices making all sorts of music — from an Asian woman chanting to what sounds like a central European children's choir — to create a multi-cultural experience.

The beauty of much of Ohm — at least intellectually, which is where most of this is meant to live anyway — is that any two people can love or hate the same piece, for very sane and intelligible reasons. Some of it, though, is nearly impossible to love, no matter how hard you're able to intellectualize. For example, La Monte Young's experiments with analog sinewave oscillators, "Excerpt 31 1 69 c. 12:17:33—12:25:33 PM NYC" (disc 2, track 13), will strain even the most dedicated gearhead's ears and patience.

While hardcore electronic fans will probably be annoyed by Ohm's strict adherence to short works and "bleeding chunks" lasting only three to seven minutes, the practice effectively defeats the common criticism that electronic music never knows when to quit while it's ahead, and is a key to the set's success.

The sound is uniformly brisk and hard-edged, although some of what's here is rather one-dimensional and, not surprisingly, lacking in warmth. After such intriguing sets as Gravikords, Whirlies and Pyrophones, Planet Squeezebox, Deep in the Heart of Tura, and, of course, Klezmer Music: A Marriage of Heaven and Earth, Ellipsis is rapidly becoming the quality chronicler of fringe music.

— Robert Baird
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**Infinity Prelude MTS**

Editor:
We are gratified by several aspects of Michael Fremer's review of the Prelude MTS in May. First, and most important, we are pleased that he really liked it. We worked very hard to make a benchmark loudspeaker, and to give it that elusive "extra"—the ability to be tailored to sound good in difficult rooms at low frequencies. It is especially rewarding that the reviewer took the trouble to understand the science behind the design process, and to point out that, while numbers and graphs are essential parts of the scientific method we use, we also listen seriously.

"Observational reviewing," as Michael calls what he does, is an important part of our own internal process. We are blessed with what may be the world's best facilities for making the process accurate, efficient, and repeatable. However, it clearly is possible for a very experienced and meticulous observational reviewer to appreciate the excellence of our efforts in his own home.

Through John Atkinson's measurements, Stereophile indicates an uncommon seriousness in its approach to product evaluations. Again, we are gratified to see that the excellent subjective evaluations correlate with an impressive set of technical data. We have compared notes with John on several occasions, and this correlation of technical and subjective results is a relatively regular event in both of our experiences.

Judging from the data and John's comments, we would assume that the Prelude MTS was measured with its Bass Mode switch set to position 3. Readers should know that the Prelude MTS system features extensive bass-management capabilities, controlled by a three-position Bass Mode switch on the back of the Prelude MTS subwoofer. Position 1 assumes that bass management is done by a competent upstream A/V processor. Position 2 turns on the subwoofer's internal line-level 80Hz crossover. In this mode, the output of the preamp is connected to the subwoofer and the output of the subwoofer is connected to the main power amp. This inserts an active 80Hz high-pass filter that limits the lows to the tower, and an 80Hz low-pass filter that appropriately tails the subwoofer's response to make perfect with the tower. This is the mode that Michael used in his evaluation of the Prelude MTS.

Finally, position 3 assumes a broadband speaker-level input to the entire subwoofer-tower assembly. The broadband signal is stepped down to line-level, appropriately filtered, and then used to drive the subwoofer. The signal is also routed to the tower unaltered. In this mode, the manual instructs the user to turn on the high-pass filter built into the tower. The measurements that John Atkinson performed used this mode of operation. The small peak at 90Hz that John measured in mode 3 is completely nonexistent when using mode 2. In Michael's review, using mode 2, he noted: "The integration of subwoofer and tower was seamless, with an impressively smooth, clean, and natural sound overall."

There is probably nothing more satisfying than to get a nice compliment; praise for a job well done. For praise of this product to come from an "analogue" guy like Michael Fremer is high praise indeed.

Thanks.

**Lamm ML1**

Editor:
We would like to thank Jonathan Scull, John Atkinson, and the Stereophile team for a very professional, solid, and objective review of our ML1 amplifier in May. While Jonathan Scull's expressive style conveyed the emotional impact of listening to music with the ML1s, John Atkinson substantiated that experience with the measurement results. It is always gratifying for me to know that a person becomes absorbed and moved when listening to music through LAMM electronics, as Jonathan was. And, although audio components are merely the tools that assist us in reliving musical events, we all strive to relive those events to the fullest. As Jonathan aptly noted, "partnering electronics are very important for best results," and I myself cannot stress enough the importance of the proper matching of system components within any level. Ultimately, each component should sonically be as neutral as possible within the limitations of each particular topology, in order to ensure the maximum neutrality of the system. The idea behind the ML1 (and any of my designs) was to create a piece of equipment as self-efficacious as possible.

It was with pleasure that we read this review. Jonathan, thank you again for sharing your experience with the ML1.

**Nitty Gritty 2.5Fi**

Editor:
We at Nitty Gritty would like to thank Michael Fremer and Stereophile for the review of our 2.5Fi record-cleaning machine. Fully aware of Michael's customary cleaning machine, we were delighted, and fully welcomed the comparison. Though appreciating his acknowledgment of the simplicity and cost-effectiveness of the Nitty Gritty system, we were hoping for a bit more of an in-depth efficiency/convenience comparison with the other system(s).

For the last 19 years, Nitty Gritty has produced a line of user-friendly record cleaners, currently priced from $269 to $839. Cost-effective, yes; but more than being merely affordable, the system has been audibly and microscopically shown to truly deep-clean records. Rather than spreading the schmutz around, the surfactant in our Pure 2 makes the water "wetter," thus allowing it to actually flow into the grooves, under the debris, and suspend it. The vacuum then removes every trace of fluid and contaminants, and voilā: schmutzless LPs. A quick brushing of the Vac-Sweep (scrubbing fibers on the vacuum slot) while the vacuum is on will delete whatever, if any, debris is left from those garage-sale records (which, by the way, might benefit from a brief pre rinse to eliminate the chunks).

To clarify at least one misconception about the 2.5Fi's dispersion of fluid: Though it is injected through the leading half of the Vac-Sweep only, it immediately flows to the lateral half, as the disc rotates over the fibers. Should your flashlight batteries fail, rest assured, your record grooves will still be cleaned! The minute "velvet" fibrils of the Vac-Sweep are small enough to actually penetrate the record grooves; nylon bristles, unless carefully calibrated, will barely break the surface.

As Mr. Fremer points out, Pure 2 does contain a percentage of isopropyl alcohol — less than 10%, actually. Quite a keen nose you have there, Michael! (By the way, we also make Pure 1, a non-alcohol concoction, formulated primarily for acetate records.) I agree with Duane Goldman's assessment that isopropyl alcohol, in con-
siderable strength, would not be good for records...the use of higher ratios, as in some alcohol-based fluids, would likely have a "solvent" effect on vinyl. However, in smaller concentrations, alcohol helps to evaporate the molecular film on the surface of the record before air contamination can affect it. Non-alcohol fluids may leave this behind.

Thank you, too, Michael, for the mention of our Record Doctor II, which Audio Advisor sells in quantity. This allows me the opportunity to universally salute our nearly 300 dealers/distributors, who have been staunch supporters of our products. Many of these fine companies are selling at an amazing rate, pricing in a most competitive way. The number of elated consumers who have called, e-mailed, or written with their comments has been so gratifying, and we will make every effort to continue our policy of customer relations. After all, it's our customers who have made Nitty Gritty's longevity possible.

Gayle Von Sydlek
President, Nitty Gritty

**Quantum Symphony & Symphony Pro**

**Editor:**

"What is the use of straining after an amiable view of things, when a cynical view is most likely to be the true one?"

George Bernard Shaw

We apologize to Michael Fremer for the mess made by the "technical roughage" he was "forced to ingest" and then "regurgitate" to the reader in his review of Quantum's Symphony and Symphony Pro power-line conditioners. We empathize with Fremer's cynical tone and his struggle to intellectually grasp the concepts behind a product that claims to be a power-line conditioner, yet employs no traditional filter design techniques whatsoever.

At the same time, Quantum Products welcomes the opportunity to once again frustrate the conservative editorial establishment of a beacon to the high-end industry with a product worthy of attention by audiophiles and enthusiasts of recorded music alike. Quantum begins where the Coherent ElectraClear and Tice Magic Clock end.

Now we would like to foist upon, or kindly invite, the patient, astute, adventurous, and open-minded reader to digest (painlessly, we hope) the following overview of the theory behind Quantum Products:

"Scientists know that 99.9% of an atom's weight is contained in the nucleus. Except for a few electrons, the rest of the atom is empty space, or vacuum. The fact that the vacuum is a far busier place than it would appear to be is a consequence of quantum mechanics. What is new is the realization that this dynamic vacuum can be shaped and manipulated. Some of it may become a working component of novel electronic devices." — Hans Christian Von Bayer, Professor of Physics at the College of William and Mary, and author of *Taming of the Atom*

Quantum physics is the physics and mechanics of atomic and subatomic phenomena, and is the physics that identifies the fundamental particles of physical reality and attempts to describe their behavior and interactions with each other and with the vacuum. The vacuum contains no physical properties, but contains enormous energy potentials and natural energies. It may perhaps be the domain of all phenomena that we call consciousness, though this has not been verified. If this is the domain of mind, then the creative potential would theoretically be immense.

Essentially, the Quantum technology embodies the craft of generating special natural energy-field patterns in the magnetic vector potential domain (electric and magnetic fields) in the dynamic vacuum. Have you got that? Stay with me. These special patterns etched into the electric and magnetic fields influence electrons and photons. We accomplish this using circuitry that uses a proprietary imprinting process to activate the organized fields for a targeted technological benefit, such as increased signal-to-noise in an electronic system.

Now comes some "roughage" (oops!).

The magnetic vector potential field acts on the vacuum to alter the existing state of disorder and random fluctuations at that level. This brings about organization and coherence (not the Rowland amp) to the vacuum condition. This action can be compared to the principle of magnetic tape bias, where the north-south pole orientation of the ferric-oxide domains become aligned by a high-frequency (MHz) carrier signal. Biasing reorganizes the tiny magnetic domains in an ordered arrangement so as to prepare the tape to be an efficient carrier of the audio signal.

The audio signal actually modulates the bias wave during recording and is demodulated on playback.

Similarly, the imprinting process of Quantum Resonance Technology, or QRT, reorganizes the electron behavior in a material so as to become more conducive. As the electron moves through that material it encounters fewer inelastic scattering events, or collisions between electrons and the atoms caused by random fluctuation. This means electrons flow more efficiently (and lower utility bills), and noise decreases while signal information increases in electronic systems (electrons playing the telephone game).

The Symphony facilitates QRT by incorporating Hertzian (frequency) and non-Hertzian fields to interface with the AC line current from the wall outlet. Non-Hertzian fields exist at a more fundamental level than classical EM fields, according to noted physicist David Bohm, and can influence EM fields. Non-Hertzian fields can be generated by a specially designed Tesla coil to cancel current elements opposed by 180°, and their associated EM fields.

Quantum uses principles of musical composition and other proprietary methods to generate a variety of coherent non-Hertzian field patterns and EM permutation. This is akin to a form of "silent music" being played on electricity. Thus the appropriately named Symphony.

To extend Fremer's analogy to Fleming's display of moldy bread or penicillin, indeed, we are offering a potent remedy to "heal" or purify "sick" electricity. Call it electronic "medicine" if you must, but please refrain from using the word "voodoo." Clearly, the skeptic Fremer experienced the Symphony's astonishing effects.

The benefits are cumulative, by the way. Take two and you will cure most electrical ills. This is no placebo, guaranteed. In fact, we are so confident about our Symphonies that we will waive the 15% restocking fee to all Stereophile readers who mention Mr. Fremer's review and are brave enough to come forward without shame to purchase the Symphony or Symphony Pro and would carefully evaluate its merit in their systems. Sometimes effective medication can be tough to swallow.

We regret that although Fremer "thinks he hears and appreciates the effects," he is content to live without what satisfies so many other audiophiles.

Bill Stickehout
President, Quantum Products

**Paradigm Studio/100 v2**

**Editor:**

Our sincere thanks to Robert Deutsch for his wonderfully favorable review of the Paradigm Reference Studio/100 v2. We are very pleased with the time that he took in so carefully describing the significant sonic improvements of this second-generation product, and delighted at how much RD simply enjoyed the sound of the Studio/100 v2. These same improvements have been incorporated throughout the complete Studio v2 and Active v2 series of models.

The biggest challenge for any design team with a top-of-the-line product is to improve it to the next level of refinement and thereby communicate the original musical performance even more accurately to the listener. In this regard, it is extremely gratifying when consumers, reviewers, and dealers alike have all given us their unbridled enthusiastic praise. We are very proud of the Studio/100 v2. It is a comprehensive design that is the result of very considerable R&D teamwork, and we are indeed pleased that RD has given the Studio/100 v2 such an enthusiastic recommendation.

RD also mentions a significant point...
about imaging that we would like to further emphasize. While the image localization of the Studio/100 is truly superb, it also has broad dispersion, which, as RD pointed out, has the added benefit of a much less critical listening position. Even when listened to off-axis, the Studio/100s were able to maintain a solid soundstage. Instead of forcing the listener into a single sweet-spot listening position, the Studio/100s are remarkable in their ability to allow a listener to simply relax and enjoy the music, and even have their friends enjoy the music at the same time.

We have always strived to produce transparent, sonically accurate speakers that also, by any measure, represent unparalleled value! Our thanks once again to RD for the thoroughness of his review and for his very gracious and kind words.

W.A. VanderMarel
Dir. Sales & Marketing
Paradigm/AudioStream

Apogee PSX-100

Editor:
We appreciate your thorough testing of our PSX-100, and are very pleased with both your objective and subjective test results. Concerning the jitter findings in the D/A section, it should be mentioned that, in a professional studio situation, having two clocks providing digital synchronization is not good audio practice, as synchronous digital signals are a must. Your measurement setup would not actually be encountered in normal operational circumstances, and in the studio environment the Audio Precision Series Two measures jitter performance in the low-picosecond values.

Because of the dual-clock capability of the PSX-100, it is possible in one specific case for some minor interference between the two clocks to occur, resulting in increased jitter. As your reviewer noted, the sound quality is little affected, if at all. The phenomenon occurs only when the two clocks are running independently at almost the same sample rate, and this is an unusual situation: normally, both parts of the unit will be synchronized to the same source, and therefore run at the same sample rate; the jitter will be within specification.

For those who are particularly concerned about this jitter during playback, the best solution is either to have the A/D and D/A set to different sample rates—e.g. 44.1 and 48kHz—or to clock the A/D and the D/A from the same source, resulting in both sections being clocked at exactly the same rate. The latter can be achieved by selecting “digital” as the sync source of the A/D converter. When recording, there should be no concern for extra jitter, because at that time the recording device is being clocked to the A/D converter and is therefore at the same rate.
For the critical purpose of archiving analog material to the digital domain, the PSX-100 provides the superb sound conversion that Michael Fremer discusses in his review. Further, the comparisons made to the Mark Levinson No.30.6 do not take into account the fact that the Levinson unit is D/A only — had the PSX-100 been described as D/A only, the jitter phenomenon described in the review would not occur. For professional quality at a price point many times less than the other conversion systems mentioned, the PSX-100 is an ideal solution to making digital recordings in the studio or for the serious home recordist.

We would like to thank you for such a thorough subjective and objective review — keep up the good work! — Lucas van der Mee

Senior Design Engineer
Apogee Electronics

Richard Gray’s Power Company 400S

Editor:

We thank you for giving us the opportunity of making this pre-publication response and for giving us lengthy coverage of the Richard Gray’s Power Company (RGPC). We are disappointed that Jonathan Scull was unable to achieve the results that others and we have enjoyed with the over 2000 units sold by over 75 dealers in the 13 months the RGPC has been on the market. These dealers encourage no-risk, in-place demonstrations to high-end audio and home-theater enthusiasts, professional recording studios, and musicians.

In a few rare exceptions where one’s very-high-end system has already been tweaked and the sound balanced with different cables, interconnects, AC power cords, and power-line conditioning devices, the addition of the RGPC may introduce an incompatibility. In this case, it might not seem to perform well. However, once the incompatibility is discovered (which may be as simple as a cable change), the effects are generally dramatic and welcome. Many people have reported that, when used with some video projectors, the projector itself needs re-calibration to take full advantage of the RGPC, and then with dramatic and welcome results.

The essence of our proprietary choke technology (patent pending) is straightforward: The RGPC, wired in parallel with the line, electrically and mechanically simple, reacts to the specific needs of the equipment on the system (the load) to reduce the colorations found in most audio and video equipment. It should not (and has not, according to our experience and that of users everywhere) add coloration as JS described.

Ohm’s law says that I=V/Z; current (I) equals voltage (E) divided by impedance (Z). Our literature clearly states that a series-type line conditioner can add resistance to the line, thereby decreasing available current and energy.

You have inferred that we claim all other products to be obsolete. This is not true. We do recommend, however, removing all line conditioners from your system when evaluating the performance of our product or any other new component. When you’re satisfied, we suggest you reintroduce them incrementally to determine their effect on the system. As you know, every system and AC line feed is different. We have received favorable comments resulting from adding certain power-line enhancers, line conditioners, and sine-wave “regenerating” amplifiers in addition to the RGPC.

We appreciate you publishing our descriptions from “The Gray Paper,” the name of which was our tongue-in-cheek approach to the conventional white paper because, as JS says, “nothing is black-and-white.” We do, however, want to distance RGPC from those others now on the market who attempt to “fill-in” and smooth out the harsh distortion, etc. — i.e., those who filter higher frequencies.

Additionally, since Jonathan brings up public utilities’ use of large capacitors, which resonate the AC line, we invite your readers to review these relevant websites:

www.pactechnologies.com/

www.pactechnologies.com/savemoney.

www.nebulae.net/cabyspo/article5.htm

www.aineurope.mcm.com/EVAR.

How Jonathan writes his articles is his business, but one bit of criticism: We wonder what end is achieved by using descriptions such as “leaner-than-dog’s-breath” amplifier.” To us, Stereophile’s objectivity is not enhanced by this use of sarcasm.

The components J5 used for his test have been used successfully with the RGPC in similar systems throughout the country. Reading his description brings us to conclude that, for some reason unknown to him or to us, his system and the RGPC are incompatible. Notwithstanding, we are thankful that the seasoned audiophiles whose purchases Stereophile influences, as you have ours over the years, can readily discover for themselves the favorable results gained in their own systems by arranging a no-risk in-home demonstration by one of our professional dealers listed on our website.

Finally, in the Y2K CES report in the April 2000 Stereophile, you point out and list exhibits where the RGPC was seen in use by manufacturers and retailers all over the CES. We believe that so many high-end amplifier manufacturers touting the use of Richard Gray’s Power Company speaks very loudly for itself.

Richard Gray, Dick McCarthy
Partners, Audio Line Source LLP
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Okay, back to equipment racks and resonance tuning.

Let's say your components are snuggled into one of those ubiquitous Target racks I used to use myself, or a similar round- or square-section hollow-tube rack with MDF shelves supported at their corners by tabs or push-in paddles. Shut your system down, remove the component on the top shelf, and rap the shelf with your knuckles. Not very reassuring, is it? Not only is the shelf resonant, but being supported at only its four corners makes it rattlen'jump when you rap it.

Back in February's "Fine Tunes," I suggested making your own constrained-layer-damped shelves by bonding several \( \frac{1}{4} \) sheets of MDF, or alternating sheets of wood and MDF. Well, this month we're going One Step Beyond.

Take exact measurements of your current shelves, how deep they're set into the retaining tabs or clips, and how much room you have between shelves. Then run down to your local Home Improvement Hutch and pick up two \( \frac{1}{8} \) -thick sheets of Masonite. Two \( \frac{3}{4} \) by \( \frac{3}{8} \) sheets should cost no more than \$2.50 each, and most places will cut the boards for free or for a nominal charge. If you do your sunn right, you can make use of the entire sheet without wasting an inch. Pick up a few cheap clamps, a coarse wood rasp, and some Elmer's Wood Glue if you're not a Tool Type type.

Haul your booby home and clear a work area. You'll want a large, flat surface to set up on; a baking marble would do nicely (but don't tell the wife!). You'll find the Masonite has a rough, fibrous "backside" (don't we all?), while the other side is smooth and ready to paint. Rasp down the fuzz on the backs of all the cut panels to prepare for gluing. Use a stiff cardboard paddle to spread the Elmer's evenly over both sides to be glued, press them together, and wipe off the edge ooz. Don't be shy: Try two, three, or even more sheets for greater damping effect. Clamp the sheets together, or weight them down with a couple of bricks or concrete blocks, and let dry for 24 hours. During that time, think creatively about how to explain away the missing baking marble.

Next day, unclump your new equipment shelf and give it a right rap. I guarantee you'll be startled at how dead it sounds, how nonresonant. Eat your heart out, Norm Abrams! You can finish the shelves however you'd like. If you're a bachelor dude and décor is the last thing on your mind, use 'em as is. If you're style-conscious and wish to impress friends'n'family, clean up the edges and paint them whatever color suits your creative soul. The point is, you can make them as nicely finished as you like, and it still won't cost you more than a couple of bucks.

As also mentioned in the February "Tunes," consider installing a piece of mild-steel sheet metal to the underside of Your New Shelf to further improve damping characteristics and to add a modicum of RFI/EMI shielding. That should run you less than \$10. Or find a scrap-metal dealer or a local metal fabricator. Bet they have a scrap bin full of pieces of just the right size — for free!

By the way, if you don't mind opening the ol' wallet, you can have 1"-thick glass sheets cut to size, then glue the corners onto the retaining tabs of the rack to keep them from resonating. Yes, these have to be thick, which means they'll be expensive, but they should be surprisingly inert.

While the shelves are drying, turn your attention to the rack itself. Back in February I suggested using steam-cleaned "pool" sand to fill hollow-tubed stands. Tuning maven Victor Tiscareno of AudioPrism/Red Rose Music had an even better idea. "No matter how many sandboxes, inner tubes, or even ISO Bearings you use, if the stand is rickety, you're still in trouble."

His solution? Pick up a three- or four-dollar can of nontoxic expanding insulation foam, pull the footer spikes from This Old Rack, and shoot it up! As for the smaller-gauge cross-members, drill \( \frac{3}{8} \) inch holes and blow the foam in through a straw! What a terrific (and cheap) way to stop your rack from ringing.

What might be the results of all these heroic efforts? Listen for a lower noise floor, tighter bass, cleaner midrange, more open highs, and better imaging.

Reader Leif Christensen, from Norway, recently sent an e-mail with another do-it-yourself shelving solution for heavier components: "Make an approximately 4"-deep tray of whatever size best fits your rack. Use MDF acrylic, Lexan, or even aluminum. For each tray, buy three wheelbarrow-wheel inner tubes. Drill three holes for the valves in the bottom of each tray. You may need the small plastic adapters so the valves can reach through the bottom plate of the tray. Place one tube in each front corner and one in the back at the center. Then place the component on a shelf, and bleed the inner tubes down to level them and adjust the cutoff frequency of the isolation. (The less air, the lower the isolation filter frequency.) I use this technique with great success for my Basis Ovation turntable, Aesthetix Io phono front-end, and Audio Research VT100 Mk.II amplifiers. I've tried all sorts of leaking sinks, footers, and points, but they all seem to have some negative effect. This doesn't the inner tubes I get in Norway can take a 30-40kg load each without leaking significantly for a whole year. And as a bonus, it's cheap! Good luck and keep up the good work."

Many thanks to Leif and all the other readers who have e-mailed their suggestions and experiences with resonance tuning.

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THE NOT SO NAKED TRUTH

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