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Art Dudley

Happy New Year!

I'm fortunate to own some very nice hi-fi gear: Different turntables, tonearms, and pickups for different records. Two pairs of really superb full-range loudspeakers. A choice of mildly exotic amplifiers—my favorite combination of which (a stereo preamplifier and a pair of monoblock power amps) sells for a little over \$21,000. The average American consumer would think that's insane.

The average American consumer would be correct, but only insofar as it applies to his or her own buying habits. After all, we're nothing if not a nation of customers, and the customer is always right. From where I sit, the discretionary buying habits of my fellow countrymen are not only grotesque but almost heartbreakingly sad. Especially during the holiday season, when I'm dashing off this piece, it seems as if most of them are buying goods simply for the sake of buying goods, in bulk and motivated not by need or even *desire*, but by the same level of reflexive titillation that makes a crow dive for a gum wrapper.

I blame the marketers, of course, but today that's the same as saying *I blame the corporate media*. Indeed, on daytime television in particular, it's virtually impossible to see or hear a single crumb of information that's not calculated to *sell*: a book, a movie, a beverage, a snack, a product for which there is no apparent human need. It's been said that watching television can be like driving past an especially nasty car accident: dreadful and demeaning, but you can't take your eyes away from it. Having now spent the better part of two hours watching the *Today* show on MSNBC, I would take that a step further: Watching television is like seeing a sewage disposal truck with a talking mule at the wheel crash into a burning whorehouse. It's harder on the spectators than on the casualties.

If the marketing weasels who control *Today* and other such shows are on target, the average American is blowing his or her money on the sort of useless shit that makes God Himself shake his head and cry for us: Inflatable lawn ornaments (choose from Santa, the Easter Bunny, Casper the Friendly Ghost, or an 8'-tall

Tiki Totem). Gourmet jelly beans in over a hundred different flavors. Gourmet popcorn and an old-fashioned cinema-style popcorn cart from which you can dispense it to your admiring friends. Monogrammed Post-it notes. Reusable "ice" cubes made from a space-age polymer. A ring with a fake jewel that opens to reveal a container of lip gloss. A limited-edition Precious Moments teddy bear in camouflage fatigues.

Nor can I ignore consumers of more generous means, to whom an even greater constellation of treasures is available: Jimmy Choo sandals for \$900. A Judith Leiber handbag for \$8000. An almost startlingly inept and

maybe four or five cable companies (you knew I was going to say that, just as you know that it's true), it seems to me they're doing their best to make things that play music as convincingly as possible. Inefficient and bumbling? Some. A little too greedy for their own good? A few. Larcenous, dishonest, condescending, and snarky? None whom I've met.

But forget all that, because . . . *Happy New Year!* It's 2039! I'm dead! And so are lots of you! *Wheee!*

The Jimmy Choo sandals fell apart after one year. The gourmet jelly beans could be traced to over 100,000 deaths attributable to diabetic shock. The Ju-

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CALCULATED TO **SELL**.

condescending sketch of a "family" from someone or something called Kstudio for \$300.

Nor will I let you literary types off the hook—at least not those of you whose coffee tables are home to such deathless works as Marlena Spieler and Sheri Giblin's *Grilled Cheese: 50 Recipes to Make You Melt*, or whose faces will be recognized at their local Dog and Cat Spa, or whose credit-card statements still bear the scar of having an asteroid or nebula named for a loved one.

The people who sell all of those items and a hundred thousand like them have one thing in common: They think you're an idiot.

Well: *Are you?*

I sure as hell don't think so. I think you're pretty smart for caring enough about music that, in your spare time, you'd want to read about playing recordings of it. Have I told you today that I love you?

A better question: Do the people who make the audio products you cherish think you're an idiot? For the most part, and with the exception of

dith Leiber bag got left on the back seat of a taxi in West SoHo. (The woman who lost it complained to the cab company and the driver was canned for no good reason.) And the descendants of the people who wrote, designed, and published *Grilled Cheese* still laugh at all the people who made them rich.

But you listened to that Wadia CD player every day until you died, and it never failed to make you happy. The Linn LP12 and the 20-odd cartons of LPs you left behind are still packed away in the attic of your old house, where they'll be discovered some day—and will change lots of lives for the better. Someone on my wife's side got hold of my Shun Mook Mpingo discs, and even though they talk about me and laugh whenever they take them out, it's all pretty good-natured. Every solder joint on my beautiful Shindo Corton-Charlemagne amplifiers is still good: I know because my daughter has them now, and she plays her records through them all the time.

I could probably be happy anywhere. But I like it here best of all.

stereophile

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PUCKER UP!



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Senior Contributing Editors *Sam Tellig, Martin Colloms, Michael Fremer,
John Marks, Wes Phillips*
Editor At Large *Art Dudley*
Web Producer *Jon Iverson*

CONTRIBUTING EDITORS (AUDIO)

*Jim Austin, Lonnie Brownell, Peter Bruninger, Brian Damkroger, Robert Deutsch, Shannon Dickson, Larry Greenhill,
Keith Howard, Jon Iverson, Fred Kaplan, Ken Kessler, David Lander, Erick Lidite, Paul Messenger, Robert J. Reina,
Kulman Robinson, Markus Sauer, Jason Victor Serinus, Peter van Willenswaard*

CONTRIBUTING EDITORS (MUSIC)

*Les Berkley, Larry Bimbaum, Daniel Buckley, Thomas Conrad, Matthew Fritch, Andrew Gilbert,
Robert Levine, Fred Mills, Dan Ouellette, Leland Rucker,
Scott Schinder, David Sokol, John Swenson*

Graphic Design *Natalie Brown Baca, Pip Timmenbaum*
Cover Photo *Eric Swanson*

ADVERTISING SALES

Publisher *Keith Pray*
(212) 915-4157 • fax (212) 915-4167 • e-mail: Keith.Pray@sorc.com
Advertising Manager *Ed DiBenedetto*
(212) 915-4153 • fax (212) 915-4164 • e-mail: Ed.DiBenedetto@sorc.com
Advertising Manager *Laura J. Lovecchio • Lovecchio Associates, Central, West Coast Mfgs
& National Retailers*
(718) 745-5025 • fax (718) 745-5076 • e-mail: Laura_Lovecchio@sbcglobal.net
Sales Coordinator *Rosemarie Torcivia*
(212) 915-4160 • fax (212) 915-4167 • e-mail: Rosemarie.Torcivia@sorc.com
Classified Manager *Helene Stoner*
(505) 474-4156 • fax (505) 473-1641 • e-mail: hmonstoner@msn.com
Music Manager *Ilko Nedhev*
(212) 490-2079 • e-mail: ilko@mitchelladgroup.com
Marketing Director *Shawn Higgins*
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Editorial ... (212) 915-4156
Editorial fax ... (212) 915-4164
John Atkinson ... john.atkinson@sorc.com
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More on Gordon

Editor:

All of the articles and readers' letters in the October 2009 issue on the passing of J. Gordon Holt failed to mention one of his revelations: Most audiophiles will never see, much less hear or own, the majority of the equipment reviewed in the magazine. Accordingly, the review itself must be informative, entertaining, insightful, and, above all, fun to read. This innovation of Gordon's brought the reader into the listening room and started the audio press industry.

—Jay Valancy
biggeramps@mac.com

The past and the future

Editor:

I have just read the letter from Steve Rogers in the April *Stereophile*. In the last year I, too, have loaded my CD collection onto my computers, a laptop and a PC (each has a dedicated 1TB hard drive for the purpose), with a view to cutting the attendant clutter that over 1000 of the things brings. My wife seems pleased with that part of it.

Like Mr. Rogers, I have found myself listening to a whole lot of stuff, with iTunes set to Shuffle, that I haven't heard in a very long time. Unlike Mr. Rogers, apparently, I haven't actually found myself horrified at some of the stuff that turns up. Bemused? Yes. Perplexed? Occasionally. Delighted? Often. Engaged with the music? Always. Even the cringe-inducing excesses of my youth have their points of enjoyment.

I suspect that if we were talking about old TV shows that were current when we were in single figures there would be less embarrassment; it seems to me that music is something that we take to with our heart and soul (TV is just TV). It means stuff to us all. To be taken back to the dead-end roads of your musical journey is okay. After all, you can go only so far before you have to return to the main road.

As I have heard it said, the past isn't always what it used to be. —Jack Clark
jackclark@homemail.com.au

Turned off by the future

Editor:

I agree with Mr. Fremmer's recent statements about digital audio (August 2009):

"We are on the verge of a revolution in high-definition digital audio. . . at some point soon the floodgates will open. . . [however], configuring a computer to play audio with full resolution is a genuine pain that turns off or confuses many audiophiles."

I'd very much like to get digital audio from my main system to my computer and from my computer to my system. The time and effort involved to decipher the various programs and codes is just ridiculous. I've given up on both digitizing my vinyl and on getting 24/96 files to play beyond my computer. I've had some success in using iTunes to stream "Red Book"—standard audio from the computer room to the listening room, but have found the learning curve beyond that to be more than I care to climb. This despite my MS from a well-regarded technical university!

Thank you for allowing me to give voice to this frustration; I hope equipment manufacturers are listening. Please continue to update us on where the industry stands. Perhaps an article or series on what programs and equipment exist to enable HD digital and how to use them? Now that I can buy it, it would be nice to be able to play it. —Brad Houston
sradh@cox.net

For starters, read the on-line articles at www.stereophile.com/computeraudio/1008servers and www.stereophile.com/digitalprocessors/ayre_acoustics_gb-9_usb_dac/index5.html. And we will be publishing more on this subject later in the year.

—John Atkinson

Sonic toothpaste!

Editor:

Kudos, JA, for calling Don Was's hand on that sonic disaster ("As We See It: The Spaces Between the Notes," November, p.3). Don Was was the producer so he could have called the shots on the Delbert McClinton album, especially as the CD was released by a tiny label. He could have told the mastering guy *not* to destroy the sound. Digital toothpasting is the absolute worst thing for sound quality. You described the problem—you create grating squarewaves that make it impossible to listen.

I was just at [the Audio Engineering Society convention] and spent a lot of time checking out the new crop of

boutique analog gear. There are some great compressors out there, and if you do the crunching in the analog state, you don't get the squared-off waves because you transfer to a digital max with an already compressed signal. And, by the way, if you transfer at 24 bits with some headroom and then normalize to 16 bits with -1dBFS as your peak, the dithering-down will create 0dBFS peaks in some places but there should be no digital overs. Even some garbage mixed-in-the-box job will sound better taking it out to analog, doing the crunching in analog, and then mastering in hi-rez and dithering down for a CD master. At least that's been my experience with extensive transfer work. One analog compressor that stuck out as particularly good for this job was the Shadow Hills tube monster. I was actually surprised what a versatile tool it is, because it seems like a weird, cultish, gearhead thing. But it's well made and it does what it claims. There are other mastering compressors out there. And someone makes a superfast limiter specifically to transfer superhot to digital.

So there's no excuse for the digital toothpaste. But it's endemic.

And worse yet, more than a few of these new, expensive vinyl reissues are made out of crunched digital masters, so they sound even worse since they have vinyl distortions on top of digital distortions. Amateur hour in Siberia!

—Tom Fine
tom.fine@gmail.com

Cables make a difference

Editor:

A friend recently came to visit sporting some power cords and speaker cables for me to try out in my system. While my system isn't world class, neither is it schlock. Some components are Class A, others B, and some, well, I just got them at a good price. Anyhow, I enjoy my music, and I certainly have the best system in our neighborhood (though certainly not in our local audio club).

I'd rather not say which cables went in or which were removed, only to say that the new cables cost quite a bit more than the old. While I was prepared for a slight improvement, I was ill prepared for a jaw-dropping Is-that-really-my-system?? improvement. Which brings me to ask if your staff would dedicate a full issue of

LETTERS TO THE EDITOR should be sent as faxes or e-mails only (until further notice). Fax: (212) 915-4164.

E-mail: STletters@SourceInterlink.com. Unless marked otherwise, all letters to the magazine and its writers are assumed to be for possible publication. In the spirit of vigorous debate implied by the First Amendment, and unless we are requested not to, we publish correspondents' e-mail addresses. Please note: We are unable to answer requests for information about specific products or systems. If you have problems with your subscription, call toll-free (800) 666-3746, or write to *Stereophile*, P.O. Box 420235, Palm Coast, FL 32142-0235.

Stereophile to the science of power cords and speaker cables. Why are some better? What makes them so? Why, oh why, does the delivery of electricity make such a huge difference in the way my system sounds?

—Doug Small
White Stone, VA
dsmall22578@verizon.net

Perhaps they don't

Editor:

Why don't you review equipment blind? As you may or may not know, there is a placebo effect in the medical industry that frustrates the medical community when developing new drugs. It has been speculated that there is a placebo effect in the audio world as well. I have seen articles that say there is no difference between properly sized zip wire and high-end audio wire, and the same with amplifiers. It would be nice to know that experts such as yourselves could back up your reviews without your knowing what you are reviewing.

—Brian W.
brian102665@yahoo.com

Perhaps they might

Editor:

Reading Michael Lavorgna's "As We See It" in September ("Fragile Souls,"

p.3) brought some interesting thoughts and prompted me to write. He quotes Stephen Mejias on the Furutech LP DeMagnetizer, saying "it made a big improvement," then goes on to defend what is generally called the subjectivist point of view.

I think the problem may lie not so much in subjectivist *vs* objectivist, but in what, exactly, *better* means. If a person were to say, "I like the way this component sounds compared to this other component," there would be no argument, because we are talking about taste.

However, when someone says this component is "better" than that component, or "it made a big improvement," it seems to me that most people would not think it is an expression of taste. Talking about "better than" or "a big improvement" implies that a scale is being used to measure. If the scale is only one's likes or taste, it makes no sense to talk about "better," because in that case everyone's scale will be different, and one person's scale is of little use to anyone else. As Michael himself writes, "What I fail to understand is how *their* experience is supposed to inform *my* experience."

It seems to me that we really can't talk about "better than" or "a big improve-

ment" unless we have some common reference: a common scale for measurement. What can we use as a scale? If we don't use "live music" as a scale, for various reasons, what are we left with?

—Shawn Hunt
hunt@ece.uprm.edu

Shawn, I can think of no greater compliment than to be thought of as being thought-provoking. Thank you for that. Whether our reference is live acoustic classical music, being sung to sleep by a grandmother, the roar of a highly tuned engine, or the tweet of a wee tweety-bird, the experience of listening to music on a hi-fi is ultimately about personal enjoyment, for which there is no common reference. Therein lies its beauty and allure. What we are left with is ourselves. Whether this is a good or a bad thing is up to you. For me, the hidden gem in hi-fi is the ability to share the enjoyment, which is something Stephen Mejias does exceptionally well, and better than most. —Michael Lavorgna

The funny thing is that I enjoyed recorded music played back over a cassette deck or a boombox or my parents' stereo—and could even tell the differences between their respective sonic abilities—long before I ever attended a live music event. So what was I using as a reference, then? —Stephen Mejias

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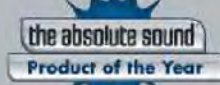
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YOUR LOCAL NEWSSTAND

John Atkinson

The seventh edition of *Stereophile's* annual *Buyer's Guide* is available on newsstands now, priced \$6.99. In its 148 pages you'll find listed more than 4000 components, along with their specifications and prices. There are source components both digital and analog. There are headphones. There are all manner of amplification components, including preamplifiers, power amplifiers, integrated amplifiers, and receivers. And, of course, there are loudspeakers and subwoofers.

The prices and specifications listed were correct as of the beginning of August 2009. Here's how we compiled the listings: In the spring, our then editorial intern, Ariel Bitran, created a master Excel file for each product category. Starting in June, Debbie Stampfli and Claire Lloyd e-mailed to every manufacturer and distributor in our database a blank spreadsheet for them to fill in with their products' names and model numbers, specifications, and prices. John Higgins then merged all the returned spreadsheets into a master file for each category, after which Debbie and Claire did a second round of e-mailings to manufacturers that had not yet responded to the first, and to new companies that had come to light in the meantime. Finally, *Stereophile* assistant editor Stephen Mejias fact-checked all the spreadsheets and eliminated home-theater-specific products from the master spreadsheets. (These products are listed in the *2010 Home Theater Buyer's Guide*, also available on newsstands this month.) He then exported the data in a format that could be used by our production team of Nerissa Dominguez Vales and Pip Tannenbaum. Stephen then proofed each page and contacted, one last time, those companies still not represented. The InDesign template for each table was designed by *Stereophile's* longtime art director, Natalie Brown Baca.

My thanks to everyone involved in the production of the *2010 Stereophile Buyer's Guide*. Despite everyone's efforts, I'm sure there are still some audio brands that should have been included but unfortunately have not been. I would appreciate your letting us know which these are. E-mail me at Stletters@sorc.com; we'll make sure they're included in the *2011 Stereophile Buyer's Guide*.



UK: WHITTLEBURY, NORTHAMPTONSHIRE

Paul Messenger

There was understandable industry skepticism when the Chester Group announced that it was moving the English Hi-Fi Show, long held each September at a Heathrow Airport hotel, to a new location well away from London, and giving it a new name: the National Audio Show. For some years, the Chester Group had battled to wrest control of the September Heathrow event from *Hi-Fi News*, which had run the show there since the early 1980s. Despite their ultimate triumph, the victory turned out to be a Pyrrhic one—the 2008 event proved a depressing affair that was clearly well past its sell-by date. A new initiative was clearly necessary, but would the move to Whittlebury Hall—near the Silverstone motor-racing circuit, roughly in the center of England—work out? Would the city-centric English audiophiles travel to the middle of nowhere for a Show?

Happily, the skeptics were proved wrong, and the two-day event was a resounding success. Exhibitors were surprised and pleased by both the quantity and quality of the visitors, and several commented that the rooms themselves had surprisingly decent acoustics, drawing parallels with the Frankfurt Kempinski and even the hotels used for the long-defunct Harrogate Show.

The main source of criticism was that the architect who designed Whit-

CALENDAR

Those promoting audio-related seminars, shows, and meetings should e-mail the when, where, and who to stephen.mejias@sorc.com at least eight weeks before the month of the event. The deadline for the March 2010 issue is December 28, 2009. We will reply with a confirmation. If you do not receive confirmation within 24 hours, please e-mail us again. If you prefer to communicate through fax, the number is (212) 915-4164.

Attention All Audio Societies: We now have a page on the *Stereophile* website dedicated solely to you: www.stereophile.com/audiophilesocieties. Check it out and get involved! If you'd like to have your audio-society information posted on the site, e-mail Chris Vogel at vgl@atlantic.net and request an info-pack.

Please note that it is inappropriate for a retailer to promote a new product line in "Calendar" unless this is associated with a seminar or similar event.

CALIFORNIA

■ Sunday, January 31, 2–5pm: The **Los Angeles and Orange County Audio Society** will hold its monthly meeting at **Definition Audio Video** (2909 182nd Street, Redondo Beach).

Marantz's Kevin Zarow will be on hand to demonstrate the company's Reference line of electronics. A raffle is planned and lunch will be served. Guests and new members are invited, and parking is free. For more info, visit www.laocas.com or call Bob Levi at (714) 281-5850.

■ Sunday, February 28, 2–5pm: The **Los Angeles and Orange County**

Audio Society will hold its monthly meeting at **Visual Sound** (841 E. Whittier Boulevard, La Habra). A demonstration will feature dipole speakers, including the **Magnepan MG20.1**, along with cables from **AudioQuest** and tube electronics from **Audio Research**. AudioQuest's Andrew Kissinger will be the guest speaker. A raffle is planned and lunch will be served. Guests and new members are invited, and parking is free. For more info, visit www.laocas.com or call Bob Levi at (714) 281-5850.

■ Sunday, March 21, 2–5pm: The **Los Angeles and Orange County Audio Society** will hold its monthly meeting at **Upscale Audio** (2504 Spring Terrace, Upland). Society member Kevin Deal will be on hand to introduce a large selection of new tube gear. A raffle is planned and lunch will be served. Guests and new members are invited, and parking is free. For more info, visit www.laocas.com or call Bob Levi at (714) 281-5850.

tebury was clearly an enthusiast of mazes. Even after two days I was still regularly getting lost, and still unable to advise similarly disoriented visitors who asked me for directions.

Every hi-fi show has its own flavor—a combination of the venue, the visitors, and, most important, the exhibitors. **Naim Audio** apart, most of the bigger UK brands decided to give the National a miss—a major reason for Heathrow's long-term success had been its easy access for foreign visitors, and the National was little help there. Instead, the new show was dominated by importers and distributors, leavened by many smaller UK brands and a fair sprinkling of dealers.

The Global High End—Krell-driven Wilson Sashas, darTZeel-powered Magico V2s, Zanden and Kuzma feeding Conrad-Johnson and Avalons, etc.—was well represented by distributors such as Absolute Sounds, Audiofreaks, and many others. All of these and many more of the brands present are well known and well publicized, so I'll allocate my limited space elsewhere.

No visitor could have failed to no-

tice the continuing proliferation of vinyl'n'valves (that would be LPs'n'tubes to you), and anyone who reckons that either of these "obsolete" technologies has been consigned to the dustbin of history would have found the National Audio Show deeply disturbing. Far from merely refusing to lie down, both of these vintage approaches to sound reproduction are making genuine comebacks among serious enthusiasts.

Some manufacturers, of course, never abandoned vinyl at all. **Roksan** designer Touraj Moghaddam was proudly showing a new version of his stylish Radius turntable, which doesn't look much different from its predecessor—no point in changing an already successful formula—but nearly all its details have been upgraded to improve its performance.

Avid Hi-Fi's Conrad Mas has done much to revive the turntable. His new introductions included the clever Iso-rack support, the two-box Pulsare phono stage, and two turntables: a revision of the entry-level Diva II, and the limited-edition Anniversary, with massive separate motor drive and pow-

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er supply.

The return of the **Systemdek** name was a nice surprise. The sons of the founder, Peter Dunlop, who have successfully run **Art Loudspeakers** for some years, have now added the Systemdek IIID, a turntable with a multi-laminated plinth, a suspended subchassis, and an outboard motor. The demo unit was being used with a 12" **Audio Origami** tonearm from Glaswegian designer Johnny Neilsen.

Revolver returned to vinyl a few years back with the pretty Replay turntable, made in China, but has experienced difficulties in retaining control over the design. At the National they showed (but didn't demonstrate) the less glamorous, less costly Rebel 2, to be built in the UK; it's close to production, while work continues on a new edition of the Replay.

Some distributors are bringing in new turntables from Germany and China, but at least two brand-new UK



PHOTOS: PAUL MESSENGER



(L-R): Conrad Mas with his latest Avid Anniversary turntable; the return of Systemdek with the IIID turntable.

creations made their debuts at the show: the Eclipse, a very pretty acrylic creation from **Inspire Hi-Fi**; and **Claro Audio**'s two-motor Clarity 09, with its ultrathick platter. Both have had good reports in the specialist press, but only time will tell if the vinyl revival is strong enough to sustain new makers of turntables.

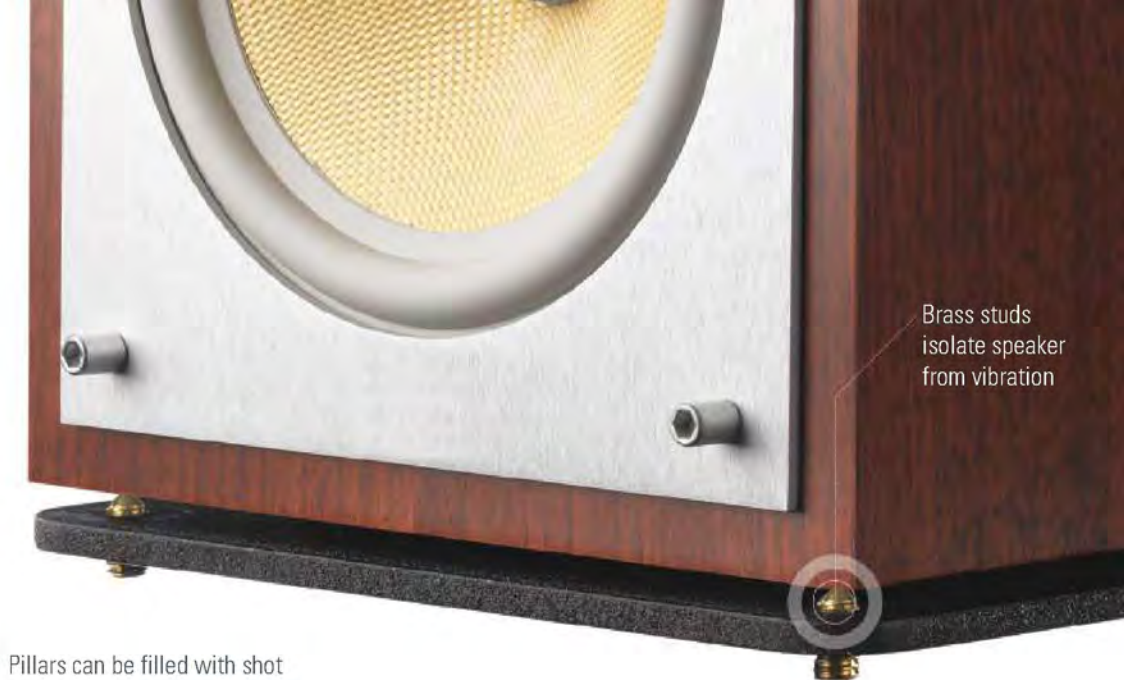
The tube revival seemed equally strong. Many enthusiasts are attracted by the mere sight of brightly glowing output tubes, such as the 211s used in **GT Audio**'s latest Tron model, or **Audio Note UK**'s Jinro. The Jinro is intended to provide an Audio Note Ongaku-like experience at a quarter

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(L-R): Graham Holland shows off his Audio Duo amp; Brian Taylor and his Aspara HL1 horn; Nic Poulsen and his Trilogy components.

the price, with 22Wpc of power available, copper wiring replacing silver, and other less costly components. And you could probably read a book by the light of the paralleled pair of 6V572 tubes, assisted by curved polished metal reflectors, that are used in **Unison Research's** new S9.

Not that you necessarily need brightly glowing tubes to get a brilliant sound. One of the most interesting and impressive demonstrations cleverly mixed old and new technologies. A **Nova Physics** solid-state digital player fed a **Music First** transformer-based passive preamp and prototype low-power PX4 triode monoblocks, these in turn driving a pair of **Lovington Horn's** new, high-efficiency, Lowther-driven LM1s. John Howes, who designed and builds the PX4, lives near me, so I got to hear them at home a few weeks after the show. This single-ended 3W (!) design has no capacitors in the signal path, and includes special output transformers from Stevens and Billington of Hastings (who also make the Music First preamp), and sounded sensational through my high-sensitivity Rehdeko RK175 speakers. I've put my name down for the next pair of prototypes, and reckon Art Dudley would love to hear the PX4s with his Lowthers.

Audion, a UK brand whose products are manufactured in France, has come up with the perfect amplifier for the terminally indecisive. The new Duo has a switch that changes the heater setting, allowing immediate and easy swapping between 2A3 and 300B output tubes. However, the Audion I'd like to try is the Black Night integrated, which is unusual among tube amps in

offering remote control of both input and volume—it's difficult to turn one's back on more than 20 years of solid-state armchair convenience.

Inevitably, many of today's tube amps come from China, and equally inevitably, I'm reluctant to take good sound quality for granted here. But Guy Sergeant was filling a very large room with sweet sounds, his **Pure Sound P10** phono stage and 2A3 line amplifier feeding a pair of Brian Taylor's **Aspara Acoustics** HL1 hybrid horns from a modified **Technics** SP10 turntable.

There were hybrid electronics, too. Nic Poulsen first brought out his new **Trilogy Audio Systems** range a year or so ago, and has now supplemented the original preamp and power amps with a full-size integrated amp and a cluster of cute half-width separates. These various tube-and-solid-state hybrid devices look great, have lots of features, and were doing a fine job driving a pair of awesome little HB-1 speakers from the Japanese firm **Kiso Acoustic**, which Trilogy's distributor, Symmetry, also imports.

Another interesting and unusual Japanese product, demonstrated by ABC Audio, is a stereo power amp from **Digital DoMain**. The B-1a uses its own unique Static Induction Transistor (SIT) power transistors, which I believe are a new variation on the V-FET theme. The B-1a is oddly shaped but sounds very sweet, is beautifully finished, and costs rather less than you might expect.

Imported loudspeakers have always struggled to establish themselves in Britain, though not for want of trying, but there were plenty of overseas mod-

els at the National Show, from the basic to some of the most exotic: the **Cabasse** La Sphere, **GamuT** S9, **Focal** Maestro Utopia, **Crystal** Arabesque, and **Nola** Baby Grand Reference, as well as the US designs already mentioned. It's hard to say whether any of the less-well-known newcomers will stick around, but it was nice to see **Magnepan** speakers again available in the UK.

Curiously, new British speaker designs seemed thin on the ground. **Kudos Audio**, one of the newer UK brands, has been turning up in the showrooms of some of the best dealers, and its new X2 floorstander, the first of a new entry-level range, was making music that belied its tiny size. **Naim Audio** was demonstrating its interesting Ovator S-600 loudspeaker, based on Balanced Mode Radiator (BMR) technology and now close to production.

A few accessories caught my attention, including: **KeyStroke's** series of neat little quartz-locked strobe lights for accurately checking turntable speed; **Townshend Audio's** expanding range of Stella Stands, to keep your big speakers from annoying the rest of the family and/or neighbors; and **IsoTek Systems' Aquarius** power conditioner-distributor, which replaces their affordable GII Mini Sub.

No show report can cover everything, especially when it's held in a hotel that does double duty as a maze. The good news is that the UK again has a really good audio event in the fall, and next year's National Audio Show is bound to be larger and more comprehensive. I just hope that, in 2010, the Chester Group invests in a little more signage to help us find our way around. ■



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That man is richest whose pleasures are cheapest. —Henry David Thoreau

Wine and luxury are not the way to riches! —Proverbs 21:17

Know first who you are; then adorn yourself accordingly. —Euripides

These quotations are from a recently published book I picked up at the library: *Stop Acting Rich . . . and Start Living Like a Real Millionaire!*, by Thomas J. Stanley, PhD (Hoboken, NJ: John Wiley & Sons, Inc., 2009). Should you spend \$26.95 on this tedious tome printed on pulp paper? Nah . . . do what rich people do: Take it out of the library.

Dr. Stanley never ceases to remind the reader that he is Thomas J. Stanley, PhD in Business Administration, University of Georgia. You can visit his website, www.thomasjstanley.com, where a banner reads: "AUTHOR, RESEARCHER, EXPERT." And self-promoter extraordinaire. Still, Dr. Stanley makes some good points. I'll give you the gist.

Don't be fooled into buying stuff just to appear rich; it's an almost sure way *not* to get rich, Dr. Stanley repeats. And repeats. It's what my mother taught me during a frugal New England childhood. "You can tell the real rich," she said; "they drive beat-up station wagons, wear sweaters with holes in them, and never flaunt their money."

Marketers prey on "the would-be rich" who consume what they can't afford, sending themselves, figuratively, to the poor house. They really *had* a poorhouse in New Bedford, Massachusetts, straight out of Dickens. "If you are a wastrel, this is where you will wind up," my grandfather warned. I inherited his evil laugh.

The would-be rich drive flashy cars. They show off expensive watches. As the Tourneau watch store in New York advertised, "a new watch can say a lot about you." They serve Grey Goose vodka. Wear high-end shoes.

Not the way to get rich, per Dr. Stanley, PhD. Instead, drive a Honda or Toyota. Sport a Seiko or Timex. Bet-



Cambridge Audio 650A (top) and 650C: a big move up in build quality. Sound, too.

ter yet, wear a promotional watch from a hi-fi manufacturer. Live in a downscale neighborhood where you'll be the richest person on the street. (Bad idea, that. The neighbors are likely to be too close, too noisy, too nosy.)

Dr. Stanley loves booze—writing about it, that is. Crawford's is fine scotch—popular in Georgia, perhaps. Smirnoff vodka is as good as you need to serve or drink. (Yes, it is, if you need to drink vodka at all.) Dr. Stanley writes about a wag who pours Smirnoff into empty Grey Goose and Absolut bottles. I shall try this *treeck* on Marina's *byinzzday*.

According to Dr. Stanley, the alcohol used to produce most vodka in the US comes from such suppliers as Archer Daniels Midland—"supermarket to the world." It arrives in rail cars or in tanker trucks, like fuel oil or gasoline.

I once interviewed with the company that then distilled Smirnoff vodka, located in Hartford, Connecticut. They made three brands of vodka: Smirnoff, Popov, and Relska. Same alcohol, same water, I was told. Smirnoff went through several additional stages of charcoal filtration for a smoother shot down the gullet. The distilled-spirits industry remains highly secretive. No one offers me a tour of the vodka factory now.

For martinis or drinking straight, Smirnoff is worth the extra money. Lesser vodkas, with fewer stages of filtration, taste more like raw alcohol

but are fine for a Bloody Mary, a screwdriver, or the punchbowl. Dr. Stanley suggests that your guests might never know. His motto: Buy your booze in plastic bottles.

Dr. Stanley, PhD, doesn't mention high-end hi-fi. Why should he? The would-be rich don't know or care, and few of the really rich do, either. This is what our industry lacks. We have plenty of nerds, but too few turds who consume more than they can pay for.

Two decades ago, a British hi-fi manufacturer ordered a survey of the aspiring rich. They coveted fine motor cars, Saville Row suits, Jermyn Street shirts, fine wines, expensive watches—anything they could flaunt. Shoes, too, I guess. High-end hi-fi didn't crack the top 20 categories of products they lusted after. I know why—you listen to your hi-fi in private. The would-be rich are into public displays of wealth. Stuff that's portable.

Can purchasing a product guarantee happiness? Dr. Stanley's research suggests that it can't. I feel sorry for the person who bought a \$107,000 pair of loudspeakers that were said to be the best in the world. It's a real bummer when that speaker is *not* named *Stereophile's* Loudspeaker of the Year.

If Thomas J. Stanley, PhD, were hip to hi-fi, what would he recommend?

He might tell you to check out a Rotel. Or go NAD. Maybe he'd turn you on to Cambridge Audio. These three brands offer some of the best

values in audio. They're the Seikos and Skagens of the hi-fi world, the Hondas and Toyotas.

Cambridge Audio components are designed in London, England, by a sweaty team of bright young engineers and a few geezers, none of whom seems to shower often. Like people on the Moscow subway. When I visited three summers ago, technical director Matthew Bramble was clad in a T-shirt so greasy he couldn't join the rest of us for lunch—at a pub. The headquarters are somewhat seedy, too; they're located at Hankey Place.

In years of yore, Cambridge Audio was based in Cambridge, England, where it had been founded by a scamp known as Stan Curtis, one of the most colorful characters in British hi-fi. Stan now does consulting work, and Cambridge Audio is owned by The Audio Partnership Plc, established by Julian Richer, who built Richer Sounds into Britain's most successful chain of audio and video stores, as measured by what counts: sales per square foot. Richer sites his shops around the corner from the high street, or even in dingy alleys. You want a demo? That's upstairs, mate, or even around the corner and upstairs. Cambridge Audio is their house brand of electronics.

The fit'n'finish of Cambridge Audio gear have improved dramatically with the Azur 550 and 650 series. Artie Dudley used to like this sort of stuff before he turned his attention to \$15,000 speaker cables and \$100,000 amps.

Do you still have your copy of the March 2006 *Stereophile* (Vol.29 No.3)? If so, re-read my writeup of Cambridge Audio's Azur 740A integrated amplifier and 740C CD player. Today I write about their equivalents in Cambridge Audio's new next line down, the Azur 650A and 650C.

Cambridge Audio Azur 650A integrated amplifier

The Azur 650A retails for a modest \$777, like the matching Azur 650C CD player. At street (or catalog) prices, you can likely snag both for under \$1500 with some "free" cables thrown in, if you ask. (Cambridge Audio does



The 650 is clean and uncluttered. There's a miniplug iPod input on the front. And a terrific headphone section.

not supply interconnects with their products.)

Remember, with an integrated, you don't need a pricey pair of interconnects between the line stage and power amp. Thrift! Avoid unnecessary interconnects—that's the way to wealth. Eat at Wendy's or McDonald's. Buy your wine, if you can, at Costco or Trader Joe's. Gosh, Dr. Stanley, why not avoid pleasure entirely?

Remember the rickety Cambridge Audio stuff Stan Curtis used to build in his kitchen? Or was it his garage? The Azur 650A doesn't look or feel or sound like your 'umble-pie eye-fye. This amp is tastefully designed, in an understated sort of way, and beautifully built. It weighs 18.5 lbs (8.4kg) and measures 16.9" (430mm) wide by 4.7" (120mm) high by 13.8" (350mm) deep. The brushed-aluminum faceplate is 0.39" (10mm) thick. The wraparound casework looks and feels luxurious, as does the ALPS plastic-film volume knob—and volume is also adjustable via the remote control.

On the front panel are a miniplug input for an iPod and a proper ¼" headphone socket. An iPod dock is said to be forthcoming. There's no onboard phono option, but why pay for what you may not need, especially when so many excellent outboard phono stages are available—including one from Cambridge Audio? The bass and treble tone controls are defeatable. I enjoyed defeating them, with pleasure, and they didn't appear to compromise the sound. There's a balance control, too. The remote is thoughtfully arranged, and far less cluttered than some I've seen lately.

On the back are six inputs (none balanced), two speaker outputs, and a tape loop with two sets of outputs, along with a preamp output for driving a powered subwoofer or a second amplifier. It uses one pair of Sanken bipolar transistors per channel to deliver a claimed 75W into 8 ohms or 115W into 4 ohms, and its two sets of switchable speaker terminals let you run two sets of speakers simultaneously, so long as all the speakers have a nominal impedance of

8 ohms. But don't worry—the 650A's protection circuits will shut the amplifier down if it runs too hot.

Matthew Bramble and his team at Hankey Place crow about their new CAP5 protection circuitry, which "monitors clipping, DC, heat, output stage voltage, and shorts." Call me jaded. CAP5 seems like the latest in a long line of "miracle" circuits. The "intelligent" clipping feature (for unintelligent people) is disengaged by default—probably because it diminishes dynamics and squashes the sound. Turning it on takes some prestidigitation with the front panel and the rear power switch.

I didn't bother. As it was, the 650A ran exceptionally cool driving my Harbeth Compact 7 ES3 speakers.

A very fine headphone output stage is included. The Azur 650A was gutsy enough to drive my AKG K701 and Audio-Technica ATH-AD700 headphones, which respectively have input impedances of 62 and 32 ohms. (Cambridge Audio doesn't recommend 'phones whose impedance drops below 32 ohms.) It's a blessing to listen to headphones with remote control of volume.

The Azur 650A was not a bone-crushing bass-delivery machine, like the NAD C 375BEE integrated amplifier I reviewed in October. The Azur's bass was less tight, and somewhat plummy, without the same sure grip on my Harbeth speakers' midrange/bass drivers. The NAD handled these speakers like a dominatrix—she took off their trousers and spanked them. The NAD sells for \$1299, vs \$777 for the Cambridge.

My colleague Robert Deutsch wrote in the February 2009 issue about sharp-

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eners and levelers—a useful distinction (see www.stereophile.com/asweseeit/are_you_a_sharpener_or_a_leveler). By nature, I'm a leveler; but for this rag, I also have to sharpen, as does Dr. Bob (Deutsch), PhD. *Sharpening* means looking for small differences and then blowing them out of proportion—even at the risk of hearing things that don't matter or don't exist. In the spirit (if not the words) of Gertrude Stein: a difference that's no difference is no difference.

Along with less-than-balls-out bass, I noted a tonal balance that tilted up slightly, in a curiously engaging sort of way. The amp sounded open and airy, but not at all bright. Better this than dark and closed-in! Unlike many manufacturers, Cambridge Audio actually admits to having a house sound. Matthew Bramble: "Like the partnering Azur 650A, this player has an open, detailed presentation. There's just a suggestion of excess brilliance at high frequencies, which becomes a problem only if you partner the player with an already aggressive system."

My Harbeth Compact 7 ES3 speakers aren't known for being aggressive. Nor am I (heh-heh). Besides, I could engage the 650A's Treble control with recordings I know to be bright or brittle—especially jazz and classical "historical recordings" (*ie*, anything pre-stereo).

The 650A sounded relaxed and natural, while its Cambridge Audio predecessors I've heard might have had clarity at the expense of a little brittleness or edginess. This is Smirnoff, not Popov; refined, not raw. What I heard new from Cambridge's Azur 650 amp and CD player was a shimmering quality through the midrange and treble, a lack of astringency I hadn't heard before from Cambridge gear.

There was a sweetness, a silkiness, a delicacy that belied the 650A's low price. True, I didn't get the killer bass that the more expensive NAD delivered, and I thought the overall resolution stopped short of heart-stopping. There was a little less here than first met my ear, and that included harmonic richness, or structure—a point driven home when

Philip O'Hanlon, from distributor On a Higher Note, delivered the Luxman SQ-38u tubed integrated amplifier. The Luxman made voices come to life; the Azur 650A made recordings sound more like artifacts; less true to life.

But the Luxman costs \$6000—nearly eight times as much as the Cambridge. For \$777 or anywhere near it, I've heard nothing better than the Azur 650A. When you factor in its luxurious fit'n'finish, you have a category killer. There's nothing shoddy or shabby or dingy about this amp—it's hard to believe that it's British. Well, it's not: it's made in China.

Cambridge Audio Azur 650C CD player

Decisions, decisions . . .

Should you get the matching Azur 650C CD player (\$777) . . . or buy Cambridge Audio's DacMagic?

If you already have a Cambridge Audio DacMagic, the answer is easy: Keep it; you've already bought it. If you don't own a DacMagic, your options are rather more complicated.

The Azur 650C has two digital reconstruction filters, compared with the DacMagic's three (see www.stereophile.com/digitalprocessors/cambridge_audio_azur_dacmagic_da_converter). Out of the box, the 650C is set for a sharp rather than a slow rolloff of ultrasonic energy, with "strong attenuation of aliasing images above the passband"—that is, over 22.05kHz, half the CD's sample rate. According to chief designer Matthew Bramble, the slow rolloff offers "less attenuation of close-in aliasing images for less ringing in the time domain."

Neither of the Azur 650C's filter settings is the "right" choice, Bramble advises. You set the filter to slow by

holding down the Stop button on the front panel to open the setup menu—a doddle, as the British like to say. Your dealer can do it for you, but this is hard to mess up even for a technophobe like me.

What about the magic bullet: up-sampling? According to Bramble, "the 650C (and the 550C) don't upsample. The normal 16-bit/44.1kHz data is sent to the DACs. Internally, the DACs oversample by 128x, but this is technically different than upsampling."

Okay, if you say so.

The 650C uses two Wolfson Microelectronics WM8740 DACs per channel. So you have two fully balanced outputs per channel, summed at the output stage to cancel noise and digital artifacts. Why no balanced outputs? Well, the matching 650A amplifier has no balanced inputs.

Hand me another nail, Dr. van Helsing: I am happy to report that the 650C does *not* decode SACDs. So far as I know, Cambridge Audio never made an SACD player. Better to put the money elsewhere. At this price point, it would probably be impossible to offer a great player of both CDs and SACDs.

The Azur 650C is a rarity these days: a robustly built CD player that is not a flimsy piece of plastic crap selling for up to \$2500. It features a proprietary transport-and-servo system that looks after focus, tracking, and the laser's output level in real time, as a disc plays.

Matthew Bramble: "Whereas many 'comparable' CD players utilise an inferior CD-DVD-ROM derived drive, the 650C takes full advantage of Cambridge Audio's audio-only CD transport, which is coupled to our new highly sophisticated S3 Custom CD Servo™."

The trouble with outsourcing your transport and controller is that its manufacturer can discontinue it without warning. This has happened often, leaving more than one model of CD player unrepairable when spares have not been kept on hand. Customers have been left in the lurch and makers of CD players have gone bust.

Like the matching Azur 650A amplifier, the Azur 650C is beautifully built, with the same solid look and



Imagine: A robustly built CD player for \$777. A rarity now, says Sam. No frills, no fuss, great sound.

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I found more good stuff in Issue #3 of Quarter Notes than the last five issues of BOTH (print magazines) together. Keep it up. And charge if you have to.

Mike C., Boston, MA

Thanks so much for the newsletter.... I never thought that my system could sound as good as it does. Your book has truly been the best investment in sound I have ever made.... You helped me to realize the potential of my system. Thanks again for the great book and the newsletters!

Brian D., St. Louis, MO

Of course, I've received hundreds of similar letters, including a large quantity from readers outside of the U.S. And, if you're interested,

there are quite a few on the Reader Comments section of the **GBS** website.

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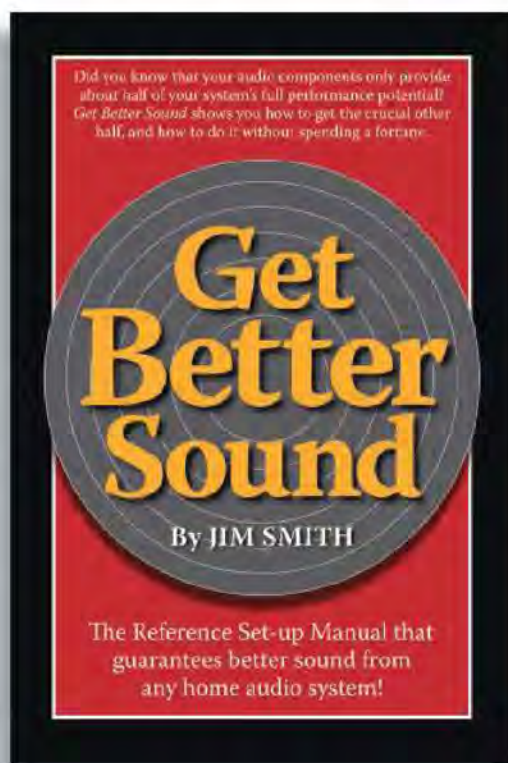
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Best regards,

Jim Smith

PS—The holiday season is coming up soon. If you want to receive **Get Better Sound** as a gift, I'd suggest that you start “hinting” early, as last year it was exceptionally hard to meet the demand, and **GBS** had only been out for a couple of months!

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feel. Its dimensions are 16.9" (430mm) wide by 3.4" (85mm) high by 12.2" (305mm) deep, and the player weighs 10.6 lbs (4.8kg)—precisely the weight of Maksim, our cat, who right now is crawling over my keyboard.

When comparing the sound, I used the Cambridge DacMagic in its Minimum Phase setting *vs* the Azur 650C's slow-rolloff setting. One could go crazy with combinations. Using the same XLO interconnects from the Roger Skoff era (the 1990s) for both products, I was able to switch from the Azur 650C's own DAC to the DacMagic by changing inputs via the remote. Levels were already matched. I used the matching Azur 650A amp, my Harbeths, and my favorite headphones.

Straining to hear differences like fellow sharpener Robert Deutsch, PhD, I felt that the Azur 650C, used as a one-box CD source, was less resolving than when used only as a disc transport for the DacMagic. If you own a DacMagic, keep it. If you have a CD player or transport you love, buy a DacMagic. It's more resolving, more harmonically full than the Azur 650C, but not by much. The sonic signatures were similar; but with the DacMagic there was a touch more *there* there. Plucked strings were pluckier. I noted greater definition, faster transients, more ambience.

But I'm sharpening way too much. I needed to listen through headphones to identify what differences I think I did. Identify. The DacMagic, at \$479, is a terrific bargain, especially if you already own it; the 650C, for \$298 more, is a great deal if you need a robust transport, too.

Summing up the Cambridges

Open, airy, sweet, civilized—that's the sound of the 650C and 650A together. No surprise that the two are very similar in their strengths and weaknesses. I

did think that harmonic textures could be richer, fuller. Voices could be more convincing and immediate, the bottom end tighter. I wouldn't call the sound threadbare, but lush the 650C is not. Nor is the 650A.

Icing on the cake: The 650A and 650C both bear the Energy Star stamp of approval: each is claimed to consume less than 1W in standby.

Do you need to spend more than this—less than \$1500 for the 650 combo, at actual street prices? Dr. Thomas J. Stanley, PhD, might recommend this stuff—if he were as high on hi-fi as he is on booze bottled in plastic.

John Bevier, a longtime friend, works

cash. His passion was building amps. He had few dealers, but even so, more than he could supply. One of those dealers kept the B.E.L. 1001 a secret, almost out of sight. He would take some customers aside: *Listen, hear this. It's what I have at home.*

Another dealer, Frank Huang, formerly of Audio Outlet (now Reference Cinema and Sound), told me, "Dick Brown was one of the reasons I got into this business." Huang never had any B.E.L. amps in stock, either.

Each B.E.L. amp was built by hand and tuned by ear. Brown went for delicacy, resolution, and harmonic accuracy rather than brute force. I wish I

THE DACMAGIC, AT \$479, IS A **TERRIFIC BARGAIN**, ESPECIALLY IF YOU ALREADY OWN IT; THE 650C, FOR \$298 MORE, IS A **GREAT DEAL** IF YOU NEED A ROBUST TRANSPORT, TOO.

for Cambridge Audio's US distributor, Audio Plus Services. He wrote to me in an e-mail: "This is an exciting time to be old audio geezers, isn't it? I've not been this excited since I joined this industry back in 1981."

Goodbye, Richard Brown

Richard Brown passed away on October 10. He was 69, according to sources, and had been ill for some time.

You probably didn't know him. I didn't, either, although I talked with him by phone several times. He was the owner of Brown Electronic Labs, aka B.E.L. (not to be confused with David Belles, of Power Modules, Inc.). He was a great hi-fi designer.

I did know two B.E.L. dealers, and came close to buying the 1001 power amplifier on several occasions—including its final iteration, the Mk.V, in 2001. Brown couldn't stop me from buying one. But if I did, would I kindly not mention it in print? There was no way Brown would or could ramp up production to meet any extra demand and the waiting list already stretched for months.

Details about the reclusive Richard Brown are scant. I believe he worked full-time as an aerospace engineer, and that he was a highly successful one. If my sources are correct, he built his amps in his spare time, and profit was not his motive—he didn't need spare

had bought one. Undoubtedly, though, I would have spilled the beans about it. Best not be tempted.

The stereo version of the B.E.L. 1001 (there was also a monoblock) used two pairs of output transistors per channel to deliver 50W into 8 ohms. No aiming for the magic 100Wpc for marketing reasons, at the expense of sound quality. The amplifier doubled its power into 4 ohms (100W), and doubled it again into 2 ohms (200W).

Though he avoided publicity, Richard Brown was accessible to his customers. He treated them, and his amplifiers, the way a conscientious physician looks after patients. The amps were his children; many of the customers were his friends, if only by phone. He sought out no reviews, though he received a few. If I'm correct, he had no website, never ran an ad, and never exuded a whiff of self-promotion. Nor did he waste money on producing garish hi-fi jewelry—his amps came in plain black cases.

Used B.E.L. amps turn up, but rarely. While Richard Brown is no longer here to service or update them, the 1001 amplifier has an enviable reputation for longevity. According to Frank Huang, the only thing that typically fails is the power switch—after 20 years or so. And it's easily fixed.

The B.E.L. 1001 may have been the best amp I never owned.

CONTACTS

Cambridge Audio Ltd., Gallery Court, Hankey Place, London SE1 4BB, England, UK. Tel: (44) (0)20-7940-2200. Web: www.cambridge-audio.com. US distributor: **Audio Plus Services**, 156 Lawrence Paquette Industrial Drive, Champlain, NY 12919. Tel: (800) 663-9352. Fax: (866) 656-0686. Web: www.audiopluservices.com.

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Michael Fremer

The Rocky Mountain Audio Fest

The plan was to hit the Rocky Mountain Audio Fest, held at the Denver Tech Center Marriott last October, do my two seminars on turntable set-up, look around for whatever new analog scraps might be found, come home, report on them, and get back to covering new gear in this column—stuff is piling up. Unfortunately or fortunately, depending on how you look at it, more new analog products made their debuts at this year's RMAF than at any Consumer Electronics Show I can remember in the last decade or more.

Friday, October 2

After years of showing prototypes, **Abbington Music Research** finally demoed a production unit of their PH-77 hybrid dual-mono phono preamplifier (\$11,000). A sample was delivered to me following RMAF, and I'm listening to it as I write. The PH-77 has three single-ended inputs, plus a fourth, direct input that bypasses many of its switchable functions. Even in direct mode, loading, gain, and multiple phono EQ curves are all adjustable via buttons on either the front panel or the remote control. The build quality is stellar, as is everything about the operating system. The moving-magnet section is all-tube, with a solid-state moving-coil input that boosts gain in steps up to 72dB. Also included is a 24-bit/96kHz A/D converter and USB port that permits easy transfer of vinyl to digital, and the use of the Feickert setup software without an external soundcard.

Axiss Distribution's Art Manzano introduced **Air Tight's** ATE 2005 phono preamplifier (\$6000), which features one MC input, two MM inputs, and built-in cartridge demagnetization. The MC input is FET-based; the second MM input is designed for use with Air

Tight's ATA H2A step-up transformer (\$3500). Apparently, in Japan transformers are the more popular way to boost low-output MC cartridges. Manzano also showed me **Shelter's** new 901 Mk.2 cartridge (\$2100), which features an all-new motor in a familiar body.

housing, an automatic-charge battery power supply, one armboard, and a beautifully machined armboard insert that permits precise, easy adjustment of vertical tracking angle (VTA) for any tonearm installed—and the Black Night can accommodate up to four tonearms simultaneously.

The platter of this massive design weighs 44 lbs, the chassis an additional 66 lbs. The Black Night was introduced last May and made its American show debut in Denver; TW-Acoustic claims it's already sold 21 of them. While the new, Mickey Mouse-shaped Raven .5 turntable is at the low end of the TW-Acoustic line at \$4000, its build quality is anything but Mickey Mouse. Introduced September 15, its initial production run of 50 was sold out within a week.

High Water now also imports the **Pole Star** PS-UNV1 (\$2800), a Japanese-made tonearm that's packaged with the Raven .5 and a Dynavector 20XL or H cartridge for a total of \$6500. Rounding out the turntable line is the Raven One turntable (\$6500). TW-Acoustic also introduced the tubed Raven Phono, a phono preamp with three inputs (\$9000).

At Jeff Catalano's behest, Bob Graham, of **Graham**

Engineering, produced a 12" titanium armtube for the Graham Phantom II tonearm. It looked long. I remain unconvinced by the supposed advantage of a longer arm's slightly lower tracking error in the face of its higher moment of inertia, lower rigidity, and potential for greater tracker error should the setup be less than perfect, but I suspect Graham will now offer it for those who insist on it.

The Lotus Group now imports, from China, the **Hanss Acoustics** line of turntables. Lotus's Joe Cohen demoed



Top: Mikey's eyes sparkle as he stops for a picture with Jim Fosgate.
Bottom: The revised TW-Acoustic Raven AC.

High Water Sound's Jeff Catalano demonstrated the expanded line of turntables from **TW-Acoustic**, in Germany, with designer Thomas Woschnick on hand. They were showing the Raven AC, which I reviewed in December 2006, and which is now available with three motors, a special power supply, and armboard inserts that make arm switching easy (\$18,500, up from \$14,500). TW-Acoustic also showed their new top-of-the-line turntable, the Black Night (\$40,000), with three motors built into a single

the T-60 (\$6200), which features two motors, three O-rings, a 42-lb, magnetically levitated platter, magnetically levitated feet, and appears to have been inspired by earlier 'tables made by Clearaudio. Hanss also introduced the PA-60, a new two-chassis transformer/tube MC/MM phono preamplifier (\$5000).

Local dealer **Gold Sound** debuted **Parasound's** Halo JC 3 MC/MM phono preamp, which boasts balanced and single-ended outputs, as well as the company's new budget Z phono preamp with USB output (\$400). Both Parasound's Richard Schramm and legendary designer John Curl were on hand. Also on display in the Gold Sound room was **VPI's** Classic turntable, introduced on publication of my February 2009 review of VPI's more-than-twice-as-expensive Super Scout Master Rim Drive turntable. "This could be the best-sounding turntable I've ever made," VPI's Harry Weisfeld told me. *Now* he tells me. It's certainly his most elegant looking.

The Gold Sound room was also where **Ortofon** launched Cadenza, a

new line of MC cartridges designed to be more "ambitious" than the popular Kontrapunkt and Jubilee lines. The Cadenzas include a Mono as well as Red, Blue, Bronze, and Black models. The top of the line, the Cadenza Black (\$2300), sports a nude Shibata stylus attached to a boron cantilever.

By the time I'd absorbed all this analog news, it was time to hold my first "Turntable Setup" seminar, at 2pm. I set up a **Graham** Phantom II tonearm on a **Montegiro** Lusso turntable using Dr. Christian Feickert's new, easy-to-use, all-metal alignment tool. I'd never used the latter before, so, in front of the audience, Feickert taught me how. I think it's healthy to show people what you *don't* know as well as what you do.

Feickert also showed the crowd the workings and many features of his Ad-just+ azimuth-adjustment software. A



VPI's latest Classic.

recent upgrade to the Pro version of the software uses a 5.5Hz filter to cancel out the wow inherent in virtually every test LP—and every other sort of LP—due to eccentric grooves, for more accurate measurements of speed and jitter.

After the seminar, in the room of **Avatar Acoustics** (who also import the Abbingdon Music Research PH-77), I checked out **Dr. Feickert Analogue's** handsome new Woodpecker turntable (\$4995, and no double entendres from me), fitted with a Feickert DFA 10.5

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Benchmark DAC1-Pre

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PRODUCT OF THE YEAR

Peachtree NOVA Integrated Tube Amp/DAC



Sennheiser HD-800

tonearm (\$1250, or \$1000 with Woodpecker). Like the VPI Classic's, the Woodpecker's motor is in its plinth, in an attempt to make high-performance analog playback both simple and elegant looking, as vinyl returns to the mainstream.

Soundsmith's Peter Ledermann introduced numerous new products at RMAF. I could spend the first quarter of 2010 and probably longer just reviewing his new stuff, beginning with the Strain Gauge Phono System SG-200 (\$5500). One of the problems some audiophiles had with the bigger, more expensive SG-400 was the necessity of using a dedicated preamp. The SG-200 is the same circuitry in an out-board box that plugs into any line-level input in an existing preamplifier. The cartridge's cantilever flexes two tiny Strain Gauge beams of ultra-low-mass silicon to produce an electrical analog of the groove walls. There are no magnets or coils, which results in an ultra-fast, high-resolution signal. No doubt the sound is *different* from that produced by a traditional cartridge, and it has its fans and detractors, like everything else in

audio. I hope to review the SG-200 soon.

Soundsmith also introduced the MMP2 and MCP2 phono pre-amps (\$699.95 each). They're handmade, enclosed in high-quality aluminum cases, and powered by external DC supplies. The MCP2 features continuously variable loading from 10 ohms to 5k ohms and a fully shielded step-up transformer.

Also new from Soundsmith is their top-of-the-line Sussurro phono cartridge. The \$4500 price is high and the 0.3mV output is low, requiring an MC preamp. Inspired by Frank Schröder, Ledermann has found a way to decrease even more the moving mass of his moving-iron system. Lower mass equals lower inertia equals faster response time and less energy stored in the moving system. Azimuth and stylus rake angle (SRA) are adjustable at the wooden cartridge body, which is



The Sussurro is one of many new products from Soundsmith's Peter Ledermann.

hinged on the mounting bracket. The channel separation at 1kHz is claimed to be >34dB. All of the measurements claimed for this low-compliance design are outstanding.

Speaking of Frank Schröder, **Artemis Labs** introduced a new "not made by hand" 9.4" tonearm (ca \$4000) featuring a kingwood armtube and ceramic bearing. The arms Schröder makes by hand are always in short supply so a review sample is not likely ever to be forthcoming.

Before I knew it, Friday was over,



Product of the Year Award Winners

At Music Direct, we have been reading *Stereophile* for longer than we can remember. The reviewers inside this publication have been informing us on the best products in the world of high fidelity. At the end of every year, the *Stereophile* Product of the Year awards issue gives us the opportunity to share our enthusiasm for the award-winning products we carry. We would like you to know that we would be happy to discuss these products with you anytime.



Luxman L-505u Integrated Amp



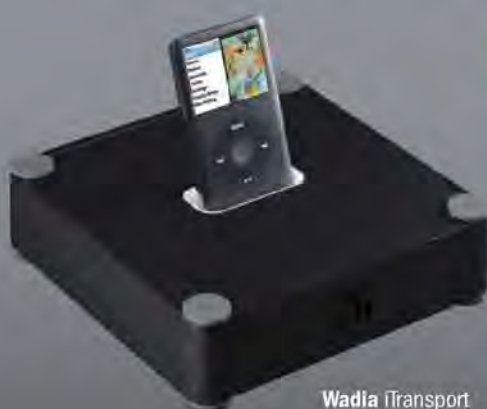
Musical Fidelity V-DAC



Shure SE310



Benz Micro Ace



Wadia iTransport



PS Audio
Power Plant Premier



A Revolution.
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ESSENCE

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—Jeff Dorgay **TONEAudio** Issue 22

"If your hairs don't stand up, it's all for nothing. Transmission of the encoded energy is key and deliverance rides on pure timing and heft. The Essence nails both. While more 'modern' leaner designs focus on greater apparent detail retrieval, Zu shines a light on rhythm, coherence and mass." —Srajan Ebaen **6moons.com**

"The Zu Essence is not a hair-shirt product, in which regard alone it has surpassed at least half the high-efficiency loudspeakers in the domestic marketplace. Inasmuch as it's among the more affordable choices—exponentially, in some cases—it has surpassed many of the rest. The Essence is something of a milestone. With its very good bass extension, superb musicality, lack of egregious timbral colorations, and impressive spatial performance, the Zu Essence qualifies as the first loudspeaker I've heard that combines genuinely high efficiency with a level of audiophile performance for which no excuse needs to be made... I'm really impressed with the Essence—and, yes, I could happily live with it myself: It's that good." —Art Dudley **Stereophile** October 2009

Zu Returns to Direct Sales | **New Lower Prices Effective Now**

Zu Audio's true high-end loudspeakers aimed at music lovers, are sold directly to U.S. customers, via ZuAudio.com or 800-516-8925. The radically changed economy of the past 12 months has reset music lovers' perception of value, so we've revamped our production methods and products to give you more for less: Our new critically acclaimed Essence loudspeaker, formerly starting at \$5,000 per pair in retail stores now starts at \$3,495 per pair—its new everyday price direct from Zu!

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I'd visited only a handful of rooms, and heard very little as I attempted to discover all of the new analog gear at the show.

Saturday, October 3

My Saturday-morning seminar was as crowded as Friday's, if not more so, and though I'd stayed out late Friday night, carousing and imbibing, the session went much better, I felt.

Then it was back to the halls to prow for more new analog. I found some in the **Kubotek/Haniwa** room. Here's a company I've never heard of whose full line of products includes some unusual-looking loudspeakers, plus a line of electronics that includes the Haniwa HEQA01 MM/MC phono preamp (\$5000) with built-in cartridge degausser. The HEQA01 is claimed to produce less than $\pm 1^\circ$ phase shift from 20Hz to 20kHz, as well as very accurate RIAA equalization. The gain is said to be 62dB.

In partnership with **My Sonic Labs**, Haniwa has also developed the HCTR01 phono cartridge (\$5000), a low-output MC with an internal impedance of only 0.8 ohm and an output exceeding 0.3mV. Haniwa claims it tracks at 0.6–1.0gm, which is pretty much unprecedented for a low-output MC, in my experience.

Later on Saturday I met the legendary (I don't use the word lightly) **Jim Fosgate**, who showed me the handsome finished edition of his all-tube (including rectification) Signature MM/MC phono preamp (\$2500, distributed by **Musical Surroundings**). Fosgate is best known for his work in car stereo for Rockford-Fosgate, along with his surround-sound innovations, including Dolby Pro-Logic II. But he's also big into tubes and vinyl, and with vinyl now on the rise, he found himself feeling—much to his amazement—that a new phono preamplifier might be a good idea. He was right.

Some time after the January CES, I made arrangements with Hans-Ole Vitus to review **Vitus Audio's** new



From top: Fosgate's all-tube Signature MM/MC phono preamp; Audio Research's new multi-EQ-curve Reference 2 phono preamp; Brinkmann's Bardo magnetic-drive turntable; Air Tight's ATE 2005 phono preamp.

52-lb SP-101 phono stage. My digital recording device malfunctioned and I lost the price, but as I remember it, it was breathtakingly high. After spotting

Audio Research's new multi-EQ-curve Reference 2 phono preamp, I attempted to do likewise with Dave Gordon, but got a less committed response. I'll keep working on him.

Ray Samuels of **Ray Samuels Audio** showed me a chassisless version of an Emmeline MM/MC phono preamp with a power supply of rechargeable batteries (soon to be released for ca \$700). Samuels claims it will sound better than its big sisters, which already sound plenty good.

Even **Esoteric**, now best known for its SACD players, showed a phono preamp at RMAF. The dual-input E-03's (\$5500) MC resistive and MM capacitive loadings are independently adjustable via the front panel; it also demagnetizes MC cartridges.

Brinkmann's new importer is **On a Higher Note**, and the latter's Philip O'Hanlon happily spun LPs on Brinkmann's Bardo magnetic-drive turntable. Unlike the wooden-plinthed Oasis, the Bardo reprises the look of the more expensive LaGrange and Balance models. The Bardo couples the Oasis's magnetic motor drive and 22-lb platter to the Balance's spindle and bearing, though the more technical aspects of the drive system are best left to a full review. Prices begin at around \$8000, but the fully accessorized rig shown at RMAF goes for around \$10,000.

I heard about but didn't see **ZYX's** flashy-looking Omega Lapis Lazuli MC cartridge (\$7500), though I recently received a review sample of ZYX's cryogenically frozen R-1000 Sigma 2X cartridge (\$14,000). That will be fun to install!

AA Audio Imports, which distributes **Ypsilon** in the US, now imports the **Bergmann Audio** Sleipner turntable (\$18,000) I first spotted in Norway in fall 2008. This typically clean, understated

Scandinavian design features an acrylic platter and a tangentially tracking arm with an air bearing (of the holes that blow air variety).

Enter Christine

Larry Denham missed the Friday of RMAF. The Canadian manufacturer was delayed at the border by customs, perhaps because he'd brought with him an intricately machined manifold part for an F-16 fighter jet—a definite border-closer!

In his day job, Denham owns a machine shop that produces complex aeronautical parts for Boeing, and other US and Canadian military contractors. In his "spare" time he produces audio accessories for his other company, **TTWeights Audio**. In a very short time, he's produced an almost mind-numbing array of mats, turntable weights, outer rings, exquisitely machined adjustable cones, and other goodies. In fact, Denham told me at RMAF, his analog business has overtaken his military contracting business. When I suggested that he make a chunky, easy-to-grip replacement for VPI's piddling plastic screw-on record clamp, which all too easily slips from the fingers, he made a really good one. He's since sold *hundreds*, he told me.

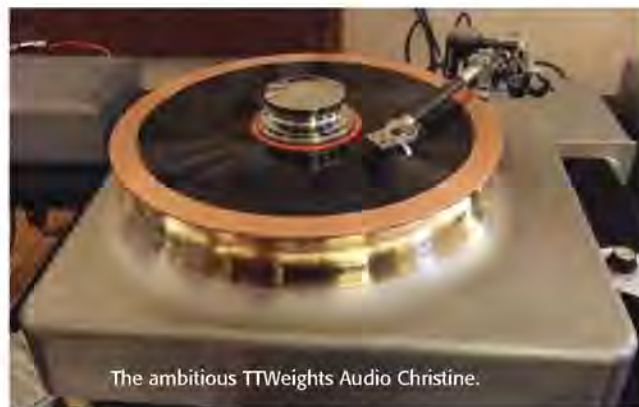
Denham recently introduced the Christine, an ambitious-looking, mass-loaded, 180-lb turntable first seen on Audiogon.com (!), and which made its physical debut at RMAF. The massive, CNC-machined plinth of "billet 6061-T6511" (an alloy of magnesium, silicone, and aluminum) has brass damping pockets, carbon-fiber decoupling, copper isolation plates on the bottom, and stainless-steel bolts. It houses the DC Super Torque Servo Drive System, which—via a 9", 8-lb subplatter/rim-drive system with a digital regenerative amplifier and DC servo speed control—

spins the 71-lb outer platter of naval brass and copper with integral carbon-fiber mat. The 1"-diameter, non-contact, Micro Grain bearing of solid polished carbide (0.00005" maximum out-of-roundness and taper not exceeding 0.00005") rides in a permanent oil bath. According to Denham, the bearing lets the platter, which weighs a total of 81 lbs, spin freely at the nudge of a pinky.

Interestingly, not all turntable designers agree with the concept of zero bearing friction. For instance, both **Dr. Christian Feickert** and **Spiral Groove's** Allen Perkins prefer a known degree of drag for what they say is better speed control, but that's with belt drive. Belt and rim drive, too, have their partisans, but in my experience, execution is what counts, and Larry Denham appears to have executed his vision with the sort of precision you expect from a military contractor.

Of course, the TTWeights system includes a two-piece outer ring for the platter of nickel-plated copper and a 1.8-lb center weight of tuned stainless steel. The feet, which are also available as separate accessories—and which I plan to use to support my Wilson Audio Specialties MAXX 3 speakers—are precision-machined from four individual components: a stainless-steel spike, 6061 brass base and locking collar, and an isolating inner matching disc. Each foot can be micro-leveled and then hand-locked.

The TTWeights tonearm mounting



The ambitious TTWeights Audio Christine.

system features a quick-release brass housing, decoupled from the plinth with carbon fiber, that locks securely in a plinth pocket via a single bolt that locks into the carbon fiber and is said to produce no mechanical coupling with the housing or the plinth. Denham claims that tonearms can be removed and replaced within a minute, to within a repeatable accuracy of 0.002–0.004".

In short, the Christine is a *serious* assault on the state of the art of turntable design. Cost: \$60,000. I hope to review it in 2010. That I or anyone else would be reviewing any new turntable in 2010 is something few of us could have imagined back in the dark days of the early 1990s, when the vinyl light was nearly extinguished.

Sunday, October 4

I had to fly home the third and final day of the Show, but I must say that the 2009 Rocky Mountain Audio Fest¹ was a great show, at least in terms of manufacturer participation, and a fitting tribute to its late founder, Al Stiefel. His wife, Marjorie, produced this year's edition as a tribute, and I hope she'll continue to make the Show happen in the coming years. There was also a nice, well-attended, after-show get-together and remembrance for *Stereophile* founder J. Gordon Holt, organized by VTL's Bea Manley.

Unlike the somewhat hostile, competitive vibe at CES, the scene at RMAF was positively ecumenical. I even bought my old boss Harry Pearson a chocolate martini. When, soon thereafter, he triumphantly told me that he would be reviewing the **Miyajima** Shilabe phono cartridge, and I told him that *my* review had been published in the September issue of *Stereophile*, he almost choked on it. But it's the thought that counts.

¹ *Stereophile's* live coverage of the 2009 Rocky Mountain Audio Fest can be found at <http://blog.stereophile.com/rmaf2009>.
—Ed.

IN HEAVY ROTATION

- | | |
|--|--|
| 1) Dieter Ilg, <i>Bass, Sommelier du Son</i> 180gm LP | 7) Gerry Mulligan & Ben Webster, <i>Gerry Mulligan Meets Ben Webster</i> , Verve/ORG 180gm LPs (2) |
| 2) Rokia Traoré, <i>Tchamantché</i> , Indigo 180gm LPs (2) | 8) Milt Jackson Sextet, <i>Invitation</i> , Riverside/Mobile Fidelity Sound Lab 180gm LP |
| 3) Elvis Presley, <i>For LP Fans Only</i> , RCA/Speakers Corner 180gm mono LP | 9) Humble Pie, <i>Smokin'</i> , A&M/Analogue Productions 180gm LP |
| 4) Original Soundtrack, <i>The Hot Spot</i> , Antilles/Analogue Productions 180gm, 45rpm LPs (2) | 10) Bob Dylan, <i>Self Portrait</i> , Columbia/Sundazed 150gm LPs (2) |
| 5) Mary Black, <i>Full Tide</i> , PurePleasure 180gm LP | |
| 6) Kenny Dorham, <i>'Round About Midnight at the Cafe Bohemia</i> , Blue Note/Music Matters 180gm, 45 rpm mono LPs (2) | |

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Or go a step further still and hear it for yourself! Nordost will be demonstrating the benefits of Quantum technology in direct comparison to competing products at the Rocky Mountain Audio Fest (October 2nd-4th) or, hear the new Qbase alongside the Qx2 and Qx4 at dealers now. Take a listen to Quantum and you'll quickly see that sometimes simple makes sense.



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Art Dudley

Household Miracles (or The Scantly Dressed Eye)

We murder to dissect.

—William Wordsworth

Tice Clock: Are there two more loaded words in all of hi-fi?

For those too young to know: In 1990, an audio manufacturer named George Tice brought to market a \$350 accessory that could improve

the sound of any domestic music system, simply by being connected to an AC outlet in the same room—or so he claimed. But the claim was incredible, because the product appeared to be nothing more than a rebadged RadioShack digital alarm clock to which an invisible “proprietary treatment” had been applied. *Stereophile* borrowed and tested various samples of the Tice Clock, and although one writer said he *might* have heard a very slight effect, editor John Atkinson summed up our coverage by stating that not only did the Clock fail to perform as advertised, but George Tice’s technical explanations for it had no basis in scientific fact. Thomas J. Norton, *Stereophile*’s technical editor at the time, added that the Tice Clock was identical, inside and out, to a \$20 RadioShack alarm clock—to the naked eye.

An amusing side note: The Tice Clock was also one of the grains of sand around which professional skeptic James Randi oozed the pearl of his famously clever exposé of our hobby. As Randi stated on his website, “The Tate Clock . . . is only one of the items [*Stereophile*] tested and approved.” John Atkinson and I both noted, publicly, that not only did Randi get the product’s name wrong—an indication that this debunker of mind-readers thinks he can glean information from the printed page without actually having

to read—but he misstated our review conclusions by a statistically significant 180°. Randi responded with as much world-weary, *can-you-believe-these-fruitcakes* condescension as he could muster, decrying our pettiness for even mentioning his “typo”—and, of course, ignoring completely the matter of his false report of our review conclusions. As I said: clever.¹

ing on it at all.

So it goes, I guess, for any of us who would report on the products of Quantum Resonant Technology, of Santa Monica, California, which I mentioned in last month’s “Listening” column. The company’s Qx4 audio accessory (\$2399) is remarkable for two things: Its use in a good-quality system has a consistently audible effect—music recordings sound notably and

consistently clearer, bigger, more open, and more (naturally) detailed—and QRT’s explanation of the technological basis of that effect is unsatisfying. The former puts the Qx4 in an altogether higher, nobler plane than the Tice Clock, but the latter still bugs me.

In a nutshell, QRT describes the Qx4 as a “scalar field generator” that uses “technology derived from quantum mechanics” to provide “ordering and stabilization of magnetic field effects.” The company also says the Qx4 isn’t a filter of any sort, and thus does not impede current delivery in the slightest. The latter is certainly true: The Qx4 places nothing but electrical contacts and heavy-

gauge wires in line with the household current. But if the task that it doesn’t perform is clear, the one that it does perform remains cloaked in mystery. I won’t pretend I understand quantum physics better than anyone else whose post-collegiate science education is limited to reading *National Geographic* at the dentist’s office, but it seems to me that anyone who can design and manufacture a useful, practical, household generator of “scalar fields” would have been kidnapped by the CIA by now and put to work building superweapons, à la Enrico Fermi, Wernher von Braun, and Tony Stark. That a marginal industry such as ours can attract so many people who have farted,



A Qx4 in its natural habitat.

Field day

Back to the plot: Whenever alternative science is evoked in an attempt to explain the technological workings of an audio component or tweak—more often than not it’s the latter, of course—we of the press would do well to remember *l’Affaire Tice*. And here’s why: Even though *Stereophile* reported, truthfully, that the Tice Clock was inadequate to every task except reporting the time of day, there remain those who believe we committed a journalistic sin by report-

¹ I’m being unfair: James Randi did in fact put me in my place, with a witheringly funny illustration of a 1960s-era cartoon character named Dudley Do-Right. I have hesitated to even *think* of the great man since then, in apprehension of the even more clever taunts that would surely ensue.

successfully, at the laws of physics never ceases to amaze me.

The skepticism with which I regard Quantum RT's official explanation² also comes from having looked inside one of their Qx4s. Apart from the expected power-supply components, the Qx4's single circuit board contained four discrete transistors, one voltage regulator, four very small capacitors, six resistors, one crystal, four coils, and an 18-pin chip of indeterminate function. (That chip and most of the other parts were obscured by a coating of something hard, dark, and opaque.) Not that this means anything, but I have owned and repaired wah-wah pedals of greater apparent complexity.

Having said all that: The Quantum Qx4 *works*. Not only does it provide one of the most clearly audible performance differences I've heard from a non-cable accessory, its effect has been documented in a series of laboratory differential tests, conducted by Acuity Products of East Sussex, England (www.acuityproducts.co.uk). I don't think it's a consumer magazine's place to publish a manufacturer's test graphics within the course of a report any more than it's our place to copy a product description, word for word, from a promotional brochure. But you can see Acuity's results for yourself

² "Scalar Field" sounds scientific, but all it means is that any particular property is not associated with a specific direction. Temperature, for example, is a scalar field whereas magnetic and electric fields are not, because they are directional. You can read my thoughts on the misappropriation of scientific terms at www.stereophile.com/asweseeit/787. —John Atkinson

CONTACTS

Ayre Acoustics, Inc., 2300-B Central Avenue, Boulder, CO 80301. Tel: (303) 442-7300. Fax: (303) 442-7301. Web: www.ayre.com.

Nordost Corporation, 200 Homer Avenue, Ashland, MA 01721. Tel: (800) 836-27501, (508) 881-1116. Fax: (508) 881-6444. Web: www.nordost.com.

Quantum Resonant Technology, 1507 Seventh Street #270, Santa Monica, CA 90401. Web: www.quantumqtr.com.

Transparent Audio, Industrial Park Road, Saco, ME 04072. Tel: (207) 284-1100. Fax: (207) 284-1101. Web: www.transparentcable.com.

on the Internet. And, yes, they appear quite remarkable.

I have on hand four samples of the Qx4, the most effective being the two that are dedicated to my pair of Audio Note AN-E speakers. (The others, when I use them at all, are adjacent to my preamp and to the AC outlet strip that powers my system.) According to Roy Gregory of Nordost Corp.—Nordost distributes Quantum products in the US—Qx4s positioned directly above or below a conventional loudspeaker control the stray electromagnetic fields given off by, and perhaps reflected back at, the *motor* of each dynamic driver. In light of that explanation, I couldn't help thinking of the Qx4 as an active version of the altogether passive VPI dB-5, aka the VPI Brick.

SCARCELY A WEEK HAS GONE BY WHEN I'VE FAILED TO **AMUSE MYSELF** OR OTHERS BY SWITCHING THOSE TWO QX4S ON AND OFF AND **LISTENING FOR THE DIFFERENCE**.

Scarcely a week has gone by when I've failed to amuse myself or others by switching those two Qx4s on and off and listening for the difference. This morning, in fact, I invited my wife to play that game. I plugged the AC cords of the two speaker-mounted Qx4s into the same switchable, heavy-duty outlet strip, then sat on the floor between the speakers, the outlet strip in my lap and my back toward the main listening seat. I played one of Janet's current fave albums—Leonard Cohen's *Live in London* (CD, Sony), an AIFF copy of which I've ripped to my iMac—and asked her to let me know whenever it seemed that I might have done something to change the sound overall, and to try to describe the change in her own words, as well as to tell me whether she thought it was a change for the better or for the worse.

While listening to the first four songs on the album, I worked the switch a dozen times. My wife's responses all came within three or four seconds of my moving the switch, and only twice did she fail to notice a change. She gave no false positives, which is to say she never declared that the sound had been changed when in fact the switch had not been thrown. And with 100% consistency, Janet preferred the sound with the Qx4 switched on. Asked to

describe the sound *without* the Qx4, she spoke a few simple words—with her hands cupped around her mouth.

I literally thank God every day that I married the right woman.

For every coelacanth there are ten Loch Ness monsters

I still own a VPI brick, and I still find the occasional amplifier on which it has a positive if small effect. I still own some Ayre Myrtle Blocks, and I still use them from time to time, to isolate various components from their hatefully resonant surroundings. I still own some Shun Mook Mpingo discs, which I trot out once a year for the fun of it. Sometimes they appear to alter the sound in my room, but most of the time I think their effect is psychological—which is

not *quite* the same as saying "They do nothing."

I no longer use Original Cable Jackets in my system. I no longer use Tweak brand contact enhancer. I no longer color the edges of my CDs. I no longer demagnetize phono cartridges—or anything else, for that matter. A long time ago I had a packet of Peter Belt foil stickers, which came for free in some English magazine, but they got lost or mixed up with the trash or something before I ever had a chance to try them.

I never bought Shakti Stones. I never bought Marigo dots. I never bought cable risers. I have virtually always rejected the idea of placing pointy metal cones under audio components, partly out of disgust with some of the people who sell them (*They couple! They decouple! They do whatever you want to think they do!*), and partly because common sense tells me that big, heavy things shouldn't be made to teeter precariously above their surroundings—and that any perceived sonic difference imparted by such accessories may actually be a by-product of the listener's subconscious anxiety, as the sensible part of his brain tries to convince the delusional part of his brain that something very bad is about to happen.

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Anyway, the point is this: For every Quantum Qx4 there are at least ten Tice Clocks. And even though I'm not the kind of guy who enjoys speaking on the phone for more than a few minutes at a time, I'm often tempted to call all the audio reviewers whose numbers I can get hold of and ask whether they still use all the stupid accessories they've recommended throughout the years. You can guess their answers as well as I can.

Where does that leave the Quantum Qx4? More to the point: What kind of value does this product represent?

The most common reply—the most *reasonable* reply, some might say—would be to apply an appropriately weighted scale of value, taking into account both price and perceived improvement. Thus, if one can spend \$5000 on a loudspeaker upgrade that nets the owner an extra half-octave of deep-bass extension, a \$5000 accessory that nets only a small increase in clarity must be seen as a poor value. From that point, one might even develop a mental construct of precisely *how* much more musical enjoyment one should expect for, say, \$500. (Those of us who insist on imagining the number of records one could buy for that or any amount are, of course, banned from playing this game.)

Others might take the opposite approach: *Money is the least of my concerns, while music is the greatest—and any product that enhances my enjoyment is worth the expense.* Please, Mom and Dad: It isn't too late to correct that silly mixup at the maternity ward.

Then we have the middle ground: *Differences between amplifiers aren't always as immediately noticeable as those between loudspeakers—but because this is my hobby, and because it gives me a great deal of pleasure, I'm willing to pay almost as much for the former as for the latter.* Not only is there nothing wrong with this point of view, there's an awful lot right with it—in addition to which, one should bear in mind those household miracles in which distinctions that at first seem subtle gain disproportionate significance in the fullness of time.

According to Wikipedia, the median household income in the village where I live is \$35,375, and 13.3% of the population live below the poverty line, including 18.5% of all residents under the age of 18, which is sad as hell. When someone gets sick around here—really, seriously, life-threateningly sick, I mean—the common practice is to have



The Transparent Audio Performance USB cable.

a spaghetti supper at the firehouse to raise money to help pay the bills. The average take is a few hundred dollars. (Ironically—*pathetically*—the uninsured people at the center of these events are the ones who oppose a national health-care system, usually because some fat piece of shit with an eight-figure income has convinced them that such a thing would amount to socialism. Both the shortest verse in the Bible and the famous John Stuart Mill quote about the relationship between intelligence and political orientation come to mind. Here's a point I've made at least twice before in this space, but it bears repeating: If you can write a check for a four-figure accessory of less than extraordinary sonic value, you can write a two- or three-figure check that will have an immense, immediate effect on people's lives—and will, in the process, improve your enjoyment of your hi-fi beyond measure.³

Nordost is a company of integrity—as responsible for some very real advances in audio-cable design as they are for continuing to offer products of enduringly high value. (In this profession, whose members are often allowed to keep and to use the most expensive product samples for as long as we wish, I've bought *at retail* a few very good cables over the years, including Nordost's cost-effective Flatline Gold.) If you have an excellent system and the means to maximize its performance, you can buy two or more Quantum Qx4s, safe in the knowledge that the company you're dealing with is unlikely to screw,

abandon, or laugh at you.

Two-figure tweak: Transparent Audio Performance USB cable

Last week was the last full week of summer. Because of that, and because the screen door between our living room and our deck needs mending, our home is plagued with a few late-season houseflies, the kind that bash repeatedly into one's head and won't be shooed. Yesterday, while writing at my desk, I became so perturbed that I prayed: *Dear God, please help me kill this fly.* That was an unreasonable request, of course, and I could almost hear Him speak into the silence: *How sinful that a creature who has lived for 55 years would take life from one whose age is measured in weeks.*

I asked forgiveness and amended my prayer to a different request: *May I instead have a better-sounding digital source, please?* That seemed more reasonable.

Literally a day later, the UPS man left a carton on my porch: Ayre's USB-input QB-9 digital processor, which my friend Wes Phillips wrote about in the October 2009 issue. It was here to spend a few weeks in my system.

The QB-9, for which Ayre has licensed the Wavestream USB controller software I wrote about a few months ago, in my review of the Wavelength Cosecant v3 DAC, will be the subject of a Follow-Up in a future issue of *Stereophile*. But I couldn't wait that long to say how impressive it is—my love for my slow-to-load Sony SACD/CD player is now at an all-time low, leading to yet another acceleration in CD-ripping—and to mention that here, at last, is a computer-based digital music component of such musicality and high resolution that sonic differences among

³ Do please note that my own hypocrisy, sloth, and greed are also among the targets of these semiannual rants. Sadly, this is what it often takes to get my check-writing juices flowing.

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various different USB cables are apparent, if enduringly minute.

At the behest of Ayre's Steve Silberman, the folks at Transparent Audio sent me a sample of their new Performance USB: a heftier and apparently more durable USB cable than any other I've seen. As Brad O'Toole of Transparent explained, his company has sidestepped current and previous computer-spec standards established by the industry's USB Implementer's Forum, for the simple reason that their audio-specific cable so far exceeds them, with heavier-gauge conductors, more robust connectors, and higher-quality dielectrics and shielding.

Performance USB cables can also be made a good deal longer than the norm: runs of up to 50' are possible, according

A 1M TRANSPARENT PERFORMANCE USB CABLE SELLS FOR JUST \$90.

to the Transparent price sheet (though Transparent only guarantees performance up to 30'). That same document contains even better news: A 1m Performance USB cable sells for just \$90. The same God who knows how sorry I am for damning that fly knows how much I love two-figure tweaks.

I spent a quiet afternoon comparing the 5m Belkin cable I normally use, for which I paid less than \$50, with a 5m Transparent Performance USB, which sells for \$190. Though the distinction was one that any sane person would consider vanishingly slight, I concluded that there was indeed less noise—and "blacker" silence, where appropriate—with the more expensive cable.

Of at least equal importance to me, seeing as how my computer is on one side of the room and my audio-equipment rack is on the other, is the fact that Transparent's USB cable seems significantly more durable, in cable and connectors alike. For once, I'm in total agreement with Ross Walker's delightfully caustic observation—paraphrased somewhat for this application—that the most important quality of any audio cable is that it absolutely *must* be long enough to reach from one product to another. Given that my checkbook was already open before me, I bought the Transparent Performance USB. ■



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of the way, with rich online tutorials, commercial grade product, and personal service that is first rate. In a hobby filled with snake oil and sometimes utter nonsense, it's nice to see some really good science working the way it's supposed to. —Tom Schmidt

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Reviews

"...the soundstage so huge I could have walked into it and wandered around for an hour or so."

Wes Phillips, Stereophile March 2009

"The transient response of the Anats, seemed instantaneous, but the flesh in that attack gave music both the sense of immediacy and the rich harmonic texture heard from the real thing."

Adam Goldfine, Positive-Feedback Issue 45

A good phase-response is necessary in order to accurately portray the soundstage, preserve dynamic realism, and convey the music's emotional impact.

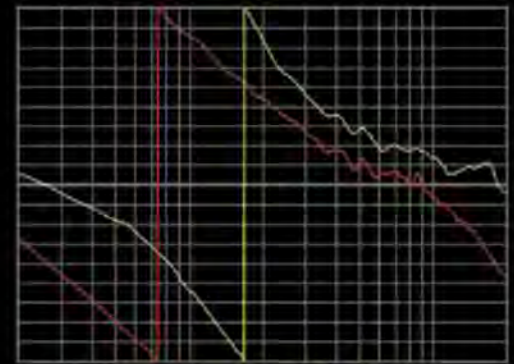
Traditionally, designers have used 1st-order crossover circuitry in order to optimize phase-response, as in theory it allows for zero absolute phase.

However, reality and theory are not the same. In reality, when taking into account the drivers and cabinet, no design offers zero absolute phase. Furthermore, when dealing with real (i.e. non-ideal) designs, the wide overlap of a 1st-order crossover forces drivers to operate outside their optimal band, where performance is highly compromised.

YG Acoustics takes a different approach: rather than traditional crossovers, it employs proprietary circuitry, designed using software developed entirely in-house. The resulting absolute phase matches that of the finest 1st-order designs, but with the added advantage that drivers only operate within their optimal band. Most importantly – relative phase is near-zero, i.e. all drivers radiate as one integral unit¹. Only YG Acoustics offers this unique technology, which is part of what makes Anat Reference II the best on Earth. ►

Absolute Phase

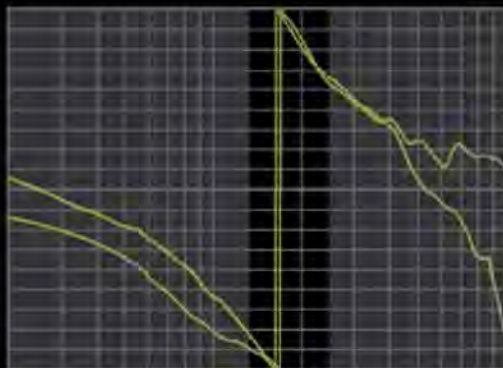
Here are absolute phase measurements of the YG Acoustics Anat Reference II, and of a leading competitor with 1st-order crossovers². As can clearly be seen, neither speaker offers zero absolute phase. Instead, each goes through a full 360-degree cycle throughout the audio band. It is important to note that going only once through a 360-degree cycle is a remarkable accomplishment, which represents the current state-of-the-art. Not surprisingly, both speakers' imaging is highly realistic.



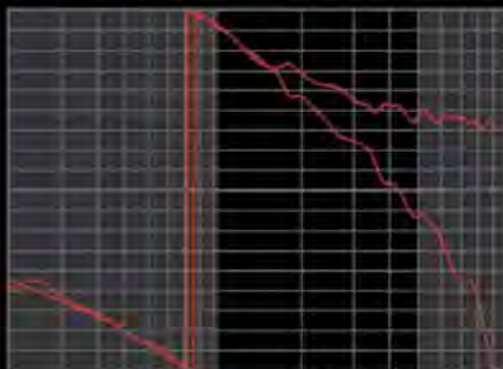
YG Acoustics absolute phase
200 Hz – 20 kHz, 20 deg div.
1st-order competitor

Relative Phase

Moving to relative-phase (a measure of how well the drivers are integrated), YG Acoustics' proprietary circuit topology is far superior to the competitor's 1st-order crossover. The competitor's wide overlap³ leads to a relative phase of ± 90 degrees between drivers, compared to YG Acoustics' state-of-the-art ± 5 degrees. Correspondingly, YG Acoustics offers far superior emotional impact: peaks preserve their dynamic "pop", but are somewhat "smeared" by the competitor.



Overlap



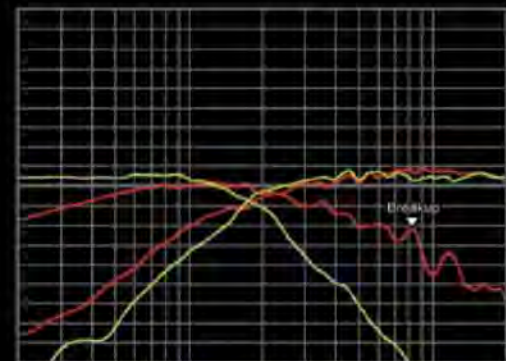
Overlap

YG Acoustics absolute phase
200 Hz – 10 kHz, 20 deg div.
1st-order competitor

Overlap

Finally, the advantage of YG Acoustics' narrower overlap: both designs utilize midrange drivers that can operate smoothly up to 8.5 kHz, and are crossed-over to the tweeter far lower.

YG Acoustics' midrange driver is attenuated by over 50 dB at its breakup frequency, whereas the competitor's midrange is only attenuated by 15 dB. Therefore, whereas with YG Acoustics only 0.3% of the sound at 8.5 kHz is generated sub-optimally, with the competitor 18% of the sound is essentially "pure breakup". Sonically, while YG Acoustics retains its clarity throughout the audio band, the competitor sounds veiled whenever music contains this frequency range.



YG Acoustics, midrange and tweeter SPL
200 Hz – 20 kHz, 5 dB div.
1st-order competitor

¹ It is important to note that zero absolute phase does not guarantee zero relative phase. In fact, even a theoretically ideal 1st-order crossover does not offer good relative phase. Therefore, high-quality loudspeaker design is far more complex than it may initially seem.

² All measurements performed at YG Acoustics' state-of-the-art lab.

³ Overlap in this document is defined as the range in which each driver type is no more than 12 dB below the total signal strength



Designed by Yoav Geva (Gonczarowski)

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MUSIC IN THE ROUND

Kalman Robinson

Getting Down to Fundamentals: Paradigm Reference's Studio SUB 15 with Perfect Bass Kit, and Audyssey's Sub Equalizer

It seems only yesterday, but it's been 10 years since I began using the original Paradigm Reference Servo-15 subwoofer in my system. It was good then, and it still is, although a lot around it has changed. At first, I hooked it up via Paradigm's X-35 crossover, then via a Technics SH-AC500D surround processor, and finally to the subwoofer/LFE outputs of the various preamplifier-processors and A/V receivers I've used. Y'see, the Servo-15 is just a powered sub. It has an amp and a level control, but no crossover, no channel mixing, and no phase control. Just plug in the signal and it plays it. Along came in-room response correction from Audyssey, Anthem, Velodyne, etc., and the Servo-15 became an even better sub. For music, it entirely satisfies my needs.

So why am I reviewing Paradigm Reference's new Studio SUB 15? Well, aside from my obligation to you, the readers, I was curious about how Anthem has adapted its ARC software to subwoofer EQ in the form of Paradigm's Perfect Bass Kit (PBK-1), how the art of subwoofing has advanced in the past decade, and how two separately placed subs will perform.

The Studio SUB 15 (\$2500) differs in several ways from the Servo-15 (\$1500 when reviewed by Larry Greenhill in *Stereophile* in August 1999, since discontinued). First, it lacks a servo system, due, I suspect, to the current availability of DSP control of the driver that's more secure and subtle than accelerometer-based feedback control. Second, two 850W class-D amps replace the Servo-15's single 400W discrete amp. While both subs sport 15" cones, the diameter of the SUB 15's voice-coil is 76mm compared to the Servo-15's 50mm. In fact, the new drive-unit is of far more complex construction, from its 35-lb ceramic-ferrite magnet structure to its dual spiders and aluminum shorting ring. Third, though similar in size to the Servo-15, the SUB 15 is substantially heavier (114 vs 90 lbs), yet more attractive due to its outrigger feet and tapered sides. The two models' bass extensions differ little: the Servo-15 is rated down to 14Hz, the SUB 15 down to 12Hz.

Entirely new in the SUB 15 are its



Paradigm Reference's SUB 15 along with the microphone and stand provided in the Perfect Bass Kit.

ability to accept balanced (XLR) as well as unbalanced (RCA) input signals, a trigger input in addition to auto on/off, an adjustable low-pass filter (35–150Hz plus bypass), a phase adjustment (0–180°, continuous), a soft blue power-indicator light, and a USB port. Both models include a level control.

The SUB 15's extra 24 lbs make a big difference—I needed help to carry it into the house and position it in the listening room. My Servo-15 was already occupying the space between the listening sofa and the left rear speaker, so with help, I put the SUB 15 in the front of the room, between the center- and right-channel speakers. Later, I swapped the subs—much easier said than done. I used the Paradigms individually and together, but delayed using the Perfect Bass Kit until I'd gotten a good impression of what the SUB 15 itself was about. Of course, that meant a fair amount of cable swapping and rerunning of Audyssey MultEQ Pro, but I wanted to keep as level a playing field as possible.

In either location, and without any EQ, the SUB 15 had a flatter, more extended bass response than the Servo-15. The unequalized in-room response showed that the Servo-15's –3dB point was just above 20Hz, the SUB 15's at

15Hz. Using the SVSound AS-EQ1 or the Audyssey SEQ room-equalization programs, each sub's response was corrected to be flat to about the same indicated frequencies, with steep rolloffs below those figures. Subjectively, however, the SUB 15 more readily “disappeared” as a discrete source of sound, both when used for movies' Low Frequency Effects (LFE) channel, which is low-pass-filtered at 120Hz, and for rerouted left/right channel bass with a crossover up to 80Hz. This suggests that the new SUB 15 has a smoother upper end—if you can call a ceiling of 100Hz the “upper end.” It also suggests that the SUB 15's driver and cabinet contribute fewer spurious resonances that might draw a listener's attention away from a given sound's intended apparent source.

Now for the Perfect Bass Kit PBK-1 (\$250), an adaptation of the formidable Anthem Room Correction (ARC) system used in Anthem's Statement D2 processor (see www.stereophile.com/miscellaneous/908mitr). The PBK-1 looks exactly like the ARC kit, and works similarly. One need only connect one's PC, via USB cables (provided), to the mike (provided) and to the SUB 15, and launch the application. The PBK-1 asks two questions: how



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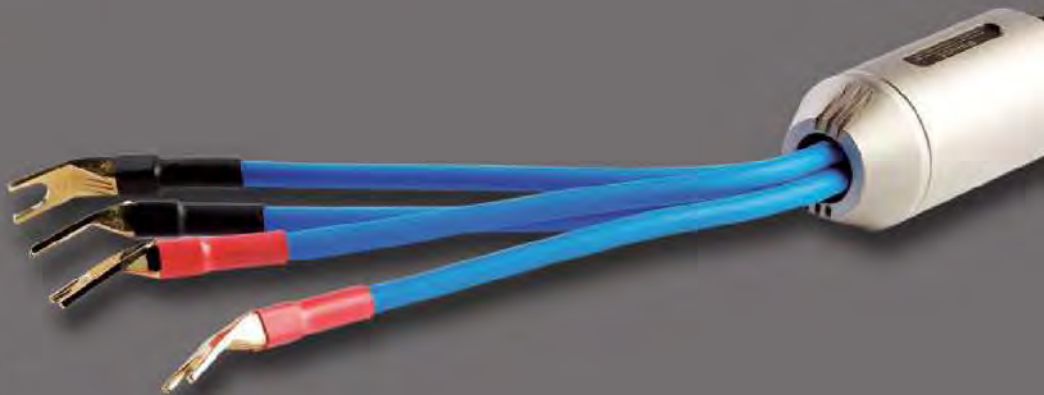
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many mike positions you'll use (up to 10), and what upper frequency limit (160–250Hz) you want for the correction. I specified my usual choice of six mike positions: position 1 at the listening position, 2 and 3 to either side of that, and 4–6 about 3' in front of positions 1–3. Then you hit Measure: the PBK-1 burps the sub, then prompts the user to move the mike to the next position. A little calculation, and the display graph shows three traces: the measured in-room response, the target response, and the calculated response with the

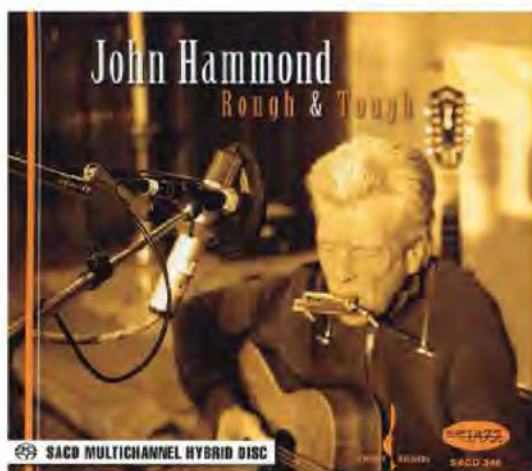
implementation of the PBK-1's Infinite Impulse Response (IIR) filters.

The SUB 15's response, as measured by the PBK-1, showed considerable variation throughout the range, with a large peak at 26Hz (my room's axial mode) and a deep null at 35Hz (a major transverse mode), along with their attendant harmonics. The low frequencies extended strongly to 15Hz. The unmodifiable target curve was pretty flat from the low-pass point of 250Hz down to 20Hz, with a mild rolloff below that. The calculated result

very closely tracked the target result. I experimented with the only variable available, the low-pass frequency, but found that leaving it at 250Hz gave the flattest result. All that remained was to click the mouse and upload the correction from the PBK-1 to the SUB 15. The entire measuring and adjustment procedure took less time than unpacking and setting up the mike and stand.

The subjective results with the PBK-1 were very good and satisfying, but, while easier to use and significantly less expensive, they were no better or worse

RECORDINGS IN THE ROUND



JOHN HAMMOND: *Rough & Tough* Chesky SACD346 (SACD)

John Hammond is a one-man acoustic blues show, and you might not expect that Chesky needed more than two channels to give us everything we need to hear him. Well, that ain't so. First, the ambience of St. Peter's Episcopal Church, in New York City's Chelsea, where Chesky has recorded for many years, is very friendly. Without obscuring any detail, it cradles the music in subtle reverberation so that you can savor the sounds as they fade. As would any experienced musician, Hammond seems to tune his tone and pace to constructively interact with the space. You can hear all the cues in stereo, but they lack the coherence you get from Chesky's 4.0-channel mix.

Second, Chesky's recording is made with a SoundField microphone configuration. While the recording isn't in the Ambisonic UHJ format, I was still tempted to try the Ambisonic decoder in my Meridian 861 pre-pro, now that I can feed it SACDs via HDMI. Holy cow! Instead of feeling as if I were in St. Peter's (I've attended recording sessions there), it was as if Hammond had been transmigrated into my living

room, with a presence and an impact rarely accomplished in reproduction. In addition, my room now had a more spacious acoustic. I enjoyed this disc in several formats and, in every one of them, it was a intimate experience with John Hammond.

MAHLER: *Symphony 8, Adagio from Symphony 10*

Laura Claycomb, Elza Van Den Heever, Erin Wall, sopranos; Katarina Karnéus, Yvonne Naef, mezzo-sopranos; Anthony Dean Griffey, tenor; Quinn Kelsey, baritone; James Morris, bass-baritone; San Francisco Symphony & Chorus, San Francisco Girls Chorus; Michael Tilson Thomas
SFSO 821936-0021-2 (2 SACD/CDs)

MAHLER: *Symphony 8*

Liudmila Dudinova, Ailish Tynan, Viktoria Yastrebova, sopranos; Zlata Bulychева, Lilli Paasikivi, mezzo-sopranos; Sergey Semishkur, tenor; Alexey Markov, baritone; Evgeny Nikitin, bass; London Symphony Orchestra, Choir of Eltham College, Choral Arts Society of Washington; Valery Gergiev
LSO Live LSO0669 (2 SACD/CDs)

More Mahler—but I'm a Mahler fan, and his music is perfectly suited to high-resolution multichannel, as its dynamic and spatial demands fairly burst the limits of CD. This doesn't mean I'm going to toss my classic Mahler recordings on CD and LP, but those are now reserved for special moments when I'm in an intellectual or analytical mood. To just enjoy the music, neither format presents it as the hi-rez media do. Here are two great examples.

From the first bar of each of these recordings, I had the same reaction: This is the way it's supposed to sound. Of course, those sounds were somewhat different; the SFSO troops sounded vast in the spaciousness of Davies Hall, San Francisco, and the Londoners were powerful in the reverberant St. Paul's Cathedral, in London. Each sound suits its performance. Michael Tilson

Thomas's Eighth (83:34), on two discs, is a model of clarity and insight supported by a nigh-perfect cast and presenting a nearly Apollonian Mahler. (Also included is a lovely and similarly clear-eyed performance of the *Adagio* of Mahler's uncompleted Symphony 10.) Gergiev's single disc (77:22) is intense and highly dramatic, and he summons sympathetic responses from his singers and players to create a huge impact.

I recommend both: Regardless of which I'm listening to, I think, *Wow. I really like this one.* Then I play the other one and feel the same way. I don't have to choose; if you do, sample them online and you'll quickly hear the difference. Either way, you can't miss.

RAVEL: *Daphnis et Chloé*

James Levine, Tanglewood Festival Chorus, Boston Symphony Orchestra
BSO Classics 0801 (SACD/CD)

Some two years after the release of *Chamber Music for Winds and Strings* by Mozart (BSO Classics 0601), the Boston Symphony has come back with a whopper of a complete recording of Ravel's ballet *Daphnis et Chloé*. Music lovers and audiophiles don't lack for options, with the classic 1955 recording of the full score by Charles Munch and the BSO (SACD/CD, RCA Living Stereo 61388), and an



than with the SVSound or Audyssey devices. Of course, the SUB 15 already contains the real guts of the Paradigm EQ system, so there should be no reason to even consider buying one of the other EQs. Measurement of the actual performance of the SUB 15 with PBK-1, using the XTZ Room Analyzer, revealed that: 1) there was no correctable modal behavior, 2) the response was flat within $\pm 2\text{dB}$ from about 100Hz down to 15Hz (which is absolutely remarkable), and 3) while there were no detectable modes, the decay times be-

low 100Hz were somewhat more extended than I'd achieved with the SVS AS-EQ-1.¹ However, the PBK-1 made a huge improvement in the SUB 15's bass performance compared with that of the Arcam AV888 that I reviewed in November 2009, such that running the PBK-1 before running the Arcam's auto setup/EQ was almost obligatory.

¹ While I think it's fair to compare XTZ measurements made using the different devices, it's not justifiable to compare what the XTZ shows with three mike positions with what the PBK-1 or the SVSound or the Audyssey determines from six or more positions. The measurement is merely a snapshot.

I hail Paradigm's Reference Studio SUB 15 as a worthy successor to its Reference Servo-15. The SUB 15 offers all the powerful bass and extension needed for any music and, indeed, for home theater, unless you're a bass maniac. (If you are, get two or more SUB 15s.) The PBK-1, the SUB 15's obvious mate, will work with up to four Paradigm subwoofers, and is a bargain at \$250. However, with sophisticated room EQ now built into almost all modern pre-pros, I wonder how much of a market there is for dedicated

RECORDINGS IN THE ROUND, continued

atmospheric four-channel recording by Stanislaw Skrowaczewski and the Minneapolis Symphony of Suites 1 and 2 (SACD/CD, Mobile Fidelity Sound Lab UDSACD 4008). Now it gets complicated.

Though neither as overtly passionate nor as fervent as Munch, and not offering textures as diaphanous as Skrowaczewski's, James Levine seems to draw on the best of both approaches. What tips the balance, and perhaps simplifies the choice, is this recording's awesomely spacious and transparent sound. The Sound/Mirror recording team, under producer Elizabeth Ostrow, give us all the detail and depth of Boston's Symphony Hall, unstrained and unrestrained. Simply ravishing.

STRAUSS: *Eine Alpensinfonie, Macbeth*
Marek Janowski, Pittsburgh Symphony Orchestra
Pentatone PTC 5186 339 (SACD/CD)

Is this really Pittsburgh? I have many great-sounding PSO recordings from Capitol/EMI, Command, Telarc, and Philips that were made in the old Syria Mosque or in Heinz Hall, but I've never heard them sound like this. Pentatone's Brahms discs led by Marek Janowski gave us an inkling of a warmer, richer Middle European sound, but for me they lacked some grit and brio. However, this new *Alpensinfonie* shows a ripper sound, with brilliant strings and brass ideally matched to Strauss's Alpine trek. Generally, one doesn't hear brass choirs with such immediacy in a space as large as Heinz Hall, but they remain in perfect and spectacular balance. Pentatone, aided by contributors from the Sound/Mirror recording team, has here displaced the classic recording by Zubin Mehta and the L.A. Philharmonic (London/Decca), and the newer one by André Previn and the Vienna Philharmonic (Telarc) as the best-sounding *Alpensinfonie*, and Janowski and the Pittsburghers

give a performance competitive with the historic one by Rudolf Kempe and the Dresden Staatskapelle (EMI).

BRIEF LISTINGS

As the months go by, I fall further and further behind in commenting on new and noteworthy multichannel recordings. So, in an effort to catch up, here are 10 I highly recommend.

THE EBONY BAND: Music of Weill,

Toch, Schulhoff

Weill: *Kleine Dreigroschenmusik*. Toch: *Egon und Emilie*. Schulhoff: *H.M.S. Royal Oak*
Werner Herbers, The Ebony Band, with soloists & Capella Amsterdam
Channel Classics CCS 25109 (SACD/CD)

HAYDN: Symphonies 93, 95, 96

Bruno Weil, Capella Coloniensis
Ars Production ARS 38 061 (SACD/CD plus bonus commentary CD)

MOZART: Symphonies 22–25, 27

Adám Fischer, Danish National Orchestra
DaCapo 6.220542 (SACD/CD)

ROY ORBISON: *Black & White Night*

Image Entertainment ID49540BBD (Blu-ray)

In DTS Master Audio, this is the best-sounding version yet.

SHOSTAKOVICH: *Lady Macbeth of Mtsensk*

Eva-Maria Westbroek, Katerina; Christopher



Ventris, Sergey; Vladimir Vaneev, Ismailov;
Royal Concertgebouw Orchestra, Chorus of De
Nederlandse Opera; Mariss Jansons
Opus Arte OABD7031D (2 Blu-ray)

SHOSTAKOVICH: Piano Trios 1 & 2, Cello Sonata

Rachmaninov Trio Moscow: Mikhail Tsinman,
violin; Natalie Savinova, cello; Viktor Yampolsky,
piano
Tudor 7138 (SACD/CD)

JOHANN STRAUSS JR.: *Die Fledermaus*

Pär Lindskog, Alfred; Lyubov Petrova, Adele;
Pamela Armstrong, Rosalinde; Thomas Allen,
Eisenstein; London Philharmonic Orchestra,
Glyndebourne Chorus; Vladimir Jurowski
Opus Arte OABD7004D (Blu-ray)

STRAVINSKY: *Apollon musagète, Pulcinella Suite*

Alexander Janizek, Chamber Orchestra of Europe
Linn CKD 330 (SACD/CD)

VERDI: *Requiem*

Christine Brewer, soprano; Karen Cargill, mezzo-soprano; Stuart Neill, tenor; John Relyea, bass;
London Symphony Orchestra & Chorus; Sir Colin Davis
LSO Live LSO0683 (2 SACD/CDs)

ZAPF: *Das Goldene Kalb*

Jobst Liebrecht, Ensemble Mosaik
New Classical Adventure 60197 (2 SACD/CDs).

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subwoofer EQ for most multichannel systems. They remain obligatory for two-channel and analog multichannel systems, but beyond that, I can easily imagine a multi-SUB 15 system with PBK-1 applied to each, all connected to an Anthem Statement D2v, with ARC integrating the whole shebang.

Audyssey Sub Equalizer

It was only yesterday that I reviewed the SVSound AS-EQ1—well, it was last September. I had it only briefly (www.stereophile.com/musicintheround/music_in_the_round_38), and now I have its twin: the Audyssey Sub Equalizer (each model costs \$799). In fact, with their magnetically held front panels detached, there's no way to distinguish them physically. And yet there are differences. Purchasers of the SVS get a measurement program disc and a calibrated microphone similar to that used with higher-level Audyssey-equipped A/V receivers and pre-pros; it requires no external mike preamp. The Audyssey Sub Equalizer comes with zilch. Nada. It must be used with the Audyssey MultEQ Pro software² and its supporting hardware kit. This means that installation should be done by an Audyssey-trained installer, though I know of many private users who have done it themselves. It also means that installing the Sub Equalizer will benefit from the Pro's more sophisticated software and its hardware kit's superior mike and preamp. Because the Sub Equalizer is physically identical to the SVSound AS-EQ1, I'll spare you a description of its front and rear panels and its basic pattern of interconnections. The only physical difference is the powered mike preamp in the line for the Sub Equalizer.

The only functional difference between the models that I could find was that while the AS-EQ1 will handle two subs, it assumes they will both be in the same room/system. The Audyssey Sub Equalizer can handle two subs, either in the same or different rooms. However, while the two products can be used similarly, SVSound advises users to run whatever system setup and equalization they have on their AVR or pre-pro once before doing any measuring with the AS-EQ1. They include a procedure, AutoEQ Assist, and a bypass cable, with which the resident equalizer

can be fooled into thinking it's attached to a virtually perfect subwoofer and thus apply no EQ to the sub channel. After that, you run the AS-EQ1 measurements and calibrations, then manually transfer to the main processor the level and distance recommended for the sub. This precludes the superimposition of two redundant and possibly conflicting corrections to the sub channel. On the other hand, the fact that the Sub Equalizer must be used with Audyssey MultEQ Pro means that, more than likely, the Sub Equalizer will be used with an Audyssey MultEQ Pro-compatible processor. In this case, the preferred procedure would be to run the Sub Equalizer measurements and calibration first. Then, when Audyssey MultEQ Pro does the setup and EQ for the main processor, it

were within 0.2dB of each other, even though Audyssey's window of allowable difference is 3dB. After that came the now-familiar procedure of EQing the two subs by taking measurements at my six standard positions with the Sub Equalizer in a 1-in/2-out configuration. The results were excellent and, not too surprisingly, nearly identical to what I'd achieved with the SVSound AS-EQ1. The Audyssey MultEQ Pro also gave me values for the subwoofer's level (-3dB) and distance from the listening position (32") to enter into the DTC-9.8's set-up menu.

I restarted Audyssey MultEQ Pro with the microphone and preamp connected to the Integra's Aux 1 input, then repeated the process to recalibrate the remaining five channels with Mul-



Audyssey's Sub Equalizer with its sculpted front panel. Pop it off for convenient set-up connection access.

will theoretically find a virtually perfect sub(s) and not impose additional EQ.

What's going on? If the SVSound AS-EQ1 and the Audyssey Sub Equalizer are fundamentally identical, why are we singing different tunes? I think it's because the AS-EQ1, as an independent component, is likely to be used with processors that use setup and EQ systems other than Audyssey's. On the other hand, I think it's reasonable to expect that anyone buying a Sub Equalizer will use it with an Audyssey MultEQ Pro-compatible version of Audyssey MultEQ XT, either built into a processor or in the form of the Audyssey Sound Equalizer. In fact, you can use either device either way, but Audyssey seems to have greater respect for the proper compatibility of its own products. Naturally.

So I followed the rules. I inserted the Sub Equalizer between my Integra DTC-9.8 preamplifier-processor and my two Paradigm subs, the Servo-15 and SUB 15; to my computer, via USB; and to the pre-pro's center-channel analog input. Audyssey MultEQ Pro guided me through balancing the two subs' levels with that channel, a procedure best repeated—the software seems to make a slow, rolling average of the measurements. After several repetitions, good stability of the result was achieved, and the three channels

tEQ XT. As I have in the past, I used my edited-to-flat target curves, then adjusted the crossover frequencies to flatten each channel's frequency response in the range below 120Hz. The "before" frequency response of the subwoofer(s) channel was not quite "virtually perfect"—it showed some ripples—but the EQ'd "after" graph was absolutely flat down to 14Hz! More interesting from this run was that the distance indicated for the paired subs was nearly identical to that those recommended by the Sub Equalizer—to within 2"—and the indicated level was identical.

In terms of sound, though, this may be the "sweet spot" among all the various Audyssey options. While both the Sub Equalizer (\$799) and the SVSound AS-EQ1 (\$799) will get you the increased bass-filter resolution of Audyssey's standalone Sound Equalizer (\$2500), they also offer a way to properly manage a pair of subwoofers, and cost less than a third as much. On the other hand, the combination of the Sub Equalizer with an Audyssey MultEQ

³ I don't know how to defeat the SUB 15's own EQ. To ensure that it was not a contributing factor, I swapped the positions of the two subs. The Servo-15 remained unequaled, and the SUB 15 was now effectively so, as reflected in my measurements. However, the intercession of the SUB 15's EQ DSP undoubtedly contributed to the long signal delay reflected in the indicated distance of the subs from the listener, as calculated by the Audyssey Sub EQ.

² Audyssey MultEQ Pro was *Stereophile's* 2008 Joint Accessory of the Year; see www.stereophile.com/budgetcomponents/508mitr and www.stereophile.com/musicintheround/music_in_the_round_35/index1.html.

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Pro-compatible pre-pro or AVR gets you high-resolution sub correction, the additional accuracy of a superior microphone, the optimization facilities of Audyssey MultEQ Pro, and nearly the same resolution in the main channels, where I think it is less critical. The catch is getting your hands on Audyssey MultEQ Pro, which Audyssey thinks should be used only by professionals. In fact, careful and serious amateurs such as you and I are likely to devote more time and effort to the task, since we're not on the clock. And perhaps we'd get even more out of it.

Bottom Line

With sophisticated room EQ now being built into more and more multi-channel preamplifier-processors, one might wonder about the real market for a dedicated subwoofer EQ. However, it seems that many mainstream makers of A/V receivers are dumbing down the equalization software in their newer, less expensive models, as they ask those models' DSP engines to do more and more tasks with the same horsepower. Compare, for example, the versions of the Audyssey software included in the lower-end 2008 models from Onkyo and Denon with what's included in the comparable 2010 models. For most users, that will be okay. However, if you're serious about bass but have a really difficult room and/or multiple subs, dedicated subwoofer correction—via the Paradigm's PBK-1, Audyssey's Subwoofer Equalizer, SVSound's AS-EQ1, VLSI Solution's Anti-Mode 8033, or other device—should be an excellent investment. In a stereo system (with a subwoofer) or an analog multichannel system, they should be obligatory. ■■

CONTACTS

Audyssey Laboratories, Inc., 350 S. Figueroa St., Suite 233, Los Angeles, CA 90071. Tel: (213) 625-4300. Fax: (213) 625-4383. Web: www.audyssey.com.

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BY JASON VICTOR SERINUS

Theodore Roosevelt might have described Allen Perkins as someone who speaks softly and carries a big stick—or two. Before founding Immedia Distribution in 1990, and long before co-founding turntable manufacturer Spiral Groove in 2005, this soft-spoken designer of two award-winning turntables had begun a career as a jazz drummer.

I've known Allen Perkins for more than a decade, ever since the Bay Area Audiophile Society, of which I'm a mem-

ber, contacted him about demonstrating one of his products. In all those years of talking to Perkins at audio shows, asking him questions, and listening to components together, I have yet to hear him gratuitously toot his own horn. In fact, as I prepared this feature, I discovered that he hadn't bothered to mention that each of his two Spiral Groove turntable models has won a major award. Nor did he offer to supply copies of the positive reviews they'd received. I almost had to pry the information out of him. While it may seem paradoxical that a drummer would prove the epitome of calm and equanimity, Allen Perkins prefers to let the music that flows from his accomplishments speak for itself.

Perkins spent much of his childhood in small towns in Michigan and Wisconsin. There, he got the music bug while

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listening to his father's Reader's Digest Records collections of big-band music by Glenn Miller and Tommy Dorsey. Equally fascinated by mechanical apparatus, he went from high school to Schwinn Bicycle School, where he learned to build bicycles from raw parts.

At 21, Perkins entered the University of Wisconsin at Eau Claire as a music major.

There, he spent four or five nights a week performing jazz on drum kit and percussion. The sobering realization that he would either have to teach, become a band director, or risk economic hardship as a professional percussionist led him to major in psychology and minor in Asian Studies. Now 54, he continues to perform weekly with a Bay Area band.

The Fatal Visit

While still an undergraduate, Perkins accompanied a fellow bandmember on an 80-mile drive from Eau Claire to Minneapolis to get some equipment repaired. There he happened into a stereo shop owned by Paul Wakeen (who now owns Stillpoints, makers of footers, stands, and racks for audio equipment). Wakeen recognized Perkins from his drumming activities, and not so innocently asked what his stereo system was like.

Perkins responded that he didn't have money for new gear, and was happy with his current setup of Technics turntable, NAD preamp, Crown amp, and Canton speakers. But a few days later, Wakeen called him. "You know," he said, "I liked talking to you. I got a sense that, with your knowledge of music, your opinions would be valuable to me. Could I send you a preamp so you could tell me what you think of it?"

Perkins repeated that he liked his NAD and couldn't afford a new one. Nonetheless, he took the fatal step and offered to give Wakeen's model a listen. What happened next changed his life.

"I installed the used PS Audio Model 4 that Paul sent me," Perkins told me in the first of several extended interviews and listening sessions. "I thought I wasn't going to hear a difference, when I put on a Pat Metheny record. Probably three notes played, and all I could think was, 'Oh shit, how am I going to pay for this?'"

A week later, Wakeen offered Perkins the PS Audio in exchange for working in his store on weekends. "I think you'll have a good rapport with customers because of your music background," he said.

Perkins accepted, and soon moved to the Twin Cities to work at Wakeen's aptly titled House of High Fidelity. Nearly three decades later, Perkins now has his own house of hi-fi, as it were; it serves as Immedia's distribution center, as well as the manufacturing facility for Spiral Groove products, and the Sonics by Joachim Gerhard loudspeakers created by the eponymous former designer for Audio Physic. The 3000-square-foot facility also includes a recording studio in which Perkins's drums get a daily workout.

Putting Things Together

Around 1985, Paul Wakeen began selling SOTA turntables. Perkins, with the same inquisitiveness that had propelled him to fix bikes, dismantled his SOTA vacuum turntable and set about addressing what he thought were its three serious design flaws.

That January, at the Consumer Electronics Show in Las Vegas, Perkins met SOTA's owners and designers. "I said that I had the model that always did this and this and this," he recalled, "and told them that I had fixed mine. There was a dead silence. After a few seconds, the designer said, 'We've been working on that problem for two years and we couldn't solve it.' After I showed them what I did, they came to me

the next day and asked if I could fix all the other 'tables they had loaned out at the show."

That spring, Perkins moved to the Bay Area to work with SOTA, at their factory in Oakland, on their new speaker line. Soon he was asked to replace SOTA's designer. In fall 1989, after four-and-a-half increasingly stressful years, he decided to leave SOTA, which folded soon thereafter. Perkins then joined Stig Bjorge, Jonathan Carr, and Petr Mares to cofound a company to distribute Lyra cartridges in the US. When that trans-Pacific partnership proved unviable, they agreed to let Perkins continue distributing Lyra in the States.

Searching for a name for his new distribution company, Perkins was determined not to fall back on such audiophile buzzwords as *research*, *audio*, and *lab*. Eventually, he came up with Immedia. "Immedia derives from *media* and *immediate*," he explained. "I want people to know that I will remain present and attentive throughout transactions, and strive to deliver my own goods immediately."

"I thought I wasn't going to hear a difference, when I put on a Pat Metheny record. Probably three notes played, and all I could think was,

'Oh shit, how am I going to pay for the PS Audio preamp?'"

Soon after Immedia began distributing Lyra's Clav-

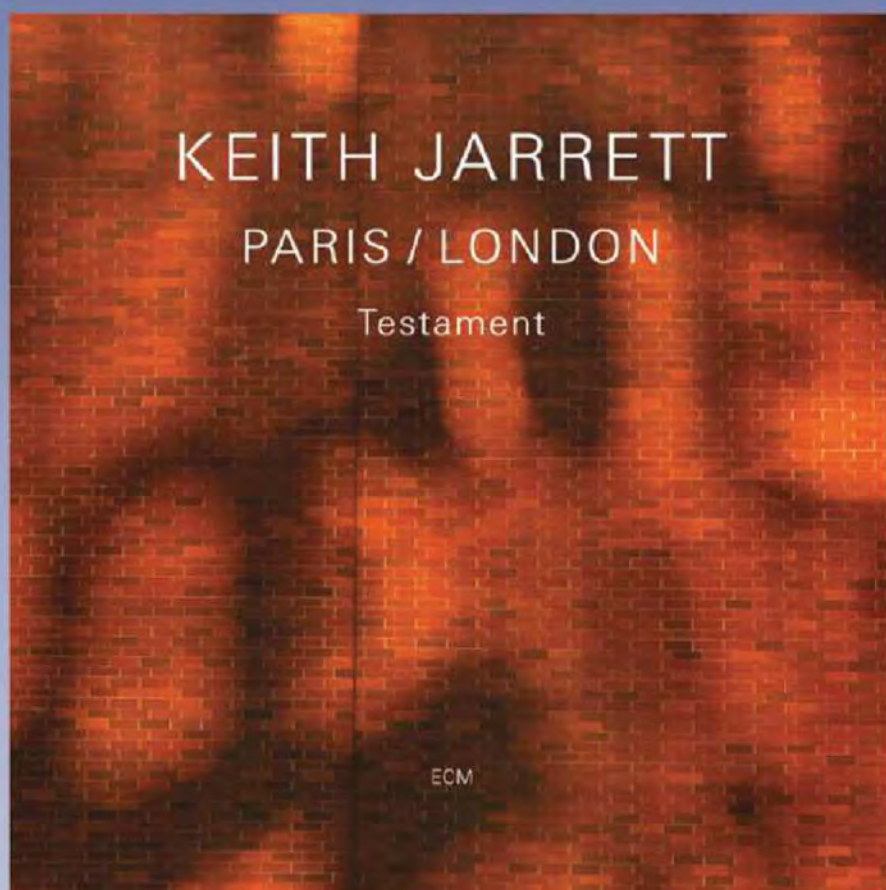
is cartridge, Perkins teamed up with former SOTA machinist Franz Rolinek to begin manufacturing the RPM turntables. (In this case, "RPM" stood for "Rolinek-Perkins Machine.") Eventually, Rolinek took over manufacturing and Immedia handled distribution. Perkins then added to Immedia's stable of distributed products more lines of cartridges, Finite-Elemente equipment racks, Connoisseur and Lehmann amplification, and, for a while, Burmester, Yamamura, and Audio Physic. But the fact that Immedia was always able to sell more turntables than RPM could make presented an insurmountable problem for a company pledged to immediate delivery.

After RPM revolved no more, Perkins determined to never again have distribution problems with his own products. Thanks to computer-aided design (CAD), Spiral Groove can manufacture its products in large enough quantities to keep up with demand while achieving close tolerances and levels of fit'n'finish undreamed of only a few years ago.

The Angel on the Clif

In 1999, Perkins opened a retail outlet in San Francisco's East Bay. Though the venture was short-lived—two devastating burglaries depleted Immedia's stock and made insurance prohibitively expensive—it connected him with a customer named Lisa Thomas.

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"When Lisa came in wanting equipment," he explained, "I got the sense that she was probably dismissed in high-end audio stores, as women usually are. I also felt her enthusiasm. I took time to show her a very nice system, which she purchased.

"After we got to know each other, and I learned that she had cofounded Clif Bar, I asked if she might be open to a loan that would enable me to make a new turntable. [*Clif Bar makes the high-energy health bar of that name.—Ed.*] She said she'd rather form a partnership in a bigger company that would allow me to make all the cutting-edge products I'd like to make. Close to three years ago, we formed Spiral Groove. Lisa has been very, very supportive and patient ever since."

During the present period of economic slowdown, when so many companies are digging in their heels, retrenching, or calling it a day, Immedia and Spiral Groove are moving forward with new, custom-built headquarters and an expanding product line.

Spiral Groove produces three analog products designed by Perkins: a recently launched tonearm, and two belt-driven turntables: the SG1, winner of *Stereo Sound* of Japan's Grand Prix award; and the SG2, which *ToneAudio* magazine named its Analog Product of the Year for 2008. Perkins has also teamed with electrical engineer Brian Daley to create the Spiral Groove Equinox line of electronics. It includes the E DP1 preamplifier-DAC and the 60Wpc, class-A E 60A solid-state power amplifier, whose sound is said to bridge the gap between solid-state and tubes. Perkins designed the chassis and certain mechanical aspects of both electronic components, and worked with Daley to tweak their sound.

"Brian adjusts the sound if I'm not satisfied with something, which is often the case," he said. "Once I give examples as to what I'd like to hear, he's brilliant enough to be able to change the design to address those things."

Spiral Groove has also become the majority holder in and manufacturing facility for Sonics by Joachim Gerhard. Perkins worked on the Amerigo, which performed extraordinarily well in small hotel rooms at the 2008 CES and Rocky Mountain Audio Fest, and has since helped redesign Gerhard's entire line.

"Joachim is such a brilliant designer," said Perkins. "Having a second set of ears and aesthetic sense has motivated him and helped create a better product. We feel the new speakers fill the void created when Joachim ceased to be the designer at Audio Physic, the Virgo II was discontinued, and their new speakers took on a different flavor and characteristics."



Wired

Spiral Groove has also introduced a unique line of cables designed by Keith Roberding. Though Roberding had contacted Perkins years before, during the latter's first month at SOTA, his trust in Perkins, and Perkins's long friendship with Daley, impelled him to wait until Spiral Groove could welcome him aboard. Spiral Groove's tonearm and electronics, as well as the Sonics speakers, are wired with Roberding's wire.

"I know of no other cables that are made this way," Perkins told me. "For about eight years after the design came out, there weren't any machines that could make it. I never considered it a viable product because it had to be handmade in small quantities, and I only want to distribute products that I can deliver upon demand. I hate disappointing people. Now we can finally make cables in whatever quantities we need."

Perkins praised Roberding's unique, single-gauge, multi-stranded design, which is patented. The cable's geometry is claimed to dramatically lower skin-effect and time-variation delays while addressing issues of impedance and capacitance.

"When we were at CES these past two years," he said, "the system sounded really, really good for a show system. Nobody even knew

The Sonics Allegra speaker (left) is now manufactured in the US; the Spiral Groove SG1 turntable (above).



we were using the cable because it doesn't jump out at you. It's very thin and flexible, and can hide on the floor. It makes the most holographic, low-distortion, and neutral-sounding presentation I've ever heard."

Perkins then added one of the characteristic verbal footnotes that display the straight-talking approach that has earned him respect. "Let's be honest. Everybody talks about neutral, but it's *their* neutral. I have my own idea of neutral. For me, these [cables] are *very* neutral."

Spiral Groove Turntables Mirror Their Maker

When asked what is special about his Spiral Groove turntables, Perkins replied, "What I am is in the design. It is an extension of my personality. My sense of reasoning and decision-making lead me to certain choices that manifest in the turntables, just as they manifest in everything else in my life.

"The meditation process is at the foundation of how I approach things. It's an effort to throw out emotional responses by recognizing them for what they are, and not let them drive me. When I get angry, I examine what stirred up the anger. I learn much, much more that way. If I look at a turntable, for example, I ignore all the hype. Instead, I ask what are the basic underlying requirements of getting the record to spin steady without introducing extra noise, and play it back in a pure form. I try to look at it from the perspective of the source, rather than getting caught up in surface concerns.

"I'm not much of a follower of trends or fashions. I don't look at other people's arms or turntables, although I do remember what I've seen so that I don't waste time reinventing the wheel. I don't take other designs apart to find out

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how they're doing what they're doing. I don't know what materials they're using, or what they cost, for the most part. I don't do marketing research to make designs.

"Designs are rarely perfect," he acknowledges. "Maybe a perfect sphere is perfect. A turntable is supposed to play back a record at a constant speed without inducing any of its own noise or sonic signature. That's the fundamental goal. It's very basic. After identifying the goal, I investigate the sources of problems that prevent me from achieving it. Of course, the most basic sources are the motor and the bearing. Then there are other influences, including the cartridge. I look at all the different variables, which in the case of turntables include the length, shape, and smoothness of the bearing, whether it's oil, whether the motor is DC or AC, etc. Then I do visualization exercises to address problems in the most efficient way possible."

In focusing on his fundamental goal and paying special attention to basic design problems that remain unsolved, Perkins finds himself especially critical of the constant readdressing and repackaging of old, deeply flawed designs from as much as 20 years ago. For example, he suggests that makers of tonearms often refuse to acknowledge longstanding design problems, because to do so would mean that they would have to cease manufacturing their product and start over from scratch.

Sometimes, of course, Perkins ends up doing exactly what earlier designers have done—but many of his designs, even those that appear more or less conventional, are quite different inside. For examples, he believes that his platter bearing is very different from those used in other turntables in that the spindle and platter bearing are decoupled yet precisely aligned. He also claims to have solved a fundamental problem with tonearm counterweights, though he was characteristically reticent when I asked about the details.

"I looked back half a century or so, and virtually nobody had done what I've now done. I don't understand why. Every time someone looks at the arm and I explain what I've done, they're kinda quiet. Then they ask why no one ever did it before. Maybe everybody has copied everybody else for the last 50 years."

Although Perkins has long been able to visualize solutions, only recently has he gained access to computer-modeling techniques that allow him to achieve his vision. Thanks to CAD, he is now able to make far fewer and only slightly differing prototypes of his tonearm before settling on the design that works best.

"I have great appreciation for modern technology. Even though I'm making turntables, I'm not at all a Luddite when it comes to how things get done."

Sex Appeal

As any veteran of audio shows can attest, a favorite attendee sport is ogling turntables that are visually stupefying and outrageously expensive. Though I'm sure there are serious design rationales behind the apparent madness of a turntable that looks like something from *Magical Mystery Tour* crossed with something from *The Cabinet of Dr. Caligari*, such a product undoubtedly owes its appearance to something more than the quest for optimal functionality.

Spiral Groove's two belt-driven turntable models have an elegant, understated simplicity of appearance. In comparison to much flashier five-figure babies, the SG1 (\$25,000) and SG2 (\$15,000) have little sex appeal. Despite Perkins's protestations—"Don't be that mean to them; they have curves!"—to dazzle was not his desire. His goal has always been to create a turntable that neither injects its own sound nor passes along

outside influences.

Although Perkins was loath to be seen as setting himself apart from other manufacturers, I did finally get him to discuss the fundamental design differences between the Spiral Grooves and other turntables. Perkins's tables achieve extra strength and rigidity because their intentionally compact designs resist bending. "Mass is an easy marketing ploy," he said. "To make something big and heavy isn't clever, even though people see it as more impressive. You can make it shiny, or use clear acrylic for the same reason. I don't use those materials because I've listened to them. They don't do the things I want them to do. No matter how many people will jump at the chance to have a clear turntable, I'm not going to make one for them, because I don't think it sounds good."

The more expensive SG1 has a bayonet armboard that lets the user change out tonearms in about 10 seconds, as quickly as changing a camera lens. This easily

"I have a great appreciation for modern technology. Even though I'm making turntables,

I'm not at all a Luddite when it comes to how things get done."

enables the use of different arms with different cartridges. The SG2 has the same armboard without the bayonet mount, and requires 10 minutes to swap arms. Each table has a 14"-diameter ring around the bottom of the 12"-diameter platter to accommodate the drive belt.

"The extra diameter increases the inertia on the platter eight times over what a standard 12" diameter gives," he claimed. "In my opinion, that's much better than adding eight times the weight to the same size platter. There's a limit to what mass is good for."

Perkins's platter, which he began to develop while still at SOTA, comprises layers of different materials, with the bottom layer stainless steel (SG1) or aluminum (SG2). The next layer is a porous material, such as cloth or paper, impregnated with phenolic glue. Perkins finds this material extremely dead and inert, and easy to accurately machine. Then comes ¼" of vinyl. The platter's top layer is a ¼" thickness of graphite, whose lossy composition dissipates reflected vibrations.

Much of the platter's sound quality derives from the proportions of these different layers. "Any single material has a resonance of some sort," Perkins said. "Putting different materials together cancels the resonances out. I've layered materials that tune well together and produce better sound. You see acrylic turntables all over the place because they're easy to manufacture. Acrylic does a pretty good job, but for me, it's not the final answer for good sound."

In addition to its drive ring, many of the SG1's smaller parts are also of stainless steel: the clamp, pulley, feet, etc. In the SG2, these parts and the drive ring are aluminum, which

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is lighter, less expensive, and easier to machine. The SG1's base has four layers of aluminum that form a two-piece body; in the SG2, three layers of aluminum form a single block.

"People buy my products for different reasons," Perkins said. "Many come to them after they've experienced several other products with a lot of marketing push behind them. They put them side by side and say, 'Wow. This performs.'"

Spiral Groove DP1 Preamplifier

The forthcoming DP1 boasts a built-in DAC so it can handle both analog and digital input signals, and special outputs designed to accommodate custom-made crossovers that can run multi-amplifier systems.

"It has three outputs," Perkins explained. "You can put a little circuit board with an active crossover in the internal slots. If you design an external crossover to work at that low voltage, you don't risk the problem of losing efficiency by placing huge [capacitors] and resistors in a speaker box, where the power is high. The external crossover gives you much more control, much less

"I believe that if I make products that are really high-quality, and we back them up well, there will always be a market."

distortion, and presents a far less challenging and complex load for an amp. You do have to multi-amp, but the technical advantages and increased efficiency are tremendous. Every time I've ever heard a multi-amp system, my mouth drops open because it's so controlled, so low in distortion, and so effortless.

"Theoretically, we can build a crossover to any speaker designer's spec. We can also give them the specs for the slot, and they can build their crossover and encase it in epoxy. We will also eventually offer it as a feature for a few Sonics [by Joachim Gerhard] speakers. I think it will be very ear-opening for many audiophiles."

The Best of Times

How does Allen Perkins feel about initiating new ventures just as, economically and culturally, so much is shutting down?

"Everybody's got a plan," he told me, "and this is mine. If I could play drums all day and be paid the same, I would do that. But that won't happen. There's nothing else I can think of that I want to do. And it's ideal for my 11- and 15-year-old sons to see me doing something active and pushing forward in my fifties."

"People buy audiophile equipment because they're into listening to music at a very high level. The niche we're in is a pretty resilient one. It's survived all the other depressions and downswings. Many manufacturers will not be able to afford the R&D during these questionable financial times, and you may see far fewer interesting new products to review and listen to than in past years. Now is the perfect time for us to develop and introduce new products. I believe that if I make products that are really high-quality, with high fit and finish, and we back them up well, there will always be a market."

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PUCKER UP!

BY ROBERT BAIRD



THE FLAMING LIPS WANT A KISS

Had he not given his life over to musical-theatrical freakdom, a career in auctioneering might have made Wayne Coyne rich. Or, better yet, TV evangelism—envelopes from little old ladies, filled with crumpled dollar bills and loose change, would have poured in. As good as he can be musically, Coyne's real forte is talking, and that extends to what he puts down on the page. The bios he writes for his band consist of one long, run-on sentence, broken very occasionally by ellipses, which he uses as commas. Interviewing the bearded, twinkle-eyed rock visionary with the curly, unruly, salt-and-pepper hair—whose electric mind has been the chief idea generator at the heart of the Flaming Lips for nearly three decades—can be exhilarating and exhausting all at once. Ravenous swarms of verbiage make speaking impossible. Brain swoons and auditory overloads are common. An elusive hunger for silence grows.

All of that would be fatal if not for the fact that Coyne knows he's a talker and so doesn't take himself too seriously. Also, rather

than make the road more dangerous, his constant blizzard of words actually provides traction and perspective on the ever-winding course of Lipsiana. Talking to Wayne Coyne is always a gas.

This particular conversation rolls the plot back to the releases of the band's last two records, the tuneful *Yoshimi Battles the Pink Robots* (2002) and the even more congenial *At War with the Mystics* (2006). Several tunes from the latter, especially "The Yeah Yeah Yeah Song (With All Your Power)" and "The W.A.N.D. (The Will Always Negates Defeat)," became, after 26 years of trying, the band's largest commercially viable hit singles ever. The album of jokey psychedelic pop, much of it outfitted with show-off titles like "Pompeii am Götterdämmerung" and "My Cosmic Autumn Rebellion (The Inner Life as Blazing Shield of Defiance and Optimism as Celestial Spear of Action)," ended up winning two Grammys: for Best Engineered Album, Non-Classical; and for Best Rock Instrumental

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Performance. Strangely enough, a band once described by its leader as a “hillbillies-gone-punk version of the Who,” and by the leader of the Butthole Surfers (on whom the Lips initially modeled themselves) as “an audio-visual psychedelic folk-rock extravaganza,” were suddenly flirting with the mainstream. They’d even become a singles act. Many longtime fans were horrified that the Fearless Freaks from Oklahoma City had become too brave, clean, and reverent.

Although the band’s live act continued to use beach-ball-sized balloons, swirling spotlights, people dressed in furry animal costumes, and Coyne liberally dousing his white suit with spurts of fake blood, fan fears that they were getting too mainstream rose when the band licensed a number of songs from both records to ad agencies. “The W.A.N.D.” became the soundtrack to a widely seen commercial for Dell computers. Mitsubishi and Range Rover both used “Do You Realize??” to sell cars. And Kraft Foods licensed, “The Yeah Yeah Yeah Song” to hawk salad dressing. The Flaming Lips selling lettuce? Armageddon seemed sure to follow.

So how to follow two increasingly commercial albums and a tidy advertising windfall? First, the Lips finally released the crazed *Christmas on Mars*, a vanity sci-fi film project Coyne had

been intermittently making in his backyard since 2001. And in August 2007 they released a live concert DVD, *U.F.O.s at the Zoo: The Legendary Concert in Oklahoma City*.

Finally, the task of making another record loomed. To use a reasonably obliging musical analogy, should they act as Bruce Springsteen did after *The River*, and turn left and make a Lips *Nebraska*—or should they plow straight ahead to try to push their on-the-cusp stardom over the top with a *Born in the U.S.A.*? Coyne cocks his head, clears his throat with his usual, “Yeah, yeah, yeah,” and begins.

“I loved *Nebraska*. I was relieved, and that really made me love Bruce Springsteen, what he did on *Nebraska*. Now, it didn’t make me love *Born in the U.S.A.* The flaw in your thinking there is that Bruce Springsteen is deciding, ‘I’m either gonna do *this*—and he probably knows it’s gonna work—or I can do *this*.’ For us, it’s just like, dude, we are barely hanging on to anything we can do. We’re lucky *any* of it ever works—ever.

“We talked about that a lot after *At War with the Mystics*, because we didn’t calculate anything on that album—you get into a groove, and it’s easy to write songs and to do a certain production, and we liked elements of that. And we knew that we were doing things that were more poppy, and more verse-chorus sing-along things. I know after *Yoshimi* we wanted to have a few songs that were, like, stadium/arena songs, where you could say, ‘C’mon, motherfuckers, we’re all going to do this thing together!’ Not because we think that’s so great, but as the Flaming Lips, you think, ‘Hey, what would it be like if we did this?’ and so you just go and do it.”

He shifts in his chair as the effect of several Diet Cokes begins to kick in.

“We were thinking of that type of intense big moment, especially with something like ‘The Yeah Yeah Yeah Song,’ where

it’s like it’s just so stupid and ridiculous—that doesn’t mean that it isn’t fun, but you embrace that part of it, and you do those things and you like them, and then you want to move on.

“But when it came to do this one, you know you can think of a million things that you want to do. I mean, that’s the curse of imagination. You don’t just have one idea and then go and do it. You think, ‘This will be great,’ and then, 10 minutes later, ‘Yeah, but *this* will also be great.’ It never ends.”

The album of which he speaks is *Embryonic*, the Lips’ new two-disc set, released on CD in early October 2009. Several weeks later, following the trend in physical media that’s made so-called premium products all the rage, the same two discs were re-released in a deluxe package that also includes a hi-rez (24-bit/96kHz) version of the album on DVD, an expanded booklet, and a lithograph of the cover art—all in a box covered in artificial fur. Finally, on November 27, *Embryonic* was re-re-released on two LPs pressed on transparent, blue and yellow vinyl,

“THAT’S THE CURSE OF IMAGINATION. YOU DON’T JUST HAVE ONE IDEA AND THEN GO AND DO IT. YOU THINK, ‘THIS WILL BE GREAT,’ AND THEN, 10 MINUTES LATER, ‘YEAH, BUT THIS WILL ALSO BE GREAT.’ IT NEVER ENDS.”



and accompanied by a bonus CD of the record. The album was engineered by Dave Fridmann, the longtime Lips producer/collaborator and onetime member of Mercury Rev who, in recent years, has also produced records by Weezer, MGMT, and Mogwai. *Embryonic* has Fridmann’s

trademark spacious, outgoing sound, which nevertheless still values dynamic range and extremely judicious use of compression.

Judging from the reader reviews on Amazon.com, which vary from “Unlistenable” and “Oh, the horror” to “Wonderfully off-kilter album” and “The mainstreamers don’t know what hit ‘em!,” the Lips faithful are split on what Coyne admits is a jammy, freeform record whose title accurately describes much of what’s inside.

“I think in the past I felt like if there’s not some sort of structure, nothing would happen. And with this kind of stuff—because I was, for better or worse, forcing the dynamic to be very simple—we’d do these jams, and I’d just like play two notes for 20 minutes. I think [Lips virtuoso keyboardist] Steven [Drozdz] knew intuitively that if I played something simple, he could decorate the top with these strange colorings, these sort of jazzy chords. I know some of them he lifted straight from Bill Evans. That adds a layer that isn’t really simple. It adds a shading that takes them beyond being just hypnotic jams.

“When you write a song, sometimes you spend a year crafting the little nuances in it, and the meaning builds in your mind, and the little things that you’re doing become very precious little creations. But with this, there was absolutely nothing precious. The best stuff just happened on a whim while we were jamming. Anything that we’ve done that is probably considered good in the past started from something that we thought was good, but then it went wrong and something spontaneous happened.

“You’re always hoping the element of the unknown comes in and makes your thing special and magical. But with this

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In my life, three much-hyped experiences have actually lived up to all the hoopla: trekking into Machu Picchu on a misty morning, climbing the Great Wall of China on a brisk December afternoon, and auditioning the Ayre KX-R. If it's not the eighth wonder of the modern world, I say demand a recount.

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there was a real desire not to be restricted to the songwriting curse. And that's hard to do, because you're driven to organize and write things. We think we're songwriters. And so it's hard not to fall into love with your dumb ideas. That's what artists do. There's what you intended, and then there's the things that happened that you take credit for."

One flavor that's returned on *Embryonic*, perhaps from 1997's *Zaireeka* (a set of four discs intended to be played simultaneously), is a very distinct leaning toward prog rock. In spots there's even a kind of motion reminiscent of the fluid psychedelia and so-called "instant compositions" of Can, the Krautrock pioneers.

"There's an element of that sort of stuff, and I don't know why. There's something exotic about that."

A new influence makes an appearance in spots, a distinct drone and moan à la Joy Division.

"Totally, totally."

There's even a slight Ian Curtis quaver to Coyne's vocals.

"There is. There is. I even said that about some of the singing. I didn't think of it when I was doing it, but when I heard it, I said 'Oooh, that's that thing I like about Ian Curtis. Ian Curtis is this great singer, in my opinion, but as far as the way he'd structure his notes

"Toward the end [of the recording session]—and I say this because she's funny when she says it—she said, 'Usually I have to be really drunk before I freak out, but let's do a version where I really just freak out.' She starts doing all this screaming, growling bird sounds, sex sounds, and all kinds of great shit. Before she got too far, I knew I was gonna make a song of it."

That after 26 years together—if only 11 full-length albums—the Flaming Lips have finally made their first double album is a symbolic milestone not lost on Coyne's record-geek/rock-historian side. The trio of Coyne, Michael Ivins (bass), and Steven Drozd (drums, keyboards), who've now officially been joined by drummer Kliph Scurlock (who needs to lose the shades), have, for *Embryonic*, mustered the requisite sprawl and ambition to make a worth it double album. But could it have been cut down to a better single disc, especially considering the space-jam nature of many of the tracks?

"The 'White Album' could have been cut to a better record? To me, the sentence that would come after that is, 'Yeah, but if it was a single record we wouldn't have 'Revolution 9.'" The idea that a group like the Beatles, given the opportunity, would do a 'Revolution 9'—maybe not all of them, maybe just John, but that's good enough



"WE THINK WE'RE SONGWRITERS. AND IT'S SO HARD NOT TO FALL IN LOVE WITH YOUR DUMB IDEAS."

and all that, it was so expressive, and was like, 'What I'm singing about, I'm telling you exactly the truth here.' I like that. I never thought of myself as being that kind of singer. I'm always thinking, 'Oh, people want to hear me do these kind of cracked melodies in my hopeful voice.' I'll try a million things, but stumbling upon this . . . to me it seemed more disturbing, and I like that. And it became a little bit more freaky in a way that we hadn't been freaky on purpose before.

"And the Krautrock thing, it's difficult, because you don't really know what that is, it's such a minimal, strange thing. It's rock, but it's not jammy rock, it's kind of a machine kind of thing, and I think whenever we've tried to do it, we wouldn't know how to do it, but whenever we've stumbled upon it, we'd say, 'Hey, that's that thing.' I can definitely hear it in 'Convinced of the Hex.' It's not even about the notes. It's about a certain quality of sound and playing."

Two guests, both young and hip, appear on *Embryonic*. Brooklyn's psychedelic pop-rock duo MGMT, an act heavily influenced by the Lips, sing on "Worm Mountain," a tune Coyne describes as "a grand adventure, climbing this strange mountain looking for worms that had been dipped in Ecstasy or something. They would take some and be happy, and we'd take ones and go insane. It even felt like if we ever got together, we could play that song; they could jump around as the innocent stars they are, and we'd look like the old weird wizards, still worrying about is this working or not."

Karen O, the combustible frontwoman of the Yeah Yeah Yeahs, sings on "Watching the Planets." She literally phoned-in her vocals with "the iPod earpiece in one ear and the phone in the other." As good as her work on that cut is, it's the cornered-animal racket she raises on "I Can Be a Frog" that's really, um . . . hearty.

for me—the idea that they would pursue that, I'm like, yeah, that's what groups should be. They shouldn't think that they have a style or a sound, they should just be free to do whatever.

That was kind of our main, if you can call it that, inspiration, or main mold—to say, let's have something that can work like the 'White Album,' where it doesn't all have to be a produced, perfect, essence of the Flaming Lips sound.

"[Elton John's *Goodbye*] *Yellow Brick Road* just feels to me like a lot of songs. It starts off like it's gonna have these threads, but those threads don't stay. I'd say [Led Zeppelin's] *Physical Graffiti* works, because they do some very relaxed stuff on there, they have some big productions, some small productions—variety. It isn't all pleasant on first listen, but in time you come to like the offhand stuff. Even *Bitches Brew*—Miles Davis. It's hard to even say it's a double record. It's only six songs.

"I don't know if double records have any meaning past [Sonic Youth's] *Daydream Nation*. After that, for me, double album sort of meant self-indulgence. Which, in a way, I always thought would be bad. If we really were left to our own devices . . . but, in a sense, I know that it probably didn't appeal to us or we would have done it a million times already. I speak like finally we were let free to do whatever we wanted, but we were free anyway."

That most Lipsian of concepts—freedom—now has the band thinking of their next project: a complete remake of Pink Floyd's *Dark Side of the Moon* featuring Stardeath and White Dwarfs, Henry Rollins, and Peaches. As bloated as that plunge sounds, Coyne shrugs. Suddenly, this man of many words is at his economical best.

"Music is better than us thinking it. Something happens, and we're caught up in it."

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SPECIFICATIONS Soundcards compatible with PCI (ST) and PCI Express (STX) personal computers. Windows operating systems supported: XP, Vista, 7. Sample rates supported: 44.1, 48, 96, 192kHz. Bit depths supported: 16, 24. Dolby Digital and DTS decoding supported. Analog outputs: line on RCA, headphones on 1/4" jack. Analog inputs: line/microphone on 1/4" jack. Digital output: electrical and optical S/PDIF on RCA jack with coaxial TosLink driver. Maximum output level: 2V, line output. Headphone output level & impedance: optimized for headphones with impedances of 32–600 ohms. Frequency response: <10Hz–90kHz, –3dB (96kHz sampling). THD at –3dB: 0.0003%, line out; 0.001%, headphone out. Signal/noise: 124dB, line out; 110dB, headphone out. A/D input S/N: 118dB. A/D input THD at –3dBFS: 0.0002%.

SERIAL NUMBER OF UNITS
REVIEWED 93COAI098346 (ST),
 93COAI019499 (STX).

PRICE \$199.95 (each). Approximate number of dealers: Over 150 online retailers.

MANUFACTURER ASUSTeK Computer Inc., 15 Li-Te Road, Peitou, Taipei 11259, Taiwan. US distributor: ASUS Computer International, 44370 Nobel Drive, Fremont, CA 94538. Tel: (812) 282-2787 (support). Fax: (510) 608-4555. Web: <http://usa.asus.com>.

With all the current fuss about getting audio data from a computer to a standalone D/A processor via S/PDIF, USB, FireWire, WiFi, or Ethernet,¹ it has been overlooked that the oldest way to get audio from a PC is to use a high-performance soundcard plugged into the host machine's motherboard. I remember how excited I was when I installed a Sound Blaster Pro 16 board in the 486-based Dell running Windows 3.1 that I was using in the early Clinton era, plugged its analog output into my high-end rig, and played back 16-bit/44.1kHz files.

The first truly high-end soundcard of which I was aware—that is, one that would record and play back data with a 24-bit word length and sample rates of up to 96kHz—was the CardDeluxe from Digital Sound Labs, which I reviewed in September 2000 (see www.stereophile.com/computeraudio/280). Since then, RME and Lynx have come to dominate the high-end soundcard market,² even as, in recent years, the most activity has taken place at the *low* end of the soundcard market, fueled by the needs of video gamers. So I thought I would write about a new entrant in this arena, the Xonar Essence, from ASUS, a Taiwanese maker of motherboards and chips. It costs just \$199.99, or even less from online stores such as Amazon.com.

There are many cards on offer in this sector—ESP's Juli@ (yes, that's how it's spelled) and M-Audio's Audiophile 192 both seem popular with budget-conscious audiophiles—but I was particularly attracted to the Xonar Essence because it is advertised as having a signal/noise ratio of 124dB, which is true high-end territory. It even comes packed with a typical set of measurements, taken with the same Audio Precision SYS2722 measuring system that I use.

Technical details

ASUS sent me both the Xonar Essence ST and Essence STX cards. They appear to be identical, other than the ST being configured to fit into a standard PCI slot on a legacy computer's motherboard, the STX conforming to the newer PCI Express standard. From here on, unless otherwise noted, my comments refer to both cards.

The Essence looks like any other soundcard, with one important difference: Its analog output circuitry is shielded by a grounded metal cover, this anodized black with a stylized image of a Chinese tiger printed in gold. The cover acts as a Faraday shield, preventing RF interference from contaminating the analog signals.

On the card's exterior is a vertical array of jacks. From top to bottom, on gold-plated RCAs, are the right and left analog line outputs, followed by the headphone output on a 1/4" stereo phone jack. Below that, another 1/4" stereo jack serves as both the line and microphone inputs, these selectable with the supplied Xonar Audio Center software. At the bottom is an RCA jack that provides a standard S/PDIF digital output capable of running at sample rates up to 192kHz. An optical S/PDIF driver is placed at the interior end of the jack, so that a TosLink cable can be

1 For a primer on this subject, read my 2008 article at www.stereophile.com/computeraudio/1008servers.

2 The original version of the Sooloos music server, reviewed by Jon Iverson in October 2008 (see www.stereophile.com/mediaservers/908sooloos), used a high-quality RME Hammerfall HDSP 9632 PCI card for its analog output stage.

used with an adapter, if that is preferred. There is no digital input.

The bottom section of the multilayer card carries the analog input circuitry, this based on a pair of R4580 low-noise dual-op-amp chips, followed by a pair of 5532 dual op-amps. These feed a Cirrus Logic CS5381, a 24-bit A/D converter chip capable of operating at sample rates up to 192kHz and offering a S/N ratio of 110dB. At the bottom right of the card are two ASUS-branded LSI chips that do all the audio data processing, including Dolby Digital decoding, Dolby Headphone and Dolby Virtual Speaker processing, and Dolby Pro-Logic II, as well as volume and various reverberation and equalizer functions. Above the larger chip is the power-supply section, featuring multiple voltage-regulator chips, a large number of Nichicon Fine Gold electrolytic capacitors, and two purple Sanyo OsCon caps. As well as the attention paid to the power supply, ASUS makes much of what they call "Hyper-grounding," which minimizes noise that might degrade the analog output signal.

A high-performance, two-channel, 24-bit D/A converter—a Burr-Brown PCM 1792, the same chip used in Musical Fidelity's V-DAC D/A processor—is sited to the left of the supply section, adjacent to a vertical metal shielding strip. The analog output stages lie to the left of this strip and are covered by the removable cover mentioned earlier. Under the cover are two separate output stages, one for the line outs, the other for headphones. The headphone driver is a Texas Instruments TPA6120A2 chip, a current-feedback design capable of sourcing 80mWpc into 600 ohms with very low distortion. The line-level output stage is based on a pair of JRC 2114D dual-op-amp chips (the 2114D is equivalent to the popular 5532 chip), followed by a pair of low-noise National LM 4562 dual op-amps. Although almost all the components used, other than the electrolytic caps, are surface-mount types, the four output-stage op-amp chips are socketed 8-pin types, to allow the owner to experiment with other pin-compatible chips.

Setup

I installed the Essence ST in an older PC running Windows XP with Service Pack 3, but for the STX, I bought a Shuttle PC (AMD Athlon 3.1GHz dual-core processor, 2GB RAM) run-



ASUS Xonar Essence ST PCI computer soundcard

ning Vista Home Premium, which has a suitable PCI-Express slot. The advantage of the Shuttle PCs is that they are dead quiet acoustically, meaning that I could place the PC in my equipment rack and use short interconnects to the preamp. Installation of the Essence cards in both computers was straightforward; an important point about both cards is that they don't draw power from the PCI or PCI-E slot in the computer's motherboard. Instead, they have a hard-drive-type 4-pin socket

that must be separately connected to the PC's power supply. That way, the analog circuitry benefits from being maximally isolated from the noisy ground on the PC's motherboard.

ASUS recommends that, using the Windows Control Panel, you first disable any existing audio hardware before you install the Essence's supplied drivers. Installing the drivers also installs the Xonar Audio Center program, which allows you to adjust the card's settings. Here I ran into a problem: playing a

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96 or 192kHz file with either Foobar 2000 (v.0.9.6.9) or Adobe Audition 3.0 and setting the appropriate sample rate with Audio Center didn't give a sound from the STX card that was noticeably better than standard CD-sourced files. I played some test tones, and it appeared that even when the sample rate was set correctly—confirmed both by selecting the digital output and by checking the sample-rate display on the dCS Puccini D/A processor to which it was attached, and by looking at the STX's properties in the Vista Control Panel's Audio

Devices window—96 and 192kHz files were being downsampled to 48kHz, with spectral components higher than 48kHz aliased into the audioband (eg, a 40kHz tone was reproduced as 8kHz). I reinstalled the driver and the software, but to no avail. (This didn't happen with the ST version of the Essence installed in the older PC running Windows XP.)

The fix was to download and install ASIO4.DLL (see the guide to setting up Windows for audio playback at www.ayre.com/usb-windows.htm),

then select that as the default sound device in Foobar's Playback Preferences dialog. I let ASUS's technical support know about the problem, but by press time they still had not gotten back to me. But it concerned me that if there was an incompatibility between my PC, Vista, the Xonar software, and the jukebox software, there was no immediate way of knowing something was wrong, as music still played. Windows 7 was released as this issue went to press, so I will install the new operating system on the Shuttle PC, along with the ap-

MEASUREMENTS

I examined the measured behavior of the ASUS Xonar Essence ST and Essence STX using the Audio Precision SYS2722 system (see www.ap.com and "As We See It" in the January 2008 issue, www.stereophile.com/asweseeit/108awsi), as well as, for some tests, my Audio Precision System One Dual Domain. I performed a complete set of tests on the STX card, which was installed in an AMD Athlon-powered PC running Vista Home Premium, and repeated some of the tests on the ST card, which was installed in an older Pentium-powered PC running XP. Test-tone WAV files were played back using Adobe Audition 3.0 and Foobar 2000, with ASIO4 selected as the default audio device.

The card would optimally play files only with sample rates of 44.1, 48, 96, or 192kHz. When the card's S/PDIF output was selected, its sample rate followed that of the file being played (ASIO4) or that selected with the Xonar Audio Center. Both the ST and STX cards passed 24-bit data when set appropriately.

The maximum output level from the line outputs was 2.16V; from the headphone jack, it depended on the setting chosen: 885mV (0dB, for headphones with impedances below 64 ohms), 3.52V (+12dB for headphones with impedances of 64–300 ohms), and 7.03V (+18dB for headphones with impedances of >300 ohms). Peculiarly, this maximum level remained the same if the Playback Level was increased to its maximum (12dB)

in the Mixer panel of the Xonar Control Center. All that happened was that signals below the selected gain were amplified, but signals at or above it were unaffected; ie, with 12dB of gain selected, signals at or below –12dB were boosted by 12dB to 0dB; signals above –12dB were hard-limited to the same 0dB. The line output impedance was a moderately low 99 ohms at all frequencies; the headphone output impedance was 10.7 ohms at all frequencies and settings. All the outputs preserved absolute polarity; ie, were non-inverting.

The STX's frequency responses at sample rates of 44.1, 96, and 192kHz are shown in fig.1. A small amount of rolloff (–0.25dB at 20kHz) with 44.1kHz data continues above the audioband with files of higher sample rate, the only difference between the 96 and 192kHz rates being that the former drops like a stone above 46kHz. Channel separation (not shown) was superb, at 120dB at all frequencies.

Fig.2 shows my usual 1/3-octave swept-bandpass analysis of the STX's line output while the card decoded dithered data representing a 1kHz tone at –90dBFS with 16- and 24-bit word lengths, and a dithered 1kHz tone at –120dBFS with 24-bit data. Other than an almost negligible component in the left channel at 60Hz, the traces are free from any power-supply-related spurious. The increase in bit depth drops the noise floor by 15dB, implying a resolution approaching 19 bits, which is excel-

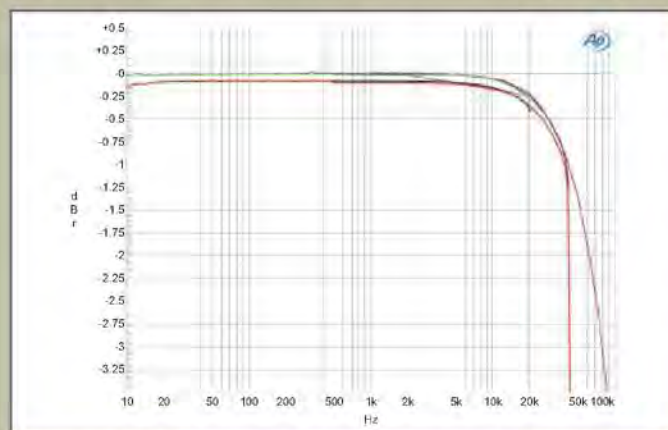


Fig.1 ASUS Xonar Essence STX, D/A frequency response at –12dBFS into 100k ohms with sample rate set to 192kHz (left channel cyan, right magenta), 96kHz (left blue, right red), 44.1kHz (left green, right gray). (0.25dB/vertical div.)

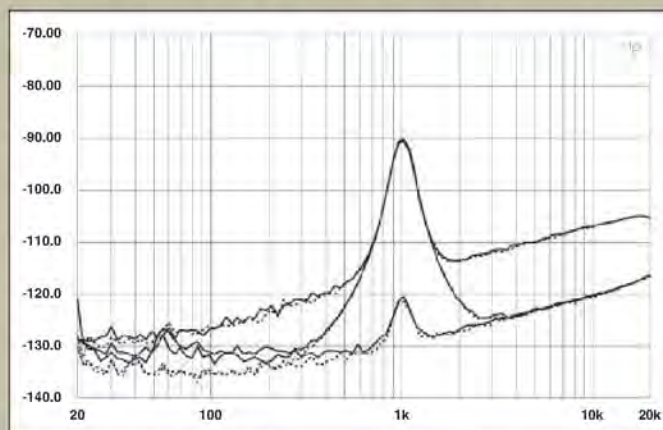


Fig.2 ASUS Xonar Essence STX, 1/3-octave spectrum with noise and spurious of dithered 1kHz tone at –90dBFS with 16-bit data (top) and 24-bit data (middle at 2kHz), and dithered 1kHz tone at –120dBFS with 24-bit data (bottom at 1kHz). (Right channel dashed.)



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propriate ASUS driver, and report in a Follow-Up if this resolves any potential sample-rate problem.

The other issue that raised its head during setup was not a problem as such, but the fact that the STX and ST can't play files with 88.2 or 176.4kHz sample rates in a bit-transparent manner, which they *will* do with 96 and 192kHz data. The cards will indeed play 88.2 and 176.4 files, but will convert their sam-

ple rate on the fly to whatever rate has been set with the Xonar Audio Center. ASUS claims that the Essence cards' built-in sample-rate converter is of very high quality, but there will still be a loss of ultimate sound quality with 88.2 and 176.4kHz files.

Sound

I copied my iTunes library, which I usually use with my Apple G4 Mac

mini, to an external USB drive, which I could use with both the ST and STX computers. Almost all of my auditioning was performed with the STX card, however. Files were played back with Foobar and ASIO4. One boon of this setup was that a helper app enables Foobar to play Apple Lossless files, allowing me to use my iTunes library without having to first transcode the files to FLAC or the uncompressed AIF

measurements, continued

lent considering the noisy RF environment inside a computer. Fig.3 shows a similar spectral analysis, this time performed with an FFT technique and plotted on a linear rather than a logarithmic scale, which is why the noise floor is now flat with frequency rather than gently sloping up. The same 15dB drop in the noise floor is evident, and now some harmonics have been unmasked in the left channel. As in fig.2, the left channel is a little noisier than the right below 1kHz.

With 16-bit data, the linearity-error test was dominated by the recorded dither noise, so I haven't shown the result. I couldn't replicate the manufacturer's claim of an A-weighted signal/noise ratio of 124dB for the Xonar

Essence. However, ref. 1V output, I measured 114dB for the STX, which is still superb, but 102dB for the ST. It's possible that the actual ratio will depend on the computer in which the card is installed. Even so, the STX's level of noise was so low that the waveform of an undithered 16-bit sinewave at exactly -90.31dBFS was superbly well defined, with both the three DC voltage levels and the Gibbs' Phenomenon "ringing" readily apparent, and the waveform beautifully symmetric about the time axis (fig.4). Increasing the word length to 24 bits gave a superbly defined sinewave (fig.5).

The Essence STX's line output stage offered very low levels of harmonic distortion. Fig.6, for example, shows

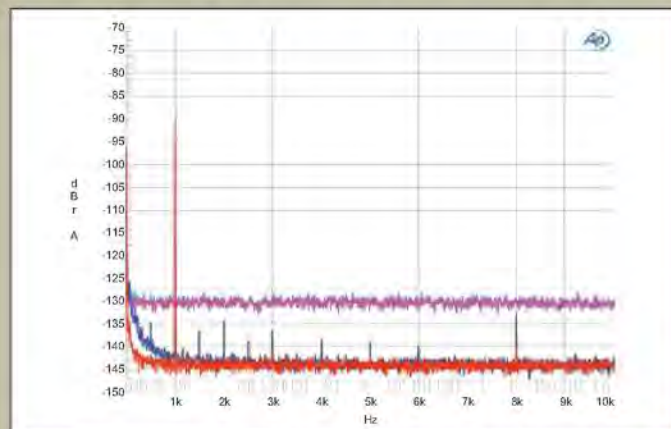


Fig.3 ASUS Xonar Essence STX, FFT-derived spectrum with noise and spurs of dithered 1kHz tone at -90dBFS with 16-bit data (left channel cyan, right magenta) and 24-bit data (left channel blue, right red).

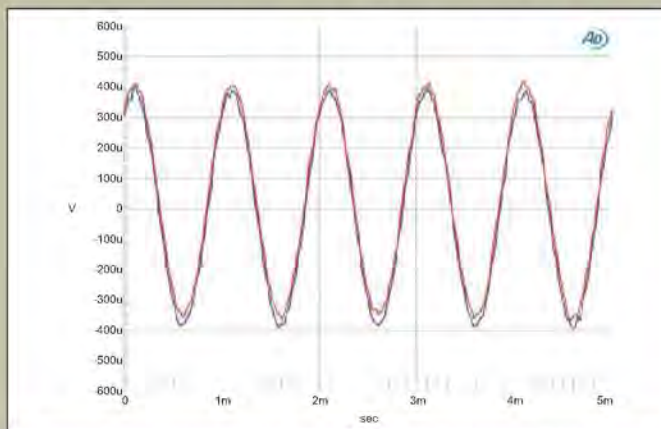


Fig.5 ASUS Xonar Essence STX, D/A waveform of undithered 1kHz sinewave at -90.31dBFS, 24-bit data (left channel blue, right red).

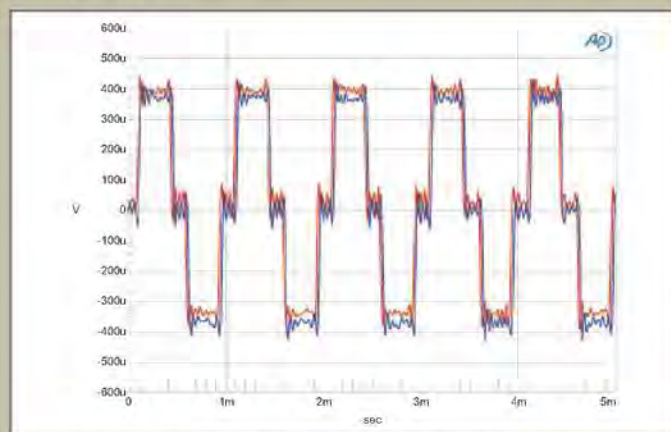


Fig.4 ASUS Xonar Essence STX, D/A waveform of undithered 1kHz sinewave at -90.31dBFS, 16-bit data (left channel blue, right red).

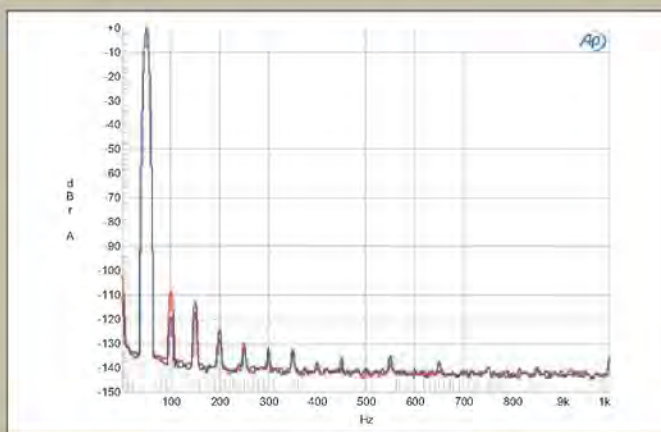


Fig.6 ASUS Xonar Essence STX, line output, spectrum of 50Hz sinewave at 0dBFS into 600 ohms, 24-bit data (left channel blue, right red; linear frequency scale)

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or WAV formats. Another was that another helper app allows Foobar to play DVD-Audio discs in the PC's drive. (The tracks are helpfully identified as being multichannel or two-channel.) I didn't try any of the Essence's DSP effects—I used the card only as a straight, high-quality digital source.

Setting Foobar to Shuffle with CD-sourced files while I sat at the desk in my listening room to edit magazine copy, it was apparent that the Xonar Essence's analog outputs offered serious sound quality. The DVD-A of Neil Young's *Harvest* (Reprise 48100-9) drew me into the music, and the blend of James Taylor's and Linda's Ronstadt's voices behind Young on "Heart of Gold" was well delineated without obscuring the individuality of their sounds.

Returning to the listening chair, low frequencies had suitable impact and weight, the midrange was uncolored, with excellent clarity, and the high frequencies sounded very clean, with good air around sound sources. In Joni Mitchell's "On France They Kiss on Main Street" (from *Shadows and Light*, Asylum 704-2), the cymbals had an excellent combination of sheen and sizzle without the latter being unnaturally emphasized—although, of course, the HDCD decoding was not being applied. And on "The Dry Cleaner from Des Moines," Jaco Pastorius's display of walking-bass virtuosity on fretless Fender was reproduced with authority, as was Don Alias's kick drum: The balance between the "pat" of the initial drum-head transient and the "purr"

of the subsequent body tone was well managed.

The same was true for a 24/96 piano recording I made at the beginning of November for a live *vs* recorded demonstration organized by Philip O'Hanlon of Luxman and Vivid distributor On a Higher Note (see http://blog.stereophile.com/stephenmejias/live_versus_recorded/). I had to record a little closer/drier than was optimal, so that the double hit of the same acoustic was not too disturbing on playback. But the Xonar Essence did a great job of conveying the full weight of the Steinway D as pianist Genadi Zagor pounded its left-hand keys at the climax of Mussorgsky's *Pictures at an Exhibition*. (If you're going to be at the Consumer Electronics Show this month, O'Hanlon will be

measurements, continued

the spectrum of its output reproducing a full-scale 50Hz sinewave into the demanding 600 ohm load. The third harmonic is the highest in level in the left channel (blue trace), the second in the right (red), but all harmonics

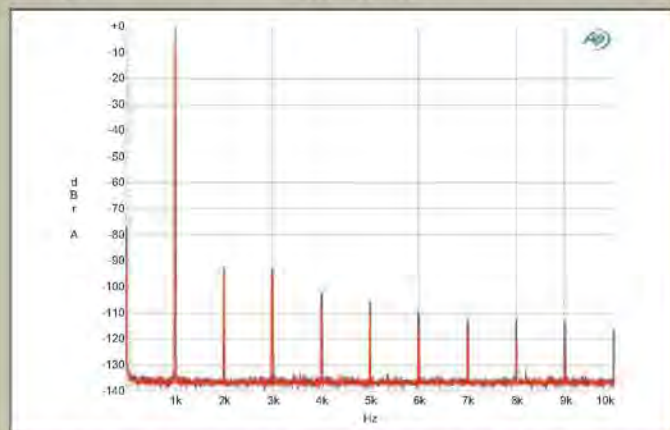


Fig.7 ASUS Xonar Essence STX, headphone output set to +18dB, spectrum of 1kHz sinewave at 0dBFS into 300 ohms, 24-bit data (left channel blue, right red; linear frequency scale).

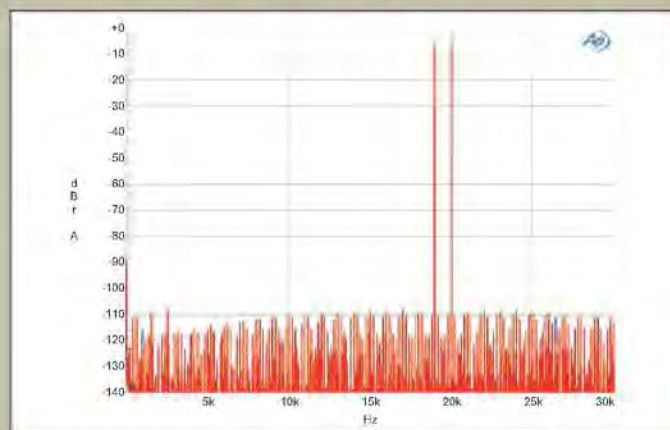


Fig.8 ASUS Xonar Essence STX, line output, HF intermodulation spectrum, 19+20kHz at 0dBFS peak into 100k ohms, 24-bit data (left channel blue, right red; linear frequency scale).

are at or below -110dB (0.0003%), which is superb. From the headphone jack, the THD depended on the setting. With the low-gain setting for low-impedance 'phones, all distortion harmonics were buried beneath the noise floor, even into 300 ohms (not shown). And in the worst case, the +18dB setting into 30 ohms with a full-scale signal, all the harmonics were still below -90dB (0.003%, fig.7). With the high-level, high-frequency intermodulation test, actual intermodulation spurs from the line outputs were all at or below -110dB, even into 600 ohms (fig.8). However, some odd scalloping of the noise floor is apparent, suggesting that something is not quite right.

Word-clock jitter in the STX's TosLink S/PDIF output, measured directly with the AP SYS2722 and a 44.1kHz datastream, was low at 1.48 nanoseconds, which is close to the system's resolution limit. Jitter in the analog output, assessed with the Miller Audio research analyzer but graphed with the SYS2722, was very low, at 170 picoseconds left and 186ps right, this mainly due to pairs of sidebands at ± 1.63 and ± 3.26 kHz (fig.9).

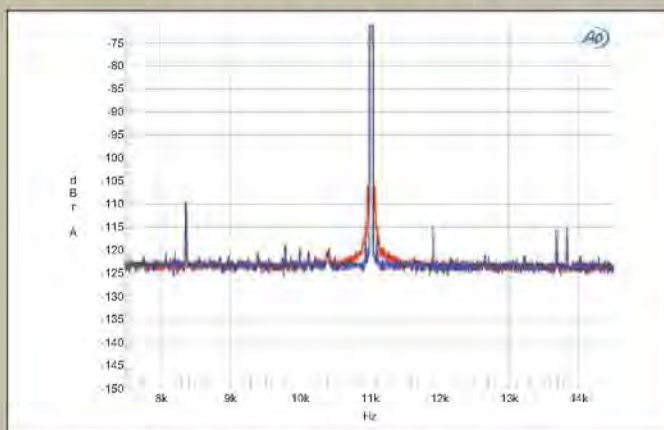


Fig.9 ASUS Xonar Essence STX, line output, high-resolution jitter spectrum of analog output signal, 11.025kHz at -6dBFS, sampled at 44.1kHz with LSB toggled at 229Hz, 16-bit data. Center frequency of trace, 11.025kHz; frequency range, ± 3.5 kHz (left channel blue, right red).

playing this recording in his suite.)

The Xonar Essence STX was doing sterling work for my everyday listening. How would it stack up against other computer-audio solutions?

Comparisons

My first comparisons were with a slightly more expensive product, the \$300 Logitech Squeezebox (see www.stereophile.com/digitalprocessors/906slim), which accepts audio data over a WiFi or Ethernet link, but is limited to 16 bits resolution and a sample rate of 44.1 or 48kHz. Source was the Squeezebox Server program (originally called Squeezecenter) playing files from the iTunes library on my Mac mini, and levels were matched to within 0.1dB at 1kHz.

Ah, *that's* what I was missing with the Xonar card—a remote control! And the joy of having a display that I can read from my listening chair. But the Squeezebox's sound (with its standard power supply) fell a little short of the Xonar Essence's. The bass lacked extension and the highs were grainier. When I played the master files of my recording of Cantus's *While You Are Alive* (CD,

Cantus CTS-1208), the soundstage for Eric Whitacre's *Lux Aurumque* was less well developed, the hall sounding a bit smaller and drier.

The second round of comparisons were against a product that has become our de facto standard for high-end computer playback: Ayre Acoustics' QB-9 D/A processor (\$2500), which features a USB input operating in the jitter-eliminating asynchronous mode (see Wes Phillips' review in October 2009, www.stereophile.com/digitalprocessors/ayre_acoustics_qb-9_usb_dac). Again the source was my iTunes library, this time played from the Mac mini using iTunes, controlled with my iPod Touch via Apple's Remote app, and levels again matched at 1kHz.

Well, as much as I want to tell you that the \$200 Xonar Essence equaled the \$2500 Ayre, it didn't. Low frequencies had even more authority, high frequencies were silkier, and the Essence's soundstage was revealed as being flatter, with less image depth than with the QB-9. Yes, the iTunes-Mac-Ayre combo is irritating in that every time you want to play a file with a different sample rate, you have to exit iTunes,

reset the sample rate in the Audio/Midi setup utility, then reopen iTunes. But the sound from the Ayre on hi-rez files was up with the very best. And, of course, the QB-9 will handle 88.2kHz files in a bit-transparent manner, though it won't, without a forthcoming firmware/hardware upgrade, decode files with sample rates of 176.4 or 192kHz.

But in the immortal words of the inestimable Sam Tellig, there was simply more *there* there with the Ayre. On "North Dakota," Lyle Lovett's duet with Rickie Lee Jones from *Live in Texas* (originally CD, Curb MCAD-11964), the delicate space around the electric guitar solo and the congas was more easily resolved through the QB-9, with both instruments being set farther back in the stage as a result. The Essence was very good, but the QB-9 was all I could imagine wanting or needing. For 12 times the price, of course.

Headphone listening

That the Xonar Essence cards have a dedicated headphone output is a boon for late-night listening. And the fact that their maximum output level can be adjusted to match the imped-

measurements, continued

I then turned to the Essence STX's analog input, this operated at the same sample rates as the playback settings. The input level applied to the analog/digital converter can be adjusted with the Audio Center program's Record Gain control. With this control at its maximum, a signal level of 2.1V RMS resulted in clipping-free digital data with a level of 0dBFS; *i.e.*, the maximum possible. The input impedance was a fairly low 4300 ohms at all frequencies, which will stress some tubed preamps, and the input preserved absolute polarity; that is, positive-going pulses resulted in positive data words. The frequency response of the data depended on the chosen sample

rate, of course. The low end was flat to 20Hz; the high end followed the same ultrasonic rolloff seen in the playback responses (fig.1).

Inexpensive A/D converters tend to start overloading as the input level reaches the maximum possible. The STX's ADC, however, was well behaved even at the very top of its dynamic-range window. Fig.10, for example, shows the spectrum (analyzed in the digital domain) of a 1kHz tone at a level equivalent to -1dBFS, with the word length set to 24 bits and recorded with Adobe Audition. The highest-level harmonics are the third, at -116dB (0.00015%), and the second, at

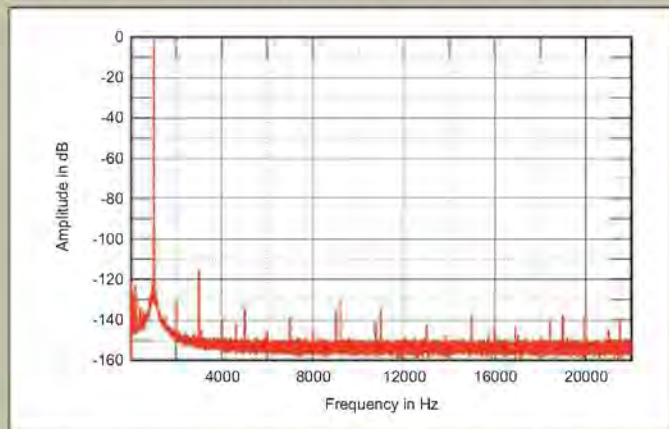


Fig.10 ASUS Xonar Essence STX, line input, spectrum of 1kHz sine wave at -1dBFS, 24-bit data, 44.1kHz sample rate (left channel blue, right red; linear frequency scale).

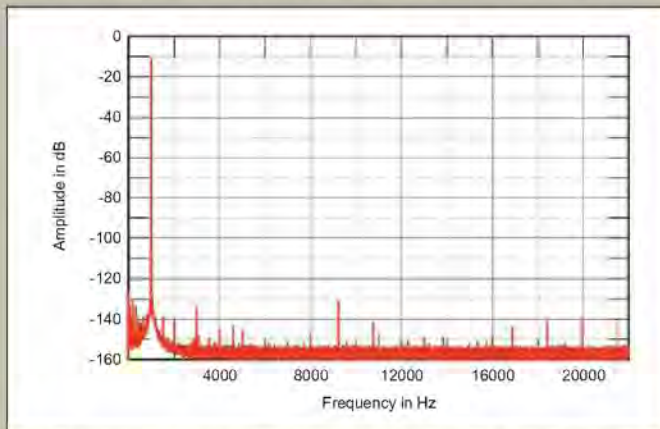


Fig.11 ASUS Xonar Essence STX, line input, spectrum of 1kHz sine wave at -10dBFS, 24-bit data, 44.1kHz sample rate (left channel blue, right red; linear frequency scale).

ance and sensitivity of your 'phones is a blessing. I don't have the space here to go into the cards' sound quality with headphones—I will do so in a Follow-Up—but suffice it to say that the Essences did well in this mode.

Summing up

The Xonar Essence STX and Essence ST soundcards are by far the least expensive way of turning a PC into a genuine high-resolution audio source I have yet encountered. Neither the Essences' resolution nor their low levels of noise are compromised by having to operate in the electrically unfriendly environment of a computer chassis.

Assuming that the problems I encountered using the Xonar Audio Center to play files at 96 and 192kHz were specific to my computer/operating-system setup, both cards worked reliably, and using the ASIO4 virtual playback device did resolve those problems. However, given the increasing number of high-quality files being offered for download with sample rates of 88.2 or 176.4kHz, their omission is a major impediment to my giving either of these cards a universal recommenda-

ASSOCIATED EQUIPMENT

DIGITAL SOURCES Shuttle PC (AMD Athlon 3.1GHz dual-core processor, 2GB RAM) running Vista Home Premium with SP2; A-One PC (Pentium 1.4GHz processor, 2GB RAM, running Windows XP with SP3); with Foobar 2000, Adobe Audition 3.0, and ASIO4 used for playback (see text); Ayre QB-9 USB D/A processor, Logitech Squeezebox 3 WiFi D/A processor, both used with Apple Mac mini (G4 processor, 1GB RAM) running OS10.4.11 for media storage & playback with iTunes 9.0; dCS Puccini SACD/CD player.

PREAMPLIFIER Simaudio Moon Evolution P-8.

POWER AMPLIFIER Simaudio Moon Evolution W-7.

LOUDSPEAKERS Aerial Acoustics 20T V2.

HEADPHONES Sennheiser HD-650.

CABLES Digital: Kimber Illuminations Orchid AES/EBU, AudioQuest VSD-4 S/PDIF, Belkin Gold USB 2.0. Interconnect: AudioQuest Cheetah, Ayre Signature (balanced), Linn (unbalanced). Speaker: AudioQuest Kilimanjaro. AC: PS Audio Lab, manufacturers' own.

ACCESSORIES Target TT-5 equipment racks; Ayre Myrtle Blocks; ASC Tube Traps, RPG Abffusor panels; Shunyata Research Dark Field cable elevators; PS Audio Power Plant 300 at 90Hz (preamp), Audio Power Industries 116 Mk.II & PE-1, APC S-15 AC line conditioners (not power amps). AC power comes from two dedicated 20A circuits, each just 6' from the breaker box.

—John Atkinson

tion. And the fact that the Essences are compatible only with PCs is a problem for those who, like me, have found the Mac a more friendly environment for playing music from a computer. But

for playing back CD-sourced files, I can unreservedly recommend the Xonar Essence, in either of its guises, as the least expensive means of extracting true high-end sound from a PC. ■

–126dB (0.00006%). However, these are close to the residual level of the signal generator I used for these tests, Audio Precision's System One. Dropping the input level to –10dBFS (fig.11) gave a spectrum almost free from distortion, though some enharmonic spurious are visible at a very low level (*enharmonic* means that their frequencies are unrelated to the signal frequency). But even with a signal level equivalent to –90dBFS, these enharmonic tones are still well below the signal level (fig.12).

Figs.10–12 were taken with a sample rate of 44.1kHz. Changing the sample rate to 48 and 96kHz gave very

similar results (not shown). At 192kHz, however, you start to see the effect of the noiseshaping used in the A/D converter to get the necessary baseband resolution as the gentle rise in the noise floor above 50kHz (fig.13).

The ST (PCI) version of the Essence didn't measure quite as well as the STX (PCI Express) version, but both still offer very impressive sets of measurements for a product that is a) affordably priced and b) must be housed in the hostile RF environment of a personal computer.

—John Atkinson

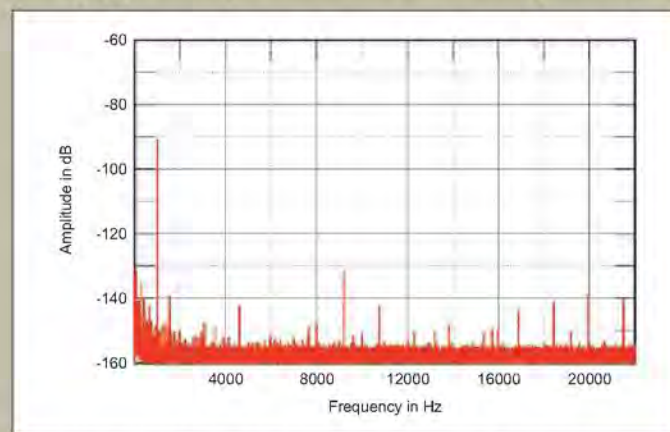


Fig.12 ASUS Xonar Essence STX, line input, spectrum of 1kHz sine wave at –90dBFS, 24-bit data, 44.1kHz sample rate (left channel blue, right red; linear frequency scale).

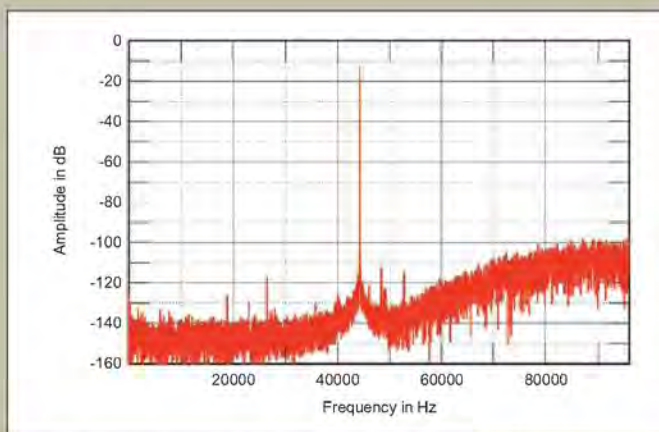


Fig.13 ASUS Xonar Essence STX, line input, spectrum of 44kHz sine wave at –12dBFS, 24-bit data, 192kHz sample rate (left channel blue, right red; linear frequency scale).



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Aesthetix Atlas

WES PHILLIPS

POWER AMPLIFIER

DESCRIPTION Stereo power amplifier with tubed input stage, solid-state output stage, and separate high-pass crossover input with 6dB/octave filter slope and selectable crossover frequency. Tube complement: two 6NS7. Maximum power output: 200Wpc into 8 ohms (23dBW), 400Wpc into 4 ohms (23dBW). Full-power bandwidth: 4Hz–150kHz. THD at full power: <1%. Input sensitivity: 60mV for 1W output, 2.3V for full power. Input impedance: 470k ohms. Output impedance: 0.25 ohm at 1kHz. Signal/noise ratio: 120dB (no reference level quoted). Power consumption: 100W in standby.

DIMENSIONS 18" (462mm) W by 8" (205mm) H by 19" (487mm) D. Weight: 70 lbs (31.8kg).

FINISHES Black, silver.

SERIAL NUMBER OF UNIT REVIEWED 4629.

PRICE \$8000. Approximate number of dealers: 45. Warranty: 3 years, nontransferable.

MANUFACTURER Aesthetix Audio Corporation, 5144 Commerce Avenue, Unit A, Moorpark, CA 93021. Tel: (805) 529-9901. Fax: (805) 529-9902. Web: www.aesthetix.net. US distributor: Musical Surroundings, 5662 Shattuck Avenue, Oakland, CA 94609. Tel: (510) 547-5006. Fax: (510) 547-5009. Web: www.musicalsurroundings.com.



Aesthetix Audio Atlas tubed/solid-state power amplifier

In Greek mythology, Atlas was the Titan who supported the heavens—although he's more commonly shown supporting Earth itself. (Funny thing, that: the globe he was always shown supporting actually did once represent the cosmos, but at some point became the Earth.) According to Hygenus, Atlas was the son of Aether, the personification of the sky and heaven, and Gaia, the personification of the Earth. Atlas was brother to Prometheus (fore-sight), Epithemius (hindsight), and Menoetius (a warrior whose insolence got him smitten by a lightning bolt from Zeus, resulting in a name synonymous with “ruined strength”).

In other words, Atlas was a heavy hitter; if you name something after him, it had better be spectacular. Jim White, chief designer and head honcho at Aesthetix Audio, was surely aware of all this when he had the chutzpah to name his 200Wpc hybrid power amplifier after the brawny Titan. The question is, was he justified in that confidence?

Mapping a Titan

The Atlas (\$8000) is a hefty beast at 70 lbs, and is wrapped in an aluminum enclosure that surrounds the circuits and heatsinks in a cage-in-cage construction. The Atlas's two transformers and three chokes are housed under a stainless-steel cover to prevent magnetic fields from interfering with the audio circuitry. The B+ tube power-supply is discretely regulated with each channel's driver stage supply separately regulated. The 1400VA transformer feeds a choke, which in turn feeds the high-current output section.

The voltage gain stage employs one 6SN7 tube per channel. The current-amplifying output stage, designed in conjunction with Ayre Acoustics' Charles Han-

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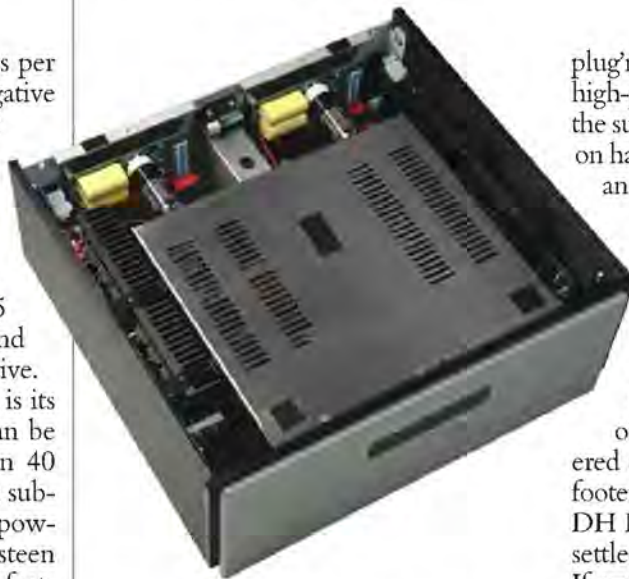
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sen, uses 16 bipolar output devices per channel and there is no global negative feedback. Each channel's output devices are connected by massive copper bus bars, which radically reduces impedance, according to White, though it is fair to note that the Atlas has a relatively high specified output impedance of 0.25 ohm. The Atlas's construction and circuit layout appear to be superlative.

An unusual feature of the Atlas is its 6dB high-pass crossover, which can be set to 16 different values between 40 and 200Hz. It's handy if you use a subwoofer (or a loudspeaker with a powered subwoofer, such as the Vandersteen Quattro); if you don't, it's easily defeated with a direct-input bypass.

The Atlas's front panel features a largish LED display (for a power amplifier), and five contact switches, which control power, illumination, and the high-pass crossover-frequency submenu. The rear panel accommodates single-ended and balanced inputs. The binding posts are the single-knobbed Cardas design. There



An internal shield covers the transformers and chokes.

are also RS-232 and remote trigger inputs, as well as a fused AEC mains plug.

Atlas unmoved

Setup was a breeze. There are no switches with which to choose single-ended or balanced operation, so the Atlas is

plug'n'play—unless you want to use the high-pass filter, which requires accessing the submenu. None of the speakers I had on hand required the filter, so that wasn't an issue.

The Atlas is heavy and benefits from good ventilation, so proper support and placement are required. The amp doesn't get hot so much as quite warmish. Also, while the Atlas has five rubber feet, which damp the underside of its chassis fairly well, I discovered that it benefited from aftermarket footers—I cycled through brass cones, DH Labs ceramic cones, and ultimately settled on Ayre's blocks of myrtle wood. If you feel an \$8000 amp *shouldn't* require aftermarket mods, you're welcome to skip them, but I found the Ayres added a touch more, um, air (or, alternatively, eliminated a slight amount of chassis ringing). I also scattered a few myrtle blocks on the amp's top plate, a conceit that amused my cats, who would sweep them off before settling down for a heated nap. (Cats, too, do a good job of

MEASUREMENTS

I examined the Aesthetix Atlas's measured behavior using mainly *Stereophile's* loan sample of the top-of-the-line Audio Precision SYS2722 system (see the January 2008 "As We See It" and www.ap.com); for some tests, I also used my vintage Audio Precision System One Dual Domain.

Before I test an amplifier, I run it for 60 minutes at one-third its specified power into 8 ohms. Thermally, this is the worst case for an amplifier with a class-B or -AB output stage, and this preconditioning taxes the amplifier's ability to dissipate waste heat. The Atlas's grilles above its internal heatsinks were just too hot to touch after 60 minutes, and the front panel was warm, suggesting its heatsinking is adequate for its power level.

The Atlas's voltage gain into 8 ohms was the same for balanced and unbalanced drive, at 25dB, which is lower than normal. Both inputs preserved absolute polarity (*ie*, were non-inverting), the XLR jacks being wired with pin 2 hot. Specified at a very high 470k ohms for the unbalanced input and twice that for the balanced, the amplifier's input impedances were at least those values at low and mid-range frequencies, dropping slightly but inconsequentially at 20kHz. (With such high impedances, there is inevitably a large error in measuring the exact figure.) The Crossover inputs behaved identically to the main inputs in these respects.

The output impedance was relatively high for a design with a solid-state output stage, at 0.34 ohm at low and middle frequencies, rising very slightly to 0.36 ohm at 20kHz. As a result, the changes in the amplifier's amplitude response, due to the interaction of this impedance with that of our standard simulated loudspeaker (fig.1, gray trace), reached $\pm 0.24\text{dB}$, which will be just audible.

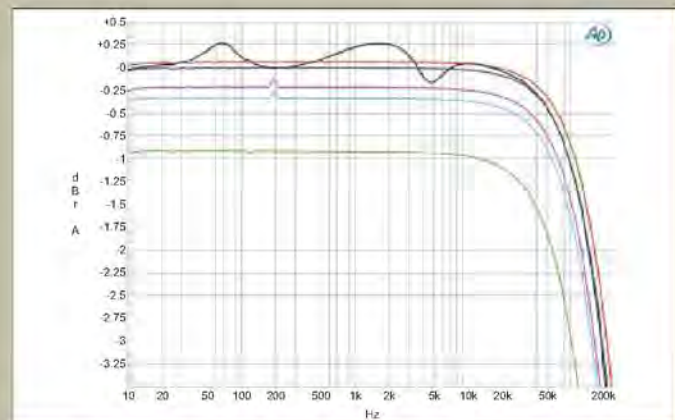


Fig.1 Aesthetix Atlas, frequency response at 2.83V into: simulated loudspeaker load (gray), 8 ohms (left channel blue, right red), 4 ohms (left cyan, right magenta), 2 ohms (green). (0.25dB/vertical div.)

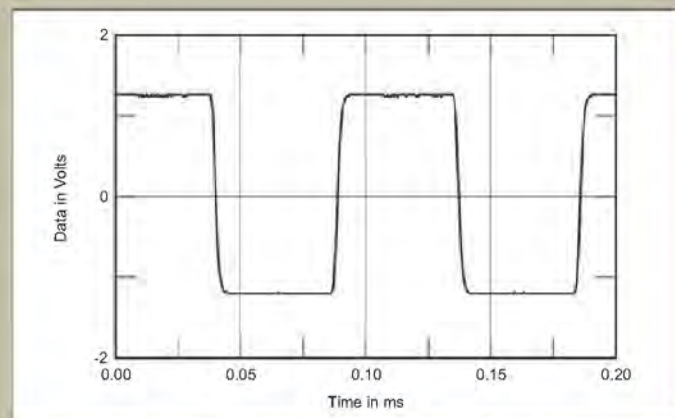


Fig.2 Aesthetix Atlas, small-signal 10kHz squarewave into 8 ohms.

damping the top plate, but they're unreliable suckers.)

I listened to the Atlas driving three different pairs of speakers: Klipsch's F-39 Palladium, Thiel's CS3.7, and Vienna Acoustics' Klimt The Kiss. None—not even the Thiels—seemed to challenge the Atlas's rock-solid control.

Heavenly music

Control, ease, and dynamic command were the first properties I noticed about the Atlas. It took charge of a pair of loudspeakers and made 'em behave.

From the Tin Hat Trio's *Memory Is an Elephant* (CD, Angel 56786), "The Would-Be Czarina" had a timbral correctness that made the trio's subdued dynamic range really pop. Released on Angel, ostensibly a classical label, the THT's version of chamber music has haunting undertones. This track begins with Mark Ortron's jangly guitar juxtaposed over sustained chords from Carla Kilsted's viola. The Atlas gave the duo a vividness that belied their *pianissimo* level. Later, the two instruments exchange

places, leaving Rob Berger's asthmatic organ chords to handle the fundamental. "The Would-Be Czarina" seems simple, but it's not—through the Atlas, it was vivid and engrossing.

On Los Lobos' live cover of Cream's

satisfyingly close.

Of course, that level of audio verité wasn't all the Atlas's doing—almost every rock track I played after "Politician" sounded flat in comparison. That said, my experience has been that truly great

CONTROL, EASE, AND DYNAMIC COMMAND WERE THE FIRST PROPERTIES I NOTICED ABOUT THE ATLAS. IT TOOK CHARGE OF A PAIR OF LOUDSPEAKERS AND MADE 'EM BEHAVE.

"Politician," from *Just Another Band from East L.A.* (CD, Slash 45367-2), David Hidalgo's lead guitar had all the screaming assertiveness of Clapton's original. The Atlas gave the band the appropriate heft of a heavily amplified rock band in a large venue. Through the Atlas, the track rewarded play after play, at increasing loudness. No, you can't reproduce the concert experience at home, but the Aesthetix proved you can get

components accentuate the differences between great and merely good recordings, whereas ordinary hi-fi flattens the effect. The Atlas made Los Lobos jump to life.

The Hilliard Ensemble's performance of the *Introitus* of Orlando di Lasso's *Missa Pro Defunctis* (CD, ECM New Series 1658) had a hushed intimacy that nevertheless filled the chapel acoustic of the Boxgrove Priory, in Chichester. Gordon

measurements, continued

Fig.1 also shows a slight (0.1dB) channel imbalance that appears to be due to the left channel (blue, cyan traces) having a slightly higher output impedance than the right (red, magenta traces). But the bandwidth was wide into all loads, with a -3dB point of 160kHz into 8 ohms, which results in a nicely square 10kHz squarewave (fig.2).

Fig.3 shows the Atlas's frequency response via its Crossover inputs, with the Frequency control set to Off (top pair of traces below 200Hz), and to all settings between 40 and 200Hz. In each case, the -3dB point corresponds fairly closely to the nominal frequency chosen and in all cases, the ultimate rolloff is a gentle 6dB/octave. Channel separation (not shown) was superb, at better than 110dB below 1kHz, and still 89dB in both directions at 20kHz. The unweighted, wideband signal/

noise ratio (ref. 1W into 8 ohms) was an excellent 85dB in the right channel but only 76.75dB in the left, the latter perhaps due to a noisier input-stage tube. Restricting the measurement bandwidth to the audioband gave almost identical results of 89dB left and 90dB right, with an A-weighting filter actually giving a higher result, 96.9dB in the left channel compared with 94.1dB in the right.

I plotted how the Atlas's THD+noise percentage varied with output power using the less-noisy right channel, so that the result wouldn't be obscured by noise at low powers. And at low powers into both 8 and 4 ohms (fig.4, bottom two traces below 10W), the THD+N was indeed low. As can be seen from this graph, however, it rose linearly with increasing power and reached approximately 0.13% before actual clipping, which suggests a

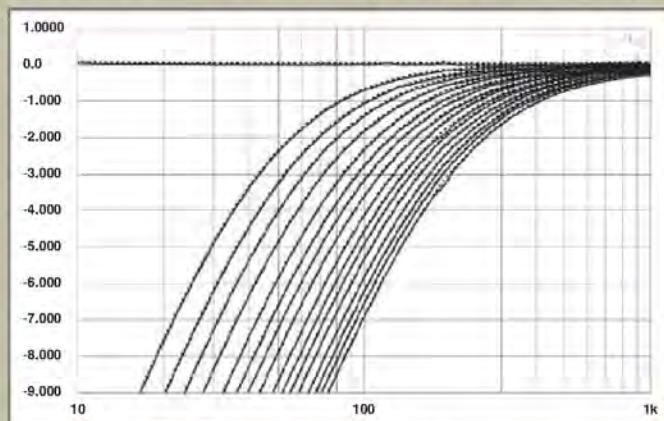


Fig.3 Aesthetix Atlas, Crossover input, frequency response at 2.83V into 8 ohms with control set to (from left to right): Off, 40Hz, 50Hz, 60Hz, 70Hz, 80Hz, 90Hz, 100Hz, 110Hz, 125Hz, 135Hz, 145Hz, 155Hz, 170Hz, 180Hz, 190Hz, 200Hz (1dB/vertical div.).

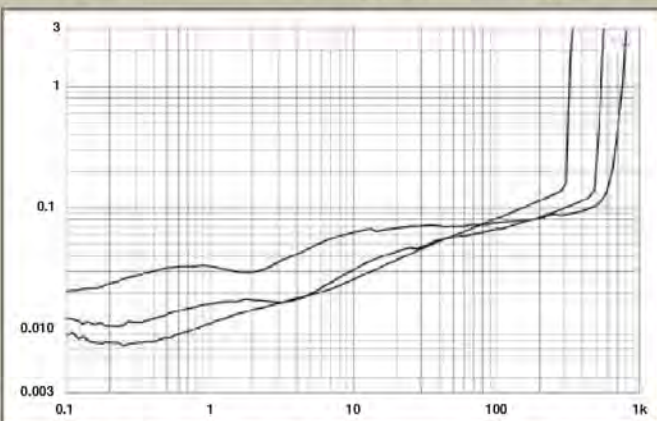


Fig.4 Aesthetix Atlas, distortion (%) vs 1kHz continuous output power into (from bottom to top below 10W): 8, 4, 2 ohms.

Jones's baritone rooted the sound with palpability, letting tenors John Potter and Rogers Covey-Crump flesh out Lasso's moving blocks of sound, as over it all soared countertenor David James. What the Atlas got right about the *Introitus* was that it was simultaneously physical and ethereal. The voices floated—but they also collided against one another. And for all the beauty of the four voices working through Lasso's winding, soaring melodies, the hushed resolution of the final major chords is a physical release. The Atlas got so much so right—*Introitus* was an eargasm.

Charles Mingus's "Cumbia & Jazz Fusion," from the eponymous album (CD, Atlantic 8801), shares with Mahler's music an emotional complexity as well as a rootedness in folk melodies. After a relatively simple opening, "Cumbia" rocks out, buoyed above Mingus's heavy bass line. Various instrumental choirs trade phrases with one another, separated by Ellingtonian ensemble choruses. It's a 28-minute journey into a complex soundscape—*always*, but especially so through the Atlas.

ASSOCIATED EQUIPMENT

DIGITAL SOURCES Ayre C-5xe^{MP} universal player; Apple iBook (1.33GHz, 2GB RAM) with 250GB LaCie & Western Digital 300GB external hard drives; Ayre QB-9, Bel Canto e.One DAC3 D/A converters; Bel Canto USB Link 24/96 USB-to-S/PDIF converter.

PREAMPLIFIER Aesthetix Calypso.

POWER AMPLIFIERS Parasound Halo JC 1 monoblocks.

LOUDSPEAKERS Klipsch Palladium P-39F, Thiel CS3.7, Vienna Acoustics Klimt The Kiss.

CABLES USB: EntreQ Discover. Interconnects: Shunyata Research Aeros IC, Stealth Metacarbon. Speaker: Shunyata Research Aurora, Stealth Dream. AC: Shunyata Research Hydra & King Cobra & Anaconda.

ACCESSORIES Ayre Acoustics Myrtle Blocks, DH Labs ceramic cones, Furutech RDP panels, RealTraps Mini & Mondo traps.

—Wes Phillips

Titan vs Olympian

I'd been lucky enough to hang on to the Parasound Halo JC 1 monoblocks until early fall, so it seemed appropriate that I compare them to the identically priced Atlas. I was about to joke that it's a tough job that *somebody* has to do, but the fact is, comparing amplifiers as good as the Parasound and the Aesthetix is hard work. Apples to oranges is an easy

comparison—but McIntoshes and Park's Pippens? That's tougher.

The Atlas revealed more midrange presence in the Tin Hat Trio's "The Would-Be Czarina"—not an astonishing amount, but the song had a tad more three-dimensionality with the Aesthetix. One thing both amps got right, however, was the overall timbral balance. This music is light as air, and

low or zero degree of loop negative feedback. It was also significantly higher into 2 ohms (fig.4, top trace below 70W). With clipping defined as 1% THD, the Atlas comfortably exceeded its specified output power with both channels driven: fig.4 shows that it clipped at 318W into 8 ohms (25dBW), 535W into 4 ohms (24.3dBW), and, with one channel driven, at 760W into 2 ohms (22.8dBW).

As can be seen in fig.5, the Atlas's THD+N percentage didn't change with frequency, but did change with decreasing load impedance. Again, the left channel was not as well behaved as the right. Peculiarly, and perhaps because of the lack of negative feedback, there was a slight history effect evident in the distortion measurements, in that after a change from a low output level to a high output level, or vice versa, the THD percentage

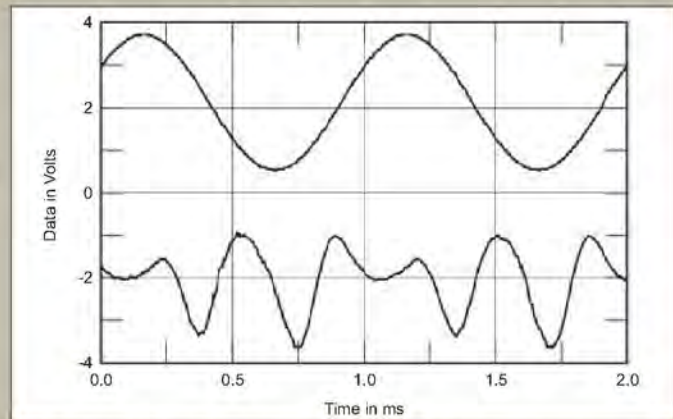


Fig.6 Aesthetix Atlas, 1kHz waveform at 14.3W into 4 ohms (top), 0.025% THD+N; distortion and noise waveform with fundamental notched out (bottom, not to scale).

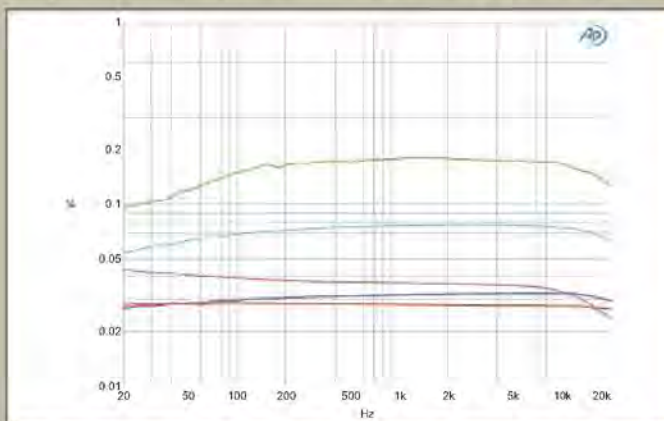


Fig.5 Aesthetix Atlas, THD+N (%) vs frequency at 10V into: 8 ohms (left channel blue, right red), 4 ohms (left cyan, right magenta), 2 ohms (green).

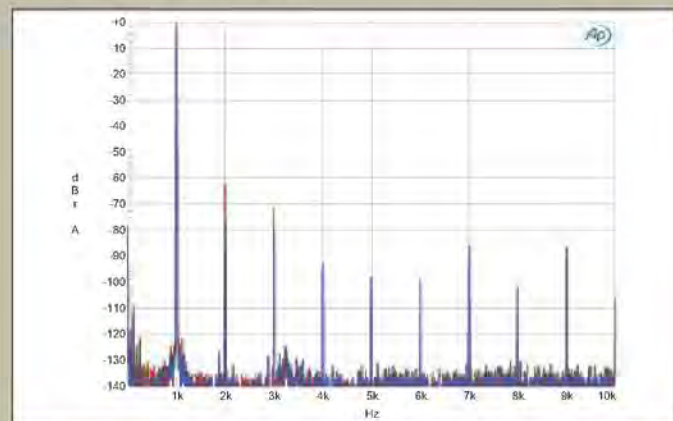


Fig.7 Aesthetix Atlas, spectrum of 1kHz sine wave, DC–10kHz, at 104W into 8 ohms (left channel blue, right red; linear frequency scale).

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Michael Fremer, Stereophile, Vol.31 No.1



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both amps remained true to that delicacy.

While I thought the Atlas got the midrange righter, the JC 1s had more top-end extension. This is an area of endless debate among audiophiles: extension or midrange timbre? It's a matter of preference, in my opinion, and not so much one of right and wrong.

As for Los Lobos' "Politician," while I felt that the Atlas had all the slam needed for kick-ass rock'n'roll, the JC 1s had even more wallop—and, again, a little more HE extension, although I thought it bordered on too much. However, "bordered on" is far from actually *being* too much. I wouldn't call the JC 1s wrong, and another listener might well call them spot-on.

I was less equivocal about the amplifiers' reproductions of Lasso's *Introitus*, although again, the differences were extremely subtle. The Atlas's creamier midrange brought the Hilliard's four voices more vividly to life for me, and placed them deeper in the acoustic. The JC 1s, I felt, were a tad less vibrant in

the middle, and just the slightest bit flatter for it.

On Mingus's "Cumbia & Jazz Fusion," however, the monoblocks did a better job of distinguishing among all of the elements Mingus threw into the piece—the bird calls, percussion, and various folk instruments that populate the field behind the sonic foreground of

This Atlas didn't shrug

Naming an amplifier after the Titan who supported the firmament—or the world itself—is a gutsy thing to do. However, Jim White's Aesthetix Atlas makes a strong case for a power amp being the structural support of a hi-fi system. Certainly, the construction and quality of the Atlas are in keeping with its namesake.

THE AESTHETIX ATLAS IS ONE OF THE REALLY GREAT AMPLIFIERS I'VE HAD IN MY SYSTEM RECENTLY.

this big band. There was also no doubt that Mingus's bass (which is rumored to have been amplified for this, his final recording) had a lot more body and slam through the Parasounds. That's not to say the Aesthetix was without its charms; its ability to wrest color from the midrange gave it an immediacy that also attracted me, if slightly less than the JC 1s.

But for all its strength and grunt, the Aesthetix Atlas revealed itself to be quite graceful in its portrayal of music and music's physical, insubstantial substance. No one could call the Atlas a "bargain" at \$8000, but neither could they gainsay its worth. It's one of the really great amplifiers I've had in my system recently, and I hope I'll be listening to it even more in the months to come.

measurements, continued

took several seconds to settle asymptotically on the new steady-state value.

The distortion waveform at a moderate power level primarily consists of the second and third harmonics (fig.6). At higher levels, a regular series of harmonics makes an appearance (fig.7), though even the highest-level, higher-order components, the seventh and ninth, lie at -86dB (0.006%), which will be below audibility. At low powers, the only harmonics that can be seen above the noise floor are the second and third (fig.8), though the third is higher in the left channel (blue) than in the right (red). The left channel is also noisier, as expected from the earlier tests, with a sideband pair at $\pm 120\text{Hz}$ surrounding the peak at 1kHz; this behavior is power-supply related. The actual 120Hz component, however, lies at a respectable -100dB in the left channel (0.001%) and -104dB (0.0006%) in the right.

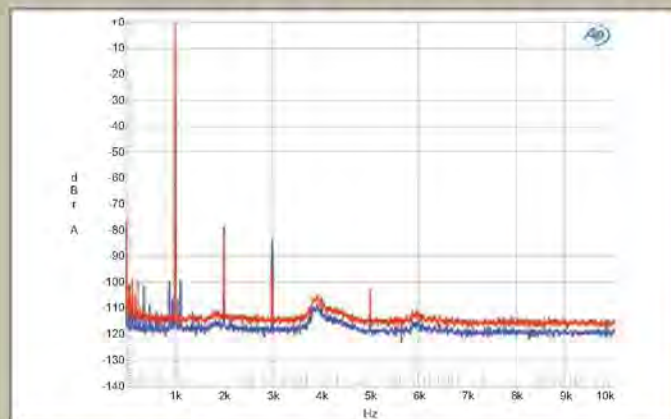


Fig.8 Aesthetix Atlas, spectrum of 1kHz sine wave, DC-10kHz, at 1W into 8 ohms (left channel blue, right red; linear frequency scale).

Finally, with its reduced linearity at high powers, the Atlas gave good rather than great results with the high-power intermodulation test. At a level around 3dB below visible waveform clipping into 4 ohms (fig.9), the 1kHz difference component was the highest in level, at -96dB (0.007%) in the left channel but -66dB (0.05%) in the right. The higher-order intermodulation products at 18 and 21kHz are better matched between the two channels, however, at -77 and -74dB, left and right channels, respectively.

The Aesthetix Atlas is a powerful amplifier, and other than some differences between the two channels that may well be due to problems with an input tube, its measured behavior mainly relates to the designer's decision to not use overall loop negative feedback.

—John Atkinson

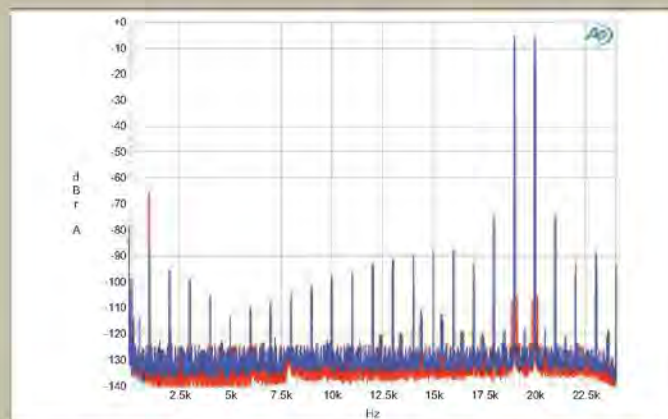


Fig.9 Aesthetix Atlas, HF intermodulation spectrum, DC-24kHz, 19+20kHz at 210W peak into 4 ohms (linear frequency scale).

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7B SST²

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MONOBLOCK POWER AMPLIFIER

Bryston 7B SST² monoblock power amplifier

DESCRIPTION

Solid-state monoblock amplifier. Output power: 600W continuous into 8 ohms (27.8dBW), 900W into 4 ohms (26.6dBW). Gain select and sensitivity: 29dB (2.3V in = 600W into 8 ohms), 1V setting; 23dB (4.6V in = 600W into 8 ohms), 2V setting. Frequency response: not specified. Distortion (1M or THD+noise): <0.005%, 20Hz–20kHz, at 600W; <0.007%, 20Hz–20kHz, at 900W. Noise measured with input shorted, 20Hz–20kHz: >110dB below rated output at 29dB gain (–75dBu), >113dB below rated output at 23dB gain (–79dBu). Slew rate: >60V/μs. Damping factor: >300 at 20Hz at 8 ohms. Input impedance: 50k ohms unbalanced, 20k ohms balanced. **DIMENSIONS** 19" (483mm) W by 5.25" (133mm) H by 17.5" (445mm) D. Weight: 48 lbs (22kg).

SERIAL NUMBERS OF UNITS

REVIEWED 001717, 001718.

PRICE \$8390/pair. Approximate number of dealers: 100. Warranty: 20 years.

MANUFACTURER Bryston Ltd., P.O. Box 2170, 677 Neal Drive, Peterborough, Ontario K9J 7Y4, Canada. Tel: (705) 742-5325. Fax: (705) 742-0882. Web: www.bryston.ca.

Hang around long enough, and your reward is often to be taken for granted or ignored. Canadian electronics manufacturer Bryston Ltd. has been around since the mid-1970s, and while—if coverage by *Stereophile* is any indication—the company has hardly been ignored, it's often taken for granted.

That's due, in great part, to Bryston's inherent conservatism in every aspect of the company's public persona. Maybe they do privately cross-dress and throw debauched bashes and hang from chandeliers, but their public face is one of an engineering-centric, low-key, value-oriented organization more interested in its products' long-term viability than in short-term flash—or *any* kind of flash. Bryston's principals seem more interested in how their products perform on the test bench than in how they look on store shelves, though the latest batch, including the monoblock amplifier reviewed here, do sport attractively shaped front panels of aluminum. Founder Chris Russell moved into audio only after a decade of working for his father's medical-electronics company, beginning in the 1960s. That background may partly explain why the appearance of Bryston components has always been modest and the product line incredibly stable, any changes more evolutionary than revolutionary.

Bryston has deep roots in the demanding but unglamorous world of professional and broadcast audio, which today, because of the changing recording-studio scene, accounts for less than 15% of the company's business. But through the years, the pro-audio connection has brought cost savings that allowed Bryston to offer, at very reasonable prices, products so solidly engineered and built that they routinely came with parts and labor warranties of 20 years—as does the 7B SST². Given the company's longevity, it's likely these warranties are worth more than the paper they're printed on.

Great reviews and great measured performance

Search *Stereophile's* website and you'll find many glowing reviews of Bryston products,



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including Larry Greenhill's October 1996 report on the 7B ST, and his April 2003 Follow-Up on the 7B SST. LG also reviewed the top of the Bryston line, the 28B SST, in January 2008. (Bryston's nomenclature, like its engineering, is evolutionary, not revolutionary. "ST" are the initials of designer Stuart Taylor; the "SST" appended to the name of each upgrade stands for "Super Stuart Taylor.")

Read those reviews and Follow-Ups and you'll find exemplary measurements and listening evaluations praising Bryston products for their generally smooth midrange, extended and non-fatiguing high frequencies, and excellent low-frequency extension and control, with occasional mentions of sonic blandness. You'll also read excellent descriptions of the components' general topologies, including the dual-mono bridged circuitry, in which the two

amplifier modules in each monoblock chassis are wired in series and driven by opposite-polarity signals.

The upgrade from the ST to the SST models removed a switch that let the user change the bridged circuit from series to parallel for driving speakers of ultra-low impedance, but which caused some slight distortion. As I said, there's nothing sexy going on here, just solid, evolutionary engineering.

Like its predecessor, the new 7B SST² offers 600W in fully balanced, class-A/B operation into 8 ohms, or about 900W into 4 ohms—all for \$8390/pair. This is impressive value, particularly given the high build quality for which Bryston is known (each amp is built by hand and individually burned in).

Does the "2" added to the amp's name mean that Stuart Taylor, along with being "Super," is now also a square? Maybe,

but it also means something else. Unlike tube amplifiers, which generally produce lower distortion and noise at lower outputs but more of both at higher outputs, solid-state amps tend to produce lower noise and distortion and better drive capabilities from about one-third power and up, but with distortion rising with the frequency. Bryston claims that its latest design maintains almost unvarying amounts of very low distortion, all of it even-order, throughout the audioband, even as the power output dips from the one-third mark down to as low as 1W. Bryston doesn't say why that circuit innovation equals "squared," but it doesn't really matter.

Other changes made to the 7B SST include new output devices, increased power-supply capacitance, a new low-noise power transformer, new computer-modeled heatsinks, more direct

MEASUREMENTS

I examined the Bryston 7B SST²'s measured behavior using mainly *Stereophile*'s loaner sample of the top-of-the-line Audio Precision SYS2722 system (see the January 2008 "As We See It" and www.ap.com); for some tests, I also used my vintage Audio Precision System One Dual Domain.

Before performing any tests on an amplifier, I run it for 60 minutes at one-third its specified power into 8 ohms, which is thermally the worst case for an amplifier with a class-B or -AB output stage. The Bryston's chassis and heat-sinks were way too hot to touch after 30 minutes of running at this power level, though after the full hour I could still keep my hand on the front panel, implying a temperature of about 131°F (55°C). Clearly, the 7B SST² has enough heatsink capacity for sustained high-power use.

The Bryston's voltage gain into 8 ohms was 29dB when the amplifier was set to "1V" sensitivity, 22.9dB when set to "2V," these figures the same for both balanced and unbalanced drive. Both sets of inputs preserved absolute polarity (i.e., were non-inverting), the XLR jack being wired with

pin 2 hot. The balanced input impedance was 10k ohms across the audioband; the unbalanced stayed close to a moderately low 7.5k ohms at low and middle frequencies, dropping a little, to 7.2k ohms, at 20kHz. This would not have been a problem for the unbalanced outputs of MF's

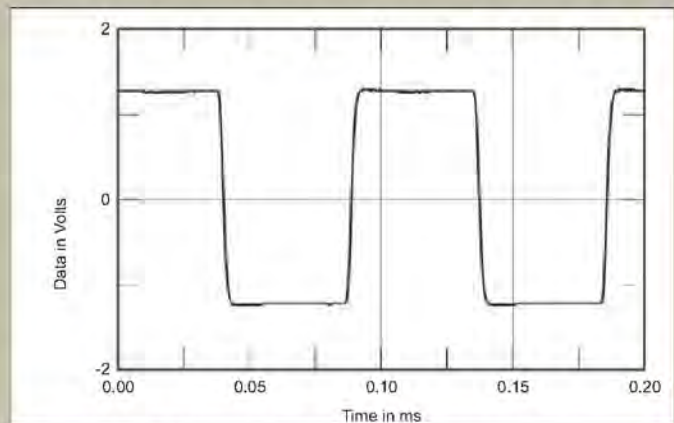


Fig.2 Bryston 7B SST², small-signal 10kHz squarewave into 8 ohms.

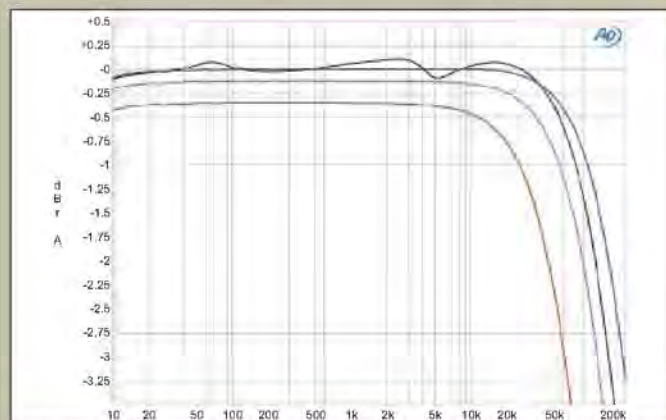


Fig.1 Bryston 7B SST², frequency response at 2.83V into: simulated loudspeaker load (gray), 8 ohms (blue), 4 ohms (magenta), 2 ohms (red). (1dB/vertical div.)

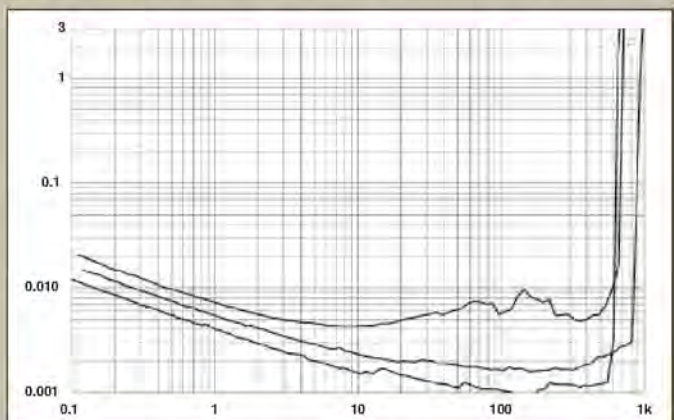


Fig.3 Bryston 7B SST², distortion (%) vs 1kHz continuous output power into (from bottom to top): 8, 4, 2 ohms.

audience



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Greg Weaver, Senior Asst. Editor, Positive Feedback Online 2009 Writer's Choice Award

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"The LSA 4+4 sounded like a full-range speaker in every way, but with a coherence and seamlessness that was undoubtedly due to the lack of crossovers and disparate drivers. The midrange was palpable and immediate without sounding forward or emphasized. The top end had a full measure of detail and resolution, without the lack of air and extension I've heard in the past from full-range drivers. But the most surprising aspects of the LSA4+4 were its bass and dynamics. The bottom-end exhibited real weight and body, with a wonderful palpability of instrumental texture on acoustic bass. Similarly, the system was very quick, dynamic, and agile, with impact behind musical peaks."

Robert Harley, AVGuide.com, June 2009

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connections and less point-to-point wiring, a new power switch, and new cosmetics. Bryston claims that all of the changes in the circuitry contribute to, per Bryston, "improved low-level clarity, focus, spatiality, and the elimination of haze."

Having never reviewed the 7B SST—or any Bryston amplifier—in my system, I have no idea how much sonic improvement, if any, has been wrought by these changes. But I thought it was about time I reviewed a Bryston. And given that I own the Musical Fidelity Titan—a superbly measuring, 1kWpc, two-box amplifier that, at \$35,000, costs more than four times as much as a pair of 7B SST²s—I wanted to test the rigid certainty of the "rationalists" who believe that all amps that measure pretty much the same (the difference in power output aside) will sound pretty much the same.

The 7B SST²'s rear panel has a single-ended RCA jack and a balanced XLR^{1/4}" TRS connector, and a switch for selecting between them. An input-sensitivity

the amp ran all the time it was in my system: cool and normal, the way we like it.

THE TOP END WAS NEITHER BRIGHT NOR ROLLED OFF, NEITHER ETCHED NOR SOFT. **THE BOTTOM END WAS NEITHER LUMPY NOR NOTICEABLY THIN**, NEITHER OVER- NOR UNDERDAMPED.

switch selects between "1V" (29dB voltage gain into 8 ohms) and "2V" (23dB gain). There's a trigger facility for remote auto turn-on (useful in a home theater), and five-way speaker binding posts.

A front-panel LED monitors a variety of conditions, including clipping, though that never occurred. Green indicates normal operation, and that's how

Sound Quality

Though the Bryston's rated power is lower than that of my reference, the Musical Fidelity Titan, with about 900W available into 4 ohms compared with the Titan's 1700W, it had no problem driving the Wilson Audio Specialties MAXX 3 speakers' nominal impedance of 4 ohms. The Bryston's

measurements, continued

darTZeel preamplifier, which is what he used for the auditioning, but the Bryston's balanced input is incompatible with the darTZeel's balanced output, which has an atypically high source impedance that varies with frequency.

The Bryston's output impedance was low for a balanced design, at 0.11 ohm at low and middle frequencies, rising slightly to 0.17 ohm at 20kHz. As a result, the modification of the amplifier's frequency response due to the Ohm's Law interaction between its source impedance and that of the speaker will be small. With our simulated loudspeaker (see www.stereophile.com/reference/60), the variations in response remained within ± 0.1 dB limits (fig.1, gray trace). The amplifier's response into 8 ohms didn't reach -3dB until almost 200kHz (fig.1, blue), which correlates with the well-defined 10kHz square-wave response (fig.2). The 7B SST²'s output does start to fall slightly above 10kHz into lower impedances; into 2 ohms (fig.1, red), the output at 20kHz is down 0.4dB, though this will have no subjective consequences.

The 7B SST² is a quiet amplifier. Its unweighted signal/

noise ratio (ref. 1W into 8 ohms) measured 75.6dB, this improving to 92dB with the measurement bandwidth restricted to the audioband, and to 95.7dB when A-weighted. These figures were in the low-gain setting; the high-gain performance was approximately 3dB worse. Fig.3 plots the percentage of THD+noise in the Bryston's output against power. The downward slope of the plots below 10W implies that what distortion is present is buried beneath the noise. Only into 2 ohms does the amplifier's THD start to rise above the noise at relatively low powers, but even then it remains less than 0.01% below actual waveform clipping. The Bryston's maximum power delivery is specified at 600W into 8 ohms (27.8dBW); the traces in fig.3 indicate that at clipping (defined as 1% THD+N), the amplifier puts out 632W into 8 ohms (28dBW), 930W into 4 ohms (26.7dBW), but 690W into 2 ohms (22.4dBW).

I examined how the Bryston's THD+N percentage changed with frequency at a level of 14V, or 24.5W into 8 ohms, where the distortion was starting to emerge from the background noise (fig.4). The THD starts to rise

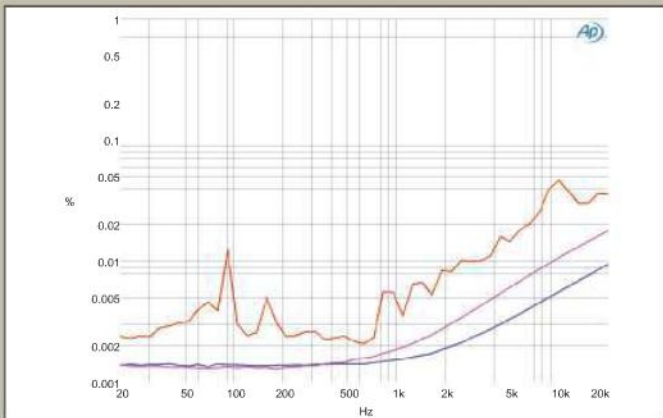


Fig.4 Bryston 7B SST², THD+N (%) vs frequency at 14V into: 8 ohms (blue), 4 ohms (magenta), 2 ohms (red).

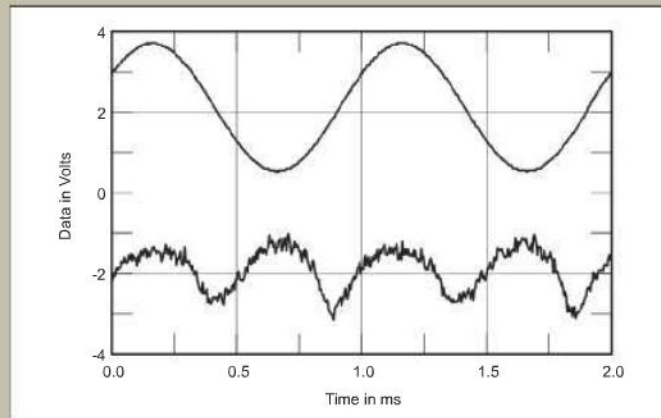


Fig.5 Bryston 7B SST², 1kHz waveform at 196W into 4 ohms (top), 0.0019% THD+N; distortion and noise waveform with fundamental notched out (bottom, not to scale).

tonal “character” was virtually unidentifiable, producing an impressive sense of top-to-bottom continuousness and smooth neutrality. The top end was neither bright nor rolled off, neither etched nor soft. The bottom end was neither lumpy nor noticeably thin, neither over- nor underdamped. The midrange was creamy-smooth, without metallic or hollow aftertastes. In other words, the 7B SST²'s tonal balance was essentially seamless and fully extended—which is also how I'd describe the Titan's tonal balance. Tonally at least, the Bryston was impressively spot-on from top to bottom, and remained so whether played at very low levels or cranked up to louder than comfortable.

Tonally, *nothing* stuck out. But something was missing. Even though everything was there, there seemed to be little “there” there. But of course, when any new piece of gear is inserted in a system,

there's always a period of adjustment. I kept listening.

Instruments and voices from familiar recordings seemed to sound as they should, so what was so different? For starters, the spatial and textural presentations. The Brystons consistently produced soundstages that extended considerably behind the plane described by the speaker baffles. But while images were cleanly layered within that depth, nothing advanced *forward* of that plane, and the image focus seemed relatively diffuse. Transients were rendered smoothly but not sharply.

The Brystons were in the system while I assessed a variety of moving-magnet phono preamps for “Analog Corner” by listening to a wonderful reissue of Billie Holiday's *Music for Torching* (mono LP, Clef/Verve/Speakers Corner MG C-669), recorded in late August 1955 (probably at Radio Recorders), a

few days after Holiday's triumphant performance at the Hollywood Bowl. Here she's backed by a small combo consisting of trumpeter Harry “Sweets” Edison, Benny Carter on tenor sax, guitarist Barney Kessel, pianist Jimmy Rowles, bassist John Simmons, and drummer Larry Bunker. It was clear that the Audio-Technica AT-PEQ3, while a great starter phono preamp for around \$60, simply couldn't convey this recording's instrumental layering, and was smearing Holiday's sibilants. As I moved up the price ladder of MM phono preamps, the soundstage grew in depth and clarity, putting Holiday out in front of the other musicians (though still behind the speakers), the drums behind them, and Carter and Edison even farther back within the confines of the studio, whose rear walls were audibly evident. When I got to the Simaudio Moon LP5.3 phono preamp with outboard power supply,

measurements, continued

above 1kHz, more so into 4 ohms (magenta) than into 8 ohms (blue), due to the falling amount of open-loop gain margin reducing the effectiveness of the negative-

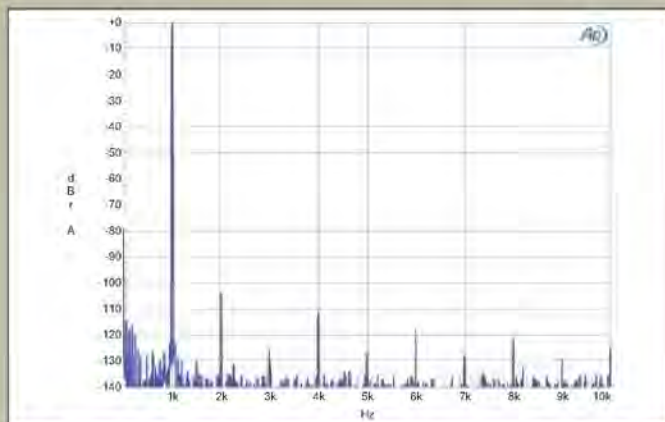


Fig.6 Bryston 7B SST², spectrum of 1kHz sine wave, DC–10kHz, at 196W into 8 ohms (linear frequency scale).

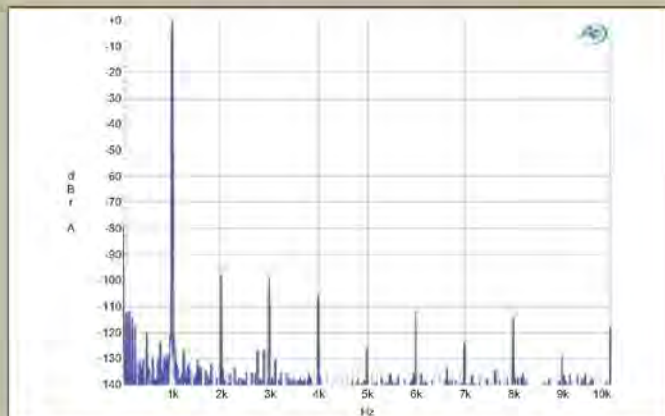


Fig.7 Bryston 7B SST², spectrum of 1kHz sine wave, DC–10kHz, at 382W into 4 ohms (linear frequency scale).

feedback mojo. The amplifier is clearly less comfortable into 2 ohms (red); even so, the absolute distortion levels remain very low at all frequencies.

More important, fig.5 reveals that the distortion spectrum consists almost entirely of subjectively innocuous low-order components, though a comparison of the spectra at high power into 8 ohms (fig.6) and 4 ohms (fig.7) indicates that the third harmonic rises as the output current increases. Note, however, the very low level of AC supply spurs in these graphs. The 7B SST²'s power supply is clearly more than adequate for the high powers this amplifier is designed to deliver. Finally, when tested at close to clipping into 4 ohms with the demanding combination of 19 and 20kHz tones, the Bryston's output spectrum (fig.8) was more like that of a pre-amplifier, with all intermodulation products at or below –100dB (0.001%).

As is usual with Bryston amplifiers, the 7B SST² offers textbook measured performance and usefully high power.

—John Atkinson

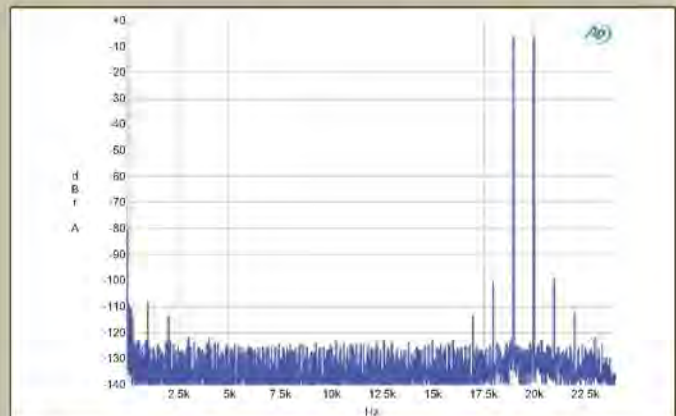


Fig.8 Bryston 7B SST², HF intermodulation spectrum, DC–24kHz, 19+20kHz at 400W peak into 4 ohms (linear frequency scale).



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the improvements in focus, transient clarity, and depth were remarkable—so the Brystons could certainly allow such differences to be heard.

Debate and switch

While the Musical Fidelity Titan and Bryston 7B SST² are both solid-state amplifiers that are low in noise and distortion and high in power output, the two products could not have sounded less similar. When I switched to the MF Titan, there was a major transformation. On “I Get a Kick Out of You,” Holiday’s voice moved forward into the room with far superior, compacted, three-dimensional focus. A cowbell now floated more convincingly behind Edison’s muted trumpet and against a “blackier” backdrop, and the texture of Kessel’s comping had added traction. The break features a drum, piano, and sax solo that sounded tonally fine through either amp, but the textural and spatial differences were profound: with the Titan, instrumental textures were richer, image focus was better, and there was a greater sense of space, with a more focused picture overall.

Chad Kassem had sent along 45rpm test pressings of some albums by Nat King Cole that he’s reissuing on his Analogue Productions label, using, for the first time, Capitol’s original three-track master tapes. With the Brystons in the system, I listened to “When I Fall in Love,” from *Love Is the Thing* (Capitol SW-824). Without first refamiliarizing myself with the sound of this track on a 180gm reissue of this album from the mid-1990s (Capitol/DCC Compact Classics LPZ-2029), it seemed that the 45rpm version produced a wider stage on which I heard a far more detailed rendering of the strings, though with seemingly less woody lushness, and less sparkle in the sound of the harp. Cole’s voice still had the familiar harshness it does on this track, but it was less bottom-heavy and less warm than I remembered it sounding on the DCC—but without hearing the track through the MF Titan, it was impossible to draw any conclusions.

The same track from the DCC reissue sounded bottom-heavy through the Brystons—as it should have—but it lacked the last bit of familiar heft from the tacked-on EQ. The expected edge in Cole’s voice was still evident, but softened and less pronounced, and while that produced a more pleasant sound, it wasn’t necessarily correct. The strings

on the DCC were lush and warmer than on the newer reissue, but the big strings’ growl was softened, and the violins’ sheen was somewhat more homogenized than I was used to hearing.

Overall, through the Bryston amps the DCC edition sounded noticeably less vivid, less holographic, more reserved, and not nearly as dramatically focused as I was accustomed to hearing it. When Cole sings this song’s opening words, “When I fall in love,” it was as if a giant head had been propelled into my lap. Through the Brystons, Cole’s voice was farther back on the stage between the speakers, presented in three-dimensional space not nearly as dramatically—nicely

not that “When I Fall in Love” is bad! This reissue of this classic album will sound stunning through either amp, but it will sound more dramatically so through the admittedly much more expensive Musical Fidelity Titan.

Esoteric, makers of SACD players, recently released three pricey reissues on 200gm LPs. One of them is Falla’s *The Three-Cornered Hat*, with soprano Teresa Berganza, mezzo-soprano Marina de Gabarain, conductor Ernest Ansermet, and L’Orchestre de la Suisse Romande (Decca SXL 2296, Esoteric ESPL 10003). Sampling had yet to be invented in 1918, but it sounds as if Falla had channeled Stravinsky, Mussorgsky,

OVERALL, THROUGH THE BRYSTON AMPS THE DCC EDITION SOUNDED NOTICEABLY LESS VIVID, LESS HOLOGRAPHIC, MORE RESERVED, AND NOT NEARLY AS DRAMATICALLY FOCUSED AS I WAS ACCUSTOMED TO HEARING IT.

rendered, but not nearly as cleanly as I know is possible with this recording.

Switching to the Titan, the DCC reissue once again projected Cole dramatically into the room in tighter, rounder focus, with more chest growl in the lower registers and a sharper etch to his harshly recorded voice. When Cole popped the microphone diaphragm on the word *cool*, the room shuddered. The harp glistened as the harpist’s luxurious plucking of each string sliced through the “black” backdrop. The strings once again exhibited the expected gritty textures.

Through the MF Titan, the 45rpm pressing derived from the three-track master tape sounded more naturally three-dimensional, with the layered strings appearing well in front of the speakers, and even farther apart than through the Brystons. This version’s better resolution of detail was now fully fleshed out, the Titan making it more apparent that far less EQ had been applied to the 45’s bottom octaves, resulting in more natural and appropriate vocal and string tones. The slightly hard leading edge of Cole’s voice remained as a fine ridge of false detail inherent in the recording.

No doubt the new reissue more accurately represents what’s on the tape. Fortunately, the rest of the performances on this album were better recorded—

and some others while composing this colorful ballet. The original master tape was digitized at 24-bits/192kHz, with no compression applied, and decoded via Esoteric A/D and D/A converters, with lacquers cut at the JVC Cutting center (it still exists!). A thousand “one-step” copies were then pressed in Japan from the “father” and inserted in appropriately deluxe packaging.

Recorded in Victoria Hall in Geneva, Switzerland—a narrow, deep, tall “shoebox”—the 1961 recording effectively conveys all of the venue’s depth, height, and narrowness. Both amplifiers managed the depth, particularly with Berganza’s voice, which was placed *way* back. As shown in a photo on the album insert, the Victoria’s unusually narrow stage required that the orchestra’s seating plan be considerably deeper than it was wide. The Titan conveyed this with great clarity, and particularly the sidewall reflections, which seem to wrap around the orchestra in almost a U shape. The Bryston flattened that effect, but it also confused the delineation of the direct and reflected sounds into one great wash that diminished the spatial cues as well as the focus of individual instrumental images. The overall effect was pleasing, especially tonally, but the sonic picture failed to fully resolve.

The Brystons’ reproductions of the

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Employing the same IAL2 pure Beryllium tweeter as the musically unsurpassed Grand Utopia EM, Focal's \$180,000.00 pr. super speaker, the Focal Scala Utopia also incorporates the 3rd Generation flower power midrange "w" driver and "W" woofer found in the Grand Utopia EM but, slightly downsized.

So, it is no wonder that the Scala Utopia sounds like a slightly down sized version of The Grand Utopia EM, because in essence, that is, what it is. And, as the French say, "c'est magnifique!"

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orchestra's full weight and overall dynamic contrasts were impressive, but this recording's macrodynamics fared better than its microdynamics through the 7B SST²s, despite what I'm sure will test out to be the amps' superbly low levels of noise.

Roll over, Beethoven

I sampled a variety of digital tracks through both amplifiers, using the Meridian-Sooloos music server as a source, decoded by the DAC of Playback Designs' SACD player. The Sooloos makes reviewing, not to mention listening, much more easy and pleasant!

I'll spare you the long list of the (virtual) discs and tracks I used, but among them were: Arturo O'Farrill's *Live in Brooklyn* (Zoho Music), one of the best-sounding CDs I've ever heard; Tommy Flanagan's *Sunset and the Mockingbird: The Birthday Concert* (Blue Note); Badfinger's *Straight Up* (Capitol); and the Beatles' *The Capitol Albums Vol.1* (Capitol).

Oddly, it was the primitive-sounding *The Beatles' Second Album*, including the American meddler Dave Dexter's added reverb, that clarified both the differences between the amplifiers and the Bryston's basic personality. The first track, "Roll Over Beethoven," begins with the familiar Chuck Berry guitar figure played by George Harrison in the left channel, with reverb added to the guitar in the right, behind which can be heard a slight hiss that becomes less apparent as the handclaps begin to float in the reverb.

The Musical Fidelity Titan's rendering of the reverb—a microdynamic event—was delicate and three-dimensional, placing it in front of a "black" backdrop, though with the hiss occupying its own distinct space; the Bryston's rendering was cloudy by comparison, and relatively indistinct against a not-so-"black" background, into which the hiss was mixed. The handclaps enter in bold relief through the Titan, fleshy and distinct; through the Brystons, they were softer, less distinctly fleshy, less three-dimensional, and partially submerged in the reverb.

Harrison picks up the guitar part in the left channel, behind him Ringo Starr heavily accenting the splash cymbal, to which Dexter seems to have added more reverb. In the right channel, just before the singing begins, there's a distinct event: seemingly punched-in left-track leakage that adds some drums. John Lennon's double-tracked vocals then begin: "Gonna write a little letter, gonna send it to my local DJ..."

Through the Titan, there was space

between the guitar and drums, each striking of the splash cymbal cleanly rendered. When the right channel's added track begins, it's a distinct event in a separate space. Now there are *two* splash-cymbal tracks, one left, one right, slightly separated in time. When the singing begins, each track of Lennon's double-tracked voice can easily be heard separately in three dimensions. In the left channel, Paul McCartney's bass line has body and texture, and is easily heard separately from Ringo's kick drum.

The space between guitar and drums was smaller through the Brystons. The splash-cymbal strokes washed into each other, the extra-track entrance in the right channel was more of a sneak than a "pop," and it was in the same plane as what was already there. The doubled splash cymbal produced an undifferentiated wash that was *not* in 3D. The vocal's double tracking was harder to unravel, and neither vocal track sounded 3D. Paul's bass line and Ringo's kick drum were less distinct. The instruments' low-end extension was there, but the clarity of each sonic event and its separation from the other events were diminished.

When I then played this track through both amps *without* paying such close attention to details, the Titan sounded like a series of dramatic, information-packed, rhythmically driven, well-focused events; the Bryston, though very similar tonally and very pleasing overall, didn't carve out space and time with nearly the same precision. The Bryston 7B SST²'s attack was softer than the Titan's; its sustain was less well controlled and almost *too* long.

A Second Pair of Amps Arrives

When sent the preprint of this review in order to prepare a possible "Manufacturer's Comment," the folks at Bryston weren't exactly thrilled with what they read. I don't blame them. However, according to Bryston CEO Chris Russell, a running change to a new type of transformer, originally designed specifically for the flagship 28B SST² but later found to produce a marked sonic improvement in both the 7B SST² and 14B SST², had not been included in my review samples, which had been sitting at the publicist's home for many months awaiting my go-ahead to ship. Russell claims (for technical reasons I don't have room to include here) that the transformer change considerably improves the 7B SST²'s focus, dynamics, depth of field, and other performance parameters in which I found the original review samples lacking.

It seemed only fair to give a listen to a pair of 7B SST²s that included the new transformers and compare them with the original units. John Atkinson also was kind enough to schlep over a pair of Parasound's Halo JC 1 monoblocks, which are similarly priced.

Revisiting the Original 7B SST²s

It took but a few minutes to hear what I reported in the review: the soft attack, murky sustain, and mutable decay. I revisited the Beatles' cover of "Roll Over Beethoven" and some of the other tracks, and added a few new ones, including "We Can Talk," from an exceptionally fine-sounding SACD of the Band's *Music from Big Pink* (Capitol/

ASSOCIATED EQUIPMENT

ANALOG SOURCES Continuum Audio Labs Caliburn turntable, Cobra tonearm, Castellon stand; Artemis SA-1 turntable; Graham Phantom B-44 II tonearm; Lyra Titan i, Soundsmith The Voice cartridges.

DIGITAL SOURCES Playback Designs SACD/CD player & DAC, BPT-modified Alesis Masterlink hard-disk recorder, Meridian-Sooloos Music Server.

PREAMPLIFICATION Manley Steelhead, Audio-Technica AT-PEQ3, Audio Valve Sunilda Simaudio Moon LP5.3 (with outboard power supply) phono preamplifiers; darTZeel NHB-18NS, Musical Fidelity Primo preamplifiers.

POWER AMPLIFIER Musical Fidelity Titan, Parasound Halo JC 1 monoblocks.

LOUDSPEAKERS Wilson Audio Specialties MAXX Series 3.

CABLES Phono: Hovland MG2 Music Groove, Furutech AG-12, Esoteric 8N. Interconnect: TARA Labs Zero, Kubala-Sosna Emotion. Speaker: TARA Labs Omega Gold. AC: TARA Labs The One Cobalt, Audience Au24, Shunyata Research King Cobra Helix CX.

ACCESSORIES Finite Elemente Pagode, Harmonic Resolution Systems SXR equipment stands; Shunyata Research V-Ray II Reference, Audience Adept Response, TARA Labs Power Screen power conditioners; Oyaide AC wall box & receptacles; ASC Tube Traps, RPG BAD & Abfuser panels; Symposium Roll-erblocks Audiodharma Cable Cooker; Furutech DeMag & deStat LP treatments; VPI HW-17F, Loricraft PRC4 Deluxe record-cleaning machines.

—Michael Fremer



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Mobile Fidelity Sound Lab). Through the original pair of 7B SST²s, the voices were positively overstuffed. I stand by my original review.

The New 7B SST²s

The differences between the two pairs of amplifiers were immediately and strikingly apparent. The amps fitted with the new transformer produced more credibly focused images in three-dimensional space; sharper, more realistic transients; and greatly improved bass definition. The new pair's attack was more precise, their sustain and decay greatly clarified. The new pair also produced a clearer picture, with more compact and more appropriately sized images in place of the original's somewhat foggy blur. For instance, on "Roll Over Beethoven," the cymbals went from a gauzy *shhsssh* to a cleanly rendered sizzle that was both more detailed and better defined spatially.

Before substituting the Parasound amps, I concluded that the most apparent and obvious sonic signature shared by both pairs of Brystons was a rich mid-band that projected somewhat forward, and large, satisfyingly palpable images, particularly of voices—though imaging overall was still only moderately precise and soundstaging was still somewhat flat, with images rarely stepping forward of a line drawn between the speakers.

Through the new pair of Brystons the voices on the Band's "We Can Talk," for instance, were more appropriately sized, and Levon Helm's drums sounded snappier and more convincing—but I've heard greater snap and crackle and, especially, three-dimensional relief with other amplifiers. While the bass performance was now more credible, it was still on the soft side, particularly in terms of electric-bass attack. Overall transparency was only moderate, with instrumental decay still somewhat less than fully resolved.

Against the Parasound Halo JC 1s

The Parasounds couldn't have sounded more different. Their bass was deeper, tighter, and better controlled, yet not overdamped, so that textures were fully resolved, and rhythm'n'pacing were far more nimble. Image specificity was greater, and dimensionality was more fully expressed. Transients were faster and more effervescent while being free of artificial etch. Reverb was expressed as genuine depth where ap-

propriate, dropping *way* down in level into the noise floor before dissipating. Images leapt from the speakers and floated more freely in a huge three-dimensional space—but most noticeable, and almost immediately, was the delicacy, resolution, and coherence of the reverb's decay.

Neither pair of Brystons matched the Parasounds' low-level resolution and microdynamic delicacy. With the much nimbler, more holographic-sounding Parasounds there was more musical information to consider and more musical pleasure to be had. Detractors might say the Halos' top end was brash, but I counter that that was the fault of the recordings, not the amps, which had a sweet top end despite all their resolution and transparency.

Conclusion

If I owned a pair of Bryston 7B SST²s, I'd make sure to find out whether they contained the old or new transformers. The improvement produced by the new transformers was significant.

Nonetheless, even the improved version, while sounding pleasant enough—and particularly rich in the midrange—couldn't get my Wilson Audio MAXX 3 speakers to live up to their sonic potential, despite having enough power to do so. It's not a matter of cost—the similarly priced Parasounds did so with ease.

But while the better of the two pairs of Bryston monoblocks always sounded pleasant, they rarely sounded exciting. The original pair elicited this conclusion: "I listened happily to the pair of them for a month, concentrating on the many things they did well. But their presentation was sort of like tofu: nourishing, but in need of spicing up to be truly tasty. Replacing the darTZeel NHB-18NS preamplifier with Musical Fidelity's all-tube Primo added needed texture and dimensionality. The Audio Valve Sunilda phono preamp added interest. Changes of cable produced useful results. But overall, the Brystons' presentation lacked the microdynamics I was used to from the Musical Fidelity Titan."

While the second pair of 7B SST²s was clearly an improvement over the first, that conclusion stands. In my experience, it is hard to beat a lot of good, clean power, and the Bryston 7B SST² offers that, plus ultra-low distortion, in a superbly built, reliable package at a very reasonable price. But before buying a pair, listen to the competition. ■

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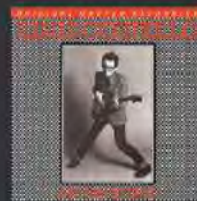
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PM5003

ROBERT J. REINA

INTEGRATED AMPLIFIER



DESCRIPTION Integrated amplifier with remote control, phono stage, and headphone output. Maximum output power, 20Hz–20kHz: 40Wpc into 8 ohms (16dBW), 55Wpc into 4 ohms (14.4dBW). Frequency response: 10Hz–50kHz, +0dB/–1dB. THD: 0.01%, 20Hz–20kHz, 8 ohms. Input sensitivity: 200mV (line), 2.2mV (MM phono). Input impedance: 20k ohms (line), 47k ohms (MM phono). Signal/noise ratio (IHF-A, ref. 1W into 8 ohms): 83dB (MM phono, 5mV input), 87dB (line, 500mV input).

DIMENSIONS 17.2" (440mm) W by 4.1" (105mm) H by 14.4" (369mm) D. Weight: 14.7 lbs (6.7kg).

SERIAL NUMBER OF UNIT

REVIEWED MZ000841000471.

PRICE \$449.99. Approximate number of dealers: 100.

MANUFACTURER Marantz America, Inc., 100 Corporate Drive, Mahwah, NJ 07430-2041. Tel: (201) 762-0500. Fax: (201) 762-6670. Web: www.marantz.com.

Marantz PM5003 integrated amplifier

We crotchety middle-aged (and older) audiophiles frequently sit around and whine about the apparently rising median age of enthusiasts of two-channel audio. "We need to do something to attract the *youts* to our cause!" one of us will say. (*Youts*? See Joe Pesci in *My Cousin Vinny*.)

Well, that's not giving the younger generation enough credit. There is a growing number of young audiophiles, many of them hooked on vinyl. In fact, one of them commissioned this review. When *Stereophile's* own Stephen Mejias found out that Marantz was producing an attractive integrated amplifier *with* phono stage for only \$449.99, he immediately lassoed John Atkinson to request one for review. Shortly thereafter, a sample of the Marantz PM5003 arrived on my doorstep.

How young is Stephen? Well, let's just say that when Mikey Fremmer was his age, Stephen hadn't been born.

What do you get for \$450?

A hell of a lot. The Marantz PM5003, which puts out 40Wpc into 8 ohms (or 55Wpc into 4 ohms), doesn't look like something that costs under \$1000, let alone under \$500. It's rugged and hefty, and its elegant looks remind me of a cross between Audio Research gear and the most expensive Creek electronics. The PM5003 was designed in Japan and is made in China (as are most Marantz products), and includes technology trickled down from two of Marantz's flagship models: the SC-7S2 preamplifier (\$8000) and the MA-9S2 monoblock amplifier (\$16,000/pair).

The PM5003 and its moving-magnet phono stage feature current-feedback circuits intended to exhibit faster rise and fall times and higher slew rates than voltage-feedback



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designs. According to Marantz, a current-feedback amplifier is better able to track music's rapid changes, and should sound more natural. The PM5003 is constructed with discrete components, and includes input buffer circuitry to optimize the signal/noise ratio and channel separation.

The PM5003 is awash with features: five line-level inputs, two record outputs, two pairs of transparent screw-type speaker terminals, a balance control, and a headphone amplifier. There are also controls for treble, bass, and loudness—and, for audio purists, a Source Direct switch to bypass them, just as in my old Audio Research SP11 preamp. Those interested in custom installations will find triple command-code sets as well as an IR flasher input. All of the preamp



Two sets of speaker jacks, two tape loops, three line inputs, and an MM phono input.

section's functions are accessible via the rugged and well-laid-out remote control, which also controls Marantz's CD and DVD players, tuner, and tape deck.

But how does it sound?

Quite remarkable, actually.

The first phase of my listening involved only CDs, to test the line-stage and power-amp sections. The Marantz PM5003's transparent, uncolored midrange made it a pleasure to listen to well-recorded classical woodwinds, such as Anthony Michaelson's clarinet on his

recording of Mozart's Clarinet Concerto, with Robert Bailey leading the Michaelangelo Chamber Orchestra (CD, Musical Fidelity MF 018). Throughout all three movements, Michaelson's instrument was woody,

airy, and vibrant. Jazz piano also shone through the PM5003—the rich, warm, sonorous midrange of Marilyn Crispell's instrument floated naturally into my listening room on her rather minimalist phrasing in the title track of her *Amaryllis* (CD, ECM 1742).

Normally, I wouldn't expect to hear extended, natural highs from such an inexpensive component, but Tiger Okoshi's revealing trumpet on "On Green Dolphin Street," from his *Two Sides to Every Story* (CD, JVC JVCXR-0004-2), was rendered without bite, harshness, or any top-octave rolloff. The burnished

MEASUREMENTS

I examined the Marantz PM5003's measured behavior using *Stereophile's* loan sample of the Audio Precision SYS2722 system (see the January 2008 "As We See It" and www.ap.com); for some tests, I also used my vintage Audio Precision System One Dual Domain.

Before I test an amplifier, I run it for 60 minutes at one-third its specified power into 8 ohms. Thermally, this is the worst case for an amplifier with a class-B or -AB output stage. At the end of this period, the Marantz's case was warm to the touch and the grille above its internal heatsink was too hot to touch. Even so, the amplifier's heatsinking is adequate for its power level.

Looking first at the moving-magnet phono input, this offered an appropriate 38.5dB of gain, measured at the Tape Out jacks, and preserved absolute polarity (ie, was non-inverting). The input impedance was 48k ohms over most of the audioband, dropping slightly to 40k ohms at 20kHz. The RIAA correction, again measured at the Tape Out jacks, was superbly flat in the right channel (fig.1, red trace), but

less good in the left (blue trace), with a -0.26dB shelf in the treble, presumably due to a slightly out-of-tolerance resistor or capacitor. The wideband signal/noise ratio (ref. 5mV input at 1kHz) was a good 57dB, this increasing to 81.2dB when A-weighted, which is only just below specification. The phono amplifier had excellent overload characteristics, offering 27dB of margin at all frequencies.

The Marantz's line inputs can be operated with the tone controls in-circuit or bypassed; Marantz calls the latter mode Source Direct. The maximum voltage gain was the same in both modes of operation, at 37.9dB into 8 ohms, and both modes were non-inverting. The input impedance was the same in both modes, at 24k ohms across the audioband, which is insignificantly higher than the specified figure of 20k ohms.

The PM5003's output impedance was fairly low, at 0.1 ohm at low and middle frequencies, rising inconsequentially to 0.12 ohm at the top of the audioband. As a result, the modification of the amplifier's response driving our

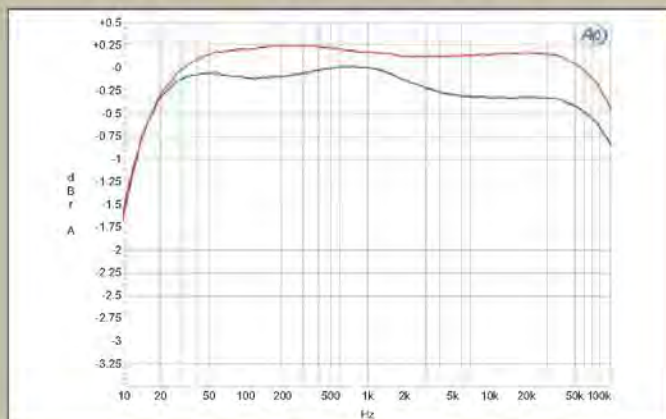


Fig.1 Marantz PM5003, RIAA error of MM phono input (left channel blue, right red; 0.25dB/vertical div.).

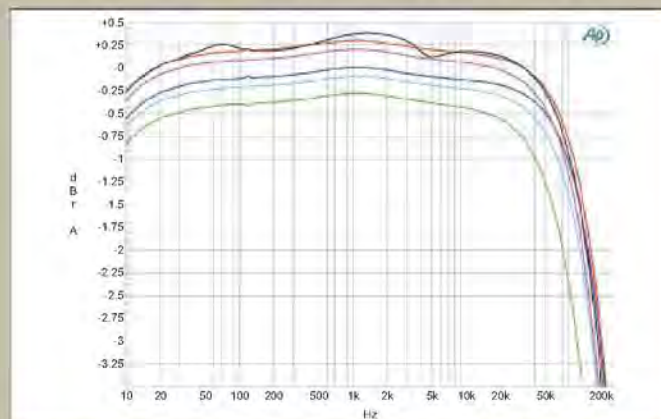


Fig.2 Marantz PM5003, Source Direct frequency response at 2.83V into: simulated loudspeaker load (gray), 8 ohms (left channel blue, right red), 4 ohms (left cyan, right magenta), 2 ohms (green). (0.25dB/vertical div.)

metallic bite of his horn sounded dynamic and as involving as I've heard through far more costly gear. Solo violin is the acid test of high-frequency realism, and Mariko Senju's performance of Paganini's 24 Caprices for Solo Violin (CD, JVC JVCC-6504-2) was searing yet pristine, with no trace of discordant electronic artifacts. Throughout John Zorn's "Orphee," from his *Mysterium* (CD, Tzadik TZ8018), percussionist David Shimmin plays a variety of closely miked high-frequency percussion instruments. Through the Marantz they took on a shimmering, bell-like quality, with natural decay and transients that were quick but not too sharp. The Marantz's articulation of transients also did an impressive job in unraveling the midrange textures in pianist Vijay Iyer's angular, rapid-fire solo on "Revolutions," from his *Reimagining* (CD, Savoy Jazz SVY 17475).

With either the Epos or Monitor speakers, the PM5003's reproduction of bass was natural, deep, dynamic, and fast, with no noticeable overhang. I analyzed Ray Brown's double-bass solo in another cover of "On Green Dolphin Street,"

the opening plucked bass on "River of Orchids," from XTC's *Apple Venus, Vol.1* (CD, TVT TVT3250-2), almost startled me—the notes seemed to jump out of thin air with realistic bottom-end weight and effortless dynamics.

WITH EITHER THE EPOS OR MONITOR SPEAKERS,
THE PM5003'S **REPRODUCTION OF BASS WAS
NATURAL, DEEP, DYNAMIC, AND FAST,**
WITH NO NOTICEABLE OVERHANG.

this one, from *The Poll Winners* (CD, JVC JVCXR-0019-2), with Barney Kessel and Shelly Manne. The sound of the instrument's strings and wood shone through, with a good sense of pacing and no trace of coloration or loss of dynamics, even in the lower-register passages. Similarly,

A fairly intense electric jazz group is a good test of an amplifier's ability to render a coherent sonic picture with realistic pacing. The middle section of "Ice Crushing at All Speeds," from my jazz quartet Attention Screen's *Live at Otto's Shrunk'n Head* (CD, Stereophile STPH020-2),

measurements, continued

standard simulated loudspeaker (fig.2, gray trace) held to within limits of $\pm 0.15\text{dB}$. However, this graph also shows a 0.3dB channel imbalance in favor of the right channel (red

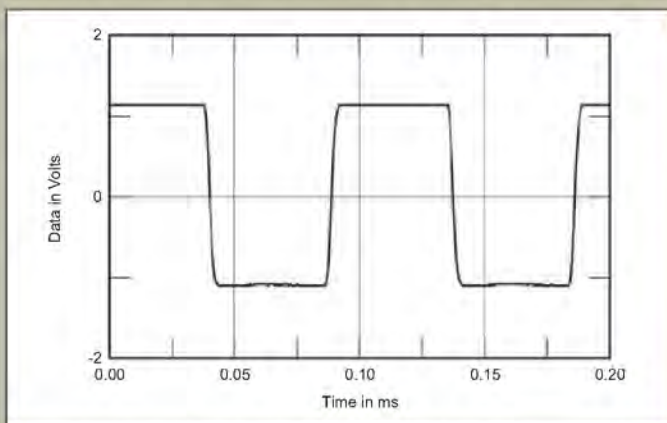


Fig.3 Marantz PM5003, Source Direct small-signal 10kHz squarewave into 8 ohms.

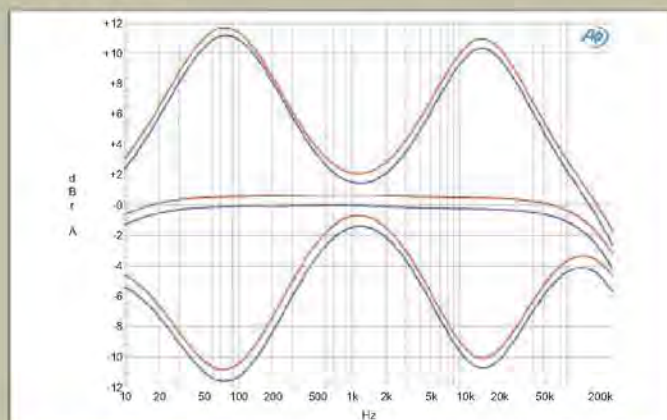


Fig.4 Marantz PM5003, frequency response at 1V into 8 ohms with treble and bass controls set to maximum and minimum positions (left channel blue, right red; 1dB/vertical div.).

and magenta traces). The volume control was set to 2:00 for these measurements; rotating the control clockwise to its maximum setting reduced the imbalance to 0.1dB, now in favor of the left channel. The set of curves in fig.2 was taken in Source Direct mode (ie, with the tone controls bypassed), yet a slight (0.25dB) boost can be seen in the upper midrange that will be just audible. The amplifier performed identically with the tone controls in-circuit but set to their detented, flat positions, so this behavior is not due to residual tone-control equalization. The PM5003 has a wide small-signal bandwidth in Source Direct mode, with a -3dB point of 140kHz, which correlates with a well-shaped 10kHz squarewave response (fig.3). However, setting the volume control to its maximum position increased the upper -3dB point to well above 200kHz, while switching in the tone controls reduced this to 110kHz, and gave a very slightly earlier low-frequency rolloff (not shown).

Fig.4 shows the effect of the treble and bass controls set to their maximum and minimum positions, as well as to their central detented positions. (The measurements were taken at 1V output, to avoid clipping the output stage at extreme control settings.) The maximum treble boost and cut was $\pm 10\text{dB}$ at 15kHz, and the bass figures were $\pm 11\text{dB}$ at 75Hz; both sets are appropriately modest. Channel separation at 1kHz was good at 90dB L-R and 80dB R-L, but it decreased to 70dB in both directions at 100Hz, and to 62dB L-R and 56dB R-L at 20kHz, the latter due to the usual capacitive coupling. The wideband, unweighted S/N ratio (ref. 1W into 8 ohms with the input shorted but the volume control set to its maximum) was the same in both tone-control and Source Direct modes, at 68dB. Restricting the measurement bandwidth to the audioband improved the ratio to an excellent 86.5dB, which is basically to specification.

With both channels active, the Marantz PM5003 met its specified maximum output powers of 40Wpc into 8 ohms

features a forceful, driving rhythm from drummer Mark Flynn playing his entire kit, juxtaposed against a moaning ostinato bass line by Chris Jones that challenges Flynn's rhythmic statement. It all hung together through the Marantz, just as it did on stage the night we recorded it.

But, you say, how well can a 40Wpc integrated produce high-level dynamic slam with such revealing speakers as the Monitor Audio Silver RS6 and the Epos M5? At one point I was playing the Marantz for an audiophile friend, Andy Slusar, who eyed it with suspicion: "How much is this thing? How many watts? I won't be convinced until you put on some loud rock music that dynamically stresses the unit." So I cranked up "Vrooom," from King Crimson's *Thrak* (CD, Discipline KCCDX01), at a level exceeding 95dB. After the thundering dynamic opening had almost knocked me off my seat, I was able to follow the

individual lines of Trey Gunn's bass and Tony Levin's Chapman stick clearly and separately, with nary a trace of compression or congestion in the fortissimo passages. Mr. Slusar: "Okay, you convinced me. The amp is remarkable."

the Marantz listening to vinyl—I was so pleased with its sound that I just kept playing black disc after black disc.

Overall, the PM5003's moving-magnet phono stage is cut from the same sonic cloth as the amplifier's overall sound

I ENDED UP SPENDING NEARLY HALF MY TIME WITH THE MARANTZ LISTENING TO VINYL—I WAS SO PLEASED WITH ITS SOUND THAT **I JUST KEPT PLAYING BLACK DISC AFTER BLACK DISC.**

Still, I was skeptical that a \$450 integrated, however well made and with however many features, could also include a high-quality phono stage. I expected to hear the sound of a throw-away phono stage. I was wrong. I ended up spending nearly half my time with

when processing digital signals. I was particularly taken by its rich, uncolored mid-range as I reveled in the verisimilitude of well-recorded women's voices. Janis Ian on *Between the Lines* (LP, Columbia PC 33394), Doris Day on *Cutting Capers* (LP, Columbia CL1232), Annie Haslam on

(16dBW) and 55Wpc into 4 ohms (14.4dBW). At clipping (defined as 1% THD in the output signal), the PM5003 delivered 42Wpc into 8 ohms (16.2dBW) and 58Wpc into 4 ohms (14.6dBW). (I didn't test the amplifier's power delivery into 2 ohms.) Fig.5 shows how the THD+noise percentage in the amplifier's output changed with output power into 8 and 4 ohms; the downward slope of the traces below 20–30W suggests that the actual distortion present was below the noise floor, and the onset of actual waveform clipping is quite sudden. This graph was taken with the tone controls in-circuit but set to their flat positions. Though the clipping power was identical into both loads, to my surprise the amplifier behaved quite differently at lower powers in Source Direct mode (fig.6). The THD+N is the same as in fig.6, until 1.3W into 8 ohms and 2.6W into 4 ohms (both equivalent to an output voltage of 3.2V RMS), when there is a sudden, drastic rise in THD to just over 0.3%. This then drops a little before the amplifier reaches its actual clipping point.

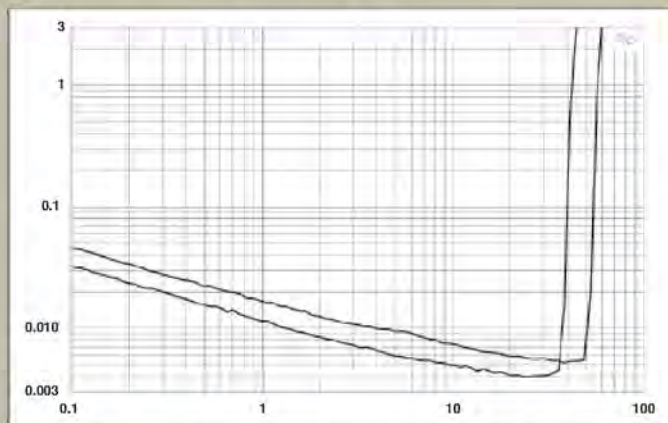


Fig.5 Marantz PM5003, tone controls in-circuit but set to flat, distortion (%) vs 1kHz continuous output power into (from bottom to top): 8, 4 ohms.

This disparity between the two modes can also be seen in the graphs plotting THD+N against frequency at 2.83V (fig.7 with tone controls active, fig.8 in Source Direct

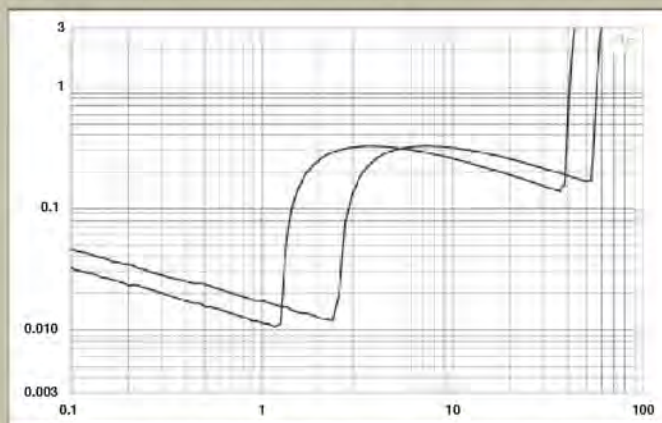


Fig.6 Marantz PM5003, Source Direct, distortion (%) vs 1kHz continuous output power into (from bottom to top below 1W): 8, 4 ohms.

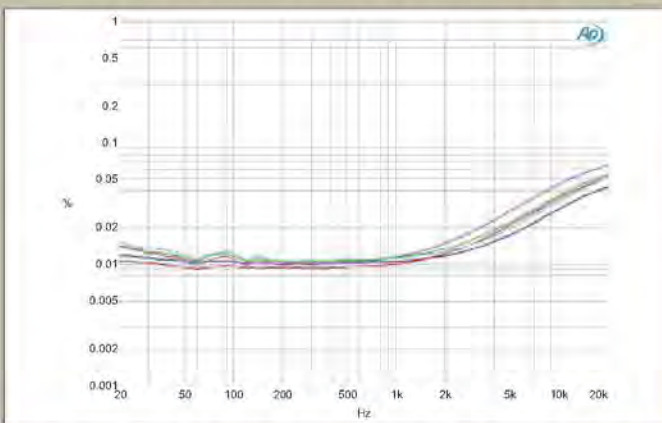


Fig.7 Marantz PM5003, tone controls in-circuit but set to flat, THD+N (%) vs frequency at 2.83V into: 8 ohms (left channel blue, right red), 4 ohms (left cyan, right magenta).

Renaissance's *Scheherazade and Other Stories* (LP, Sire SASD 7510)—all were rich and silky. High-frequency transients were as impressive as they were with CD sources. The broad range of timbres in Jamie Muir's lightning-fast percussive passages on King Crimson's *Larks' Tongues in Aspic* (UK LP, Island LPS 9230) were perfectly reproduced, with no smearing, blunted edges, or high-frequency rolloff.

At the other end of the audioband, Chris Jones puts deep bass synth and electronic percussion blasts front and center in his "Midnight Sun" (45rpm 12" single, Surface Tension STNS002), and the PM5003 rendered them in true lease-breaking, cuff-flapping fashion.¹ Finally, in densely recorded, highly modulated passages such as the interplay of saxophonist Wayne Shorter and drummer Steve

¹ Chris Jones, the bassist of my jazz quartet Attention Screen, is a film composer in his day job, and also releases original electronic music in the dubstep genre.

ASSOCIATED EQUIPMENT

ANALOG SOURCE Rega Planar 3 turntable, Syrnix PU-3 tonearm, Clearaudio Virtuoso Wood cartridge.

DIGITAL SOURCE Lector, Creek Destiny CD players.

INTEGRATED AMPLIFIER Creek 5350SE.

LOUDSPEAKERS Monitor Audio Silver RS6, Epos M5.

CABLES Interconnect: MIT MI-350 CVTwin Terminator & CVT Terminator 2. Speaker: Acarian Systems Black Orpheus. AC: manufacturers' own.

ACCESSORIES Various by ASC, Bright Star, Simply Physics, Sound Anchor, VPI.

—Robert J. Reina

Gadd during Shorter's frantic solo in the title track of Steely Dan's *Aja* (LP, ABC AA1006), the Marantz's phono stage exhibited perfectly clean pacing and a coherent presentation of the passage.

Why shouldn't I spend more money on something else?

You can indeed spend more than the Marantz PM5003's price of \$449.95 and

get much better sound. I compared the PM5003 to my trusty Creek 5350SE integrated amplifier (now known as the Creek Classic), which, at \$1695, costs more than three times as much. The Creek was much more delicate throughout the entire audioband, with smoother, more extended highs and cleaner sibilants. Low-level dynamic nuances were more linear through the Creek, which also packed more of a

measurements, continued

mode). With the tone controls operating (fig.7), the THD is below the noise at frequencies below 1.5kHz or so, as

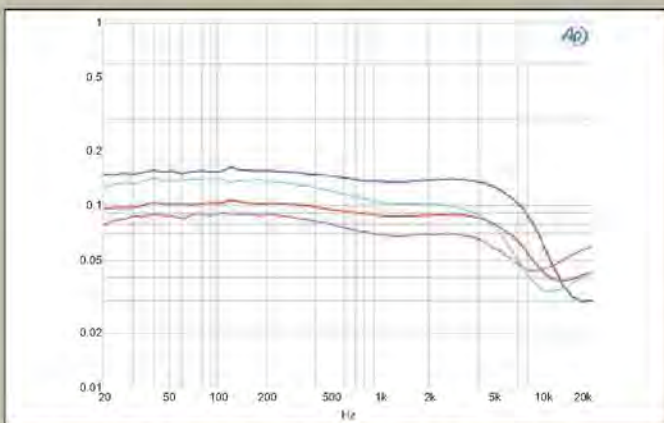


Fig.8 Marantz PM5003, Source Direct, THD+N (%) vs frequency at 2.83V into: 8 ohms (left channel blue, right red), 4 ohms (left cyan, right magenta).

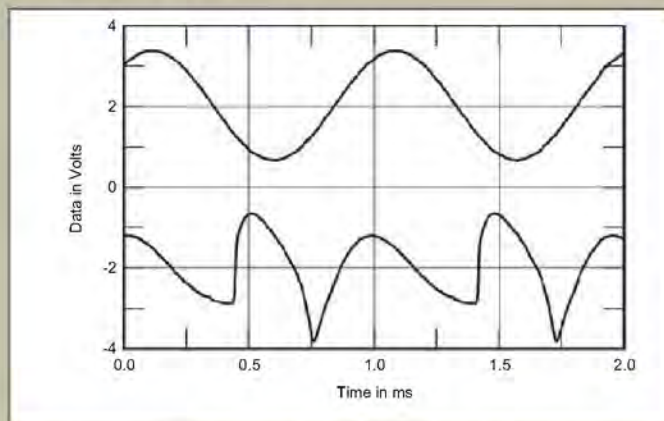


Fig.9 Marantz PM5003, Source Direct, 1kHz waveform at 5.4W into 8 ohms (top), 0.31% THD+N; distortion and noise waveform with fundamental notched out (bottom, not to scale).

predicted from fig.5; it does rise at higher frequencies due to the usual decrease in open-loop bandwidth, though this is not to any significant level, even into lower impedances. In Source Direct mode (fig.8), however, the distortion remains quite high over most of the audioband and comprises many low-order harmonics (fig.9). By contrast, the distortion waveform with tone controls active at the same power level (fig.10) is mainly second-harmonic in nature, though the spikes at the signal's zero-crossing points suggest insufficient bias current for the output-stage transistors.

At power close to clipping, the third harmonic becomes the highest in level in tone-control mode (fig.11), while the second harmonic is highest in Source Direct (fig.12); although a regular series of higher harmonics can be seen in both modes, these are much higher in level in Source Direct. While the 120Hz power-supply hum component in these two graphs is respectably low in both modes, at -103dB left and -95dB right, the 1kHz fundamental and

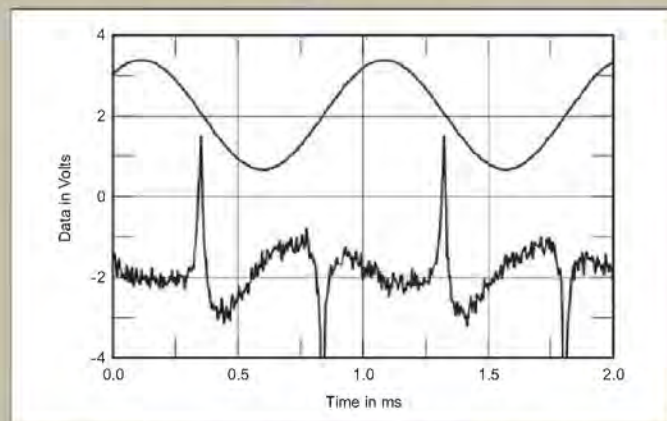


Fig.10 Marantz PM5003, tone controls in-circuit but set to flat, 1kHz waveform at 5.4W into 8 ohms (top), 0.007% THD+N; distortion and noise waveform with fundamental notched out (bottom, not to scale).

wallop at the upper end of the dynamic spectrum. There was also a greater sense of ease with the Creek, most noticeable with vocal recordings. At the low end of the audioband, the 5350SE's midbass was a bit cleaner and extended deeper than the Marantz's.

Still, the Marantz sounded uncolored, with many strengths and no glaring weaknesses. Compared to the Creek, however, the PM5003 had, overall, a slightly grainy texture with all recordings—a relative lack of refinement. The Creek and Marantz were both like dress shirts of fine Egyptian cotton, with the Creek professionally laundered and the Marantz hand-ironed at home. The Marantz is good enough to wear to work, but for the job interview, you'd want to dress up in the Creek.

Just keep in mind that these impressions resulted from listening to a system whose associated components are much

more expensive than what the typical purchaser is likely to hook up to the PM5003; the differences between the Marantz and the Creek 5350SE will likely be less audible with less expensive associated gear.

go so far as to suggest that all well-heeled audiophiles buy one, just to create a benchmark in their minds for what's available for \$450 from today's talented electronics designers. I plan to keep my sample around for a while, as

THE MARANTZ PM5003 IS A STUNNING ACHIEVEMENT: AN UNCOLORED, REVEALING, WELL-BUILT GEM WITH MORE FEATURES THAN ANYONE COULD POSSIBLY ASK FOR AT THE PRICE.

If I buy the Marantz, how will I stand?

You'll stand mighty proud. The Marantz PM5003 is a stunning achievement: an uncolored, revealing, well-built gem with more features than anyone could possibly ask for at the price. I'd almost

I seek out other components to couple with it as candidates to be included in complete two-channel systems that are highly revealing and musical but that retail for a total of no more than \$1000. That ought to keep you *youts* happy for a while.

the harmonics each acquire a pair of sidebands at $\pm 120\text{Hz}$ in Source Direct (fig.12). The PM5003 did well in the demanding high-frequency intermodulation test, at a power level just below visible waveform clipping on the oscilloscope (fig.13). All the intermodulation products were at or below -96dB (0.0015%). This was with the tone controls active, however. In Source Direct mode at the same power level (not shown), the 1 kHz difference component rose from -100dB (0.001%) to -60dB (0.1%).

Bob Reina reports hearing no difference between Source Direct mode and the active but centered tone controls. But its measured performance does indicate that the Marantz PM5003 was not working properly in Source Direct; perhaps something broke in shipping or when I hooked up the amplifier on the testbench, though it's odd that *both* channels were affected. But assuming that the PM5003's measured performance with tone controls active is indicative of its intrinsic performance, it did well for such an inexpensive amplifier. I was worried about

the lack of output-stage bias, but the excellent MM phono stage is a bonus.

—John Atkinson

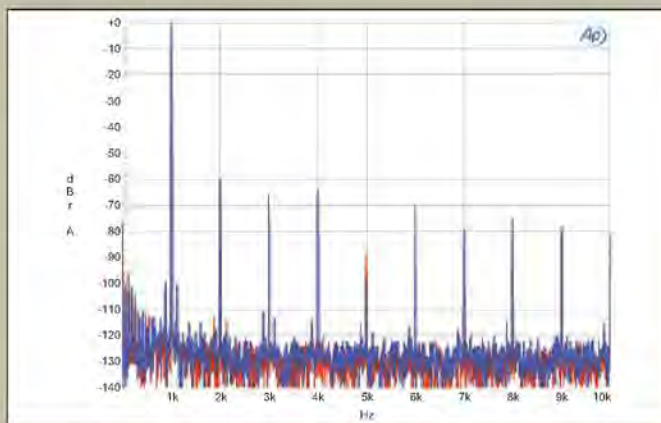


Fig.12 Marantz PM5003, Source Direct, spectrum of 1 kHz sine wave, DC–10kHz, at 27W into 8 ohms (left channel blue, right red; linear frequency scale).

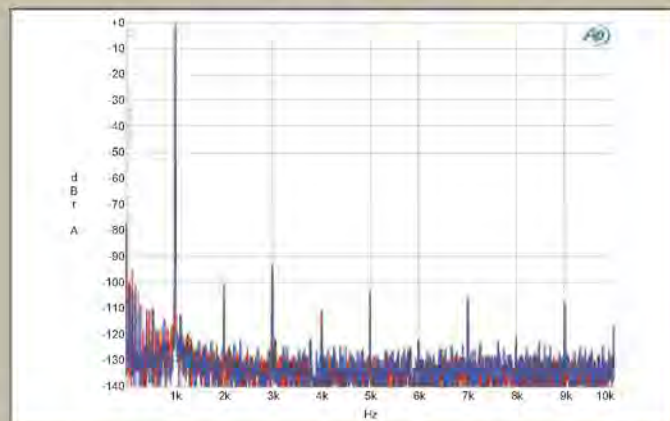


Fig.11 Marantz PM5003, tone controls in-circuit but set to flat, spectrum of 1 kHz sine wave, DC–10kHz, at 27W into 8 ohms (left channel blue, right red; linear frequency scale).

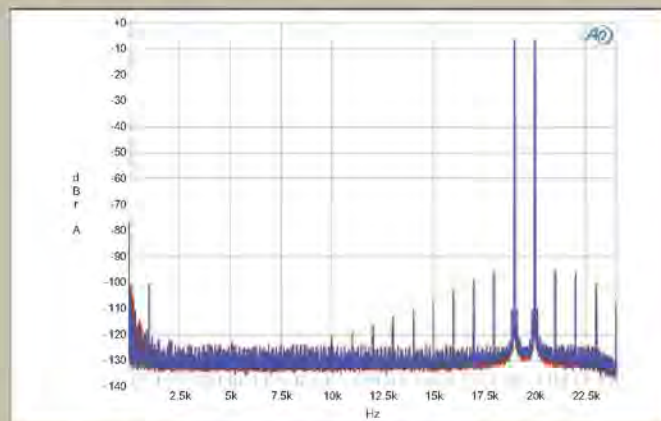


Fig.13 Marantz PM5003, tone controls in-circuit but set to flat, HF intermodulation spectrum, DC–24kHz, 19+20kHz at 22W peak into 8 ohms (linear frequency scale).

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Rogue Audio

M-180

ERICK LICHTER

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Rogue Audio M-180 monoblock power amplifier

DESCRIPTION Tube monoblock power amplifier. Tube complement (hand-matched): four KT88, two 12AU7, one 12AX7. Maximum output power: 180Wpc in ultralinear mode (22.6dBW into 8 ohms). Frequency response: 5Hz–50kHz, ± 1 dB. THD: $<0.1\%$ typical, $<1\%$ at rated power. Input sensitivity: 1.0V RMS. Input impedance: 200k ohms. Power requirements: 115/230V, 50/60Hz. **DIMENSIONS** 14.5" (370mm) W by 7" (180mm) H by 19" (490mm) D. Weight: 55 lbs (25kg).

FINISHES Black or silver.

SERIAL NUMBERS OF UNITS

REVIEWED M150-1059 & 1060.

PRICE \$5495/pair. Approximate number of dealers: 60. Warranty: 3 years, limited; tubes, 6 months.

MANUFACTURER Rogue Audio Inc., 3 Marian Lane, Brodheadsville, PA 18322. Tel: (570) 992-9901. Fax: (570) 992-1978. Web: www.rogueaudio.com.

Two audiophile buddies of mine both own Rogue Audio M-150 monoblocks. I'd always been impressed with not only the sound quality of the M-150, but also its price. For \$4495/pair, I thought my friends got a whole lotta amp for notta lotta dough. In this day and age, it's a rare and wonderful thing to get a pair of monoblocks, made in the US by a real audio company, that give you 150Wpc of tube power for under \$5000. When Rogue came out with an update of the M-150, the M-180 (\$5495), I thought it might be a good subject for my first full review in *Stereophile*. John Atkinson thought so too. I also thought it would be interesting to compare the M-180 with the very tube-like and almost identically priced Pass Labs XA30.5 two-channel amplifier (\$5500), a sample of which I had on hand. (See my Follow-Up in August 2009).

Each Rogue M-180 is based on four Electro Harmonix KT90 output tubes (*vs* the M-150's four KT88s). The M-180 can be run in the more powerful ultralinear mode, in which it achieves its claimed output of 180W; it puts out less juice when run in triode mode. You select the mode with the flick of a switch at the back of the amp. Tube biasing is easily adjusted by hand with four switches and a built-in meter, also on the rear panel. Each output tube can be biased individually, which will help in matching the tubes and lengthening their lives. Each M-180 has 4 and 8 ohm taps, and RCA and balanced inputs.

According to Rogue Audio's website, the \$1000 difference between the M-150 and M-180 gets you "a fifty percent increase in power supply storage, a number of power supply modifications, PRP resistors in all critical spots, Cardas binding posts, Cardas input wiring and Cardas RCA jacks, different input circuitry, Hex Fred high-speed

diodes for the bias supply, polypropylene bypass caps, KT90 output tubes and upgraded small signal tubes." Owners of M-150s can have Rogue upgrade their amps to M-180 status for \$1295/pair.

The appearance of the M-180 is pleasingly simple. Its thick aluminum faceplate (I got mine in silver) has a circular cutout for the power switch and a glowing blue LED to tell you it's on. The build quality is quite good, though the thin metal plates covering the amp's other surfaces seemed a bit flimsy, ringing and even rattling when I pinged them with a fingernail. If I owned a pair, I'd be tempted to damp these panels with any number of substances made for that sort of thing. My only other, entirely personal, criticism of the M-180's appearance is that it doesn't show off its seven tubes, which are in the

back of the amp. It's generally accepted that owning tubes is cool. I want people who come to my house to see tubes in

DAC1 D/A converter, and found that the 4 ohm taps worked best with my Revel F30 speakers, offering tighter bass

I WANT PEOPLE WHO COME TO MY HOUSE TO SEE TUBES IN MY STEREO **SO THEY CAN, BY THE TRANSITIVE PROPERTY OF COOLNESS, THINK I'M COOL.**

my stereo so they can, by the transitive property of coolness, think I'm cool.

Let me turn you on

Setting up the Rogue M-180s was a snap. I exclusively used their balanced inputs, fed directly from my Benchmark

and smoother treble response than the 8 ohm taps. This wasn't surprising, given the Revels' high-order crossovers, their nominal impedance of 6 ohms, and a few low dips in that impedance. Early on in my listening, I did a great deal of comparing the Rogues' triode and ultralinear

MEASUREMENTS

I examined the Rogue M-180's measured behavior using mainly *Stereophile's* loaner sample of the top-of-the-line Audio Precision SYS2722 system (see the January 2008 "As We See It" and www.ap.com); for some tests, I also used my vintage Audio Precision System One Dual Domain.

With two output-transformer taps, two output operating modes (triode and ultralinear), and two inputs (transformer-coupled balanced and unbalanced), the M-180 is basically eight amplifiers in one chassis. After checking tube bias, I performed a complete set of measurements from each tap in triode and ultralinear modes, using the balanced input. I then repeated a representative set of measurements using the unbalanced input. Unless I indicate otherwise, the measurements referred to in this sidebar are of balanced drive.

The Rogue's output preserved absolute polarity (*ie*, was non-inverting) through both inputs and from both transformer taps in both modes. The voltage gain, however, varied according to both mode and tap, though it was the same from both inputs. The maximum gain was from the 8 ohm tap in ultralinear mode, at 31.4dB

into 8 ohms. The lowest gain was in triode mode from the 4 ohm tap, at 28.3dB, again into 8 ohms. The input impedance appeared to be the same for both balanced and unbalanced drive, at 78k ohms at 20Hz, rising to 95k ohms at 1kHz but dropping to 18k ohms at 20kHz. The last might roll off the highs a little with tube preamps having a very high source impedance, but should otherwise be benign.

The output impedance depended on the output tap and frequency, but was similar in ultralinear and triode modes. It was actually low for a tubed design—just 0.33 ohm at 1kHz from the 4 ohm tap in both ultralinear and triode modes, though this did rise to 0.57 ohm at 20Hz and 0.9 ohm at 20kHz. From the 8 ohm tap, the output impedance ranged from 0.57 ohm at 1kHz to 1 ohm at 20Hz and 1.2 ohms at 20kHz. The relatively low output impedance meant that any modification of the amplifier's frequency response due to the Ohm's Law interaction between this impedance and the impedance of the loudspeaker remained within ± 0.25 dB for the 4 ohm tap (fig.1) and within ± 0.4 dB for the 8 ohm tap (fig.2).

The M-180's frequency response also depended on

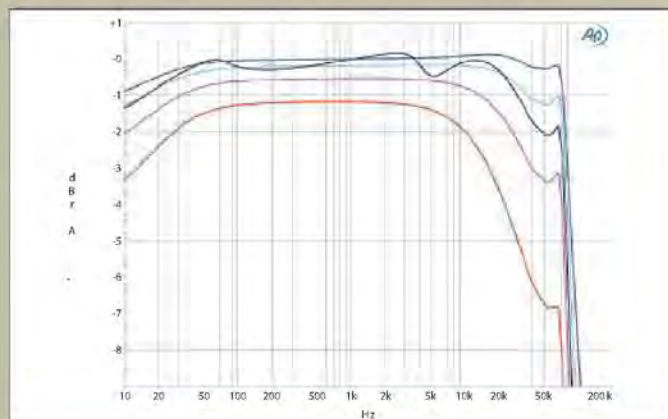


Fig.1 Rogue M-180, ultralinear, 4 ohm tap, frequency response at 2.83V into: simulated loudspeaker load (gray), 16 ohms (blue), 8 ohms (cyan), 4 ohms (magenta), 2 ohms (red). (1dB/vertical div.)

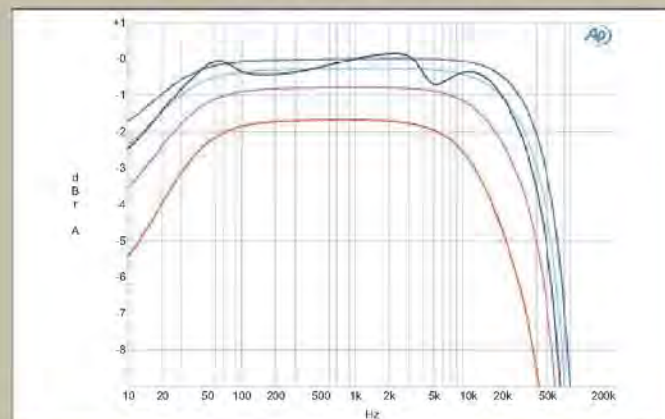


Fig.2 Rogue M-180, triode, 8 ohm tap, frequency response at 2.83V into: simulated loudspeaker load (gray), 16 ohms (blue), 8 ohms (cyan), 4 ohms (magenta), 2 ohms (red). (1dB/vertical div.)

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modes. Given my love of single-ended solid-state amps, I was sure I'd prefer triode mode. Wrong. Though triode sounded a bit more relaxed, its lack of power was very obvious in my system. Triode mode also seemed to cast over the music what I heard as a slight veil or scrim, whereas ultralinear mode played to the M-180s' strengths of immediacy and in-the-room image palpability. After those early experiments, I pretty much left the Rogues in ultralinear mode.

The Rogues' sound opened up a great deal after they'd been played for about 100 hours, during which the tube biases also settled down: After that first 100 hours, the tubes held their biases very well, only occasionally needing a small adjustment—which I take as a sign of good design. I checked the bias often

because I'm bit of a control freak and because it was fun to play with the Rogues' built-in bias meters. I also burned my thumb pretty badly on a KT90 tube one night after a couple of beers—a rookie mistake. Don't drink and bias, kids.

I'd like a bag of chips with a side of all that

My current system, which includes a Pass Labs Aleph 3 two-channel amplifier, has some real strengths and some real weaknesses. On the plus side, it has a natural and relaxed tonal balance with great harmonic coherence and a very articulate and detailed midrange. The Aleph 3 also has a tube-like sound and presents big, round stereo images, which can be very pleasant with many kinds of music. On the minus side, the

Aleph regularly runs out of steam when played loudly. It also lacks that last bit of sparkle and air in the treble, and its bass is a bit round and floppy. I mention all this because, when I put a new amp in my system, I expect—or hope—that it will give me everything my current system does well, *plus* everything it doesn't. It was my hope the Rogue M-180s could give me natural harmonics, great detail, and lots of power, control, and drive.

I began with vocal music. Listening to the CD layer of the Theatre of Voices' recording of David Lang's Pulitzer Prize-winning *Little Match Girl Passion* (SACD/CD, Harmonia Mundi HMU 807496) was as engaging an experience as I've ever had with recorded music. Lang's *Passion* is an accessible modern masterpiece scored for four singers, each

measurements, continued

both the output tap and the operational mode. Fig.1 shows the response in ultralinear mode from the 4 ohm tap; a residual peak is apparent at 68kHz but is counteracted by the increasing rolloff as the load impedance decreases. In the worst case, into 2 ohms, the response is down 2.4dB at 20kHz. The low frequencies also roll off more with decreasing load, but not to any significant

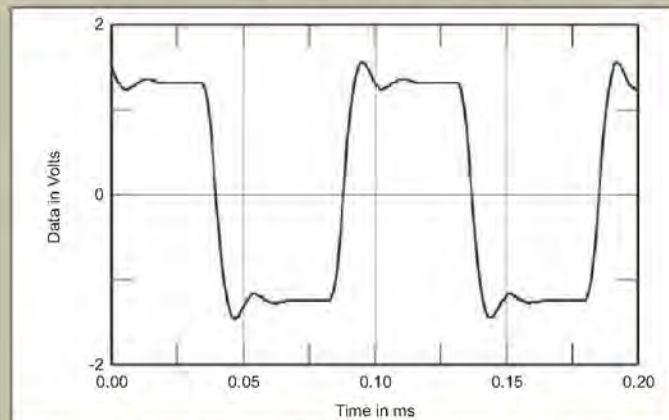


Fig.3 Rogue M-180, ultralinear, 8 ohm tap, small-signal 10kHz squarewave into 8 ohms.

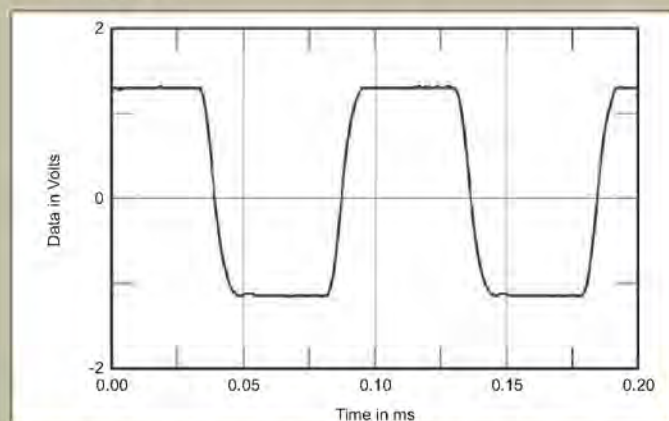


Fig.4 Rogue M-180, triode, 8 ohm tap, small-signal 10kHz squarewave into 8 ohms.

extent. There is no sign of any ultrasonic response peaking in triode mode (fig.2). The 10kHz squarewave response in ultralinear mode (fig.3) shows that the ultrasonic response peak is associated with a single cycle of damped oscillation; as expected, the 10kHz waveform in triode mode is free from ringing (fig.4), while a 1kHz squarewave is reproduced in textbook fashion, with sharp corners and flat tops (fig.5).

The Rogue M-180 is not the quietest of amplifiers; its unweighted, wideband signal/noise ratio (ref. 1W into 8 ohms, with the input shorted) measured 71.2dB from the 8 ohm tap in ultralinear mode, 74dB in triode mode. The measurements were about 2.5dB better from the 4 ohm tap. Restricting the measurement to the audioband improved the ratio to 77.3dB/80dB, while A-weighting the measurement gave a figure of 92.3dB/95dB.

How the M-180's THD+noise percentage varies with output power into loads ranging from 2 to 16 ohms is shown in figs.6–9 (respectively: ultralinear mode, 8 ohm tap; ultralinear, 4 ohm tap; triode, 8 ohm tap; triode, 4 ohm tap). Visible in these four graphs are some common factors: the linear rise in THD with power suggests a low amount

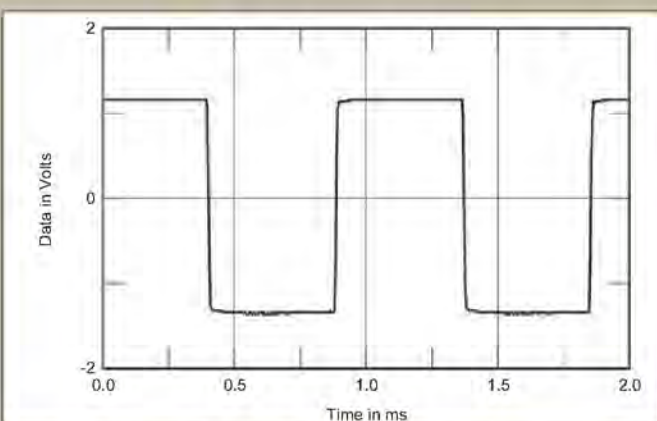


Fig.5 Rogue M-180, triode, 8 ohm tap, small-signal 1kHz squarewave into 8 ohms.

of whom also plays light percussion instruments. The text fuses Hans Christian Andersen's tale of the frozen little match girl with texts from Bach's *St. Matthew Passion*. Each voice and percussion instrument was rendered with an in-the-room weight and realism that had me reminding myself to breathe. Best yet, I sat through the entire 32 minutes of this heartbreaking work without writing down a single note about the sound. With the Rogues, my system simply communicated the music, with less between me and the event than I'd ever heard in my home.

I first listened to the Lang using Sain Line Systems' Pure balanced, a nicely designed interconnect based on cryogenically treated copper that has an open but warm character. Switching

to Sain's Reference silver, a balanced ribbon interconnect made of silver, opened up the sound even more without making it too cool or too bright. My impression was that the Rogue M-180s could handle being associated with very revealing equipment and accessories, and that I didn't need cables or other gear with complementary colorations to act as tone controls. In fact, as other equipment came in for review during the Rogues' stay here, the M-180s with Sain Reference silvers proved a very revealing and neutral combination for evaluating the sound of my other gear. The M-180s were also absurdly quiet. With the volume turned up, no music playing, and my ear to the tweeter of a highly efficient Klipsch Palladium PB-17B speaker, I heard almost no hiss.

Turning to music with some fun studio trickery, I put on Alif Tree's jazzy *French Cuisine* (CD, Compost 205-2), which features samples (including of Nina Simone), electronic music, and some great jazz playing, in an organic fusion of studio production and sweet tunes. My initial reaction: "Holy Bass, Batman!" From the album's very first note, the Rogue M-180s grabbed hold of my Revel F30s' woofers in a way that not even the Musical Fidelity 550K Superchargers, that I wrote about in December 2008, did. In terms of their drive and bass control, the Rogue M-180s didn't sound like tube amps. The overall feel from tunes such as Alif Tree's "Belle" was that my speakers were being *driven*—not in a tonally aggressive way, but in how the amps and speakers

of loop negative feedback; the lowest distortion occurs around 500mW with each tap driving as high an impedance as possible; the amplifier doesn't actually clip into 2 ohms from both taps or into 4 ohms from the 8 ohm tap until the distortion is well above the 1% threshold we usually define as clipping; ultralinear operation gives usefully more power than triode; and the maximum power is obtained with the

nominal output tap impedance matched to the load. The maximum power delivery (1% THD+N) was 160W from the 8 ohm tap into 8 ohms in ultralinear mode (22dBW), 88W in triode mode (19.5dBW), 140W from the 4 ohm tap into 4 ohms in ultralinear mode (18.5dBW), and 87W in triode mode (16.4dBW). The Rogue does meet its specified maximum output of 180W in ultralinear mode (22.6dBW

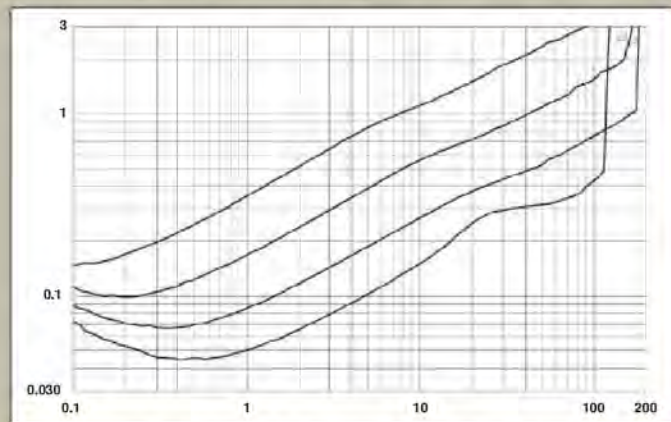


Fig.6 Rogue M-180, ultralinear, 8 ohm tap, distortion (%) vs 1kHz continuous output power into (from bottom to top): 16, 8, 4, 2 ohms.

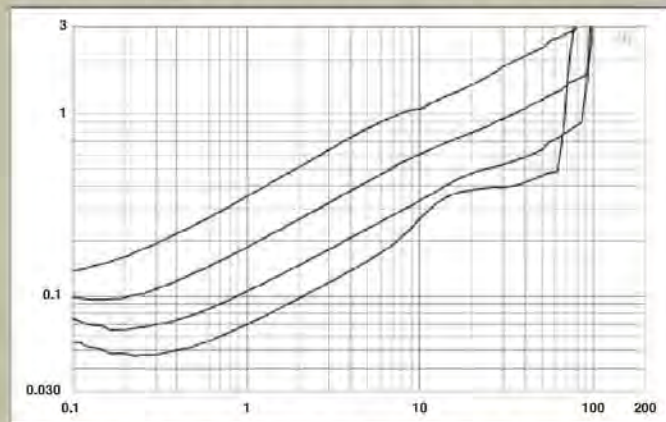


Fig.8 Rogue M-180, triode, 8 ohm tap, distortion (%) vs 1kHz continuous output power into (from bottom to top): 16, 8, 4, 2 ohms.

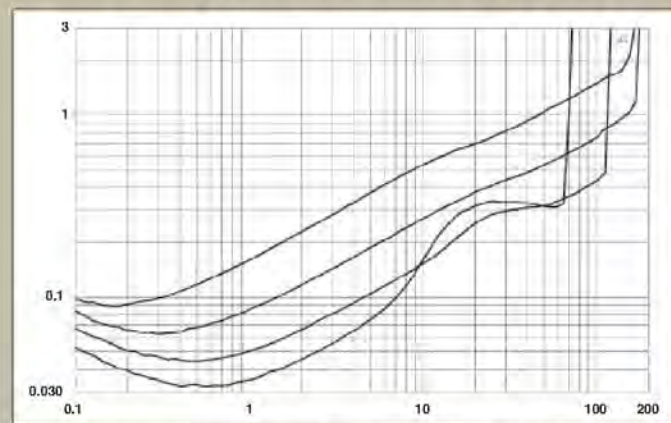


Fig.7 Rogue M-180, ultralinear, 4 ohm tap, distortion (%) vs 1kHz continuous output power into (from bottom to top): 16, 8, 4, 2 ohms.



Fig.9 Rogue M-180, triode, 4 ohm tap, distortion (%) vs 1kHz continuous output power into (from bottom to top): 16, 8, 4, 2 ohms.

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worked together to stop and start each sound. The words *articulate* and *coherent* appeared frequently in the notes I took. Some might hear this as a somewhat dry sound, which I suppose it is when compared to a swimmy tube sound. But because their tonal balance was so right, I heard the Rogues imparting a clarity to the system's timing. Usually, pacing and rhythm are achieved at the expense of bass extension and weight; not so with the Rogue M-180s, which somehow maintained great articulation while keeping hold of the deepest bass.

Through the M-180s, each note of the preternatural bass on "Through the Morning, Through the Night," from Alison Krauss and Robert Plant's ubiquitous *Raising Sand* (CD, Rounder 11661-9075-2), hit my gut like a deep, late-night sob. This album has been crit-

icized, perhaps rightly, for being too rich in the bass, and it's true that bass rarely sounds this enormous in a live setting. But through the Rogues, what on this album can sometimes sound like bloated bass had a musical impact that was hard to dismiss. The M-180s showed me why producer T Bone Burnett mixed *Raising*

crank. I think it's true that some music works only when it's played loud, and I think that's especially true of the oeuvre of that heavy-metal vanguard from Birmingham, England: Black Sabbath. Listening to the title track of *Paranoid* (CD, Warner Bros. 3104-2), the quartet's second album, from 1971, rocked me out as

THE ROGUE M-180S SOMEHOW MAINTAINED GREAT ARTICULATION WHILE **KEEPING HOLD OF THE DEEPEST BASS.**

Sand as he did. "Damn reality," I could hear him saying; "I'm going after the emotive power of *sound*!"

With this drive and bass control, I wanted to hear how well the Rogues could

hard as I've ever wanted. Not only did the Rogues present Tony Iommi's guitar with the right amount of bite and harmonic clang, but each of Geezer Butler's repeated eight-note bass-guitar picks retained

measurements, continued

into 8 ohms) but at a relaxed 3% THD limit.

While the Rogue's midband distortion was respectably low at low powers, it did rise at higher frequencies and into lower impedances. Fig.10, for example, shows how the small-signal THD+N percentage changes with frequency into loads ranging from 2 ohms (red trace) to 16 ohms (blue), with the amplifier in ultralinear mode and connected from the 4 ohm tap. The low- and mid-frequency distortion is very low into 16 and 8 ohms (blue and cyan traces), but starts to rise above 0.1% in the midrange into 4 ohms (magenta). And the distortion rises rapidly above 5kHz into all loads, implying poor HF linearity. The picture was not too different in triode mode (fig.11), except that the HF distortion now starts to rise above 2kHz rather than 5kHz. From the 8 ohm tap (not shown), distortion was around twice that from the 4 ohm tap in both modes, but was otherwise very similar in content.

Fortunately, at moderate power levels, the distortion in both modes from both transformer taps was predominantly the subjectively innocuous second harmonic (fig.12). At

higher powers in ultralinear mode, the second harmonic remained the strongest but was joined by a regular harmonic series decreasing with increasing order (fig.13). In triode mode at the same high power (fig.14), the third harmonic

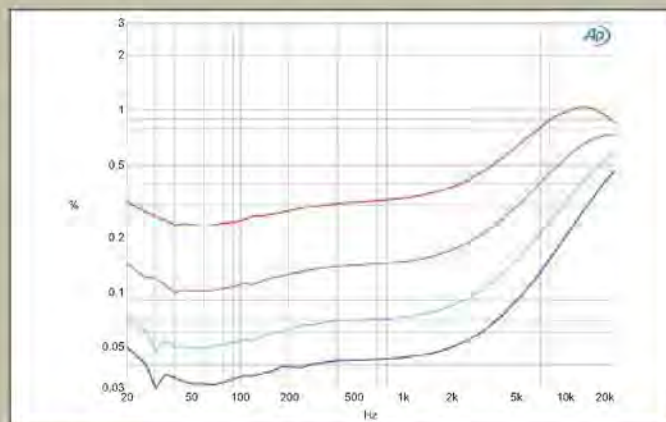


Fig.11 Rogue M-180, triode, 4 ohm tap, THD+N (%) vs frequency at 2.83V into: 16 ohms (blue), 8 ohms (cyan), 4 ohms (magenta), 2 ohms (red).

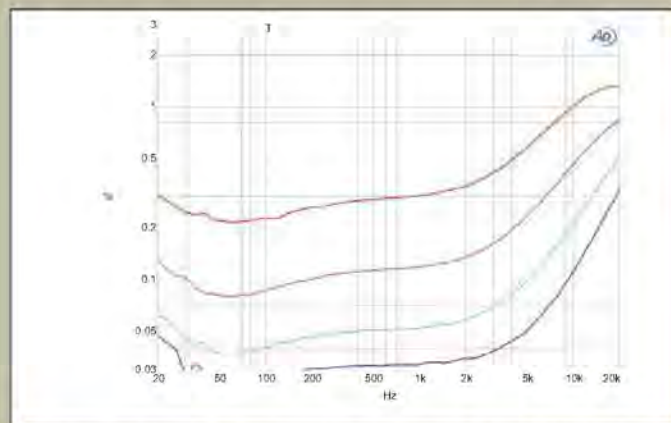


Fig.10 Rogue M-180, ultralinear, 4 ohm tap, THD+N (%) vs frequency at 2.83V into: 16 ohms (blue), 8 ohms (cyan), 4 ohms (magenta), 2 ohms (red).

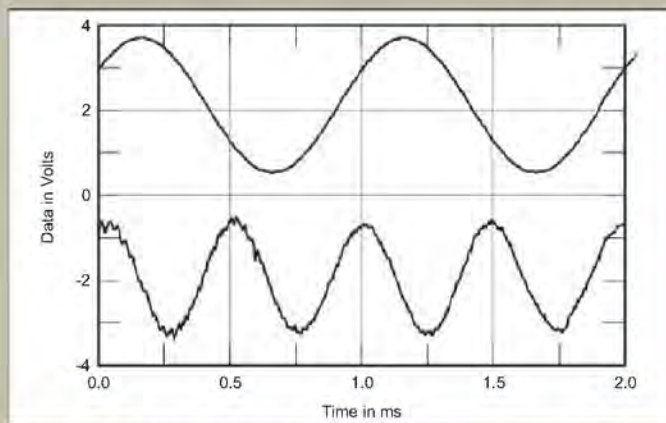


Fig.12 Rogue M-180, triode, 8 ohm tap, 1kHz waveform at 1.6W into 8 ohms (top), 0.074% THD+N; distortion and noise waveform with fundamental notched out (bottom, not to scale).

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clean articulation and propulsion while still having significant weight. Again, the impression the Rogues gave was that they were in control, driving the speaker in a natural but authoritative way.

Another turn-it-up album is Kanye West's surprisingly thoughtful *808s & Heartbreak* (CD, Roc-A-Fella/Def Jam B0012442-02). Since this album's release in 2008, the Auto Tune revolution has admittedly gotten out of hand, yet on this pounding yet sparse record West makes a case for how to use the technology for good instead of evil. As JA would say, this is music that allows for space between the notes. The effect is a refreshing change of pace from most of today's pop music, in which dynamic compression ensures a signal of constant loudness. The Rogues really delivered, humanizing and revealing

the cold, often menacing sonic world of *808s & Heartbreak*, even at dance-club levels. All of the electronic effects were laid bare yet were still musically understandable. And when actual percussion instruments come in in the coda of "Love Lockdown," it didn't sound like the end of a relationship; it sounded like the end of the world.

The Rogues excelled at throwing a huge, well-defined soundstage with outstanding spatial separation between instruments. In fact, with the Kanye West album—and especially with the Alif Tree—out-of-phase effects sounded far *more* out of phase than through any other system I've heard. On Tree's "Deadly Species," the out-of-phase string-orchestra effects seemed to materialize from another dimension. I've never heard such a great contrast be-

tween a solid, in-phase stereo image and swirling out-of-phase effects. The Rogues made listening to this kind of music very fun.

Bang, Bang

Because I still had on hand the similarly priced Pass Labs XA30.5, I thought it would be fun to stage a shoot-out between it and the Rogues. The XA30.5 presented a slightly more forward mid-treble and a fuller midbass, and its mid-range and midbass had a lit-from-within quality that I find addictive with vocal music. The Rogue M-180s had a slightly drier tonal balance, especially in the midbass, but seemed a bit more neutral through the lower treble. The biggest difference was in the amps' control of the low bass, especially in rock and pop. The Rogue M-180's control of low-bass

measurements, continued

became as strong as the second.

The poor top-octave linearity seen in figs. 10 and 11 leads to a disappointing performance on the high-frequency intermodulation test, with similar spectra seen from both modes from both taps. Fig. 15, for example, shows the spectrum taken from the 8 ohm tap in triode mode; the second-order difference component lies at -36dB (1.5%), while many higher-order spurious are visible. Reducing the power level from 50W to 1W eliminated all the high-order components (not shown), but the difference tone still lay at a marginally acceptable -54dB (0.2%).

The M-180's poor top-octave linearity basically stems from the decision to use as little loop negative feedback as possible, as many designers feel that this gives the best sound quality. But the Rogue still offers excellent linearity at low levels, where the amplifier will typically be operating with naturally recorded music. Triode mode is slightly less well behaved than ultralinear, and this might underlie EL's preference for ultralinear operation. I am impressed by the M-180's superb squarewave reproduction in triode mode, as well as by its low out-

put impedance in both modes, which imply excellent transformer design. However, its measured performance does suggest that the M-180 will work optimally when matched to speakers with a nominal impedance equal to or greater than the nominal value of the chosen transformer tap.

—John Atkinson

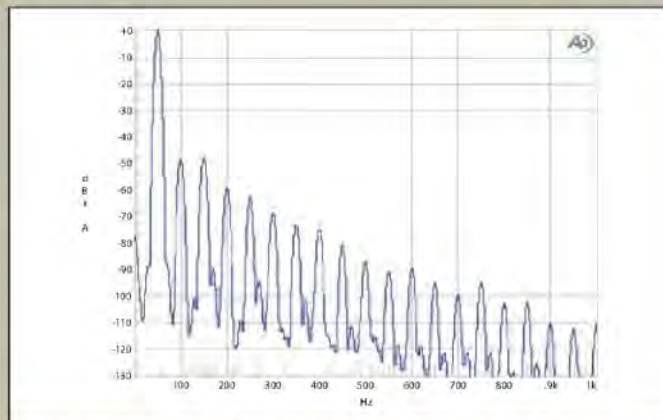


Fig. 14 Rogue M-180, triode, 4 ohm tap, spectrum of 50Hz sine wave, DC-1kHz, at 50W into 8 ohms (linear frequency scale).

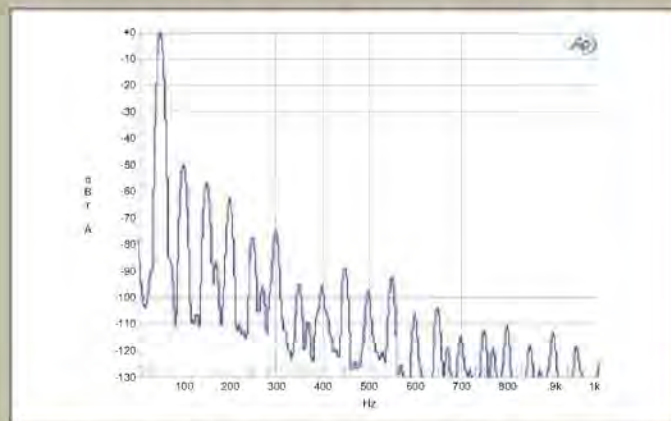


Fig. 13 Rogue M-180, ultralinear, 4 ohm tap, spectrum of 50Hz sine wave, DC-1kHz, at 50W into 8 ohms (linear frequency scale).

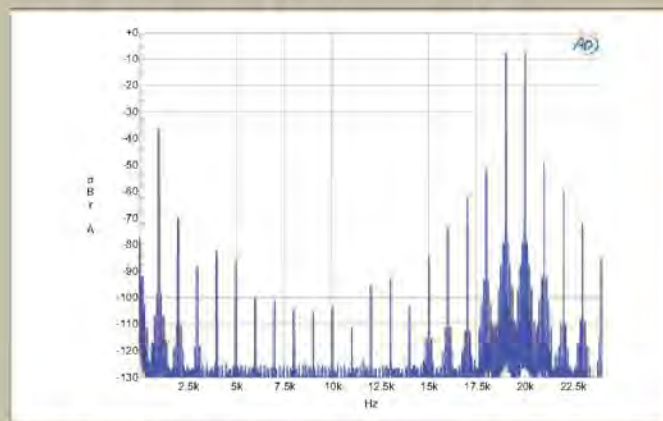


Fig. 15 Rogue M-180, triode, 8 ohm tap, HF intermodulation spectrum, DC-24kHz, 19+20kHz at 50W peak into 8 ohms (linear frequency scale).



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notes was exemplary, with great speed and heft, and the Pass XA30.5 simply could not complete in this regard. Through the Pass, the leading edges of bass notes were rounded, each note hanging over a bit too long.

There was also a fundamental difference in perspective and feel between the amps. The Pass XA30.5 seems to transport me to the musical venue, whereas the Rogues brought the venue to my room. It's not as if either perspective was a distortion of a given recording, but each amp brought its own flavor and perspective to the music making. The other big difference was in power output. The Rogues could play to much higher levels than the Pass, with greater ease and less deterioration of the musical signal.

The fun thing about hearing these two amps side by side was that if I'd done it blind, I would have sworn that the Pass amp was the tube model and the Rogue the solid-state. The Pass's character was rounder, richer, less controlled but more sumptuous. The Rogues excelled at presenting a clear window on the music while driving the speakers to do their will. Pass's design philosophy seems to be to give the best of solid-state design a tube feel, while

ASSOCIATED EQUIPMENT

DIGITAL SOURCES Theta Miles CD player via S/PDIF output; Benchmark DAC1 D/A converter; Sony Vaio laptop running Vista and Sony Sound Forge 9; M Audio Fast Track Ultra USB interface.

POWER AMPLIFIERS Pass Labs Aleph 3 & XA30.5, Manley Stingray iTube.

LOUDSPEAKERS Revel F30, Totem Forest, Klipsch Palladium PB-17B.

CABLES Digital: Stereovox HDXV coaxial. Interconnect: Sain Line Systems Pure & Reference (both balanced). Speaker: Kimber BiFocal XL. AC: Sain Line Systems Reference.

—Erick Lichte

Rogue's tube design gives solid-state amps a run for their money.

Therefore, some counterintuitive advice: If you like the sound of tubes, buy the solid-state Pass. If you like the control of solid-state, buy the tubed Rogues. Both are fine amps, but I felt that, at the end of the day, the Rogues gave me more of what I currently desire from an amp, especially in regard to macrodynamics, bass control, and stereo imaging.

The end of my beginning

The Rogue Audio M-180s gave me almost all that I expect from and desire in a power amplifier, and at a price I could conceivably afford. I also feel that the \$1000 upgrade from the M-150 is worth every penny. The M-180s offer higher resolution, better bass, and a more defined stereo image than the M-150s.

The Rogue M-180 deserves to be at the top of every audiophile's list of amps that deliver high performance in almost every aspect of playback—something I'd say even if they cost \$10,000/pair. Maybe it shouldn't be so amazing that the Rogue M-180, built and designed in the US, retails for only \$5495/pair.

Is my first full *Stereophile* review a rave? As we say here in Minnesota, you betcha. I rave about the Rogue M-180s because they do so much so right in so many ways for a price that is so good. I realize that, with my very first review, I've also become yet another audio reviewer who says the product du jour is the best thing since sliced bread. But I've been waiting a long time to write a review for *Stereophile*, and even longer to hear an amp of this quality that I might actually be able to afford. My wait is over.

WHO AM I?

When I got to high school, I joined the debate team. (To intimidate the competition, my debate partner and I used to wear bow ties. It worked.) One day, during practice, a varsity debater who was also an audiophile saw me reading *Stereo Review* and berated me for reading such a "low-class rag." Condemnation and hyperbole come easily to high school debaters. A few days after chastising me, he came up to me and said, almost apologetically, "Here—this is a *real* audio magazine," and handed me a stack of his father's back issues of the old digest-format *Stereophile*.

I didn't know quite what to make of them. First, they looked all wrong—like books, not magazines. When I opened them, I was further confused. To my 15-year-old mind, *Stereophile's* contents came from another planet. In those issues were reviews of equipment that cost tons of money—I mean, speakers costing an astronomical \$7200/pair didn't seem even possible. Also featured were equipment reports that seemed to blur the lines between science, philosophy, and religion. Being the nerd I was, I thought it was sooooo cool, and kept begging my fellow debater for more of his dad's back issues. Finally, my friends chipped in and, for my 16th

birthday, bought me a subscription to *Stereophile*. An audiophile was born.

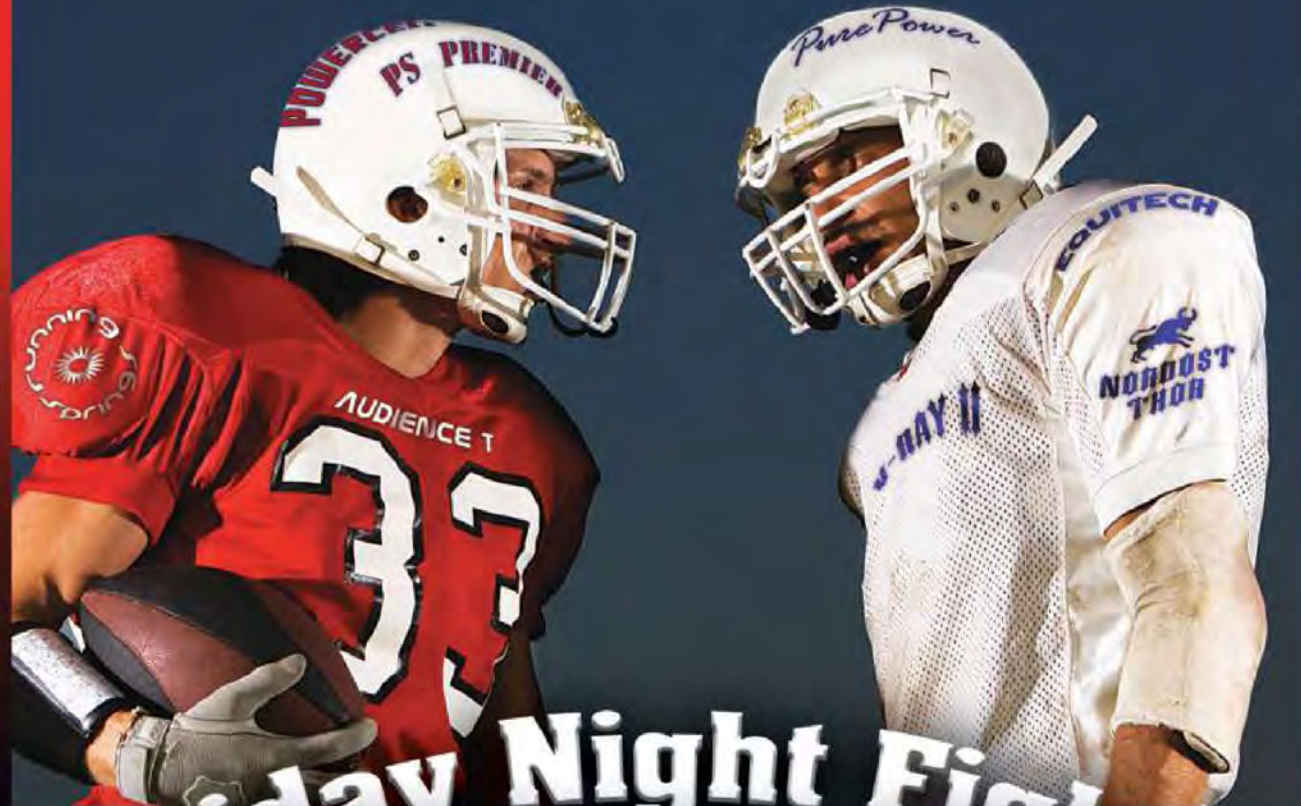
Back then, I dreamed how cool it would be to hang out with really smart guys like Wes Phillips and John Atkinson, play with ridiculously expensive gear, and get paid to write about my thoughts on amplifiers and speakers. I imagined the power I would wield as a *Stereophile* reviewer. Shivering manufacturers and lowly readers would bow before my astute listening skills and acidic comments. I would decide what was good and what wasn't. All would love me and despair!

But now I've grown up—and, more important, I've grown up with *Stereophile*. Through some very funny twists of fate, I now sit here writing my first full review for *Stereophile* magazine. It's a funny feeling when you fulfill a dream you had as a teenager; it doesn't feel at all as I imagined it would. Any grandiose ideas I ever had about being The Mighty Reviewer are gone. In their place is an overwhelming sense of responsibility—to the readers of *Stereophile*, who need to be able to trust what I'm about to write; to the manufacturers who subject their products to public scrutiny; and to the wonderful reputation of *Stereophile*. I therefore approach the writing of this review with humility and a bit of fear.

—Erick Lichte



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FOLLOW-UP

Erick Lichte

Totem Acoustic Forest loudspeaker

One of the unalloyed pleasures of being an audiophile is helping friends put together their systems. In a hobby often obsessed with getting the sound perfect in *your* room, in *your* chair, where only *you* can park *your* fanny, helping a friend buy audio gear is a way to make the sweet spot a little bigger.

Last year, I helped my friend Kurt buy speakers. Wanting something that would work in the small space near his new flat-screen TV while matching his tasteful décor, he asked if I knew of a speaker that might fit the bill while not running up too large a one. After some thought, I sent him some links to speakers made by Totem Acoustic, namely the Arro. I had heard the Arro and other Totem models in various stores and homes over the years, and thought they offered very pleasant, no-nonsense sound. Kurt loved the Arro's beautiful cherry finish, and his wife liked how elegant and slender it was. Kurt bought a pair, and now enjoys great sound with his TV—and a much better living-room music system than he might have otherwise had. Through my help with this successful purchase, I've been officially designated Kurt's Audiophile Friend.

When John Atkinson asked me to write a Follow-Up to his September 2005 Follow-Up to Larry Greenhill's original review, in April 2001, of the Totem Forest speaker¹ (now \$3495/pair in black ash or mahogany), I immediately said yes, based on my positive experience with Kurt's Arros. I'm not sure how many Follow-Follow-Ups have appeared in the pages of *Stereophile*. I'm also not sure how many speaker companies keep a model in production with no major changes for close to a decade. I contacted Totem,² and they sent me



a pair of Forests in a lovely mahogany finish, along with some Beaks, Totem's proprietary resonance-managing tweak. I unpacked everything, installed the Claws—the Totem's feet, which couple the speaker to the floor via large ball bearings—plopped the speakers in the room where my Revel F30s sound best, hooked them up to my Pass Lab Aleph 3 amplifier, and gave a listen.

At first, I was disappointed and confused. While Kurt's Arros sound smooth, balanced, and unassuming, the Forests had loose, overbearing bass, a recessed midrange, and a prominent treble. *What the heck?* I moved the Forests around the room and tried all the amplifiers I had on hand. The sound stayed pretty much the same. *This just can't be right.*

The nice part about writing a Follow-Up to a Follow-Up is that more than one other reviewer has gone before you. I checked the *Stereophile* website to see what LG and JA had learned during their time with the Forest. JA had experimented with filling the Forest's bottom cavity with sand and lead shot to help damp the vibrations of the cabinet. So I took the speakers outside and filled each with about 12 lbs of pure, dry sand, then brought them back inside, hooked them up to my system again, and gave another listen. What

a difference! I'd assumed that only the bass would get better, but filling the Forest with sand improved *every* aspect of its sound. Though Totem says filling its speakers with ballast is optional, I'd say it's mandatory, if you want to hear the Forest at its best.

The Forests stand only 36" tall, and throw an image that's closer to the floor than I'm used to. After a few days of listening I'd adjusted to the new, lower soundstage, and it wasn't a big deal. Through my reference Revel F30s (\$3500/pair when last available), I get an open, detailed, and, some might say, prominent midrange that blends evenly into the treble region. The Totem's overall balance was quite different.

As I listened to the rollicking "Don't You Worry 'Bout a Thing," from Stevie Wonder's *Innervisions* (CD, Motown 012157355-2), the Forests presented a darker, less articulate rendering of voices, while the sparkling Latin percussion sat slightly forward in the soundstage. Aggressively and poorly recorded music, such as the Smiths' "There Is a Light That Never Goes Out," from *The Sound of the Smiths* (CD, Rhino R2 516015), was an even tougher listen due to the Forest's slightly forward treble.³ The *quality* of the Totem's treble was lovely: airy, grain-free, and with no hint of harshness or lower-treble emphasis. However, I feel the Forest's tweeter, like those of so many speakers currently on the market, is dialed in about 1–2dB too high.

On naturally recorded music such as one of my own recordings, *All Is Calm: The Christmas Truce of 1914* (CD, Cantus CTS-1209), the added treble sparkle was a plus. *All Is Calm* is a radio drama that tells the story of the World War I "Christmas truce" between German and Allied forces through old trench songs, Christmas carols, and the actual words of soldiers who witnessed this miraculous event. The cast includes a male

1 All of *Stereophile*'s earlier reports on the Totem Forest can be found in the magazine's free on-line archives at www.stereophile.com/floorloudspeakers/378.

2 Totem Acoustic Forest: \$3495/pair. Manufacturer: Totem Acoustic, 9165 rue Champ D'Eau, Montreal, Quebec H1P 3M3, Canada. Tel: (514) 259-1062. Fax: (514) 259-4968. Web: www.totemacoustic.com.

3 Some (JA especially) will find this song a tough listen no matter *what* system they use; Morrissey's crooning is an acquired taste.

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choir and three actors. As I produced and mixed this album, I consciously tried to create a recording that would adhere to audiophile standards while still sounding like a professionally produced, commercial recording. I think I did pretty well, but had I taken the disc to a Hollywood mastering studio, I know they would have boosted the treble to give it more bite, air, and definition, to make the album sound better in a car or on a boom box. Listening to *All Is Calm* through the Forests gave the whole production that added detail and air without adding harshness or grain; it sounded like a Hollywood soundtrack done right, if I say so myself.

With the Forests loaded with sand, the bass was remarkably tight and well extended for a speaker this size. The Forest's bass had a tendency to emphasize the fundamental pitches of bass instruments while giving shorter shrift to each note's upper harmonics. The sound of Reid Anderson's deft bass playing on The Bad Plus's "Everywhere You Turn," from *These Are the Vistas* (CD, Columbia CK 87040), had nice weight through the Forest, but was a

little plunkier than I'm used to. I believe this is partly due to the Forest's laid-back midrange, which will come across as smooth and pleasant to some ears, and as less colorful to others.

One aspect of the Forests that LG commented on in his original review was their ability to throw a large soundstage. But while the Forests' imaging greatly improved with the addition of ballast, I never got them to create the truly holographic soundstages LG wrote of. Sound tended to lump up around each speaker instead of being spread evenly between them. When I touched the cabinet of a Forest while playing them at even moderate volumes, I felt a whole lotta shakin' goin' on; those cabinets "sang along" with the music more than I'm used to. I can't help but think that the Forests' lively cabinets impede their ability to image as well as they otherwise might.

During his listening in 2005, JA set bags of lead shot atop the Forests in hopes of taming that liveliness. Looking for a solution less obtrusive and toxic, I placed two Beaks—Totem's computer-designed aluminum bullets—in various spots atop

each Forest. Beaks on or off, I could hear no difference in any aspect of the sound. For fun, I also tried the Beaks with all the other speakers I had on hand, and heard no difference with them either. At least the Beaks *look* kinda cool.

The Totem Acoustic Forest offers a smooth midrange, airy treble, and well-extended bass in an attractive, compact package. If you audition them or already own a pair, make sure their bottom cavities have been filled with sand and/or shot. If my friend Kurt gets the itch to upgrade from his Totem Arros, would I recommend the Forests? They're worth a listen, and he might really like them. However, \$3495 is a fair chunk of change for a pair of speakers, and there are many fine contenders at or near this price listed in *Stereophile's* "Recommended Components." Before he made any purchase, I would advise Kurt to listen to a wide variety of speakers—including the Forest. I'd even accompany him to dealers to help him navigate the crazy world of high-end audio—it's my duty to keep Kurt happy so that I can retain my designation of Audiophile Friend. —Erick Lichte ■



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RECORD REVIEWS

RECORDING OF THE MONTH

CARLA BLEY *Carla's Christmas Carols* BOB DYLAN *Christmas in the Heart*

From Chuck Berry to Frank Sinatra, from the Sex Pistols, Ryan Adams and Death Cab for Cutie to Pops, Dex, and Bird, Christmas music has and continues to cast its inexplicable spell over musicians. The punch line is that many musicians will, to use a uniquely Christmas metaphor, throw all the logs on the fire and commit heart and soul to a performance of a tune like "Jingle Bells." Not all Christmas music is tossed off in one take. The number of versions of "Jingle Bells" in which you can hear the sweat and creativity churning is astonishing. Sinatra opened an album with it. In 2005, Diana Krall rode it to a No.5 slot on the US Adult Contemporary chart. And in her song "River," from *Blue*, Joni Mitchell borrows the melody line of its chorus.

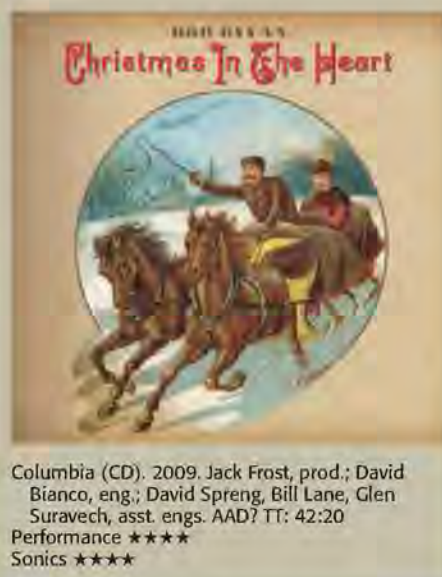
Two thousand and nine will never be mistaken for a banner year for Christmas music; the continuing disappearance of physical product, and the overall slide of the business itself, seem to be taking their toll. Yet the old year past did see the release of two records sure to stand tall in the Christmas canon for many years to come.

When it comes to making genuine efforts—really digging in and finding something new in sturdy Christmas tunes—few recent Christmas albums have been as creatively arranged as Carla Bley's heartfelt *Carla's Christmas Carols*. Bley, as it turns out, is not only one of those musicians hooked on Christmas music, but has had a long relationship with this much-abused genre. A fan of the music as a kid in California, the onetime cigarette girl at Birdland arranged a book of carols for use in public schools in the 1960s; later devised something called a Humatron, in which music students sat in a circle and passed instruments around while playing "The Twelve Days of Christmas"; and finally, in 2006, began arranging Christmas carols for brass quintet. Two years later, she and her long-time collaborator, bassist Steve Swallow, joined by a quintet of German horn players, embarked on a short European holiday tour, the success of which convinced them to repair immediately to the south of France to record the program, much of which became this record.

The arrangements—all recorded in glorious, sharp, sonorous sound that manages to capture both solo horns and ensemble sections with equal clarity—are not punchy or ostentatious. After "O Tannenbaum" becomes a short fan-



CARLA BLEY STEVE SWALLOW
THE PARTYKA BRASS QUINTET
Carla Bley, piano, celeste; Steve Swallow, bass, chimes; Partyka Brass Quintet
WATT 35 (CD). 2009. Carla Bley, Steve Swallow, prods.; Gerard de Haro, Nicolas Baillard, engs.
DDD? TT: 60:36
Performance ★★★★★
Sonics ★★★★★



Columbia (CD). 2009. Jack Frost, prod.; David Bianco, eng.; David Spreng, Bill Lane, Glen Suravech, asst. engs. AAD? TT: 42:20
Performance ★★★★★
Sonics ★★★★★

fare, "Away in a Manger" is recast as a hushed piano-bass duo with spare horn section accompaniment. Mel Tormé's "The Christmas Song," with its leisurely pace, is the perfect vehicle for an all-brass showcase in which trumpet/flugelhorn players Tobias Weidinger and Axel Schlosser trade solos.

Two Bley originals make their appearances here. "Hells Bells" is kind of a faster, jazzier "Jingle Bells" that becomes the setting for a long, high-note flugelhorn solo. Bley also gets into the action, playing a jagged piano solo, and at one point trading calls and responses with the horns. If there's one complaint with this record, it's that Bley spends more time comping than actually flashing her chops.

A muted, wanton-toned trumpet drunkenly sways and swaggers through "It Came Upon a Midnight Clear," giving this usually gentle tune a welcome back-alley jazz-club quality. Bley saves her sassiest arrangement for the aforementioned "Jingle Bells": a peppy trumpet carries the melody in short bursts, while Ed Partyka's tuba provides a humorous counterpoint and the rest of the quintet repeats a snappy figure in the background. The closer, a relaxed version of "Joy to the World," was recorded live and features a hearty burst of applause at the end—an unusual and deserved coda to an original and listenable Christmas record.

When it comes to codas, no discussion of Christmas music 2009 would be complete without mentioning Bob

Dylan's *Christmas in the Heart*, a condition that Bob has apparently contracted. There are few life experiences that equal the otherworldliness of hearing Bobby's ravaged voice skipping through "Winter Wonderland," accompanied by a cheery gaggle of female voices.

That's soon topped, however, when he turns his lusty moonscape growl onto "I'll Be Home for Christmas."

Dylan detractors will naturally find fault and label the album a disaster, but there's something undeniable about the man's determination. At 68, he's still on the road most of the year, releases good to great albums, supervises a series of reissues of his rarities, hosts a marvelous satellite-radio show, and, yes, plays it straight on a Christmas record that is absolutely fabulous in its all-consuming weirdness. Smirk and scorn if you must, but this is a Christmas record for the ages, a grotesquery that will make you smile and take your breath away.

—Robert Baird

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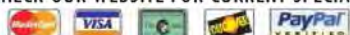
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MOZART

Complete Sonatas for Keyboard & Violin, Vols. 7 & 8

Rachel Podger, violin; Gary Cooper, pianoforte, harpsichord; with Alison McGillivray, cello
Channel Classics CCS SA 28109 (2 CDs). 2009.
Jonathan Freeman-Attwood, prod.; C. Jared Sacks, eng. DDD. TT: 2:00:18
Performance ★★★★★
Sonics ★★★★★

Here are the last two volumes of the award-winning traversal of Mozart's complete violin and keyboard sonatas by Rachel Podger and Gary Cooper, two of the most respected exponents of period performance. These final programs are somewhat different from the earlier ones, which, focusing on variety and contrast, combined unfamiliar youthful and famous mature sonatas. By contrast, all the works in Vol.7 were written very early and are virtually unknown. They include several unfinished sonatas completed by Mozart's friend Maximilian Stadler (whose transformation of a short fragment for violin and piano into a Fantasia for solo piano is so masterful that it has been accepted into the Mozart canon), and two sets of variations on French folksongs. One, in G major, is elaborate and cheerful; the other, in G minor, Mozart's frequent choice for mournful music, is shorter, sad, and deeply affecting. Vol.8 comprises six sonatas Mozart wrote in London in 1764 at the age of eight; they are essentially harpsichord sonatas with violin and cello obbligato.

The series illustrates the development of Mozart's compositional technique—the constantly growing emotional depth and complexity of his music, with its mercurial shifts of mood and character. Even among the 1764 “London” sonatas, the last are clearly superior to the first. Moreover, the instrumental texture gradually changes: from merely supporting the piano, the violin becomes its equal partner. Though following Mozart's maturation is fascinating, the inclusion, for the sake of “completeness,” of his earliest childhood compositions and the unfinished fragments seems open to question.

As before, the performances recorded here are technically excellent, musically thoughtful, and expressive. The tuning is at normal pitch on Vol.7, and a half-step lower on Vol.8, probably to accommodate the harpsichord. In period style, Podger uses many open strings and sparing vibrato; the players observe all repeats; their phrasing is elegant, their articulation crisp, their voicing clear, but their dynamic contrasts are often exaggerated.

These discs are beset by two problems. Although cellist Alison McGillivray



plays the bass line with a full-bodied tone that gives the music an admirably firm foundation, the recorded balance generally favors the piano and harpsichord. The other problem concerns the ornamentation. In Mozart's day, embellishments were spontaneously improvised, but on this record they sound so carefully planned that they lose that essential quality; moreover, they are so excessive that they threaten to overwhelm Mozart's music.

—Edith Eisler

rock/pop

GUY CLARK

Somedays the Song Writes You

Dualtone 80302-01471-26 (CD). 2009. Chris Latham, prod., eng.; Guy Clark, Verlon Thompson, prods. AAD? TT: 39:09
Performance ★★★★★
Sonics ★★★★★

Guy Clark has often complained from the stage that the hard part about making records is that you have to keep learning new songs. Yet somehow, as he details in the title cut of this, his 14th collection of new material and the first since *Workbench Songs* (2006), singer-songwriter Clark can't quit scribbling and strumming because “Somedays you write the song / Somedays the song writes you.”

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PHOTO: SENOR MCGUIRE

The master musing—Guy Clark.

Clark survived a bout with lymphoma in 2006, and his voice is thinner and a bit hoarser than it used to be, but his sense of humor and wry eye remain undiminished. Ever the master storyteller, Clark still, it's clear, has much to say. Here, with the help of such cowriters as Patrick Davis, Rodney Crowell, and longtime collaborator Verlon Thompson, Clark has concocted a convincing set of songs in his now-familiar blend of uncommon lyrical detail, intricate rhyming, and sinewy melodies, in which he ponders the great truths of love and regret in tales rich in specifics of food, whiskey, and, of course, guitars.

After opening with "Somedays You Write the Song," whose title slyly reverses the title of the album and is very similar to the song most adored by his casual fans, "Stuff That Works," Clark quickly moves into the more challenging mode of "The Guitar," a *Twilight Zone* ghost story about a fated guitar. "Hemingway's Whiskey" is an intriguing rumination on life and death set to an unusual conceit.

Because they throw the spotlight on just a singer and a guitar—supported, in this case, by assorted low-key backing from various stringed instruments and occasional harmony vocals by Bryn Davies—singer-songwriter records are hard to sustain, but here the quality of the material and performances remains high throughout. The simple microphone placements of producer-engineer Chris Latham capture this fairly spare session in crisp detail, with Clark's voice always the center of attention.

After "All She Wants Is You," per-



haps the album's most inventive melody and Clark's strongest singing, he throws in a sure winner: "If I Needed You," by his old friend, the late, great Townes Van Zandt. Later, Clark detours into "Eamon," in which he (or co-writer Crowell) rhymes *Kwajalein* (the name of a Pacific atoll) with *fourteen*. Now that's what-cha call songwriting! Despite his complaint, in "Hemingway's Whiskey," that "You know it's tough out there / A good muse is hard to find," Guy Clark, the last of the great Texas troubadours, happily still has a firm grip on his.

—Robert Baird

RAY DAVIES & THE CROUCH END FESTIVAL CHORUS *The Kinks Choral Collection*

Steve Markwick, choral arrangements; David Temple, conductor; The Crouch End Festival Chorus
Decca 80013434-02 (CD). 2009. Ray Davies, prod.; Jon Bailey, eng. DDD? TT: 52:49
Performance ★★★½
Sonics ★★★★★

Query your average rock fan on the street about his foremost Kinks-related fantasy and it's unlikely you'll get the response "Kinks tunes performed by a 65-voice chorus." For purists, the notion might even be borderline heresy.

However, just as Roger Daltrey's *A Celebration* (1994), featuring the singer joined by a crack band and Michael Kamen conducting the Juilliard Or-

chestra, managed to shed new light on classic Who tunes while retaining their emotional resonance, so, too, does *The Kinks Choral Collection* pass the audition. That's largely due to Ray Davies' direct involvement, of course; one simply can't imagine "Days," "Waterloo Sunset," or "Celluloid Heroes" sung by anyone *but* Davies. Yet it's also testimony to the enduring power of these songs, whether warhorses such as "You Really Got Me" and "All Day and All of the Night" (both with full-band rock treatments), or something subtler and less well known—"See My Friends," which devoid of instrumentation, sounds like a cross between a gospel choir and the Benedictine Monks, Davies engaging in stately call-and-response with the choir.

Thanks to the album's expansive, crystalline sound, in which voices shimmer in the air, TKCC fulfills Davies' professed mandate of reinvention. "Waterloo Sunset" will bring tears to your eyes, as all those subliminal harmonies you once sensed while listening to the Kinks' original 1967 recording come vividly to life. "Shangri-la" pulses along on a subtle bed of vocal "la-la-la-las" before building to an unexpectedly elegant finale. And in the album's centerpiece, the six songs included in the *Village Green Medley* attain a newfound, cinematic complexity that may have eluded casual listeners to *The Kinks Are the Village Green Preservation Society* (1968).

With conductor David Temple and arranger Steve Markwick working closely with Davies, it's clear the project was a labor of love. Admittedly, they missed a golden chance to add one more tweak: per Kinksian kustom, the album should have been titled *The Kinks Khoral Kollektion*. No worries, though; the sonic pleasures herein should leave everyone kompletely kontent.

—Fred Mills

CHRIS SMITHER *Time Stands Still*

Mighty Albert/Signature Sounds SIG 2024 (CD).
2009. David "Goody" Goodrich, prod.; Mark Thayer, eng. AAD? TT: 44:24
Performance ★★★★★
Sonics ★★★★★

For his 11th studio album (his first, *I'm a Stranger Too!*, was released in 1970), New Orleans native Chris Smither has landed another set of top-notch, hypnotic folk blues. Or



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bluesy folk. His gritty, bourbon-soaked voice is as engaging as a fall evening on the back porch, and he continues his tradition of mixing poignant originals with slyly chosen covers; here, the latter are by Mark Knopfler, Bob Dylan, and country-bluesman Frank Hutchison. And don't forget that, over the years, Smither's own compositions have been recorded by Bonnie Raitt, Emmylou Harris, and even Diana Krall, or that this is Smither's first CD since scoring the Outstanding Folk Act honor at the 2007 Boston Music Awards.

Throughout *Time Stands Still*, Smither sounds like a sage who possesses the answers to life's big questions. In "I Told You So," the album's most rocking track, he reflects on taking things for granted and going through the motions, "how we run so fast and think so slow." On the romantic, upbeat, finger-tapping "Time Stood Still," he boils down a precious moment with the punch line "I kissed her twice at the speed of light, and time stood still." And on "Surprise, Surprise," Mr. Smither goes to Washington and gets political: "The trickle-down will float you up / Surprise, surprise, it ain't so."

With the stealth backup band of guitarist David Goodrich and drummer Zak Trojano, finger-picking Smither has crafted a set of tunes that feel at once totally fresh and timeless, with a feel and energy that would have been right at home in the smoky coffeehouses of Greenwich Village in the early 1960s. As such, *Time Stands Still* is the perfect title. To listen to Chris Smither is to get lost in time. Recorded in just three days, the album feels live and spontaneous, and its crisp sound is intimate and understated, a welcome antidote to all the high-tech buzz surrounding us.

—David Sokol

jazz

MILES DAVIS & SONNY ROLLINS

The Classic Prestige Sessions, 1951–1956

Miles Davis, trumpet; Sonny Rollins, Charlie Parker, tenor saxophone; Jackie McLean, alto saxophone; Bennie Green, trombone; Walter Bishop Jr., Tommy Flanagan, John Lewis, Horace Silver, piano; Paul Chambers, Percy Heath, Tommy Potter, bass; Art Blakey, Kenny Clarke, Roy Haynes, Philly Joe Jones, Arthur Taylor, drums

Prestige PRS-31461 (2 CDs). 1951–56/2009. Bob Weinstock, Ira Gitler, orig. prods.; Bob Lee, Rudy Van Gelder, orig. engs.; Nick Phillips, reissue prod.; Joe Tarantino, reissue mastering. AAD.

TT: 2:11:37

Performance ★★★½

Sonics ★★★½

This set collects the complete 1950s recordings that Miles Davis and Sonny Rollins made together under Miles's leadership for the Prestige label, which originally issued them on more than half a dozen different LPs. Most of this material is already available on CD, but it's nice to have it all in one place, if only to compare the development of these budding jazz legends head to head. The earlier collaborations find the two in thrall to the bebop of Charlie Parker and Dizzy Gillespie, a circumstance underscored by Parker's presence

on a 1953 session; not until the final date do they display the mature styles that brought them lasting fame.

The first session, from January 1951, presents Davis at his weakest, mainly because he had already recorded a session with Parker for Verve the same day. The opening "Morpheus," with its complex modern arrangement, picks up where Davis's *Birth of the Cool* leaves off, but it's downhill from there, as Davis fluffs notes on "Down" and "Blue Room." Redeeming the date, Rollins shows hints of originality while following Parker's model on "I Know," with Davis comping on piano.

The October 1951 session, including the 19-year-old Jackie McLean on alto sax, was among the first jazz recordings made expressly for the long-playing format, with tracks extending well beyond the typical three-minute limit of 78rpm discs. Again the jumping-off point is *Birth of the Cool*, whose "Deception" is rendered more smoothly here as "Conception." Davis and McLean bop smartly on "Out of the Blue" and "Denial," but Rollins is hindered by a squeaky reed. Davis and Rollins step out of Gillespie and Parker's stylistic shadow with potent solos on the slow blues "Bluing" and the brisk bop tune "Dig." They avoid bebop mannerisms entirely on "My Old Flame," although Davis had recorded the Mae West ballad with Parker in late 1947.

At the January 1953 session, Davis quarreled with Parker and producer Ira Gitler after Parker downed a bottle of vodka or gin (depending on whether you believe Davis or Gitler). Parker, on tenor sax instead of his usual alto, acquits himself well nonetheless in the opening "Compulsion," but Rollins out-bops him. The bebop continues on two takes of "The Serpent's Tooth," where Davis solos incisively and Parker and Rollins play so similarly that, if not for Rollins's calypso inflections, it would be hard to tell them apart.

Two classic Rollins compositions begin the January 1954 session: "Airegin," where pianist Horace Silver plays only during others' solos, and "Oleo," in which Silver plays only on the bridge sections. While still plainly showing their bebop roots, Davis and Rollins sound more distinctively self-assured. On the final session, from March 1956, they come fully into their own, with Davis blowing wispy lines through a mute on Dave Brubeck's ballad "In Your Own Sweet Way" and Rollins playing cool but muscular hard-bop licks on "Vierd Blues." By this time, however, Rollins had declined Davis's offer to join his regular quintet, and Miles had already begun recording for Columbia with John Coltrane.

—Larry Birnbaum



INGEBRIGT HÅKER FLATEN/HÅKON KORNSTAD *Elise*

Ingebrigt Håker Flaten, bass; Håkon Kornstad, tenor saxophone, flutonet
Compunctio COMPCD002 (CD). 2008.
Andreas Runeson, prod.; Gustaf Spetz,
Andreas Runeson, engs. DDD. TT: 37:08
Performance ★★★★★
Sonics ★★★★★

In August 2009 I attended the Oslo Jazz Festival, where tenor saxophonist Håkon Kornstad and bassist Inge-

brigt Håker Flaten, with guest drummer Jon Christensen, played songs from their new album, *Elise*. It was music of strange, stark lyricism and surpassing quietness, performed in the shadowy, acoustically ideal environment of Kulturkirken Jakob, a 19th-century brick church.

Two Norwegian jazz outcats with funny names playing traditional folk hymns of their homeland does not sound like a plan for a hit record. But *Elise* has started a buzz. It was released in Europe in late 2008, and kept popping up on year-end "Top Ten" lists. When Flaten and Kornstad (whose names are not funny in Norway) performed this music in New York in April 2009, they got raves from the New York press, including the *Times* and the *Village Voice*. When *Elise* became available in the US in late 2009 at www.dustygroove.com, the first shipment immediately sold out.

Elise Flaten was Ingebrigt's grandmother. The album opens with her quavery voice singing "Ak, mon jeg staar i naade," the kind of folk hymn sung at farmhouse prayer meetings in Norway in the early 20th century. Recorded in the 1970s, it sounds timeless. It's followed by the duo's instrumental response, the melody darkly, slowly drawn by Flaten's arco bass while Kornstad trills in whispers. The song unexpectedly becomes a vamp, first discovered by Kornstad in tongue-slaps, then handed off to Flaten, who sustains it fiercely to the end while Kornstad floats long tones like lamentations straight up from the soul.

This is meditative music kept dynamic by contrast. Saxophone lines that hang in the air are set against the energy of a quick pizzicato bass. Minor-key melodies of somber finality provoke free excursions. There is not much jazz with the patience of deep ceremonies such as "Paa hinside ørken" and "For himmerigs land maa man kjempe." The only piece from the outside, Keith Jarrett's "Death and the Flower," is subjected to Kornstad's gradations of expressive nuance and Flaten's obsession with atmosphere. It becomes Nordic, part of the ritual.

That there is a buzz about *Elise* is not surprising after all. It is an album that gets under your skin. It takes you to a place you always needed to go and did not know it.

—Thomas Conrad

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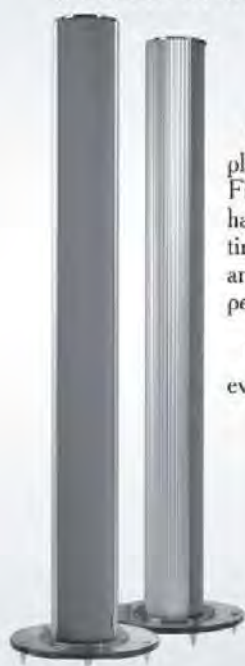


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Cambridge Audio 650A & 650C

Editor:

Many thanks for Sam [Tellig]'s review of our new Cambridge Audio 650A integrated amplifier and companion 650C CD player. It's always entertaining and educational to engage Sam's quick wit and discerning ears.

As I've observed many times in the past, given unlimited money, it's relatively easy to create good-sounding gear. The trick is to create great-sounding gear for folks who don't have unlimited funds to burn. This is where Cambridge Audio has dominated the audio landscape for the past 30 years.

A few factual corrections and omissions:

- The 650A and 650C are \$779 MSRP each.
- The Cambridge Audio DVD99 and DVD89 both decode SACD.
- The 650A has a dual-mono power supply, an advancement over the previous 640A generation and partially responsible for the improved silkiness Sam heard.

We agree with Sam when he says, "For \$779 or anywhere near it, I've heard nothing better than the Azur 650A. When you factor in its luxurious fit'n'finish, you have a category killer."

We also agree with him when he writes, "The DacMagic, at \$479, is a terrific bargain, especially if you already own it; the 650C, for \$300 more, is a great deal if you need a robust transport, too."

Sam ends by saying, "Open, airy, sweet, civilized—that's the sound of the 650A and 650C together."

We couldn't agree more. *John Bevier*
The entire Cambridge Audio
& Audio Plus gang

Aesthetix Atlas

Editor:

Thanks to *Stereophile* and Wes Phillips for the thorough and positive review of the first Aesthetix power amplifier, the Atlas. After 15 years of manufacturing highly regarded tube preamps and phono stages, our customers demanded we deliver a power amplifier of commensurate quality. Originally intended as the partner to our Saturn-series preamplifiers (Atlas being one of the many moons of the ringed planet, as are Rhea, Calypso, and Janus, other model names of ours), our first amplifier is also well suited for our multiple-chassis Jupiter-series preamps.

We commented that a product named Atlas had better be a heavy hitter. Indeed, the amp was not named until nearing completion of this three-year project. Only when we reached the stage of listen-

ing to production prototypes did it become clear, not only to me but to friends and associates, that this power amplifier was truly something special. The Atlas has many unique features: selectable high-pass crossover; a standby mode that preserves tube life while charging the coupling capacitors; and a balanced-bridge, zero-global-feedback, all-bipolar output stage. A combination of superb sound, outstanding build quality, ability to drive a wide range of speakers, and heretofore-unseen features was the aspiration. According to Wes, that aspiration was realized.

Wes correctly points out that the Atlas will benefit from proper system treatment, such as cables, racks, footers, etc. Our research and experience have found that the higher the resolution of a component, the more audible and important these treatments become.

Thanks also to Wes and John Atkinson for wrangling this 70-lb "beast" of an amplifier across Brooklyn for technical testing. The internally mounted heat-sinks are a godsend for transporting the Atlas, while also providing its high-tech look. John's measurements showed the 200Wpc (rated) Atlas delivered a whopping 318W with both channels driven! This is an indication of its massive power supply, which contains five different magnetic components: two large transformers and three chokes.

As indicated in Wes's "Associated Equipment" sidebar, our Calypso tube line stage was used throughout the review process. I was pleased to see that the Calypso performed equally well with the solid-state monoblocks as it did with the Atlas. As Michael Fremer related in his July 2005 review of the Calypso (and its subsequent Class A rating), it is capable of matching extremely well with a variety of amplifiers and source components to elevate their performance.

Special thanks to Charles Hansen of Ayre Acoustics for his design contributions, without which the Atlas would not exist; and to Richard Vandersteen for offering his unique perspective and advice.

Jim White
Aesthetix Audio Corp.

Bryston 7B SST²

Editor:

When we read Michael Fremer's review of the Bryston 7B SST², we were pleased with the many positive things he said. The Bryston 7B SST² amplifier, like all of Bryston's SST²-series products, has received rave reviews, accolades, and awards from the audio press around the world since the products debuted in January 2009. John Atkinson's measure-

ments of the product samples we submitted reinforce that the 7B SST² is a state-of-the-art high-powered amplifier with extremely low distortion: "Finally, when tested close to clipping into 4 ohms with the demanding combination of 19 and 20kHz tones, the Bryston's output spectrum (fig.8) was more like that of a preamplifier, with all intermodulation products at or below -100dB (0.001%)."

JA also reported, from the most recent Consumer Electronics Show: "With 'Superman's Song' from Crash Test Dummies, played back from a Music Vault source feeding a Bryston BDA-1 D/A processor (\$1995), BPA-26 preamplifier, and [a] pair of 7B SST monoblocks (\$7990/pair), and with the lowest octave (below the mid-30s—the CS2.4SEs were run full-range) reinforced by a Thiel SS2 subwoofer (\$9800), the sound was simply superb." (<http://blog.stereophile.com/ces2009/index1.html>)

In this most recent review, Fremer seems to concur: "The Bryston's tonal 'character' was virtually unidentifiable, producing an impressive sense of top-to-bottom continuousness and smooth neutrality. The top end was neither bright nor rolled off, neither etched nor soft. The bottom end was neither lumpy nor noticeably thin, neither over- nor underdamped. The mid-range was creamy-smooth, without metallic or hollow aftertastes. In other words, the 7B SST²'s tonal balance was essentially seamless and fully extended. . . . Tonally at least, the Bryston was impressively spot-on from top to bottom, and remained so whether played at very low levels or cranked up to louder than comfortable."

All the above, of course, refers to extreme accuracy. Why is accuracy so important? Simply because "It's the music, stupid!" Bryston has always sought accuracy above all, free from the artificial tizz and zing that, to the naïve, can pass for drama, excitement, or "dynamics." Of course, every other reviewer in the world who has tested our SST² designs, especially including others here at *Stereophile*, has recognized the SST² products as the state of the art in accuracy, and beyond reproach. We wish to thank Michael Fremer most profusely for his review of the Bryston 7B SST².

Chris Russell, CEO
Bryston Ltd.

Rogue Audio M-180

Editor:

Thank you so much for the wonderful review of our Rogue M-180 monoblocks! The design team at Rogue Audio would like to personally thank Mr. Lichte for his thoughtful and thorough review of our newest product. It's not as easy as it once was to manufacture

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Ken Kessler - *Hi-Fi News*,
September 2009

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"hand-built" products made entirely in the US. To that end, we particularly appreciate Mr. Lichte's thoughts regarding the exceptional value our amplifiers offer.

Two minor technical points regarding Mr. Atkinson's testing: First, the M-180's XLR inputs are transformer-coupled to the amplifier circuit. For the single-ended input we make use of proprietary circuitry to couple the RCA input to the same balancing transformer. This significantly minimizes the possibility of picking up ground-loop noise, and provides for the same gain from both the RCA and balanced inputs. Second, yes, we could increase the global feedback to effectively "tweak" the high-frequency specs. We are of the design camp that believes a prudent amount of feedback makes sense, but that too much feedback can take the sound from smooth and extended to hard and fatiguing.

Again, thanks for the terrific review. We at Rogue Audio look forward to continuing to bring new and exciting products to the audio marketplace.

Mark O'Brien
Rogue Audio

Totem Acoustic Forest

Editor:

I was totally aghast at this contradictory

Follow-Up review. I found that the poor review layout and content turned me away from "wanting to comment," but felt that I owed it to our faithful followers and future buyers.

Although Totem was rather pleased to have a Follow-Up review printed, I was befuddled by the apparent amateur reaction of Erick Lichte to our fabulous Forest speakers.

Totem Acoustic speakers, without exception, are produced to have a tremendous exactitude in model continuity and quality of sound. As mentioned by John Atkinson in his Follow-Up review on our Mani-2 Signature [October 2009], nothing is ever left to chance in this regard.

Not mentioning electronics, exact placement, and wires, or even asking Totem Acoustic for basic advice, seems purely irresponsible. How can a company with Totem's reputation, quality production, and worth allow this "transfiguration" of an exceptional product such as the Forest? The reviewer's apparent observations contradict [those made by] all listening to a Forest at a dealer, or at the numerous shows where we have highlighted it.

If one cannot duplicate the holographic imaging Larry Greenhill wrote about,

how can he comment on or compare anything else, for that matter? Doesn't this tell us something? Imaging on and off axis is our forte and "marque de commerce," and if it didn't happen for EL, then the problem, if not personally physiological, was due to the other equipment, placement, and room issues mentioned above. Especially that the phenomenally acclaimed Forest had little or no sonic effect for him. Really too bad! Both LG and JA clearly laid out the stronger features of this great speaker:

"The Forest's highs were transparent and beguiling, with no brightness, steeliness, or metallic edge."—LG, *Stereophile*, April 2001, Vol.24 No.4

"Upper strings were silky smooth, double basses rich and full. And again, the soundstage was wide, deep, and stable."—JA, *Stereophile*, September 2005, Vol.28 No.9

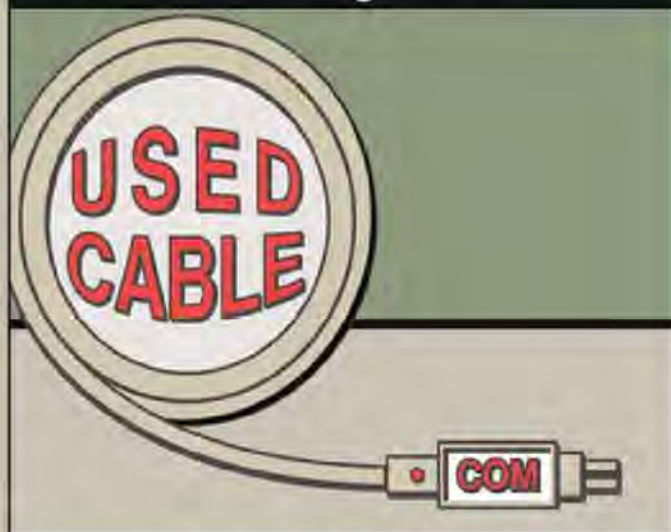
Twenty-three years of designing great real-world speakers in affordable guises with supreme quality—knowing that the world appreciates this continuous, magical effort is a comfort. This Follow-Up in many ways redefines my perspective of *Stereophile*.

Vince Bruzzese
Totem Acoustic

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John Atkinson | Editor, *Stereophile* Magazine,
RMAF 2009 Show Report

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Robert Baird

Deluxe Love

At this tenuous point in the history of recorded music, who, exactly, is still buying CDs and LPs? Labels large and small want to know. Despite their attempts to kill off the physical products they spent the last 50 years and untold millions cramming down our throats at ever-increasing prices, LPs and even CDs are proving more resilient than first thought. Gee, could it be the fact that we all have closets and shelves full of them? Or, God forbid, that some of us still have a thing for tangible media? I know, I know—I'm an old man. My kind are dying out. Dinoconsumers. I need to cut the sentimentality, chuck the gatefold album covers I once let the seeds roll down, and start (actually, keep) filling those hard drives with downloads.

Today, artists and labels still interested in continuing to produce physical product are finding that the oldest rule of the music business still applies: Compelling content sells records. Most successful niche labels today have also learned the lesson that once sustained live music clubs: Build loyalty by convincing a crowd to trust your musical taste and judgment—please enough people enough times—and eventually a crowd will gather because they want to be part of the scene, no matter who's playing.

Few labels have grasped these ideas as well as Chicago's Numero Group. Compelling content? A trustworthy scene? This from the Numero website: "We've even crossed the street from time to time to deliver hidden worlds of unsung power pop, kitchen-sink New York disco and rap, kid-group soul, fiery rockabilly gospel, Franco-Belgian electro-samba, phantom blaxploitation funk, psychedelic heartland pop, orchestral UK chanteuse folk, decaying art-soul and Southside funk-blues club life captured in glorious black & white."

"Decaying art-soul"? Whatever that sounds like, just reading such phrase-afying is semantic catnip for music geeks. Numero Group was founded in 2003 by Tom Lunt, Rob Sevier, and Ken Shipley, and is housed in a minimalist office in Chicago's Little Village neighborhood.



The label's catalog, much of it excavated from private collections of 7" singles, now numbers 60 releases loosely organized into five main series. *Eccentric Soul* handles obscure soul-music releases from what Numero calls "lovingly mishandled soul labels." The *Wayfaring Strangers* compilations lean toward country and folk; *Cult Cargo* seeks out obscure world-music titles; *Good God!* titles focus on sacred music; and perhaps the most interesting series of all, *Local Customs*, releases oddities from what Numero calls "mom-and-pop recording outfits." Deep and cool, the label has gained an enviable reputation among the musically obsessed.

"I'm personally of the belief that people are going to discover things at their own pace," says Ken Shipley. "And I'm sure there are plenty of people who buy every Numero record, who have no idea what some of them sound like, but they're just getting them because they're like, 'How long is this going to last?'"

Numero has recently joined its esoteric content and hip aura to the survival stratagem labels have begun to employ for tangible media: the packaging mojo. Recently it's been postulated by some that US newspapers will soon become so-called premium products. If you want a paper copy of the *New York Times*, you can still get it alright, but it's gonna cost you five bucks—as opposed to reading

it online for free. That's already the direction that the LP resurgence has gone: lavish packaging, 180gm vinyl, extra goodies, all for an anything-but-bargain price. Most recent limited-edition boxed sets, such as the Pixies' *Minotaur* (from Artist in Residence Records) or the new *Get Yer Ya-Ya's Out! The Rolling Stones In Concert: 40th Anniversary Super Deluxe Boxed Set* (from ABKCO), combine 180gm vinyl, CDs, and video DVDs in lush packages festooned with posters, stickers, tote

bags, and the like. While the tote bags seem a bit low-rent, the rest make for an appealing yummy that anyone bitten by the collecting jones will have a hard time resisting. Numero's first venture in this direction is *Light: On the South Side*, a two-LP-and-132 page book set (\$60) with an essay by Nick Hornby that combines Michael Abramson's photographs of mid-1970s club life on Chicago's predominantly black South Side with two LPs' worth of super-obscure blues performances, most originally released on 45rpm singles by long-gone Shytown labels like Brave, Gamma, and Dud Sound.

"There were so many different records we could have chosen from," Shipley says, "but we talked about how it can't be too soulful, it can't be too straight blues, it can't be this, it can't be that, and we finally hit upon it and said it has to sound like this: a real funky blues sound, low bottom—but also slow, not too upbeat, something with this kind of murky late-night feel to it."

The resulting package is beautifully done. The music, much of it from private collections and in varying states of preservation, has sonic limitations, but that in some ways adds to the atmospheric nature of this melding of gritty black-and-white photos and musical slow grind. The first time up, Numero Group has made contact with the ball and produced a compelling piece of tangibility.

"Our thinking was, what is the experience you're getting when you buy the record?" Shipley says. "How do you get people out of just ripping it and putting it on their iPod and hoping it comes up on Shuffle? How do you get them to actually have a tangible listening experience: Sit down and listen to this!"



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