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DECEMBER 1988

VOL. 11 NO. 12

COMING ATTRACTIONS

Vol.12 No.1 is the first issue of a new year; what will *Stereophile* have on offer? In January's equipment reports section, publisher Larry Archibald returns to the reviewing staff. His subject? Thiel's new CS1.2 loudspeaker, a design which promises much at an affordable price. Dick Olsher also returns in the January issue with a look at and a listen to the world of subwoofering; he will be reviewing models from Kinergetics, Audio Concepts, Terpsichore, Lantana, Cogan-Hall, Sumo and Celestion. J. Gordon Holt, we hope, will be taking a follow-up listen to Infinity's IRS Beta; Bill Sommerwerck offers reviews on the new generation of sophisticated surround-sound processors, represented by Lexicon's CP-1 and Yamaha's DSP-3000; while I have been living both with the deluxe version of The Mod Squad's Line Drive passive preamplifier and with their new Phono Drive phono preamp.

I will also be descending from those dizzy high-end heights in order to publish another installment in my continuing quest to find a great loudspeaker costing under \$1000/pair. The contenders? As we went to press on this issue, I had still to decide which models will be featured, but the list included models from Wharfedale, Spectrum, Angstrom, MB Quart, Black Bag, Taddeo, Rauna, Amrita, and Moni-

tor Audio. Whichever don't make in next month will appear soon thereafter.

At long last Laurie Evans and her team have finished analyzing the answers to Question 18 in *Stereophile's* 1988 reader survey. "What was Question 18?" I hear you respond. It asked you to list what equipment you owned and rate it for reliability; the results, which may offer some surprises, will be published next month.

And there is more!

Richard Lehnert reviews the new crop of Frank Zappa releases; Kevin Conklin surveys available recordings of Mahler's Ninth Symphony; Bill Sommerwerck offers his vision of the Hi-Fi System of the Future; I will be reporting on new technology seen and heard at the Los Angeles AES Convention, which took place in November; I hope that there will be sufficient space to include a full index to each and every review and article that appeared in *Stereophile* in 1988 (we have a full stock of back issues awaiting those who missed any of Volume XI); and we will have full details of the San Francisco high-end show, to take place next April.

Happy holidays, and see you in 1989.



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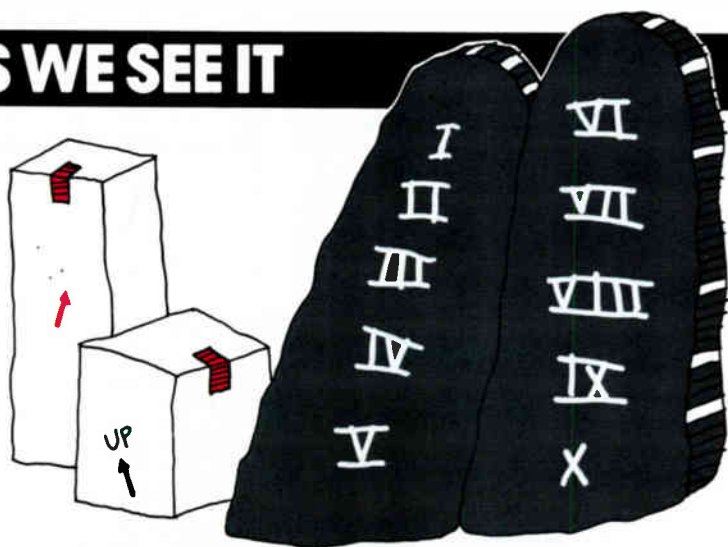
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A REVIEWER'S LOT

John Atkinson

"Time to write another equipment report," thought the Great Reviewer, aware that the IRS would soon require another small donation to keep the country running on track. Deftly donning his Tom Wolfe vanilla suit, he sat at the antique desk acquired on one of his many all-expenses-paid research trips to Europe, patted the bust of H.L. Mencken that invariably stood by the word processor, ensured that his level of gonzo awareness was up to par, arranged his prejudices and biases in descending order of importance, checked that the requisite check was in the mail, coined a sufficient number of Mailer-esque factoids appropriate to the occasion, and dashed off 3000 words of pungently witty, passionately argued, convincingly objective and deeply felt prose. Reaching for the Federal Express envelope, he sensed that something still was wrong, furrows of unaccustomed anxiety ruining the perfectly molded symmetry of his intellectual brow. "Heck," he remembered, "I suppose I'd better get the component out of its box to check if I was right about its sound quality."

This image of what was termed the Golden-Eared Subjective Reviewer by *IAR*'s J. Peter

Moncrieff—it is no coincidence, I am sure, that the derived acronym (GESR) is pronounced "guesser" — seems to be conjured up by the audio engineering establishment at every suitable opportunity. I can assure you, however, that in no way does it apply to any of *Stereophile*'s reviewing staff. A reviewer's lot is not such an easy one.

Hunter S. Thompson once wrote, "If you work in either journalism or politics . . . you will be flogged for being right and flogged for being wrong." A reviewer for this magazine is obliged to be right if he is *not* to be flogged. In his "Final Word" in the September issue, Larry Archibald defined what an equipment report needed to do and what it needed to include in order to be of use to our readers. That there is a need for more public discussion, however, was revealed when Larry and I paid a visit to The Audiophile Society (Westchester County, New York) in October; these audio enthusiasts were actively aware of what they saw as potentially serious problems with the manner in which high-end magazines cover the field. I thought, therefore, that I would share with you some more of this magazine's policies, philosophies, and attitudes toward the thorny business of reviewing hi-fi

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equipment.

Fundamentally, of course, as defined by J. Gordon Holt when he founded *Stereophile* in 1962, our reviews concern what a component sounds like. These days this seems so self-evident to any audiophile about to decide what to buy that it's hard to understand how revolutionary a change this represented a quarter of a century ago. (It was a primary factor behind *The Absolute Sound's* Harry Pearson's recently giving Gordon a Lifetime Achievement Award—see this month's "Industry Update.") The fundamental instruction to *Stereophile's* reviewers, therefore, contained in the letter I send to everyone about to start writing hardware reports for the magazine, is: "Describe the component's sound." But there's more, of course.

As well as grammatical instructions—I like our reviewers to be aware of the difference between "ambience" and "ambiance,"¹ as well as being able to distinguish between heterogeneous and homogeneous comparison (*ie*, when it's correct to use "compared to," and when to substitute "compared with")—I discuss at length with our equipment reviewers such matters as ethics, relationships with manufacturers, and to whom a magazine owes its loyalty.

The answer to this third question underlies, in fact, everything we do. We regard it as axiomatic that our primary loyalty is to those who pay money every month to read our opinions. *Stereophile's*—in fact, *any* magazine's—underlying responsibility *must* be to its readers if it is not to become the poodle of the industry it purports to cover. The readers' needs must always be put above everything else. A magazine like *Stereophile* has a threefold responsibility to its readers: it must inform, it must educate, and it must entertain. If it fails in any of these three areas, the magazine lets its readers down. Here's how we instruct our reviewers in how to cope with those responsibilities:

- The relationship between the magazine and manufacturers: There is no connection here at *Stereophile* between the editorial content and such considerations as who does and who doesn't support the magazine with advertising. There is no correlation between who advertises and who receives good reviews. There is no correlation between who advertises and

who gets review coverage of *any* kind. We choose products for review on the basis of their relevance to our readers. If a manufacturer chooses to cancel advertising because of a negative review, that is their decision. We would choose to go out of business before corrupting the integrity of our editorial material. In any case, one of my mentors, John Crabbe, editor of *HFN/RR* from 1964 to 1982, always used to say that if your publication is any good, an advertiser who cancels out of pique will eventually have to return.

- Once a writer has embarked upon a review for *Stereophile*, nothing can stop that review from eventually appearing in print (provided that the review itself is to a literary standard worth publishing). The policy of some mainstream publications is to quietly abort reviews which will be negative on the grounds that the space in the magazine is too precious to "waste" on negative copy. This practice was also justified to me by a since-departed member of staff for one of the "big three" on the grounds that his magazine's primary loyalty was to the companies who support it with advertising revenue, *not* to its readers.

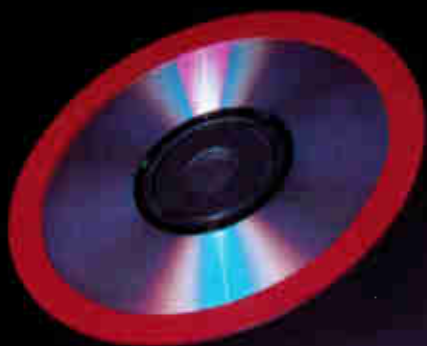
- If a product sounds bad but appears to be working properly, then we will proceed with the review on the grounds that it is typical of production. If it eventually turns out that a loudspeaker's crossover was wired incorrectly, or that the wrong transistors were installed, or that the hum was due to a production fault, we will happily review the corrected version, but you will always learn about the original problem. Such information is relevant to the review: the magazine's readers need to know that a manufacturer can't always supply a working sample, even when the user will be a reviewer.

If a product does turn out to be faulty, or just doesn't work out of the box, we ask for a second sample. If that one doesn't work, then we ask again. Similarly, when a manufacturer asks if he can send an updated version, we comply on the grounds that we need to be able to describe the most recent sample for the review to be relevant. However, the writers are instructed to include in their reviews *all* their experience with *all* the samples they've received, not just the most recent or best-functioning. Who's to say that a large number of the faulty or older versions are not already out there in the field?

A corollary to this is that it is often said that

¹ "Ambience" refers to the acoustic reflections and echoes that go to make up the reverberation and sense of space on a recording; "ambiance" is the pervading social or mental atmosphere.

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magazines receive nontypical, handchosen samples for review. Given the large number of failures that we experience, I can't believe this to be so. If it were so, then the failure rate in the field would be a disgrace to the industry. Occasionally we hear from readers that the amplifier or speaker they heard didn't sound nearly as good as the one we reviewed, in which case we make earnest efforts to obtain an additional sample for followup.

- Our reviewers write their opinions free of pressure from companies whose fortunes will be affected, positively or negatively, by those opinions. After a writer has submitted his or her review copy to the magazine, we send a preprint of the edited report to the manufacturer in time for them to send us a comment for inclusion in "Manufacturer's Comments." That is often when the cow cakes hit the fan. However, as all the communication involving the content of the review is fielded by the editorial staff, the writer is protected. (It has happened that a manufacturer has found the home telephone number of a reviewer and attempted to beat them up over the phone—"I'll see you'll never again be able to hold up your head in public!" Not surprisingly, we get upset by this behavior, but fortunately it has happened very rarely.)

- We allow manufacturers to reprint reviews of their products that have appeared in *Stereophile* only if the following conditions are fulfilled: that, if reprinted in full, *Stereophile's* production staff prepares the text and artwork in order that nothing be omitted; and that the reprint have a lifetime of only 18 months from the review's first publication in the magazine. That this has not always been the case was why we started to take a hard line over this matter in early 1987; some companies were making considerable PR mileage with *Stereophile* reviews that were getting decidedly long in the tooth.

If a company merely wants to quote from a review in their advertising, we insist both that the request be made in writing and that we see the ad as it will appear in print well in advance of publication. This is in order to verify that it does not misrepresent the original review findings. I am pleased to say that this policy seems to work very smoothly, with courtesy and cooperation from manufacturers.

- The relationship between reviewers and manufacturers can be complicated. *The Abso-*

lute Sound, for example, has a policy of refusing to allow manufacturers to communicate at all with the writer reviewing their product. We feel that this is too restrictive. It can only *help* the reviewer to know why a product is designed the way it is—education is a lifelong process—and, in turn, the manufacturer deserves to have his or her component auditioned in an appropriate manner. However, once the review is under way, we do not allow manufacturers to know details of its outcome until they receive the preprint.

- We do not allow manufacturers to dictate which reviewer carries out a review on their product. It is an unfortunate fact that it is always possible for a reviewer to become "tame" regarding a specific manufacturer's products. This is only natural; reviewers, like anyone, are susceptible to "falling in love" with the sound of particular products, or becoming overly enamored of certain design philosophies. It is also often impossible to completely separate respect for a particular designer from a review's findings. Such personal factors can also work against a company's products. If a reviewer hates panel loudspeakers on principle, for example, then it would not be fair to the manufacturer of such a model to choose him to review it.

We work to minimize any such extraneous factors by careful choice of reviewer. We pick and choose our passage through this thorny thicket basically on the premise that whoever ends up reviewing the product will reveal its virtues *and* its faults.

Manufacturers do not like this, in general appearing to prefer reviews that are wholly positive—which isn't all that surprising. Relationships have even turned sour when a reviewer, in the midst of a paean of praise for a component's sound quality, mentions that he found its aesthetics distasteful. However, it seems self-evident that even the best products will have some negative aspects or some idiosyncrasies that need to be pointed out. If you read a review that reads like it was written by the manufacturer's marketing department, then it is likely the reviewer didn't probe deep enough. Note that this is *not* an instruction to writers to produce negative reviews; only to be thorough.

- Regarding financial benefit: This standard is simple. No form of financial reward for a review is acceptable. To the best of our knowledge, no

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Stereophile reviewer has so benefited, but were it to happen that reviewer's relationship with the magazine would immediately cease.

- Trips abroad, fancy dinners, and other such benefits are often offered by companies' public relations staffs in order to attract attention to the company's product. *Stereophile's* policy is that, when a staff writer is asked to attend a press conference or any other event at the company's expense, we write copy only when it's relevant or informative to our readers (in other words, the same standard we apply to all copy). Mere attendance does not imply any deal to give the company or its products editorial coverage. We draw the line at accepting invitations to attend general events such as consumer electronics shows and conventions at a specific company's expense. If we think these events *are* worth covering, again in terms of relevance to our readers, then *Stereophile* picks up the tab. Otherwise, the magazine's staff members do not attend.

- A question that concerned The Audiophile Society was when does a long-term loan of a product to a reviewer become a gift? This is a complicated subject, as reviewers do need to keep reference products at hand. We do not have a hard-and-fast policy on the subject of long-term loans, every case being considered on its merits. In general, however, if we have a real need to hang on to a product for longer than a year, we buy it, which is the case with the Versa Dynamics turntable and Sound Lab loudspeakers used by Gordon in his reference system.

This raises another important subject: How *can* a reviewer do a fair evaluation of a product's merits without any firsthand knowledge of the performance of its peers? It is essential that a reviewer be able to place the component being tested both in its context in the marketplace and in that of its ultimate sound quality. To quote from Larry's essay in September, "The review must give you *buying information*. You must be told what significant products compete with the piece under review, whether the price differentials make sense, whether the company in question has a good reputation for service and reliability, excellent or shabby dealer networks, and whether it's likely they'll even be in business when the time for service or resale comes (though accurately predicting the latter is almost impossible)."

In fact, one of the things about the slicks

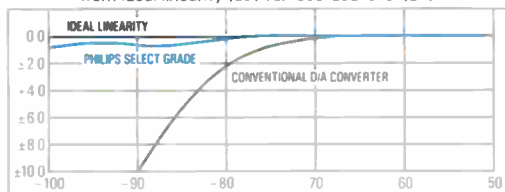
which really gets me going as a fellow Editor is that, in general, their reviews never do any of this, never comparing a product's performance, pedigree and price with those of its immediate competition. For example, it has been said about Julian Hirsch that whenever he reviews a loudspeaker, a precis of the conclusion would leave the reader with this bald statement: "Of all the speakers I have reviewed . . . this is certainly one of them." Manufacturers, of course, are happy always to have a product reviewed against its specification, with no recognition that there is a world out there in which the product is going to have to compete on its sonic merits. But readers, as potential purchasers, have a real need for hard buying information.

A secondary point is that readers, if so minded, should be able to follow the reviewer's reasoning from first principles, and test the validity of his or her statements for themselves. Too many reviewers for all magazines, in my opinion, tend to hand down Olympian judgments, apparently intended to be taken as fact without the writer supplying any of the scaffolding or supporting information which would inform readers as to *exactly how* he or she arrived at such conclusions. As I see it, this is a cop-out, aimed more at preserving the writer's need always to appear right than at the magazine's need to serve its readers. The reviewer's duty is to provide an informed and educated opinion that can serve as a basis for readers to make up their *own* minds. The more support the reviewer gives readers as to how he arrived at *his* views, the more he helps them clarify their own.

- The bottom line for *Stereophile's* equipment reviewers is the question: "Would I spend my own money on this product?" If the answer is "No," despite the piece of equipment in question performing well, then an otherwise positive conclusion must recognize this fact. And if the answer is "Yes," even if the reviewer has pointed out flaws, then the conclusion must be positive. However, to give a good review to a mediocre product, for whatever reason, is worse in some ways than giving a mediocre review to a good product. The latter can damage a manufacturer's profitability, but not only does the former fail to keep the reader informed, it may make him spend money on a product that fails to keep him happy—the worst service *Stereophile* can do him. **S**



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LETTERS

We regret that resources do not permit us to reply individually to letters, particularly those requesting advice about particular equipment purchases. Were we to do this, a significant service charge would have to be assessed—and we don't have time to do it anyway! Although all letters are read and noted, only those of general interest are selected for publication.

Cello & McIntosh

Editor:

I read with interest Larry Archibald's "The Final Word" column in the August 1988 issue which discussed product reliability.

Credit should be given to McIntosh for introducing values for product integrity and customer service that few other companies have equalled. I'm sure you remember the guarantee of pride of ownership and customer satisfaction that went with owning a "Mac."

Cello products are very different from those of McIntosh, but we respect their contribution to this field.

I would like to point out that Cello products have been used in professional studios of companies like PolyGram, RCA, Atlantic, DMP, Sonomaster, Masterdisk, Sterling Sound, and Mosaic Records for over three years. Cello products have been exceptionally reliable under conditions far more demanding than any home environment. There are over 1500 Cello units in use worldwide with virtually none on the used market. There have been no model changes or upgrades, and the few refinements made were offered at no charge to owners.

Mark Levinson, President
Cello, Ltd.

Kessler & the Mondial ad

Editor:

We appreciate the occasional publicity *Hi-Fi News & Record Review* receives in the pages of *Stereophile*. However, I would like the opportunity to clarify a point arising from the October issue. In the advertisement on pp.58-59, Mondial quotes the whole of a review written by Ken Kessler for the June 1988 issue of *HFN/RR*. We did give Mondial permission to reprint the review; we had not expected that they would also use it as advertisement copy!

Although the ad did feature our logo, I feel that there is still a danger that readers might believe the copy to have been written specially for the ad.

I feel obliged, for the record, to just point out that Ken's article was originally written for, and

published by, *Hi-Fi News & Record Review*. Tony Federici of Mondial subsequently sought and obtained permission from ourselves and from Ken Kessler to reprint the article in his own literature.

Steve Harris, Editor

Hi-Fi News & Record Review, England

Yes

Editor:

Re. July 1988 issue, p.39: "(CBS CD-1 tracks 0 and 19)". Isn't this a misprint? Perhaps, 14 and 18?

John Soule
Glen Ellyn, IL

Thank you

Editor:

I consider *Stereophile* one of the best-presented magazines on the market. I thank you for Vol.11 No.10; I was elated at the amount of information (and quality) in this issue.

James Vanderwarf
Address not supplied

The condensed Wagnerite

Editor:

Richard Lehnert hit the nail — "To the serious Wagner listener" (Wagner: *The Ring Without Words*, Vol.11 No.9). I seriously doubt Maazel was aiming at such people. He was aiming at people like me who, if we think of Wagner at all, think of him as boring, longwinded, turgid, and "not over 'til the fat lady sings." But this CD was an eye-opener! This guy could write a great tune! I find myself humming them as I sit reading the paper. Isn't that what it's all about?

Lehnert says "Surely Wagner's music is well-known enough by now?"; but it isn't. Until now you couldn't get me near an opera. You probably couldn't now, either, but at least there is hope. I might be encouraged to progress to some opera highlights. Who knows where that may lead?

Lehnert falls in that class of people who object to any condensation of the *Reader's Digest* type because it alters the master's work. However, it does make complex subjects accessible to the masses. Most of us aren't going to take a

chance on a CD or opera with a weird name like *Gottterdammerung* without a lot of lead-in. *The Ring Without Words* fills that need admirably.

Robert B. Pierce

McMurray, PA

*You're right—I do object to any condensation of the Reader's Digest type. My family subscribed to that series, and because of it I did "read" many "books" as a child that I otherwise might have missed. Trouble was, I thought I really had read them. It was only when I began reading the unabridged originals that I realized how much I'd missed—often the most important material, at least that which spelled the difference between the merely good and the excellent. And, as I intimated in my review, *The Ring Without Words* might have worked a whole lot better had it only been better performed and recorded. If all you want is "great tunes," and if Maazel's pastiche gave you some and pointed you to the source, that's fine by me—I only ask that you not confuse it with the real thing.*

—RL

Advice

Editor:

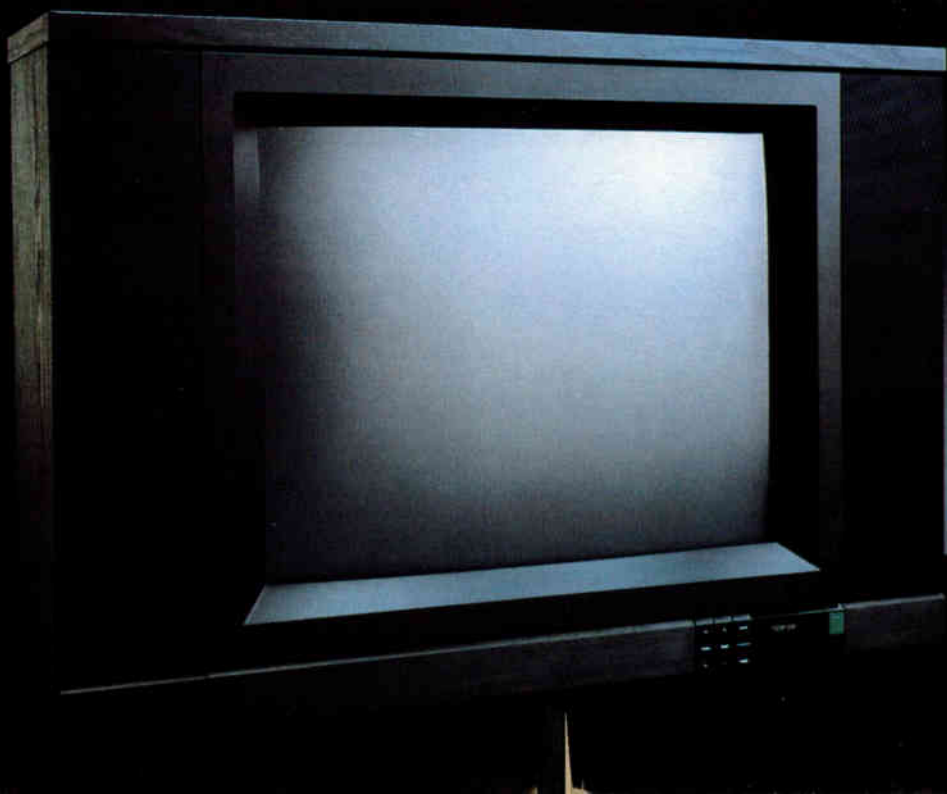
Start considering rock seriously. Stop giving

ludicrous reviews—*ie*, JGH with Tube Traps behind a dipole (absurd). Tell Lew Lipnick to either be a reviewer or a dealer. *Not both*. I question his ethics selling equipment under the auspices of a musician/reviewer. Stop being such a bunch of anal-retentive egotistical experts and get a little more practical and responsible. Support the industry around you, not just garage companies, and learn to write more as individuals instead of as "one" voice. Too many times (as in *TAS*) there develops a single writing style in a publication that should contain individual writing styles. Your business is to promote the listeners' education, not to sell equipment for Adcom, Monster Cable, or Rowland, etc.

Tip Griffin

Burke, LA

For the record, Lewis Lipnick does not sell hi-fi equipment at retail. Rather, he expands on his reviewing by acting as a paid consultant for those wanting advice on system choice and matching. Those he has helped then buy components from conventional hi-fi retailers who are in no way connected with Mr. Lipnick.



product a good review, in the form of receiving any kind of kickback or gift from the relevant manufacturer or from a retailer, then that person's relationship with Stereophile will immediately cease.

—JA

High end & pro gear

Editor:

I read *Stereophile*, I subscribe to *Stereophile*, and I have some trust in *Stereophile*, but when you recommend an \$11,000 turntable, \$5000+ amplifiers, etc., I wonder. I can set up a studio, buy a new car, or have a big down payment on a home, etc., with the money needed to buy high-end equipment. I'll stick with pro audio where I can bridge, mix, and equalize to the sound I want to hear, from any size speakers. I can even bridge to incredible amounts of wattage just for average listening, for a fraction of the cost of high end. No, I'm not a crybaby; if I had the money, maybe, just maybe, I might try a few high-end items, but I probably would kick myself for shelling out all those bucks to be disappointed with the same sound. I had my chance to compare some high-end with pro equipment in the Milwaukee-Chicago area, using CDs, records, and tapes with all varieties

of music. There were some differences, and some high-end speakers worked quite well with pro equipment. Speakers I never had many problems with, since you pay for design, wood, and name, if they can handle the power.

In conclusion, I think I'll mix and match to get the best of both worlds in sound, with extra money in my pocket for a cocktail and a beautiful lady to listen with.

Sound to you,

M.L. Gallant
Milwaukee, WI

High end & mid-fi

Editor:

I would like to respond to a letter by Randy Rico appearing in Vol.11 No.8, which itself was a response to a letter written by a Richard Fletcher. Mr. Fletcher's premise was that many "mid-fi" components "run rings around half the equipment you [*Stereophile*] recommend." Mr. Rico's comments attempted to set the record straight for Mr. Fletcher and the other "poor mindless souls" who purchase mid-fi gear.

Mr. Fletcher, the majority of retail audio consumers are *not* "mindless souls." Perhaps, instead, they have had the same experiences

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*Quoted with permission from the November, 1988 issue of *Video*.

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that I have had when shopping for audio equipment—that of the arrogant, snooty attitude of many high-end sales “counselors.” Most people, including myself, are not interested in dealing with a salesperson who treats them like a second-class citizen simply because they lack Ph.D.s in electronic engineering.

As I began my quest for audio nirvana, I spent time in many audio stores, mid-fi and hi-fi. What resulted was a general contempt for hi-end salons and the people that run them. I was simply not worth their time. I ended up with a mid-fi system, not for lack of money, but for lack of education. What is needed in esoteric audioland is people willing to spend time with the potential audio buyer, to show and educate them as to what the differences are.

No amount of salesmanship or diarrhea of the mouth will convince me that a \$2000 preamp is better than a \$200 one. Let me listen to it! Point out the differences in detail, depth, and musicality. Show me the quality of construction. Demonstrate the lack of fuzz, the clarity of the treble, the absence of bass overhang. And above all, don't treat me like a “mindless soul,” or all your efforts will be wasted.

I was fortunate enough to find a few people who were interested in educating me. My mid-fi system is gone, replaced with B&K, Acoustat, Counterpoint, and Analogics. Mr. Fletcher, I hope that you will be lucky enough to find a hi-fi retailer that cares about you, too. Mr. Rico is correct—if *music* is what you want, Carver, Polk, and Klipsch will simply leave you wanting. However, his “holier than thou” attitude is one of the reasons that mid-fi is the predominant market force. Perhaps the high-end community should stop looking down their noses at the unknowing audio buyer, and teach him that there is so much more to a musical system than a high price tag.

William Cowen
Kirksville, MO

PS: For those with access to a computer and modem, The Audiophile Network, (818) 988-0452, is a godsend for advice and knowledge.

“Dear Jeff”

Editor:

It is always good to know that designers and manufacturers take great pride in their products and will so enthusiastically defend the many virtues possessed by same. Jeff Percy's response in Vol.II No.10 to JA's review of the Image Concept 200, however, left me with the “wrong”

feeling. What I really “feel” is that an immediate switch to decaffeinated coffee is in order, if for nothing more than the sake of his loved ones. . . . Meanwhile *Stereophile* can take pride in the knowledge that the magazine never fails to entertain along with its other objectives. Mr. Percy's “Manufacturer's Comment” certainly did it for me.

Bruce T. Burgess
Jax Beach, FL

Trust Me?

Editor:

Having had the opportunity of reading Doug Self's article in *Electronics & Wireless World*, as well as those published in the *Journal of the Audio Engineering Society*, we feel that John Atkinson's response (“As We See It”) in Vol.II No.9 is unwarranted and shows a misunderstanding of scientific and engineering processes that we would not expect from someone with his technical background. Surprisingly, he didn't end his article with the phrase “Trust Me!” We have grown accustomed to this prattle in most other “subjective” magazines, but had considered *Stereophile* somewhat above this. Are we now to expect more of the same?

As engineers with no vested financial interest in any audio products, we feel that what Mr. Self has stated is quite reasonable. If Mr. Atkinson feels that Self is wrong, he should prove it with valid facts or statistics and not conjecture and half truths. For example, the objection to Self's dependence on steady-state tests is questionable because transient response of lag-type circuits (which include competently designed amplifiers) can be extracted from the steady-state response when usable response is well beyond the audio range. Our point, however, is not to dissect either article, since that is what the *JAES* is for. We suggest that *Stereophile* present both sides of the argument (with rebuttals) and let the readers decide.

What is most paradoxical is that Atkinson would use any work by Lipshitz and Vanderkooy as evidence, for their papers on subjective evaluation for the most part support Self's position. In (1) they state: “In order for subjective tests to be meaningful to others, the following should be observed. 1) There must be technical competence to prevent obvious and/or subtle effects from affecting the test. 2) Linear differences must be thoroughly excised before conclusions about nonlinear errors can be reached. 3) The subjective judgment required

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in the test must be simple, such as the ability to discriminate between two components, using an absolute reference wherever possible. 4) The test must be blind or preferably double-blind." And "our position is that as yet we have not encountered audible phenomena for which we could not measure a possible cause. On the contrary, measurements easily show up differences where none are audible in careful listening tests. Our findings are that level differences of 0.2dB are audible if present over a fairly wide band, and therefore suggest that A/B tests must have linear differences matched to 0.1dB." We suggest Atkinson and any other reviewer read this paper in its entirety because it forms a sound basis for subjective testing.

One point that cannot be emphasized enough is "linear differences." Since you have not stated that the amplifiers you review are linearly matched to the L&V criteria stated above, we can only assume that the comparative differences are linear (unless you can show that a particular amplifier is distorting under speaker load). Experiments have shown that distortion becomes audible at a point well above that of most commercially available amplifiers.¹ Additionally, Self has shown² that there is no audible "fuzzy" or unknown distortion mechanisms that were speculated on by various subjectivists. So shouldn't listeners be concerned with linear differences? Not if they're held to a minimal amount (as nearly all amplifiers are). The speaker/listening room interface will introduce linear variations that swamp any of those created by the amplifier, audible or not. Moving the speakers, or even one's head position, will probably have more of an effect than changing properly operating amps. Also keep in mind that the amp/speaker interface can introduce linear variations, since amplifiers have finite output impedances.

In any case, we would never sonically consider spending more for any amplifier based on minor linear differences. If someone wants to opt for amplifiers or preamps that sound different and cost vastly more, that is their prerogative, but don't tell us they are superior unless you can prove it. A stack of subjective

magazine reviews or speculation from some manufacturers is not proof.

Anybody know if Joe Isuzu is also in high-end audio?

Paul Fargotstein, Vaughn Estrick
Brea, CA

Trust Me

Editor:

After four years of enjoying *Stereophile*, I finally feel compelled to offer some of my own observations of the world of audio reproduction. Issue after issue, I read the letters section to bone up on the art of argument. Many important issues (and battles) have been fought here, most of which have been very interesting. Some people complain about how much they hate your publication, and others pour forth incredible praise. The best part is when you publish a controversial article, then the sparks really fly. "Is my amplifier perfect?" "Does my wire really sound better than your wire?" "How can you listen to those speakers, let alone recommend them?" My personal favorite is "Why didn't it make 'Recommended Components'?" Each time we get a new issue to contest in the letters section, I casually sit back and wait for the smoke to clear. I was moved, however, when I read John Atkinson's "As We See It" in Vol. 11 No. 9.

As audiophiles, we all know that engineers don't listen to music, they listen to graphs and statistics. JA's response to the attacks by the engineers was masterfully written. As a student in engineering, I am subjected to constant jeers and jokes about my beliefs in sound reproduction, and I have a quick and easy way to dismiss the constant attacks on my credibility by engineers waving pages of incontestable proof in my face. Just ask these people three questions. First: What kind of equipment do they listen to? Nine out of ten engineers surveyed listen to music through audio systems available at their nearest department store. Second: When was the last time they attended a live classical music performance? The answers for this one are usually very frightening. ("Never" is the most popular answer!) Third: Name the best-sounding equipment they have ever heard. Usually the responses to the first question are repeated here. After questioning many engineers, I now realize why these people can prove without a doubt that my tube amplifier sounds no different from a toaster. *Ignorance!*

¹ Lipshitz and Vanderkooy, "The Great Debate: Subjective Evaluation," *Journal of the Audio Engineering Society*, July/August 1981, pp.482-490.

² Self, D., "Ultra-Low-Noise Amplifiers and Granularity Distortion," *Journal of the Audio Engineering Society*, November 1987, pp.907-915.



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It seems these engineers can write us audiophiles off as loonies so easily because they don't know what they're talking about. Ignorance is bliss, and these engineers are bouncing off the walls with euphoria. They have heard the latest technology (which usually means it was designed with cost efficiency before sound quality), and nothing else can sound better. That is true only because they haven't tried anything else! They laugh at us because we spend outrageous amounts of money for special wire. Their argument is simple. There is no way to measure the sonic properties of wire accurately, therefore the wire has no sonic properties. I am not going to sit here and tell you I have golden ears, and I can clearly hear a difference between zip cord and the good stuff. The truth is, I can't tell the difference, but that does not instantly make my purchase of some of the good stuff invalid or crazy.

The scientists tell us that a large portion of the listening process happens in the brain. They also tell us that bias and preconception can (not always) influence what we hear. (Reviewers take note, this is not an attempt to discredit you!) My argument is simple. If a person buys a piece of equipment, they are usually impressed with what it has to offer. If they can hear a difference, real or imaginary, measurable or not, and they find it to be an improvement, why does it matter if they can measure the difference, or prove it statistically? I have never spoken with a person who has improved the sound of their system and enjoyed music less because of it! I have seen friends substitute equipment and hear more music than they ever did before. Who cares what the distortion figures are? Just listen to the music. Music is the reason for all the equipment in the first place. Every time an engineer tells me that I can't possibly hear the difference between tubes and transistors, or CDs and turntables, I laugh. I laugh because I know that I enjoy my music and my tubes and my turntable more than they will ever enjoy their graphs and statistics.

Scott T. Enright

Engineering Class of 1991, Drexel University

Bogospeak & tweak journalism

Editor:

Jeez. C'mon, you guys, credit where it's due.

The instruction manuals that accompany the dbx BX1 power amplifier and CX1 preamplifier, which include "white" papers and about

which J. Gordon Holt makes much, cannot have been quite as interesting to him as he said in praising them in his review of these products in September. He refers several times to the anonymous writer(s), but one of the things I'd just started to do before I had to leave dbx due to cutbacks was to start crediting those responsible for the text and the ideas at the end of the manuals. In the case of the BX1 and CX1, it was myself, together with design engineers Gary Hebert, Richard Aylward, David Bates, and their boss Les Tyler. With their colleagues in research, pro audio, and Soundfield speakers, they surely constitute the most informed, various, and sensible (open-minded but not foolish) small group of audio engineers working in this country, if not the world.

That large credit omission aside, thanks for Gordon's lengthy praise of the dbx manuals. Yes, they were written by persons not always, uh, sympathetic to high-end audio smoke. As for specific comments, it's OK to leave a BX1 on, but sonically, it will only matter to obsessives and, being a believer in proof, I doubt I can "grant the *possibility* that some sonic qualities are not yet measurable." (Otherwise I grant the possibility that I can fly: always a possibility, in some useless sense of the word—never say never—but it's a statistical world, alas.) It would have been nice if Gordon's reviews had gone into the manual's discussion of precisely how it is that amplifiers may sound different, and sound different with different speakers. How a load can vary frequency response is known stuff—at least to some people—and is covered at length in the BX1 instructions.

As for John Atkinson's quoting me in September's "As We See It": I have no interest in any conservative, closed-minded defense of the audio establishment (whatever it is), whether as Boston Audio Society president, ex-dbx technical/marketing editor and writer, or anything else. I do have a keen interest in audio truths, demonstrable and repeatable—*ie*, *shareable*—truths. So I am *profoundly* bugged by the persuasive technobabble pseudoscience inflicted upon the lay reader and audiophile by *Stereophile* and by other magazines; it's a perversion of learning!

Saying that absolute polarity reversal in a set of speakers will make the woodwinds in a performance suck instead of blow is crap. (I note that this was not said in *Stereophile*, but is no worse than statements that have been.) Go



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ahead and state unequivocally, if you wish, (and then demonstrate in repeatable fashion) that changing the Compression/Rarefaction sequence from CRCRCR to RCRCRC makes an audible difference, with discussion about the asymmetry of certain low-frequency waveforms and listening tests to such material. Polarity reversal doesn't seem to change sound for me, but unlike a tweak journalist, I would never make my experience universal or even write about it without "blinding myself" or testing it with and on other people.

Or, to address Atkinson directly in the matter of "bogospoken" that appears solid, I call attention to the July 1988 issue of *Stereophile* where he had to answer about his claim, in a footnote to J. Gordon Holt's review of the dbx 14/10, that all equalizers introduce "time-domain distortion" to an audio chain. (All us good tweaks know this as matter of common sense and intuition, nudge nudge.)

A letter from me in the same issue pointed out that in minimum-phase situations, before the signal gets into the room as sound, any modern equalizer corrects phase behavior *along with* magnitude (amplitude) behavior. It restores correct "timing," not distorts it. Saying otherwise, appealing to the language of "phase," is smoke blown using the very diction of science. We have to know, and be willing to learn about, what we're talking about.

For other examples of this problem, see also Professor Ed Fagan's letter in another recent issue [Vol.11 No.3, p.13] about wire, signals carried by it, and the glories of 19th-century science.

I mean, you guys always take shots at Julian Hirsch, but even he recently wrote, rightly, that prose about "fast" woofers always makes him feel as if he's entered *The Twilight Zone*.

Maybe you, and interested readers, ought to join the independent, nonprofit Boston Audiophile Society and read *The BAS Speaker*. We're not anti-tweak or anti-audiophile (hardly), but we sure are skeptical and we know a little about science (sometimes more) and scientific method.

David Moran
Lincoln, MA

Oh, what a tangled web you weave, Mr. Moran. One man's technobabble could well be another's elucidation. I quoted you in September's 'As We See It' to illustrate the general point made by Clark Jobnsen in his book The Wood Effect, ergo, that the minds of 'establishment' engineers understandably start to

close when science reveals truths that would threaten their beliefs or even existence. Douglas Self's position, and yours as revealed in the quotation chosen, are typical in that science which produces results that make you uncomfortable is labeled "bad science." You call this attitude "skepticism," but it reveals that you, too, pick and choose from the whole picture only that evidence which lies comfortably within your own belief structure. By doing so, even though you wrap yourself in the flag of "objectivity," you cast your own subjective veil over the truth.

If you take issue with what I have written in Stereophile, then please let's restrict any argument to my statements in this publication. Criticizing my position on the basis of what another writer has written in another magazine and then claiming, without example, that it "is no worse than statements that have been [published in Stereophile]" does no more than throw up a smokescreen, disguising my own position, which is more careful than you feel it to be. I am not surprised that you bear no difference when reversing signal polarity; neither does J. Gordon Holt, nor do some other listeners whose opinions I respect. I wouldn't, and haven't, claimed that the change of absolute signal polarity is always an audible night-and-day difference on music, nor that it will be equally audible to all listeners. There is evidence, for example, that those listeners possessed of perfect pitch are more sensitive to its effect than those without. However, this "tweak journalist" has taken part in carefully controlled blind listening tests using an ABX box where the effect of reversed polarity was detected reliably and consistently: to a 100% significance with unmusical test signals; to a lower level of significance with music. I understand, therefore, regard Mr. Self's and Mr. Moran's questioning of something that is well-established in the literature as being politically rather than factually based.

Regarding my apparent ignorance of the introduction or non-introduction of "time-domain distortion," I had wondered when preparing the July issue whether I should respond or not to Mr. Moran's "Manufacturer's Comment" letter. I decided not to as "Manufacturer's Comments" works best when allowed to be the exclusive domain of manufacturers and distributors. We have our say in the review; they should be allowed the same

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privilege. However, it is obviously attendant upon me now to expand on my footnote to Gordon's review, particularly as brevity made my original terminology ambiguous.

Certainly I would agree with Mr. Moran's statement that in a minimum-phase system, flattening the amplitude response will also correct the phase response. I will have to take on trust his statement that modern equalizers are minimum-phase designs. But, good grief, Mr. Moran, the problems due to room reflections, to room and loudspeaker resonances, and to such phenomena as cone break-up, the problems that amplitude equalizers like the dbx 14/10 are ostensibly intended to correct, are not minimum-phase situations!

Yes, these aberrations can manifest themselves as, and be interpreted as, departures from a flat amplitude response, but a conventional amplitude equalizer can do nothing about problems in the time domain other than to make them quieter. It doesn't cancel them. In addition, as the equalizer will no longer have a uniform phase response when its own amplitude response departs from flat, and as this phase error will not necessarily be opposite and equal to that produced by the non-minimum-phase room or speaker resonance, it represents an additional source of time-domain error. (This was pointed out by Richard Heyser in his classic 1969 paper, Loudspeaker Phase Characteristics and Time Delay Distortion.) No matter how benign, I still regard this as distortion; I hope that my philosophical opposition to multiband amplitude equalization is a little more clear.

Yes, the popular terminology of a "fast woofer" is inherently self-contradictory. However, as commonly used, it appears to indicate a bass alignment that is inherently free from overhang and boom, factors which, even if present to too small a degree to lead to a "one-note bass," can give the music a leaden, "slow" quality. Sloppy usage but hardly Twilight Zone material, I think.

Finally, I do recommend The BAS Speaker. Yes, it does approach the high end from rather a different direction from the rest of us, and grumbles overmuch. However, though the magazine these days doesn't quite scale the investigative heights it reached in the late '70s, its Editor, Mark P. Fishman, almost always has something of interest to say. Those interested can contact The Boston Audio Society at PO

Box 211, Boston, MA 02126-0002. Membership (which includes a subscription to the Speaker) is \$22 per year. —JA

Magnetic flux

Editor:

In Vol.11 No.9, p.21, Robert W. Hayden appears to be asking a question. Why demagnetize a nonmagnetic material? A good question.

My original letter (Vol.11 No.3, p.15) never stated anything about metal parts being magnetized. I stated that metal parts constantly bathed in an electromagnetic field will develop a "residual" field, and that this "residual" field can be affected by demagnetization.

All objects, animal, mineral, or vegetable, are encased in an electromagnetic field. The earth is also encased in an electromagnetic field, but a bucketful of soil is certainly not "magnetized." Sharks have electromagnetic sensors under their noses which draw them to their prey. Occasionally a shark will confuse an animal electromagnetic field with the field that surrounds a metal object (which is stronger), and swallow the object in error. This seems to suggest that the fields are similar but different.

The "residual" field mentioned in the stated letter could be an intensification of the natural field around the wire, enlarged by the electric current. It also could be as Mr. Belt stated (Vol.10 No.9), a complete unknown.

At this point the reader may be asking, "Well, just what does all this have to do with the price of corn anyway?" I would like to suggest a small experiment that should make this a little more germane.

Use a piece of equipment that is compatible with headphones, tape deck (make sure heads are clean and demagnetized), preamp, CD, or Walkman. Listen to a favorite piece of music, then unplug and remove the headphones and place them on the floor or table with the cord fully extended in a straight line. Head demagnetizer in hand and starting with the phono plug, with small circular motions slowly move the demagnetizer up the cord and rotate it about the headpiece. When this is completed, return the phono plug to its socket and replay your favorite piece of music. Granted, the effect is small, but the result is sufficient to make the point. I am sure the reader can now see how much greater the effect would be if the electronics in a system were included in this process.

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many and may reach far beyond the tiny realm of audio. What was experienced through the headphones cannot yet be explained by science.

Ron Paquette
Phoenix, AZ

CD Cancer

Editor:

This letter is in reference to the "CD Cancer" article in the July 1988 issue. I purchased a Yamaha CDX 500U CD player last year. Shortly thereafter I began noticing a fluttering noise (distortion) on the fade-in and fade-out of many of my disks. This distortion was also noticeable on some low-level passages of some classical CDs. A check with the dealer's test equipment revealed the distortion, but the dealer said there was nothing that could be done, because that was the way the unit was designed. They offered to let me trade up to a more expensive unit, but I declined to spend the extra money.

I began a quest to find if this was a common problem with other CD players or if this was just common to the Yamahas. Armed with a classical CD that exhibited quite a bit of this low-level distortion, I went to several dealers and checked several brands of players. I found that many of them did have the distortion, and that price range was not necessarily a factor—in fact, one audiophile favorite costing \$1600 tested positive. The interesting thing is that none of the dealers were familiar with the problem and they did not know the cause of the low-level distortion.

Finally, the article appeared in *Stereophile* describing this very problem. With this information in hand, I wrote to Yamaha, not really expecting a whole lot to come of it. A few days later, much to my surprise, I received a phone call from a Yamaha customer representative. They were aware of the problem and of the *Stereophile* article. They asked me to send the CD player to them so they could check it out, but they made no promises as to what they would do about the problem.

I sent the CD player to Yamaha along with a sample disc. They checked the unit out and found that the DAC was off by +11dB at -90dB. They replaced the Burr-Brown PCM56 DAC with a "K series" (or "selected") PCM56 DAC. Upon retesting, the player was now off by only 1dB at -90dB. The player's linearity was now right on, and the distortion was gone. I have

checked the player with several different discs, and there is no longer any low-level distortion.

I am very pleased with the way the unit sounds now. I feel Yamaha USA should be commended for the way they handled the problem created by their Japanese counterpart. Hopefully, if companies get enough feedback from customers, they will quit using the cheap DACs.

Gary Phelps
Austin, TX

CD Cancer again

Editor:

I was amused that right after the Audio Cheapskate had glorified (and bought!) a Marantz CD-94 player (Vol.11 No.9), Ken Pohlmann published some very poor linearity results for that product in the October *Digital Audio*. Compression, even at -70dB, was 7dB. But maybe Sam Tellig thinks compression sounds good!

Bernard A. Engholm
Carlsbad, CA

It would appear that Ken Pohlmann had a particularly bad sample in this respect. The Marantz CD-94 that Tom Norton reviewed in the October issue of Stereophile measured -70dB at -70.3dB, with a 1dB negative error at -80dB and a 6dB negative error at -90dB. I.e., the -90dB tone replayed at -96dB. This expansion is about average for a Philips-system player using the SAA7020 digital filter and TDA1541 16-bit DAC chips. The sample reviewed by Audio in September, for example, had -0.5dB and -4.5dB errors (mean of both channels) at the two lowest levels respectively. If readers are worried about the low-level linearity of such players, then NAP can supply replacement, higher-quality ICs (see "Industry Update" in October); ask your dealer for details.

—JA

AVA Dynapraise

Editor:

The yard-sale purchase of a Dyna PAS preamp was a whim on my part. When I plugged the unit into my system, though, it sounded good enough to justify selling my Yamaha integrated amp and to start looking around in the classified section of *Audio* for someone who modified the units. I came upon Jensen's Stereo Shop, and upon hearing their price, sent my unit off.

I called Jensen's and spoke with a man (who turned out to be Frank Van Alstine himself) about the modifications. Mr. Van A. spent



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phone time asking about the other components in my system, my musical tastes, and what I expected the preamp to sound like. I realize that this level of service is probably not typical, but the result of the modifications was exceptional.

In my system (Denon 103S in a Magnepan arm on a Coco-modified AR, Adcom GFA-1, and Dahlquist DQ-10a's), the sound was so transparent that nothing I have owned since has come close. Others who heard the preamp have been amazed at the performance.

I foolishly sold the preamp, but have acquired another recently. For the money, I can think of no better value.

Glenn Young
Baton Rouge, LA

A love of music

Editor:

I agree wholeheartedly with Larry Archibald's "The Final Word," Vol.11 No.6, when he comments that the love of music that a manufacturer brings to his product is what high-end audio shows are (or should be) all about. In my opinion, no one epitomizes this philosophy more than Robert Lee of True Image Research. As noted by J. Gordon Holt ("Viva Las Vegas," Vol.11 No.3), he plays "the kind of stuff a music lover listens to when he isn't showing off his system." With the notable exceptions of True Image, GNP, Robina Young of Harmonia Mundi, Klyne, and Apogee, the quality of the "music" played at CES and Santa Monica can leave a lot to be desired. Spending time in the True Image exhibit reminds me of why I remain so active in this hobby.

While on the subject, I would like to take exception to John Atkinson's review of the small and now defunct True Image loudspeaker ("The Perfect Box Speaker," Vol. 10 No.7), in which he panned its sound quality. How can a speaker that J. Gordon Holt found "captivating and mesmerizing . . . a music lover's system" ("Summer in the City," Vol.9 No.5) sound so bad to JA? At the first Winter CES in which True Image exhibited, their sound was the most pleasant surprise both to myself and to friends who had been attending for a number of years. Having subsequently heard these speakers twice in their Alhambra showroom, my ears tell me that the speculation in JA's article that True Image must have changed the design is dead wrong. It would seem that JA has done this company a grave disservice. My hearing is usually in agreement with the reviews in your

excellent magazine, but I've never disagreed more with a review than in this case. If Robert Lee ever ventures to market another speaker in the future, I feel that it would deserve a more careful review by J. Gordon Holt himself.

David L. Glackin
Altadena, CA

Regarding JGH's auditioning at CES, while we do try to mention when an exhibitor was making a particularly musical sound at a show, the acid test for any component is when it is listened to under extremely familiar circumstances. The True Image HR6.5 loudspeaker fell at that hurdle. Looking back at my measurements and notes for that review, I am reminded that I found the speaker to have an uneven and extremely colored midrange, a "hard" treble, a noticeably "lispy" quality to voice, and poor soundstage depth. Unlike many putatively high-end products, these negative attributes were not offset by strong performance in other areas: hence my bad review. I am at a loss, therefore, to explain the differences between my auditioning and Mr. Glackin's.

—JA

CD & preamplifiers

Editor:

The last two lists of "Recommended Components" reveal two distinct philosophies about the "ideal" relation between preamplifiers and CD players. On one hand, you recommend tube preamps like the Conrad-Johnson PV-5 or the Lazarus Cascade Basic for those who play a lot of CDs, presumably because tubes might gently roll off the high end and restore some of the depth, warmth, and air that some listeners think CDs lack. The PV-5, you say, is "an ideal preamp for those of you with CD players." The Lazarus is similarly described as "the ideal preamp to render silver-disc reproduction nearer to that of black."

On the other hand, you recommend a passive unit like the Mod Squad Line Drive as "ideal . . . for a CD-based system," presumably because in theory the passive unit should provide the most transparent link between the CD player and the power amp.

What, then, is "ideal"? Tube preamps that euphonically color the CD signal, or passive preamps that merely send the signal on its way?

John Holdren
Watertown, MA

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Recommended . . .

Editor:

I am a new reader of *Stereophile*—not yet a subscriber, only a borrower. Vol.11 Nos.3 and 4 recently fell into my hand, and I have to tell you that I am both impressed and bemused. I learned a lot from these two issues—I think. I have to qualify it that way because enough things I read were directly contrary to my own experience that I have to question the integrity of the information that was new to me.

I shan't here critique the whole kaboodle, only pose a few observations and questions, in particular regarding "Recommended Components" in Vol.11 No.10.

I find your high rating of the Thiel CS3.5 rather odd. Apparently you never tried to play on it music containing any real bass. When I went recently to a store to audition loudspeakers, the salesman asked me to hear the Thiels, put on my organ CD (Hurford/Mendelssohn Sonatas), and left the room. When the 32' pipes kicked in, the speakers ran out of excursion room and began slapping metal to metal on both ends so hard that I thought they would hammer themselves right off the frames. I did a three-yard sprint in world-class time and turned the volume down to sub-Muzak level, I hope quickly enough to save the speakers from serious damage. Aside from the totally incompetent bass, I thought the Thiels rather warm/fuzzy over most of the sound spectrum, compared with most other speakers in their price range.

I'm also bemused by your inclusion of the Magneplanars against exclusion of the Martin-Logan line. While the bass sections of the Monolith and Sequel won't send the big Infinities back to the woodshed, they certainly best many of their vaunted rivals. 'Tis true that the CLS is anemic in the bass (fully redeemable with a good subwoofer), but at least it fades away into a discrete and genteel silence where the Magneplanars fall to chugging and huffing and puffing and wheezing and doubling. And the Martin-Logans do sound good over a much broader area than the tiny sweet spot offered by most of the dipolar competition. Perhaps a person who earns his living sitting alone in front of a music box would have little interest in a speaker system which allows more than one person to listen at a time.

I'm also surprised by your references to subwoofers. Where are the Velodynes and Entecs?

Your comments on the Celestion and Samson betray a profound ignorance of the entire subwoofer field, if not defective hearing below about 50Hz.

I find it curious that so many of the speakers you rate highly are sweet, or warm, or have some other "hi-fi" quality, as opposed to what real music sounds like. How long has it been since you guys went to a real live concert of acoustic instruments played without electronic sound enhancement? I can picture you reporting on a live symphony orchestra that the violins had a decided edge in the upper midrange, the piccolos were harsh and shrill, and the cellos were much too thin and dry. I challenge you to sit all the way through a symphony concert (as close to the podium as possible to minimize extraneous coloration), then go back to the shop and listen to the same music on a Martin-Logan CLS (teamed with a good subwoofer, *not* a Samson or Celestion), compared to any other speaker system under \$10,000. If you don't conclude that the CLS is most like the music, you didn't listen very well. Now, you may like the sound of hi-fi better than the sound of real music, but at least you should understand and acknowledge your bias.

With all that said, I still like your magazine. I may even subscribe to it. At least you got it right on the Vandersteen 2C. You are doing a good work bringing this fine speaker to wider public recognition. It has a clean, open sound overall and is the only one under \$2000 I have auditioned that holds together on a certain piano CD I like to torture speaker systems with. It actually performs better across the spectrum than some other highly touted speakers costing more than three times as much. Some of the record reviews also appear passably cogent, and you do reference some recordings that might otherwise not come to my notice. Now if the equipment reviewers would only read Larry Archibald's editorial on the last page of the April issue. . . !

Ben A. Tupper
Ramona, CA

. . . or not recommended

Editor:

I am a long-time *Stereophile* reader, and I always look forward to and enjoy your "Recommended Components" listings. I must agree with your judgments more often than not, because my own system includes seven components that made your lists, including three in "Class A."



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However, I continue to be puzzled by the absence of Spectral products from your lists—and, for that matter, from your regular equipment reviews.

The heart of my system is the Spectral DMC-10—purchased as Gamma and updated to Delta last year. I have been very pleased with this preamp and consider it to be among the best available. I have compared it side-by-side in my own system with an ARC SP10 and the new Mark Levinson No.26. Both are wonderful preamps, and the Spectral is certainly in the same league.

I have also had opportunities to audition other excellent preamps under good listening conditions—including the SP11, Krells, other Levinsons, and the Rowland. I have never felt any urge to trade for one of these units.

My impression of Spectral amplifiers is that they are also "world class." My own amp is on your Class A list. However, my decision to buy it rather than the Spectral DMA-200 was based on price alone (\$1800 difference at the time). I thought that the Spectral amp was *fabulous*—and I was also very impressed with their lower-powered units.

So you can see why I'm curious when I don't see Spectral equipment recommended, or even mentioned very often, in a magazine that I so often agree with, and whose articles have been so helpful to me for many years.

John Vookles, MD
Memphis, TN

"Recommended Components" is exclusively concerned with components that we have either reviewed or have listened to at some length. For various reasons, we have so far been unable to beg, borrow, buy, or steal any of the Spectral preamps or power amplifiers, and therefore do not have a formal opinion on their sound. Informally, I have briefly listened to a Spectral-based system and found it to offer extremely musical sound. We shall increase our endeavors to get more familiar with the line. The reported problem with the Thiel 3.5's bass is common to any speaker that uses EQ to extend low-frequency response, the benefit only being obtained at the expense of bass headroom and LF dynamic range. With conventional musics, it is unlikely that the speaker's capabilities will be exceeded. With program having sustained, high-level low-bass information such as organ music, however, then a design with an intrinsically

extended bass response should be sought (though it will be undoubtedly more expensive than the Thiel).

Regarding Mr. Tupper's conjectures concerning the relevance of Stereophile's value judgments in the context of live music, all of our hardware reviewers are inveterate classical concert-goers. Our labeling of speakers with "bi-fi" adjectives reflects our opinion that modern loudspeakers, even the CLS, still don't sound much like the real thing. Regarding the failure of the CLS to make "Recommended Components," see my review in Vol. 9 No. 7 for the reasons. (Lewis Lipnick also refers to the CLS in his review of the Sequel in this issue.) I must admit that I didn't audition it at that time with a subwoofer. Though I have since heard it sounding considerably better in the bass with a pair of Sumo subwoofers, I'm afraid its "vertical-venetian-blind" lateral dispersion and rather forward treble balance are still not to my taste.

—JA

Virgin Megamail

Editor:

I would appreciate if I could use your "Letters" section as a means to advise fellow audophiles of Virgin Megamail, a British company which offers availability of some 59,000 record titles. Virgin Megamail has selections of contemporary, soul, rock, blues, African, and movie soundtracks in vinyl, cassette, or CD format. Videos are also available.³

I have been using the Virgin Megamail service for well over a year and have ordered close to 100 records which I have not been able to obtain in Canada or the US.

The price of the large catalog includes an update catalog which is mailed out periodically, introducing new titles. Price of the catalog and mailing instructions can be obtained from the following address: Virgin Megamail, Liverpool X, L70 1AX, England, phone 051-708-7777.

Norm Laskey
Burlington, Ontario, Canada

Steve's Last Exit

Editor:

What a pleasure to find, in the midst of John Atkinson's thorough review of the Celestion

³ Note, however, that Britain uses the 625-line, 25Hz-frame rate, PAL video system. US readers wanting to buy video products by mail order from abroad should ensure that they are able to buy NTSC-standard product.

—JA

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SL700s (Vol.11 No.9), an extended paean to Traffic's *Last Exit* LP! I am also a devoted fan of Traffic and find this LP among their most exciting, although I wouldn't want to be without *Traffic* or *John Barleycorn Must Die*, even though the latter is without Dave Mason. I had the good fortune to hear Traffic (without Mr. Mason) in 1970, close to the time the live portion of *Last Exit* was recorded, with the same lineup, of course. I also got to hear Dave Mason live twice during this period. He put on a great show, even though his band was merely adequate. Dave is among the most tasteful guitarists I've ever heard live. Unfortunately, his songwriting talent seemed to dry up after his wonderful first solo LP, *Alone Together*.

Speaking of *Last Exit*, I picked up the recent CD rerelease (Island 7 90925-2). My LP was purchased used in 1970 and came with a scratch through most of side 2. Since the LP is long out of print, I was pleased to see it appear on CD. The sound is very good, although I haven't A/B'd it with the LP yet. JA might be interested in the following differences between the LP and CD, since he is obviously so fond of the LP:

New front cover photo—nifty warped psychedelic-style image of the band in concert (without Dave Mason, as far as I can tell), with a photo of Jim Capaldi superimposed, taken while he was holding a little girl's hand. The closeup of Winwood biting the green apple on the back of the LP jacket is reproduced on the CD insert, along with a nifty B&W shot of Winwood playing the electric piano and looking about 17.

On the CD, "Feelin' Good" is no longer identified as being from *Roar of the Greasepaint*—I wonder why? No one cares anymore?

Almost all the song times are slightly different from those on LP. Some are slightly shorter, some slightly longer. But "Shanghai Noodle Factory" (place where I once used to be) is actually about three minutes longer than the LP version, clocking in at 7:58! It sounds like the same take to me, they just chopped off some of the ending, I think, for the original release. Interesting. Also, the songwriting credits for this song have been changed: "Wood" has been substituted for "Mason." A small point, but it does seem unfair to cut Dave out of his royalty! I've always wondered who "Fallon" is, who is credited with a fifth of the songwriting credit on this tune. Is he playing the

additional reeds in the background, maybe? Bass guitar?

At any rate, I hope you have inspired a few rock fans to search out and purchase this and other Traffic recordings. I also felt nostalgic listening to "Feelin' Good." Nice to hear that there's someone else out there who's also in tune with this album. I played organ in a rock band in the late '60s, and Steve W. was my god, not Clapton. I still think he has the finest, most beautiful rock voice ever recorded, and his keyboard playing is inventive, lyrical, and emotional. He should have been a soul singer.

It's curious to refer to *Last Exit* as the group's last LP, since they did go on to make six or seven more records under that name. But it makes sense to do so because the sound was never the same, never as committed, I think, after Dave Mason left, even though Steve had really dominated the group anyway. I wish I could have seen them as a four-man band. When I heard them in 1970, they mostly played tunes from *John Barleycorn*. They closed with (what else) "Dear Mr. Fantasy" (which I once heard segued by a band into the end of "Hey Jude" to great effect), with Winwood switching over to guitar. I wondered at the time what they would do with the bass line, usually handled by Winwood on the organ. Chris Wood pulled out a bass guitar and filled the bill.

I'll finish this lengthy lecture with three Traffic-related questions:

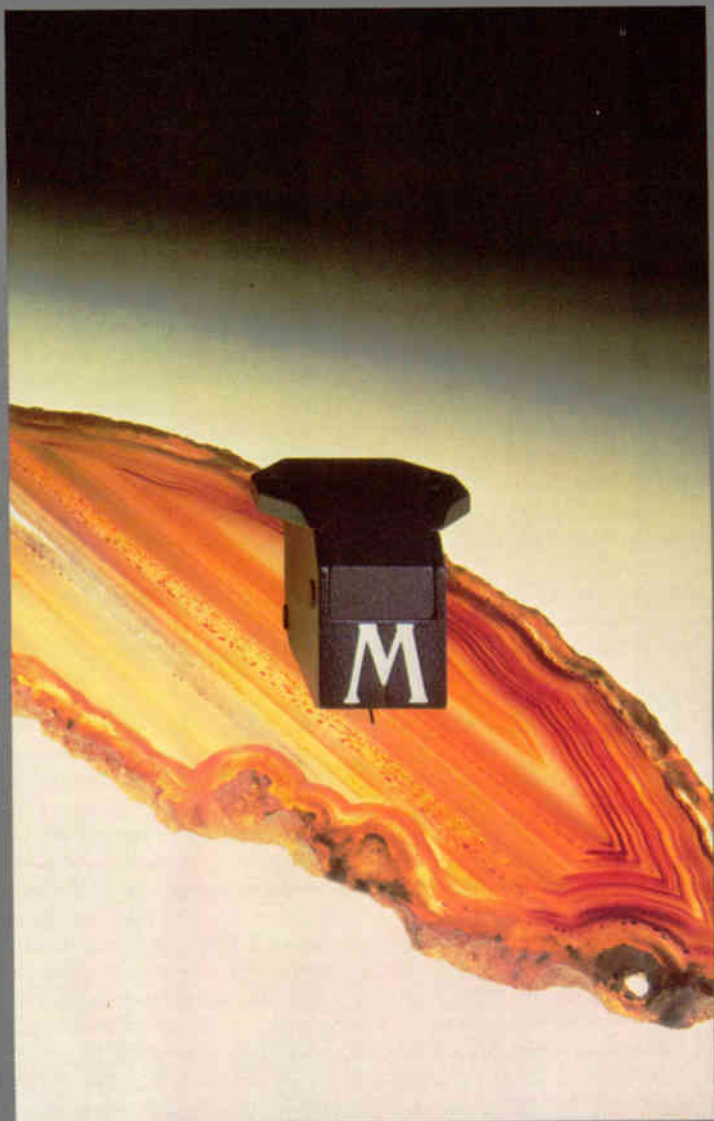
1) At the end of "Feelin' Good," Winwood says these immortal words, "Well, surprisingly enough, we did it." Did what? What do you think that means? Surprising that they'd play a Broadway song? Would any of their audience be likely to know that the tune was from a Broadway show? Maybe it was surprising that they would break up? One of those tantalizing mysteries of life, I guess.

2) Right after that point on the album, at the beginning of "Blind Man," Winwood mumbles something about closing the set with "one of our standards, a tune called 'Blind Man.'" I really love this song. Is this a cover of someone else's version? I don't recognize the writers. Does anyone know anything about this song?

3) What the hell ever happened to Chris Wood? Why isn't he making records?

One final point: I wish *Stereophile's* reviewers would cease and desist using the term "WAF." I think it is very sexist. I notice that LL has shifted to MIF (somewhat more accepta-

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ble). I think the real point is that expensive sound-reproducing equipment purchased by the male usually runs into the BIF (Budget Interference Factor), which is probably what bugged the male's helpmate in the first place!

David Foss
Cambridge, MA

The last turntable?

Editor:

As a very critical listener/performer of early music, I spent a year deciding on my "last" turntable, a SOTA STAR, three years ago. Because SOTA is committed to ongoing updates, they caused me a problem. One, it would cost money; two, I would lose my second favorite musical instrument (after my viola da gamba) for who knows how long.

To my surprise, within two days of receiving my 'table, Robert Becker called and shocked me: they couldn't really upgrade my very early

STAR to their satisfaction. To my amazement, he then told me that SOTA had decided to replace my 'table with a current Series III at no additional cost. None! Nada! And from the head of the company!


Five days later, my new STAR was back performing in my system and, let me tell you, no CD could come close to their latest vacuum model. Perhaps no other turntable for less than megabucks. But I am not writing to rave about the sound.

I simply think that this kind of support, motivated solely by SOTA's standards (and no pressure from me), deserves public notice. My other upgrade experiences were far less rewarding.

With this kind of customer support, the LP will live forever. I hope good news travels fast.

Peter Brewster Brown
Member, Early Music America
El Cerrito, CA

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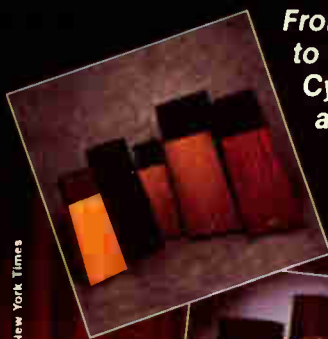
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Stereophile Vol. 11, No. 8

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Audio 6-88

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Stereo Review 1-88

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New York Times 3-88

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UPDATE



Photographs: John Atkinson

Harry Pearson (left) presents Alastair Robertson Aikman with his "Golden Ear Award" for the SME Series V tonearm

USA: John Atkinson

It could have been an awkward occasion. Readers will no doubt be aware that, despite a degree of mutual respect for each other's writers, there is little love lost in public between *The Absolute Sound* and *Stereophile*: we each feel that our particular mix of philosophies and attitudes is the best way of publishing a high-end magazine. Indeed, if that were *not* so, then why would either of us want to stay in business? Yet, at the beginning of October, *TAS* founder, publisher, and editor Harry Pearson presented a Lifetime Achievement award to J. Gordon Holt, *Stereophile's* founder, its editor for 25 years and its spiritual heart, and still its Chief Tester.

The event was a formal dinner to celebrate, in Harry's words, "The fifteenth anniversary of the high end in honor of the designers of the equipment, the authors of the recordings and the movers and shakers who brought it into being." (It was also, not coincidentally, the fifteenth anniversary of *The Absolute Sound*.) The act of celebration was the presentation of "The Golden Ear Awards," alternatively entitled the "High End Design Achievement Awards," one for each category—Electronics, Loudspeaker Systems, Recordings, Cartridges, Accessories, Turntables, and Pickup Arms—to those judged as having produced the seminal products in the 15 years from 1973 to 1988.

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J. Gordon Holt thanks *TAS* for his Lifetime Achievement Award

Forty members of the high-end audio community—writers, editors, and retailers—voted from a list of nominees chosen by Harry Pearson; the winners were as follows:

Electronics

William Z. Johnson, for the Audio Research SP-3, SP-10, and SP-11 preamplifiers, and the D-150 and D-79 series of power amplifiers.

Loudspeaker Systems

Peter J. Walker, for the Quad ESL-63 electrostatic design.

Recordings

Doug Sax and **Lincoln Mayorga**, for their Sheffield Lab direct-to-disc recordings.

Cartridges

Yoshiaki Sugano, for the Koetsu MC cartridges.

Accessories

Bruce Brisson, for the MIT Shotgun series of speaker cables and interconnects.

Turntables

Ivor Tiefenbrun, for the Linn Sondek LP12 turntable

Pickup Arms

Alastair Robertson-Aikman, for the SME Series V pivoted tonearm.

In addition, five Lifetime Achievement Awards were presented to those who it was felt had had a seminal influence on the high end. **J. Gordon Holt**, for example, was instanced by Harry as having created the field of high-end journalism, where reviewers are obliged to write about how equipment actually *sounds*. The other four awards were equally divided between the worlds of playback and of recording:

Joe Grado received an award for his work on, first, the development of the moving-coil cartridge, then his series of moving-iron designs.

Stuart Hegeman, represented by his widow Nan, was given an award for his lifetime of work on improving the quality of sound in the



Photography by Ken Wyner

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home, notably for his Citation amplifier designs and for his development of loudspeakers which aimed high but which were priced within reach of all. (The descendants of his speaker designs are still being manufactured today, by Morrison Loudspeakers in Canada.)

Bill Porter, the recording engineer responsible for all those great-sounding Elvis Presley, Roy Orbison, and Everly Brothers singles in the late '50s and '60s, received a Lifetime Achievement Award.

Wilma Cozart was given an award for revitalizing Mercury Records in the '50s and, with her late husband Bob Fine, producing the "Living Presence" series of classical recordings which set new standards at the time for musical and sonic honesty, and which even today represent some of the best-sounding recordings available to the audiophile.

USA: Peter W. Mitchell

It has been 30 years since John C. Koss created the first stereo headphone for consumer use. Koss celebrated the anniversary by introducing a new reference headphone, the Koss 450 (\$175 list), and a revamped version of the classic Pro-4/AA. While the 450 is intended as a serious monitoring headphone for on-location recording, ads also suggest that its transparency and low distortion would make it a useful tool for conducting critical comparisons of CD players.

I first heard the 450 with the L'Oiseau-Lyre CD of Hogwood conducting *Messiah* highlights, one of several CDs that I carry around with me for auditioning loudspeakers. The sound of the 450 seemed extraordinarily smooth, musical, and lifelike—better than any other dynamic headphone I have used. I was astonished and, frankly, seduced by the sound. The 450 wasn't a threat to the Stax Lambda, but it looked as if it might be a best-buy among non-electrostatic headphones. On the basis of that first impression I borrowed a pre-production sample for further evaluation.

In the pre-production unit a small air leak caused severe coloration of any external sounds that penetrate through the seal, making them more obtrusive and annoying than they would be if the leakage were louder but less colored. Michael Koss promised that this

leak would be fixed before the 'phone went into mass-production; if so, the 450 will offer excellent isolation from external sounds, making it a potentially good choice for on-location monitoring.

But this isolation comes at a price: the 450 is very uncomfortable to wear for long periods, especially on a wide skull like mine. In recent years, like most headphone users, I've been spoiled by the comfort of semi-open designs that rest on the head or outer ear with relatively light pressure. The 450, like the old Pro-4/AA, is a "circumaural" design with liquid-filled rubber rings that surround each ear and are pressed against the sides of the skull by spring tension in the headband. You can adjust that tension by bending or straightening the headband; but for good isolation and deep bass the seal must be airtight, and that requires pressure. Furthermore, the airtight seal causes the enclosed area around my ears to perspire.

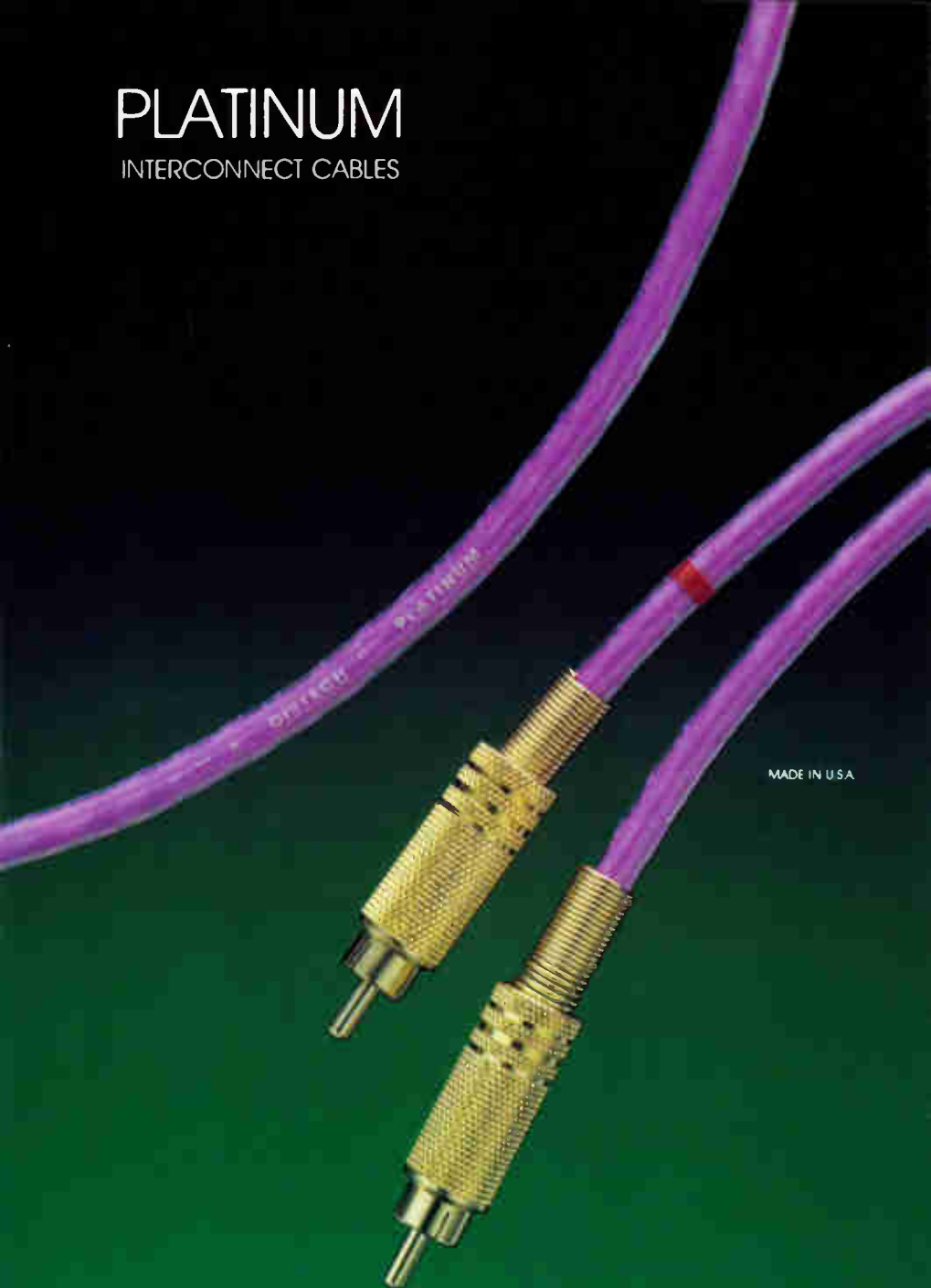
When recording backstage at a concert, I'm willing to accept the pressure and perspiration in order to shut out direct sounds that would alter my judgment of what the microphones are picking up. But when I am spending an evening at home listening for pleasure, the discomfort makes it difficult to enjoy the music.

Undeterred, I proceeded to audition the 450 with other recordings, and to measure its response. So this report is an informal mini-review. But my real purpose here is to provide an object lesson about how easily even an experienced listener can be misled by a test that employs an insufficiently varied selection of recordings. I will leap over the process and go directly to the conclusion: regrettably, the 450 is not a neutral transducer. It has a definite sonic personality that complements and flatters some recordings, producing wonderful sound. With many other recordings it is ordinary, and with some recordings it is awful.

This apparent contradiction is explained by the measured frequency response; but the measurement was done last, after the listening. First, as I listened, I fell in love with the strikingly realistic and lifelike sounds that I heard. In the Allegri *Miserere*, sung by the choir of King's College on EMI, the boy sopranos sounded like real 12-year-old boys, with more vivid reach-out-and-touch-them realism than I heard in person at King's Chapel three years ago. (Of course the microphones were closer to the boys than I was, and headphones often

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produce an exaggerated illusion of intimacy.) In Bach harpsichord concertos played by Trevor Pinnock on Archiv, the sound of the harpsichord was not the usual tinkly jangle but a rich, reedy mixture like that of a French harpsichord owned by a friend of mine. In Handel's organ concertos (Simon Preston on Archiv) the full-bodied organ blended beautifully with the smooth string sound. And Hogwood's *Messiah* recording on L'Oiseau-Lyre sounded wonderfully true to life.

Notice that these comparisons are not to hi-fi standards but to "the absolute sound" of live music. Of course, headphones don't sound like loudspeakers anyway; so it was easy to fall into the trap of comparing the sound to memories of real life. Eventually, when I awoke from my pleasure trance and recovered my critical faculties, I realized that these recordings were sounding *better* through the 450 than through my speakers—or, for that matter, through any other speakers available for comparison.

What we have here, in a phrase invented by JGH two decades ago, is "euphonic coloration"—inaccurate playback that fortuitously compensates for recording flaws, yielding sound that pleases the ear more than accurate playback would. The recordings of old music that sounded so seductive through the Koss 450 are quite bright when heard via accurate speakers.

Early instruments have a relatively lean and bright harmonic structure (especially by comparison with the beefier tone of modern instruments designed to fill large post-1850 concert halls). That brightness is exaggerated in most recordings by the common practice of locating microphones about 10' above the stage floor. Violins and woodwind instruments are not omnidirectional; they radiate certain harmonics strongly upward, while a different balance of upper and lower harmonics goes out to listeners seated at about the same level as the orchestra. (If recording engineers would spend some time listening while perched above orchestras on tall stepladders, perhaps they wouldn't be so eager to hang microphones there!)

There's nothing novel about a playback device whose appeal is partly based on a downward-sloping tonal balance that makes bright recordings sound more lifelike. Many phono pickups have a slightly tilted spectral balance, as do Apogee loudspeakers, and the

tweeter in the Celestion SL-600 is 2dB lower in average level than the woofer. The euphonic coloration in the Koss 450 is more extreme. Above 10kHz the response slopes downward, while below 200Hz it slopes smoothly upward at a 5dB/octave rate until around 20Hz. This low-frequency rise follows the modern version of the Fletcher-Munson loudness-compensation curves rather well, so that at normal listening levels the bass is subjectively flat all the way down to 16Hz!

The bass rise and top-octave rolloff account for the sweet, lifelike sound of my bright early-music CDs. And some pipe-organ recordings produced awesome sound, thanks to the 450's strong deep-bass output and exquisitely low distortion. If all recordings sounded as good, I would be recommending the Koss 450 as an inaccurate but musically satisfying reproducer. But they don't.

The response of the 450 contains a suckout at 600Hz and a peak at 6kHz, presumably due to mechanical resonances in the headphone drivers or mounting. Of the many orchestral recordings that I sampled, about half sounded OK. But the other half were severely colored, presumably because they contained musical pitches close to the resonant frequencies. Vocals proved to be the Achilles' heel of the 450, probably because the adult voice range falls into the 600Hz hole. In the Telarc recording of the Brahms *Requiem* the chorus sounded as if it was singing with jaws wired shut, producing musical tone but no articulation. In several recordings with vocal solos, the voice was murky and recessed.

So, although the Koss 450 sounds wonderful with some recordings, I can't recommend it for general use. And while the Stax Lambda is very nice, its cost puts it out of reach for many listeners. The world still needs a rugged mid-price headphone that sounds good.

Whether you are shopping for headphones, speakers, or other equipment, beware of conclusions based on listening to only a few recordings. As long as measurements don't tell us everything about product performance, we need variety in our listening tests. This was reinforced for me a few years ago when Brad Meyer and I were asked to evaluate a prototype speaker. After several hours of listening and measuring, we felt it wasn't a great speaker but couldn't pinpoint anything really wrong. Then Brad played a CBS record of pop singer Paul

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—Bebo Moroni, *Audio Review, Italy* April 87

"The (CS3.5's) overall treble performance is superb ... No electrostatic that I've heard comes close."
—Anthony H. Cordesman, *Stereophile* Vol. 10 No. 1, January 87

"The Thiel CS3.5 is a remarkable loudspeaker. It offers exceptional imaging, both laterally and in terms of depth."
—*Audio Ideas, Canada* Summer 87

"The imaging on these speakers is nothing short of amazing ... The CS3 has quite remarkable detail."
—Gordon Holt, *Stereophile* Vol. 7 No. 3, May 84

"The CS3 is simply a superb-sounding loudspeaker with a remarkable natural tonal balance and excellent imaging."
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—Richard C. Heyser, *Audio* November 85

"... musically, the CS2 is outstanding ... The imaging and depth are coherent, tightly focused, and exceptional."
—Anthony H. Cordesman, *Stereophile* Vol. 8 No. 8, October 85

"After the first couple of minutes, we had no doubt that the CS2s were exceptional speakers."
—Julian Hirsch, *Stereo Review* January 88

"The CS2 provides incredible stereo imaging with stunning depth. This is the speaker of choice for the music lover in search of a true rendition of timbres and dynamics."
—*Revue Du Son, France* June 87

"The Thiel CS1s are excellent portrayals of musical detail, and they faithfully and naturally reproduce all timbres."
—*Hi Fi Heretic* number 7

"The CS1s do it all. Indeed this is a highly musical system."
—*Revue Du Son, France* November 86

Simon and identified a 200Hz emphasis in the speaker that made the voice thick and boomy. I don't listen to a great deal of pop music, but it can be an effective diagnostic tool for exposing wood-panel resonances and other upper-bass faults.

Such experiences didn't stop me from falling in love with the Koss 450 when I heard its beautiful reproduction of early-music CDs, nor from being profoundly disappointed when other music didn't sound as good.

JAPAN: Robert Follis

The 1988 Tokyo Audio Fair was a cause for Celebration among all attendees, not for anything at the show, but for the fact that the location had changed. After many years in the remote Harumi showgrounds in Tokyo's old dock area, the show has moved to Sunshine City in Ikebukuro, a megacomplex of offices, shops, and apartments, including Japan's tallest building. The difference? Easy access to hundreds of bars and restaurants. All of a sudden the smiles were back on the faces, good beer and good sushi within easy reach, and who cared about hi-fi?

Unfortunately, the Tokyo Audio Fair can be summed up in the same few words. The overriding themes for '88 were "Look at the picture" or "Read the paragraph" on the front panel telling you how many bits or how many times oversampling that particular digital product featured. Alternatively, "Sorry, sir, we only have surround-sound demonstrations today." This is a trifle unfair, perhaps; some of the smaller companies *were* playing music in hotel rooms, and some good sounds were made.

It would be impossible to list all the new toys. Suffice it to say that one of the show's hits was a Sony handheld drum machine to plug into your boom box. I hope the following overviews give you an idea of the main trends being discussed in the bars of Sunshine City.

The Total Integration of AV Media

Often touted and now finally arriving, every possible source in one media wall: CD, CDV, Super VHS, cassette, DAT, DBS Stereo, surround



Photographs: Robert Follis

Will Sony's "Video Walkman," which combines a 3"-screen LCD color TV and an 8mm VCR, revitalize the company's video business? Apparently some airlines are installing this bijou in the backs of first-class seats, the stewardess then coming round with a basket of tapes.

sound, TV, loudspeakers, and even occasionally analog disc. Remote control of everything is *de rigueur*, and one system even integrated the phone. Nearly all new products interfaced with this concept in some way—even the most specialized products had multiple AV connections.

Tower Loudspeakers

Thin and tall to match the height of a 27" TV on a base, and all with questionable sound quality. Almost everybody had a variation, many styled to match the system racking. When planning your next house, remember to leave room for the AV wall.

1 Marketing Manager, Hayden Laboratories Ltd., England.



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Multi-bit CD Players

It's leapfrog time again; Yamaha started with pseudo 18-bit, then Technics joined in. Sony added real 18-bit, then Denon came along with real 20-bit.

Now things have gone crazy. Sony is touting 45-bit machines although this appears to be 45-bit filtering only. Yamaha is claiming real 22-bit on one machine and 18+4 ranging (Hi-Bit) on others. Teac has 18-bit+14-bit on one front panel. Me? I've forgotten how to add. The rest of the market offers any combination you can think of: 16+4, 18+2, etc., and that's before we get to the oversampling rates which appear to have peaked momentarily at 16x in Japan and 32x in the UK. How does it all sound? I'll wait until I read the answer in *Stereophile*. Suffice it to say that, in my experience so far, some sound good and some sound bad, and that digital technology is not always what makes the difference. Let's just hope this marketing-led bit war results in some audible improvements to CD reproduction.

CD 3" Singles

This concept is being pushed very hard, especially by Sony. A brand new player, the Sony D82, was shown which will play only 3" CDs. The attraction is the tiny size and tiny price: ca \$100, less than half that of conventional machines. There are lots of singles in the shops, lots of neat accessories, and the 3" format does seem set for long-term success. Welcome back, EP, and hopefully goodbye to all those filler tracks from bands with only four good songs and an hour-long album to fill.

DAT Still Struggling, Prices Still \$1300 & Up

After almost two years on the market, DAT is still not selling in any quantity. Every self-respecting manufacturer has one to show their capability, but no-one is selling them. DAT Corner, with all available machines on demo, was one of the quiet spots of the show. The most noticeable feature of current DAT designs (excepting the portables) is the ludicrous size of most recorders compared to the tiny DAT tape. What sales there are are mainly to the semipro musician market; Japanese consumers are still waiting for prices to drop and software to arrive, and so far there is no sign of either. Most of the first-generation machines are still in the shops, on sale at up to 50% discounts!



Sony's DAT contact duplicator: still waiting for record-industry customers?

Manufacturers I talked to were planning export shipments for mid-'89, assuming the copyright problems are sorted out by then. Recordable CD, anyone?

CDV/LaserVision

Almost everybody was showing CD/CDV multi players capable of accepting anything flat and round except vinyl. As soon as Finial starts licensing, I guess that will come too. CDV has created some excitement, and of course fits in well with the AV wall. Sharp showed a CDV boom box, complete with Liquid Crystal TV, and Sony, Panasonic, and Yamaha showed ranges of players. Coming soon: the CDV Walkman, car player, microwave oven, etc.

DBS Stereo

Stereo by satellite is now well-established, and all the digital amps and preamps have the 16-bit 32kHz decoding circuitry. DBS tuners are an integral part of the AV wall, and dishes as small as 75cm can be used in good locations.

High-End Imports

To generate extra business and help the balance-of-payments surplus, many well-known Japanese companies have started importing high-end gear from the rest of the world, using their industry contacts to quickly establish distribution. Denon Labs is import-

Until now, separates this good had to be inconvenient.

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ing **Infinity** speakers and **Beard** tube amps. **TEAC** is bringing in **Mordaunt-Short**, and **Audio Technica** imports **Mission**, **Musical Fidelity**, and **Roksan** from the UK. It's heartening to see US and British products out there competing, although the prices are stratospheric and sales are often made on image and novelty value rather than sound quality.



Marble and gold preamp from **Audio Devices** features a true stepped attenuator akin to that used by the **Cello** products

New Japanese High End

The Japanese high-end market has developed quite rapidly, mainly based on imported equipment plus brands such as **Accuphase**. All of a sudden, the Japanese majors are taking an interest—**Sony**, **Mitsubishi**, and others are launching components in areas previously left to importers. **Audio Devices**, a notable newcomer, showed a complete line of marble-fronted, 24-carat-gold-plated amplification, built to a standard that would shame Mark Levinson and with prices to match. **Sony** showed the CDP RI Mega CD player at ca \$5000, two boxes with twin optical interconnects (reviewed in this issue by J. Gordon Holt), and **Mitsubishi** startled every one with their Link remote pre/power mentioned below. Some of the smaller high-end importers are starting to worry about the viability of their operations in the face of good home-produced competition. One interesting, almost unique exhibitor was **Utopish Audio Instrument** by Utopia, a small company that specializes in the refurbishment and sale of classic US and British tube amps and speakers.

Wonderful examples of perfect **McIntosh**, **Marantz**, and **Quad** amps were to be heard driving **Tannoy**, **Jensen**, **JBL**, and **Electro-voice** loudspeakers. The main demo system was fed by a **Garrard 301** with a 12" **SME**; Ray Charles was the music, and boy, it sounded good—none of that irritating definition.



Technics' SST-1 "Sound Space Twin Load Horn"

Lunatic Loudspeakers

Technics' pride and joy, the "Sound Space Twin Load Horn," is a new folded-horn loudspeaker roughly resembling a saxophone, and apparently intended for connection to portable CD players and Walkmen. The system comes in three candy-flake finishes, weighs over 12kg, and costs a staggering \$1500/pair.

Wonderful-looking crystal goldfish bowls with coaxial drivers were on show from **Sasaki Acoustics'** "Creative Crystal Sound" (ideal for Santa Fe), sounding surprisingly fine despite the total lack of damping in the spheres. A pale-blue 12"-diameter Out of the Unknown flying saucer provided the amplification. **Yamaha** showed some interesting black plastic plumbing masquerading as a loudspeaker, and even the most conservative companies had interesting shapes.

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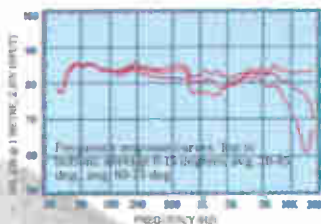
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Goldfish-bowl loudspeaker from Sasaki Acoustics with lap-top amplifier

designer must have visited Japan last year armed only with a pot of Luftwaffe grey paint and a set of curves. Somehow, he managed to sell his services to the industry as a whole: everyone was showing at least one system, if not three or four, that featured soft corners, soft controls, minimalist styling, and the obligatory grey finish. Generally, this was a vast improvement over black tombstones; I hope the trend is destined for export.

TEAC took the idea even further, introducing a soft grey lump called "New Trendy Sound Gear, Sound Core," containing CD, cassette, and a receiver. Rather neat, and indicative of many future products to come from Japan, Inc.



"New Trendy Sound Gear Sound Core," according to TEAC, incorporates CD, analog cassette, AM/FM/TV sound tuner, and integrated amplifier

Mr. Pramanik from **B&O** was seen taking a close look at these new oriental threats to his Danish designer market.



A&D true-digital electronics from Mitsubishi have full-function "intelligent" remote control



The Audio Research SP15 preamp and CL150 amp

Why Choose Audio Research

The paramount criterion of the quality of any audio system is whether or not listening to it is fun. Far too often an audio system goes unused as soon as the newness wears off. That is the fault of the system. The majority of high end audio systems are like having a pebble in your shoe: the more one listens to them, the less enjoyable they become. That is because we build up subliminal negative associations with the harsh, strident, metallic sound of audio. So when one comes home from work, there isn't a strong desire to listen to music. And that is an unnecessary tragedy.

With a good audio system, the opposite occurs. One builds up positive associations with music and FEELS like listening more and more. Music then becomes all that it should be. It becomes more than just an occasional diversion or background. It becomes a primary entertainment that is moving, meaningful, emotional and personal.

Audio Research electronics accomplish this optimally. ARC equipment is rich sounding, smooth, clear, liquid and transparent with transcendent delicacy and effortless bloom. It is enduringly enjoyable and rivetingly involving.

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Optimal Enchantment has sold more Audio Research equipment than any other store. Our store has structured itself around identifying and meeting the needs of the ARC customer.

DEMONSTRATION: We have all the ARC components on display for direct comparisons. Our "appointment only" format allows the undisturbed time it takes to really make thorough comparisons. Those comparisons provide invaluable information for you to formulate an intelligent choice of ARC components based on performance, budget and need. Of course, ARC electronics can't do it alone and we are familiar with how ARC mates with a myriad of other components. Naturally, Optimal displays and sells the components that we have found to best complement ARC equipment.

INSTALLATION: Once you have chosen the optimal ARC models, it is our responsibility to ensure that it sounds enchanting in your home. We have had more experience than anyone else at this. Experience is essential in home installation due to the uniqueness of each audio system and environment. Our installations look great AND they sound great!

SERVICE: Our service department employs the best qualified technicians in L.A. and probably

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Optimal Enchantment did not become successful by selling high priced, mediocre sound to the carriage trade; nor did we become successful by selling mid-fi, computers, & tv's; nor did we become the best ARC dealer because of the advertising strength of rich backers. Optimal Enchantment is a haven for MUSIC LOVERS. Our success is due to the countless delightful music systems we have installed in audiophile's homes over the last 12 years. Our customers are thrilled with their systems and send in their friends who in turn send in theirs. Our customers are the audiophiles of L.A. These are the DIE HARD MUSIC LOVERS who search everywhere before they buy. These are the most critical listeners, the least easily fooled, and the hardest to please. They seek UNEQUALLED MUSICALITY. Which is why they buy here.

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Mega System Remotes

Learning remotes are becoming standard issue on many products (**Dennon** receivers, **Mitsubishi** videos, and more). They simplify system building, and are becoming more and more sophisticated. Both **Panasonic** and **JVC** introduced models with interactive, touch-sensitive LCD screens. Select CD, and a customized CD control panel appears before your eyes, all other sources ditto. I had to be restrained from pocketing the display model.

Mitsubishi has taken the idea one step further: their new DAP 9500 Digital Preamp has all its controls on the interactive remote, including full parametric EQ carried out in the digital domain. Only \$5000. The matching 350W power amp has its own DACs and features two analog and two digital inputs, as well as digital volume.

Digital, Digital, Digital, *et al*

Alwa stunned everybody by showing a prototype Digital Connect system: a microphone with onboard ADCs connected by fiber optics to a DAT recorder, with digital inputs for Mic and CD connected by fiber optics to an optical switch box and then, still optically, to a pair of headphones with on-board DACs and amplifiers. Overcomplicated, maybe, but similar systems will be on sale within the next year or so, whether we want them or not.

With all the interest in optical connections, the connectors themselves are becoming saleable items; a number of companies featured various grades of interconnect—single fibers, twisted fibers, etc.—all with the now-standard **Toshiba** Toshconnect. Prices ranged from \$60 to \$150+. Watch your local tweaky dealer, exports start soon.

Random Notes

Lap-top amps from **Kenwood** to go with your walk CD; molded plastic subwoofers for Midi Systems, also from Kenwood; in-car AV systems, TV plus CD autochangers, all control parameters displayed: you can watch TV or graphics of the CD spinning merrily around. Available from **Pioneer** and **Panasonic**. Who drives, I ask myself? **Big Feet**: This year they've spread from amps to speakers as well, large, brass, and covered with brand names. CD Transport Only: From **Kenwood** at ca \$500, a CD transport in a box for the same price as a full-featured CD player; must be very profitable.



Wooden headphones from Sony

Expect many more of these from all manufacturers, especially as many amps and preamps are including on-board DACs. VHS videos including satellite stereo tuners. EDTV was introduced, overscanning and interlace-free, giving the best NTSC picture yet from a standard signal; expensive, though. **Sony** was making a fuss over wooden headphones—must be the natural resonances. High-tech Retro.

The list goes on, but my plane leaves soon and the editor is knocking at the door. Look forward to 1989, and may everything be sleeker, smaller, more rounded, and use fewer lights and less battery power. Oh, and it would be nice if it all sounded better as well.

UK: Ken Kessler

Spare a thought for John Atkinson as you read this show report, because it makes the whole proceeding mildly bittersweet. What happened is that *Hi-Fi News & Record Review's* The Hi-Fi Show at Heathrow Airport's Penta Hotel has finally come of age. And JA, as the erstwhile editor of *HFN/RR* and one of the show's progenitors, should have been there to witness it.

The Editor was in the UK a week before the show, but had to return Stateside. Had he been



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Creek's new 4040 integrated amplifier

able to extend his visit, he would have witnessed the greening of a show which he helped to create. Without wishing to put thoughts into his head, I would suggest that JA's attitude toward The Hi-Fi Show when he emigrated to Santa Fe was one of disappointment, because at that time the show was to some extent the victim of political chicanery. As it turns out, hatchets have been buried and The Hi-Fi Show is now the premier venue for specialist hi-fi launches in the UK. Whether its detractors like it or not.

Before running through a list of new products which rivals even the far bigger CES specialist hi-fi section for numbers and scope, I wish to make it clear that I am a contributor to *HFN/RR*, have been involved in every show, and have as much bias toward it as you'd

expect. But I'm also a journalist who has attended enough shows to know what makes a good'un. Besides, I didn't make up any of the products I'm about to describe. The 1988 Hi-Fi Show was so overrun with new models, hi-fi celebrities from around the globe, and eager visitors that only a blind man could fault it as far as show functions were concerned. Lousy parking facilities do not alter the fact that the show was packed and that there was plenty to see and hear. JA would have loved it.

The success of a public-invited hi-fi show is dependent on a number of things. (This does not apply to shows sponsored by dealers, who run the shows to sell product to visitors.) For exhibitors, there must be lots of traffic; for visitors, there must be enough on show to make the trip worthwhile. Although The Hi-Fi Show is open to both trade and public, many exhibitors judge the show by the response of the trade rather than the public. One of my industry moles informs me that there were some disgruntled exhibitors who complained of not getting much trade action. Considering that the numbers on trade days were about the same as in 1987, I'd have to say that it's not the Show's fault that they weren't spending: The trade buys when they need or want product. I'd suggest to those exhibitors dissatisfied with trade activity that they either make more desirable products or hire better salesmen.

As I see it, the reason for exhibiting at a show is to get as much exposure to the buying public as you can. I can assure you that there was no shortage of visitors this year, and those to whom I spoke seemed well-pleased with the effort. Here are some of the things they got to see and hear for the first time, in no particular order or attempt at completeness:

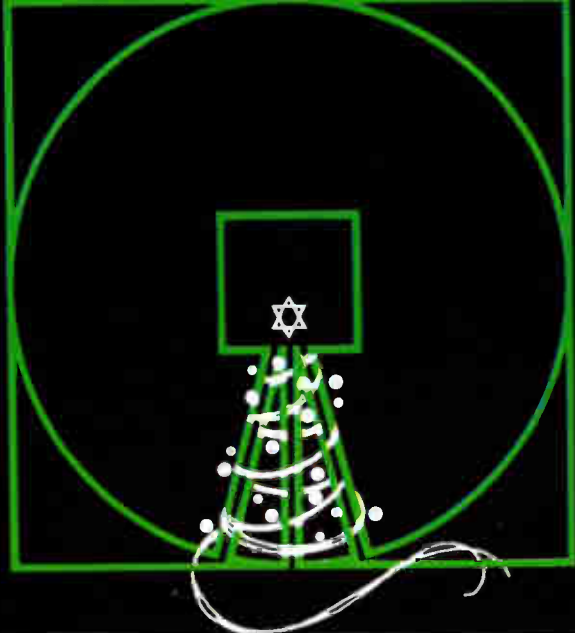


Beard P1000 triode power amplifier

On the top of my stack is a release from **Beard**, who showed a new stereo power



van den Hul miniature two-way speakers



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amplifier to serve as a UK contender in the global high-end tube arena. Beard, now with a high, glossy profile due to an injection of capital from a major investor, is set to join the Audio Research/Conrad-Johnson sector with some classy-sounding and -looking products: the P1000 is the new flagship model. Rated at 2x100W, it's an all-triode design operating in true class-A up to 50Wpc, running class-AB for only the last 3dB of a full-level transient. In most circumstances, short of ownership by a Metallica fan, it's unlikely than many listeners will ever drive it that hard. The P1000 is a hefty beast featuring the company's trademark chrome chassis, and it generates a lot of heat and light from no less than a dozen selected 6550 bottles.



The UK's resident tube genius, Tim de Paravicini

Tube maven Tim de Paravicini of **Esoteric Audio Research** was showing an as-yet-unnamed prototype for his new preamp, a gorgeous two-box affair which should be shop-ready by the time you read this. Tim already has an over-the-top preamp in his catalogue, but this £3500 item appears to be a couple of generations beyond the existing behemoth. TdP describes it as "an MVX in valves," referring to the highly successful solid-state preamp he designed for Musical (British in the US) Fidelity. It's hard deciphering Tim's conversation, which comes in Uzi-like bursts, but it sounded

something like, "Novel RIAA circuit . . . no capacitors . . . passive . . . MM and MC . . . balanced output . . . null facility," *ad infinitum*. The last-named feature, the null circuit, was something I cherished on my old AR integrated amp, a handy device for really sorting out your cartridge alignment. Will Tim's preamp herald a revival?



Audio Innovations' Horning speaker uses Lowther drivers

I'd love to tell you what **Audio Innovations** was up to, but this company releases new tube products the way Nabisco makes Oreos, so I couldn't tell what I had or hadn't seen before. But the room did yield two delightful oddities I know were new, including a super-duper version of the **Voyd** turntable called the Reference. Selling at a painful £5000, its main feature is an 800W power supply, driving three 0.5BHP motors. That's right: one-and-a-half ponies to spin your LPs. And hidden away in the corner of the adjoining room were Audio Innovations' new speakers, the **Hornings**, which stood out

Linn LK280 Power Amplifier

When the Linn LK280 arrived for evaluation we expected an 80 watt per channel version of the original LK2. However, despite using the same external packaging as previous Linn amplifiers, the LK280 offers such an improvement in performance that, after the first brief listening sessions, a long-time Linn dealer proclaimed the LK280 *"...the most significant new product from Linn to date!"*

The LK280 is a statement regarding the current thinking on how amplifiers *should* be designed. Its small size is more indicative of the design goal of maintaining the shortest possible signal path (a task which obviously requires high-density parts packing) than it is of the LK280's performance. This little black box packs an audible punch that will leave amplifiers many times its size and price gasping for breath.

Our listening tests revealed that there was more to this *"upgrade"* than a simple increase in rated power. In lab tests we found reductions in low level and crossover distortions and considerably wider bandwidth. But, what really surprised us, was the LK280's ability to deliver better than 32 amp peaks into a low impedance load for several milliseconds. That is twice the power, for more than a hundred times as long, as other high current amplifiers we have tested and is the equivalent of over 1,000 watts per channel!

Equally impressive is the quality control at Linn. In production each board is tested on an HP3065 computer. This measures *every component* on the board and checks its value against specified tolerances. The computer then powers-up the board and runs a full function test, checking all critical parameters. After passing all tests, the boards are run for two days at high power *and then retested*.

We have now had a chance to compare the LK280 with other amplifiers, operating into a variety of loudspeakers, and have found it to vastly exceed our expectations. The Linn LK280 is now available for audition at your local Linn dealer.

Linn K18 Cartridge

This new top-of-the-line moving magnet cartridge from Linn features an all metal body, a Vital stylus, and a unique bolt-on stylus assembly.

Linn has always been renowned for the mechanical integrity of their cartridges. This bolt-on stylus assem-

bly takes things one step further, allowing moving-magnet users to approach the performance of expensive moving-coil cartridges.

The K18 also employs coil wires of PCOCC (continuous cast copper) and a tapered cantilever constructed of a newly-developed low mass aluminum alloy.

For additional information on these and other Linn products and the name of the dealer nearest you contact:

Audiophile Systems, Ltd., 8709 Castle Park Dr., Indianapolis, IN 46256 (317) 849-7103
Aldburn Electronics, 127 Portland Street, Toronto, Ontario, Canada M5V 2N4 (416) 863-0915

not just because of the mouthwatering wood-work but because of the driver complement: three Lowther PM6 horns. Priced at "under £2000," the Horning's sensitivity is so far over 100dB/W that Audio Innovations' 3.5W tube amp—that's right, 3.5W—can drive them beyond the threshold of pain. (That chattering you can hear in the background is the sound of Japanese audiophiles fighting each other in the queue.)

One reappearance which took me totally by surprise was that of **Raymond Lumley**, formerly half of Grant-Lumley. A few years back, this company developed a cult in the US for their legendary tube power amplifiers, the partners eventually going their separate ways. Ray Lumley has returned with a whole line-up of goodies, the top of the range being a pair of monoblocks selling for £8500/pair. Dubbed the Gold Series 400, they're rated at 425W each into 8 ohms, and each chassis sports a dozen 6550s and three 6SM7s in the driver stages. Too heady for you? Lumley has also launched the M-75 (75W), M-125 (125W), and M-150 (150W) monoblocks for less demanding systems.

Another reappearance which warmed my heart was that of the **Radford Tristar 90**. I'd used these speakers for years and adored them; **Woodside Electronics**—who manufacture and distribute Radford amplifiers—revised the T90 with a new midrange driver and kept the price to below £350/pair. The result is the updating of what is probably the best-built, easiest-on-the-ears loudspeaker below £500. Now, if they'll only mirror-image this three-way classic. . .

Loudspeakers are, of course, a UK specialty, Great Britain breeding small loudspeakers to a level of utter absurdity and confusion. You have no idea how overwhelming is this, I would suppose, unnecessary proliferation of two-way boxes, but it continues unabated. Fortunately, a lot of them are terrific, for the simple reason that mediocre ones just don't stand a chance in what is truly a buyer's market.

Following the unexpected success of their "MC" series speakers, **British Fidelity** has launched new models prefixed "Reference." The Reference 4 is a manageable two-way featuring an 8" Audax woofer made from a polypropylene-like material called TPX, crossing over to an Elac 1" metal-dome tweeter. Price is £399/pair, smack in the middle of that amorphous sector which includes everything

above budget gear but below the crazy-priced high end. Competition is really hot in this sector because it encompasses most of the speakers which budding audiophiles buy after they've outgrown their £99/pair budget beauties. The Reference 4s will probably do just as well as the MC models, and they sounded pretty fine when driven by the company's new MA100 monoblocks, set to retail for £1400/pair.

Not the most prolific make on the market, **Gale** only launches something new when they feel it's worth doing. Having added two worthwhile speaker systems to the budget sector a year or so ago, they've countered with something for the top end of their range with the new 501. Aesthetically reminiscent of the original Gale 401 with its chrome endcaps (black is also available), the 501 uses a Volt 8" bass driver and a Vifa horn-loaded tweeter with double-wound voice-coil. Traditionalists will be staggered to learn that these do not suffer from the original's lack of sensitivity, for they yield a high 92dB from 1W. Price is set for around £700-£800/pair with black caps, or £1000 for the chrome. But why did Gale name these after a rather unloved Bose model?

Speaking of Bose designs, I didn't think that any of the British makers would pursue the RoomMate market, but **Roksan**—better known for a true rival to the Linn Sondek—showed their cute little Hotcakes, using a single KEF driver in an MDF enclosure. Finished in gloss black, these little wedges will run to £140/pair. I was afraid to ask how much they'd cost in marble or lacquer finishes. Roksan, by the way, showed up everybody by having a custom-made display by one of London's top stage designers. I heard that it took a healthy-sized crew a couple of weeks to assemble a set which looked like Troy after its fall, with slabs of cleverly disguised styrofoam looking like ancient masonry. What it had to do with hi-fi I've no idea, but it gave the Roksan room the most pleasant atmosphere at the show.

If the Roksan room was the best-looking, then the **Oxford Acoustics** room was the most exciting. Why? Because this newish company, manufacturer of the well-received Crystal turntable, launched some innovative, exciting products which nobody expected. The Crystelle is their second record-player, but it's dripping with novelty value, including a radical two-point suspension system. Yes—two-point. And the suspension isn't sitting below

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Oxford Crystelle turntable has suspension in the integral stand

the platter; it's down in the fitted sand-filled single-pillar pedestal. The best way to describe it is to think of the pendulum on a clock. The turntable rests at the top, and there are weights down below. Removing a panel from the pedestal gives access to these weights, and it's simply a matter of dialing in the balance. There's 30kg of suspended mass, and it's tuned to a resonance of 3.5Hz. After a quick demonstration, it was easy to see how Oxford could claim that the Crystelle is a snap to set up. Looking a lot like its dearer sibling, the Crystelle will sell for a very reasonable £1135.

Oxford's other surprise was the launch of a series of electronics of both affordable and mortgage-level pricing. Oxford's basic system will consist of a phono stage (£400-£500), a passive control unit (£300) with six inputs, and a pair of 100W mono amplifiers (£800-£1000). All are housed in identical sculpted wooden chassis reminiscent of Pink Triangle's PIP preamplifier; remote control and an active version of the preamp are set to follow next year. But the real eye-opener is the company's top-end preamp/phono stage combination, the

LAB. "LAB" stands for lead-acid batteries, the power source Oxford has chosen, and the unit on display had a clear glass lid revealing rows and rows of the little devils. Apparently, the LAB will run for 15 hours per charge; the intelligent power supply mutes the system when battery level drops below a certain point. The preamp features six-line level inputs, each with level switching to match sources, and the MC-only phono stage is housed in an equally massive black ash chassis of its own. Price? Around £6000.

This "look of real wood" is everywhere in the UK, with **Foundation** showing its complete line-up of wooden-fronted valve preamps and **Alphason** launching a whole range of products with black ash fascias, as well as two loudspeakers to accompany their existing turntables and tonearms. Prices are yet to be set, but Alphason's new items are pegged in the "serious separates" sector just below the crazy money. The basic combination is the Athene preamp and Adonis power amp, the latter rated at 100Wpc, with the upmarket models being the two-box Apollo preamp/Coronis power supply and the 100Wpc Artemis power amp. The company has introduced an all-new turntable, the Solo, set to sell for about half the price of the Sonata; this is a three-point suspended subchassis model with optional outboard power supply. Completing the Alphason systems are two new speakers, the 18-liter Amphion and 36-liter Orpheus, both of which feature isodynamic planar tweeters, bass drivers with TPX cones (as per British Fidelity), and facilities for bi-wiring.

Less expensive versions of existing turntables seemed a mini trend, with the **Source** being joined by the slightly less expensive SO and the **Revolver** breeding the Rebel. The latter is supplied with a dedicated, nonremovable tonearm as well as an Audio-Technica AT95E cartridge, all for a competitive £160. On the "all-new" front was the first public showing of a turntable from **Opus 3**, the Scandinavian audiophile record label. Their turntable, dubbed the Continuo, uses a crushed marble and resin plinth—the same material used by Viking stock for their loudspeaker cabinets—yielding a package weight of 24kg. A neat feature is that the armboard can be removed in five seconds. This two-speed belt-drive player features a polypropylene platter and uses air-filled feet as its suspension. Price is £399.



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Which reminds me: **Oracle** showed the latest version of the Alexandria in an exquisite gloss black and featuring a universal tonearm mounting arrangement. It was the inability to fit other than its own arm which held back sales of this model; now that it can take an SME or an Ittok, things should change.

SME showed the new "budget" tonearms already previewed in this column (see Vol.11 No.10), while a chap from Sweden was present with an affordable (under a grand) air-bearing linear tracker called the **Forsell**. Looking very much like an Air Tangent—which is also Swedish—the Forsell has already developed a slavish cult following. The unit on display was fitted with a carbon-fiber arm tube, but other materials can be specified.



Audio Research SP15 preamplifier

Mention of "foreign" makes leads me to the most important aspect of the 1988 exhibition, proof that The Hi-Fi Show has finally arrived. After all, it's not every non-CES show that earns world launches from the likes of Audio Research, Duntech, and other high-enders. **ARC** showed the mouthwatering SP15, the new flagship hybrid preamp, notable for a subtle styling change to the venerated logo. This unit exploits the SP9 as much as it does the SP11, and there were queues of Johnson's fans just itching to hear it in their own systems. **Dun-tech** unleashed the PCL500 Marquis loud-speaker, sort of a "middle" model, standing only 58" tall. This was, by the way, the first appearance of any Duntech models in the UK, so British audiophiles finally got to hear what you lot have had for some time.

Apogee was represented with the Duetta II Signature, sporting the new grilles which keep fingers well away from the ribbons. I have to admit to distinct pleasure regarding the appearance of this speaker at the Show, because at least a dozen readers came up to me saying things like, "Now I know why you use Apogees."



Duntech's new PCL 500 "Marquis" loud-speaker

The controversial **Highwood** planar loud-speakers were shown in a form much improved over what *Stereophile's* crew heard at Chicago. In addition to a number of detail refinements—they really paid attention to criticisms from the likes of Sam Tellig regarding the bass performance—there's also been a name change: Highwood speakers will be marketed globally



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Highwood's planar speaker is to be sold under the Sumo banner

under the Sumo banner. Indeed, Randy Patton from Sumo came over for the launch—that's two Pentas in a row for him.

And there were plenty of my countrymen on hand: Mark Glazier from Mark Levinson, David Hafler, Jeff Rowland to launch his line in the UK, Christopher Hansen, Mike Berns (who had Chinese-lacquered Tiffany plugs to tease the style-conscious), Stu Wein of Music & Sound Imports looking for new lines, Arnie Nudell to make sure the IRS Betas were working properly, all of the gang from Highwood, and a load more.

One or two of them got roped into a Quad/Private Eye-Fi/HFN/RR-sponsored demonstration, the one I wrote about some months back. Yes, we've finally offered listen-

ing tests under Quad's watchful eye to determine whether or not Peter Belt's accessories make a difference. Remember: Quad's Ross Walker put up £10,000 to go to charity if someone can produce conclusive evidence that Belt's bits make an audible difference. A tentative (and totally unofficial) conclusion was that visitors slightly preferred the two untreated rooms, but as I write, the 60 listener surveys are still being collated, so the official results will have to wait until next month.

Another demonstration run by *HFN/RR*, with Martin Colloms, Chris Bryant, and myself taking turns, involved listening tests to show the differences between cables and the differences between single and bi-amping. Using a real-world system consisting of a Marantz CD player, British Fidelity preamp and power amps, and Rogers loudspeakers, the tests consisted of listening to three excerpts from classical and jazz, changing to a killer cable from the standard type, and then switching in a second amplifier. The oddity is that the listeners who attended Martin and Chris's demonstrations found bi-amping to be the greater improvement, while my lot thought that the cables provided the greatest gains. Either way, I left convinced and am now using the hideously expensive, hard-to-obtain Mandrake phono leads for my most critical applications. (£500 or so per meter, would you believe?)

The word processor tells me that I've over-run by so much copy that I must resort to one-liners for the best of the rest. Here goes:

Cadence: This new British tube-amp manufacturer had its world launch with a pair of



Jeff Rowland setting up his new Complement cartridge

AudioPrism

Product News

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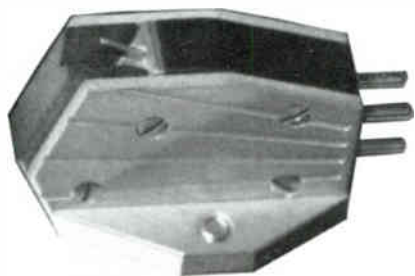
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nicely sized 60W monoblocks and a minimalist preamp. Styling details have to be finalized, but the products are just about ready for an attack on the middle of the tube sector.



Goldring's Excel MC cartridge

Goldring: This company, under new ownership, showed the first sample of an all-new UK-made moving-coil cartridge, the Excel. Due for availability in early '89, it features neodymium magnets, silver wiring, a metal body reminiscent of Audio Note, and a price tag of £495.

Monitor Audio: Mo Iqbal beat the rest with the world's first gold metal-dome tweeter, heard of good effect in the Reference Monitor 1200/Gold MD. The tweeter will be fitted to other models, including the R952/MD.

ITL: This company showed a comprehensive range of nicely finished slim-line electronics, the hottest product likely to be the MA-30 30Wpc MOSFET integrated amplifier.

Acoustic Energy: Riding high on the success of the AE1, their initial model which was reviewed by JA in the September *Stereophile*, AE launched the AE2 two-way system with two



The Acoustic Energy range of speakers with all-metal drivers

midbass drivers, and the top-of-the-line AE4 with four midbass drivers.

Ion Systems introduced a raft of elegant amplifiers, including the Obelisk integrated models and the Nexus separates. All are relatively compact and "modular," reminiscent of the Naim philosophy of system building. Ion has also taken on UK distribution of Magnum Dynalab tuners from Canada.

Dynavector: Expecting new cartridges—of which there were plenty—visitors were astounded to find Dynavector's Superstereo SSA/504 surround-sound amplifier, which features infrared remote control and a 1958 Buick fascia. Facilities include analog/digital time delay, front/rear balance, and reverberation.

Koetsu: The 80th Anniversary model—of which only 80 were produced—was on demonstration, giving most of us the only opportunity ever to hear this masterpiece.



Marantz CD-12 two-box, limited-edition CD player

Marantz: Ken Ishiwata cooked up what may be the ultimate CD player, a two-box unit called the CD-12. What you should know is that only 500 will be made, all are earmarked for Europe only, price is £2500, and each comes with a numbered, signed certificate. Somehow, I lucked out and got the first review sample. Now I need to find £2500 so it doesn't have to go back.

Origin Live: Talk about space-age—this company showed a gorgeous turntable, the Oasis, which features a triangular plinth and the company's Jubal tonearm. No subchassis or suspension; isolation is dealt with via a dedicated floor stand said to account for floor type.

Jadis: Would you believe a budget line? It starts with the 100W stereo tube amp, the DEFY 100. Price is a mere £2995.

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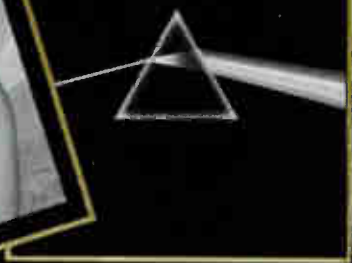


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Sonus Faber: An Italian manufacturer known for the best-finished box-type loudspeakers on earth (you cannot believe the woodwork), they showed a delightful 80W stereo MOSFET power amplifier with—dig this—wooden handles.

Finestra: An all-new make, starting out with a serious preamp (£1299) featuring four line inputs and phono. No details were available, but it gave off “the right vibes,” and I mean that figuratively.

Space Acoustics: In addition to a corner-standing speaker, Space showed the Space Deck, the lineal descendant of the Dais turntable. Features include a plastic-coated alloy platter and very easy set-up. Price is £550.

SD Acoustics: Known in the UK for a fine hybrid speaker using a ribbon tweeter, SD launched the SD OBS, a three-way with a metal-dome tweeter. As with Vandersteen in the USA, SD does not like baffles.

Celef: Part of the ProAc Group, Celef has been in hiding for a while. They’ve reappeared with three new speakers, including the Cirrus, Nimbus, and Stratus. No, we weren’t told when they’d release one with a silver lining.

Wharfedale: The V Series was unveiled, reminiscent of the E Series which had found favor with people who think that anything under triple-figure decibels is for wimps. 95dB sensitivity and 150–175W power handling—pray that your upstairs neighbor buys Diamonds instead.

Inca Tech: Jeezus—75W class-A mono-blocks weighing 200lbs each. Don’t worry about the £4500/pair price tag; designer Colin Wonfor said they’re not for export except to countries accessible by road and ferry. Six pairs have already reached Germany.

Revox: Finally, they’ve offered their line in black so they can appeal to the other 90% of the UK market. Traditionalists can stay with grey, as seen on the 100 series, the new budget range.

Lynwood: Alongside a plain but functional integrated amplifier, Lynwood showed new mains filters to deal with the iffy juice which the Central Electricity Generating Board supplies to the British audiophile.

Denon: The company relents and releases a twin-cassette deck. Denon always wins awards here for their budget cassette hardware; the DRW 750 will win back those who’d love to own Denon but need a two-in-one. Also on

show were the “audiophile” separates, including some tasty 150W monoblock amplifiers.

Gryphon: A gold-plated, two-input (phone and line) preamp that should read Faberge on the front. Dual mono, right down to two mains leads, and with a finish you won’t find this side of Audemars Piguet. Would look nice driving Goldmund’s cubes.

Absolute Sounds: Better known for hardware than software, this company sold 700 copies of a French jazz CD from a guy named Eddie Louiss. One listen will tell you why. And you couldn’t avoid it, because it became *the* demo disc of the Show.

And then there’s ATC (new crossover), TDL, JPW (new speakers), Beyer (a working cordless headphone), Arcam (new electronics), Philips (CD-Video), Deltec (new preamp), Bose (new 401), Kelvin (class-A amps), Aragon (UK launch), Matisse, Amadeus, TEAC, Albarry (new preamp), Cambridge (the CD1 Mk.II), Rotel, Stax, Infinity, KEF, AR, Celestion, Ariston, and on and on.

I calculated well over 200 brands, in over 130 rooms and stands. Yes, John, your baby has finally hit the Big Time. *Mazel Tov in absentia.*



Micromega CD player

Photographs: Robert Deutsch

CANADA: Robert Deutsch

Irving Berlin was right: “There’s No Business Like Show Business.” Sure, there are “the headaches, the heartaches, the backaches, the flops,” but where else except at an audio show can the audiophile hear so much loud music, commune with so many like-minded people, and drool over so many tasty pieces of equipment? Perhaps you’ll discover some component that will finally allow your system to sound exactly like live music. An inveterate

NITTY GRITTY HYBRID

Now it is possible to achieve perfect record cleaning and state-of-the-art compact disc cleaning in one convenient and affordable unit. Nitty Gritty has just combined its .5Fi design with its CD cleaner to come up with the "Hybrid."

The Hybrid incorporates all the features of the .5Fi; things like: the velvet lined hemicylindrical lip; capstan drive; cleaning fluid injection, 16 ounce reservoir; powerful vacuum motor; and slide-out waste fluid tray. Everything that has made it the most popular record cleaner in the world.

Added to that in the Hybrid are all the unique features of the Nitty Gritty CD cleaner: orbital cleaning motion, motorized disc rotation, and built-in dust cover.

What is not built-in is the price and size of two separate cleaners; a dramatic savings in both categories.

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When cleaning records the Hybrid operates exactly like a .5Fi; the cleaning fluid is injected, the record spindled and fluid applied during rotation, and then vacuumed dry.

When cleaning CD's, the user simply installs the CD adapter into the specially "keyed" capstan shaft, places the CD on to the adapter, applies the CD cleaning fluid, lowers the cleaning pad/dust cover, and activates the drive motor. The weight of the dust cover automatically provides exactly the right amount of cleaning action.

The Hybrid is available in either of two versions: Hybrid 1 comes with the economical vinyl-wrapped cabinet and the Hybrid 2 comes in our gorgeous solid oak cabinet.

Nitty Gritty makes five (5) models of record cleaners in all, as well as a CD cleaner. Write or call for an immediate packet of ear-opening information.

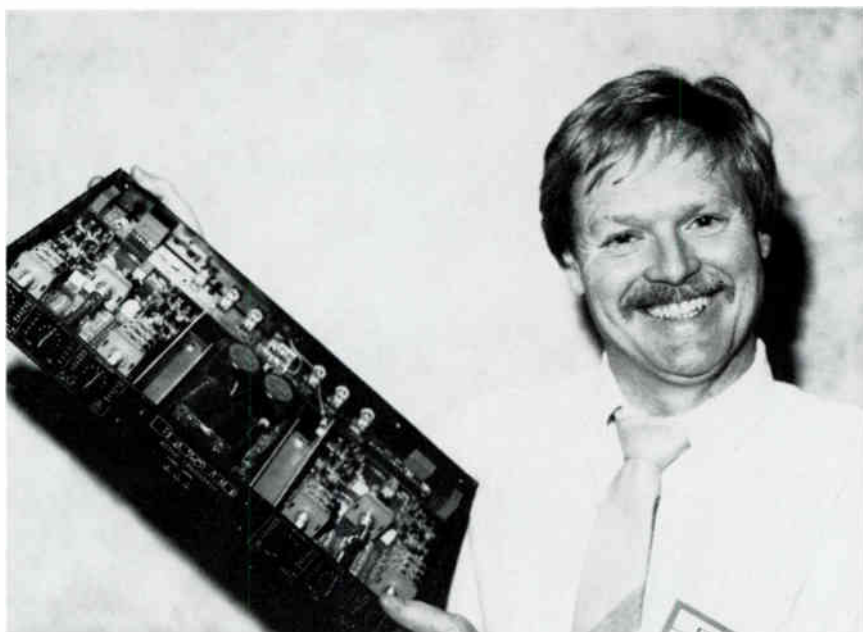
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Trying not to smile too brightly, Bryston's James Tanner displays their new, highly flexible active crossover

showgoer and reader of show reports, I jumped at the chance to do a report on the CE-EX show held in my home town of Toronto. As far as I'm concerned, this is just "doin' what comes nat'rally." (OK, no more references to *Annie Get Your Gun*.)

There are, of course, different sorts of shows. The High-End Shows mounted by *Stereophile* are for audiophiles (a.k.a. "the public"), whereas the Chicago and Las Vegas CES shows are for "the trade." Canada's CE-EX is mostly a trade show, but the public was admitted on the first of the show's three-day run. The trade *vs* public issue is a contentious one within the industry, with some manufacturers/distributors wanting the show to be all-trade, leaving their retailers to deal with the great unwashed, whereas others welcome the opportunity to deal with the public directly. James Tanner of **Bryston** told me that his company did not decide to participate in CE-EX until it was clear that there would be a public day. For him, shows like this provide an opportunity to counter what he feels are mistaken ideas of their products' sound, *ie*, that "Bryston is bright."

The Sawdust and the Horses and the Smell

Sorry, I just can't help quoting from musicals. Anyway, each show has its own atmosphere, and, to those used to CES, the atmosphere at CE-EX is either disappointing (a small fraction of the products and the people) or refreshing (a relative lack of hype, hoopla, and, generally, a more laid-back approach). CE-EX is also more of a real audio show than a "consumer electronics" show, with relatively little in the way of video, and only one room featuring car stereo, and this non-playing. Since one of the car systems featured an installation with 198 speakers and 6350W of power (really!), the non-auditory nature of this demonstration was much appreciated.

Speaking of audition *vs* vision, the guest speaker at the "VIP Breakfast," a marketing/show-management type, gave a generic speech about how to attract and retain customers, and quoted research (or opinion) to the effect that the overwhelming determinant of what sells a product is "eye appeal." A noticeable murmur from the audience of audio manufacturers/distributors and audio writers

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signaled to him that we were not amused. "Eye appeal," indeed!

The 'Tables Keep Turning

Judging by the number of new/improved turntables and turntable-associated products at the show, it appears that rumors of the LP's demise are exaggerated. The **Pierre Lurne** Audiomeca J1/SL5, several **SOTA** models, **The Source**, **Michell** GyroDec II, **Roksan** Xerxes, **Maplenoll**, **Zeta**, and **SME** (including the new CDN\$1400 "affordable" 309) represented the high end, while products like the **Moth**, **Ariston** Q-deck, and the **Revolver** (at CDN\$500 including arm and cartridge, this was described by its distributor as a "Dual killer") represented the more affordable part of the market. (Surprisingly, **Oracle**, Canada's best-known turntable maker, did not show.) One notable trend is toward acrylic or other hard mats/platters, but it would be too much to expect complete consensus in the world of high-end audio (or, come to think of it, in any other world). Herbert Papier, of **Wheaton** tonearm fame, argues that the turntable makers are going in the wrong direction with the use of acrylic mats, and he has designed a mat made from a material that he thinks has much better sonic properties: leather. The mat is marketed by **Aural Symphonics** and will sell for about US\$180. Please, no cracks about the "skin effect."

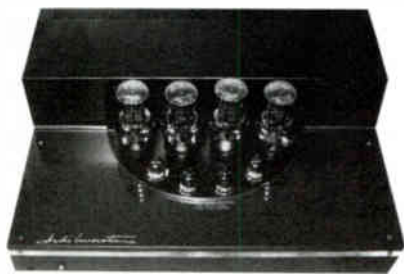
Digits

DAT was there (I spotted a machine in the new **Yamaha** "Titanium Series"), but no one seemed to care. The featured CD players were mostly the established models (like the **Philips** '960, **Marantz** '94, **CAL** Aria II and Tempest II), but **Stax** had a newly improved version of the Quattro II (18-bit, 8x oversampling) shown at CES, and **Dimexs** had the Micromega CDF1 from France. The latter is claimed to be "the first manual top loading player in the world" (a strange claim, in view of the fact that the original Philips 100 was a top-loader), featuring the standard Philips digital chip set, but with the transport having a very soft suspension, and a lot of attention paid to component selection and power supplies (three separate toroidal transformers). It is certainly a striking-looking unit, with a plexiglas case and control buttons with cryptic symbols on them. Price is CDN\$2600.

Electronics

Again, there were the established models familiar to readers of this magazine, but there were a few out-of-the-ordinary products. One of the cheapest and neatest was the new **Ariston** integrated amp, which offers full wireless remote control and a conservatively rated 35W, for CDN\$700. A bit more up-market, new to both Canada and the US, is the **Sound Audio** line of electronics. Manufactured "in the Pacific rim," marketed by **Interlinear**, these components have a Rowland-like appearance (well, not quite), claim to use high-quality parts (like ALPS pots and ELNA caps), and cost less than CDN\$2300 for the line amplifier and 50W MOSFET/tube hybrid amplifier.

From Britain comes the new "Gold Series" (somebody should bring out a "Tin Series," for those with ears to match) by **Sugden**. In a departure for a company that used to be known for a no-frills, most-for-least approach to product development, their new products (amp and preamp) look stylish (black lacquer-like finish), are more all-out designs, and, as a consequence, are not inexpensive—CDN\$3000 for the power amp. Another interesting British



Audio Innovations micropowered triode tube amplifier

line is **Audio Innovations'** tube pre/power amps. Iconoclastic designer/managing director Peter Qvortrup was on hand demonstrating the full line, including the modestly named First Audio Amplifier. According to Qvortrup, this 7.5W triode will drive a speaker to produce as much volume (not just subjective volume, *measured* volume) before clipping as a 50W transistor amp.

At the extreme high end was the **Jadis** line from France, proudly displayed by Angie Lisi and Paul Jilek in the Innerconnect room. The units on display were the first in the country,

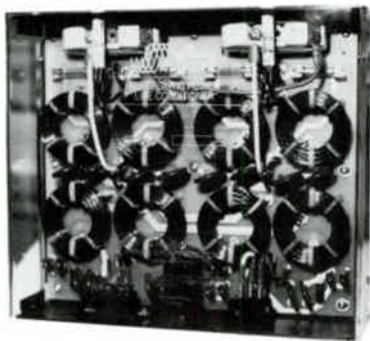
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having just cleared customs the day before the show. I happened to visit the room at the same time as Toronto high-end dealer (and Jadis dealer-to-be) Arthur Salvatore; when queried about his reaction to these hugely transformed, chrome-plated, much-betubed beauties, he became misty-eyed and declared, "I'm in love." However, those who become similarly enamored and wish to do more than worship from afar had better not have any cash-flow problems: Canadian prices are not yet firm, but the US price for a pair of the 200W mono-blocks is \$12,750. The matching preamp is a mere \$7600.



Inouye Synergistic Power Line Conditioner

One intriguing new product, distributed by **Artech** and found in a number of systems at the show, was the **Inouye** Synergistic Power Line Conditioner. Said to be different in design from all other line filters/surge protectors, several exhibitors had good things to say about it. Yes, I know that the units they had were loaned to them by the distributor, but they could have made their comments more non-committal. Price is CDN\$750.

Speakers

This was an aspect of the show that turned out to be a disappointment. Canada has a number of speaker lines that have done well internationally, but most of these manufacturers chose not to participate in the show. Thus, absent were such brands as Mirage, Image, PSB, Energy, Camber, Morrison, and Clements. In spite of the incomplete participation from Canadian companies, there were still more box speakers than you could shake a stick at. As an

ESL fan from 'way back (for a long time, I had KLH 9s, and now use old Quads), I had hoped to hear the new ESL/dynamic hybrid that a company in Ottawa has in the "advanced prototype" stage, but no such luck. And whatever happened to Naim's ESL/ribbon hybrid? I had to be content with listening to the **Martin-Logan** Sequels, **Sound Lab** Dynastats, and the revised **Quad** ESL-63 US Monitors. Taking the limitations of physical setting into account (eg, the Quads were in a small room, stuck almost in the corners), all three demonstrated the typical electrostatic virtues, ie, they sounded less like speakers and more like live music. In particular, the Sequels (with **Sugden** "Gold Series" electronics, **Audiomeca** turntable/arm, and **Sumiko** Virtuoso cartridge) had a bottom end that seemed to be a lot better integrated with the rest of the range than when the speakers were initially introduced. I was told that there has been a crossover change and an improvement in bracing.

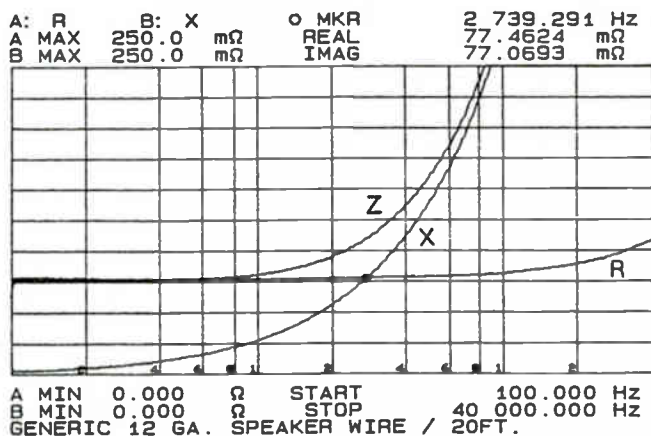
Human Factors

What would a show be like without people? Most people I met at the show were very congenial—I had a particularly pleasant chat with Gerard Rejskind, Editor of the Montreal-based *Hi-Fi Sound*—but I did have one less-than-positive experience. It happened in a room that featured products from a Canadian manufacturer that shall remain nameless (I don't want *Stereophile* threatened with lawsuits again). I walked in and was about to inquire about the equipment, when a representative of the company looked at my badge, fixed me with a hostile stare, and said, "You're the one that gave us that terrible review!" "Alas, I am but a humble record reviewer," I replied, but he was not to be mollified. He proceeded to tell me just how wrongheaded the reviewer was, how the review hurt their sales, and how, because of that review, they "want nothing to do with *Stereophile*." Exit one *Stereophile* contributor. When I got home, I looked up the review in question, and found that it was in fact only mildly negative. I wonder what sort of reception I would have had if the review had been really unfavorable. What if I had been the reviewer? Larry, do equipment reviewers who attend shows get danger pay?

The Sound of Music

No, none of the exhibitors played music featur-

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ing Julie Andrews—too bad, as far as this musical theater fan is concerned. I heard a lot of Michael Hedges's *Aerial Boundaries*. Best sound at the show? A **Stax** binaural (dummy-head) recording on CD, played on the Quattro II, with the Lambda Pro Signatures driven by the SRM-T1 headphone amp. Other than systems already mentioned, I was pleased by the sound of the "budget" system in *The Inner Ear* room. Featuring an **Ariston** Q-deck, **Garrott** K-1 cartridge, **Rotel** integrated amp, and **Inouye** Modulus-1 speakers connected with **TARA** cable (total cost less than CDN\$3000), this system, while lacking the ultimate in fidelity, had an easy-on-the-ears musicality that was quite beguiling. In a higher (much higher) price range, **Innerconnect's** system—featuring **The Source**, **Benz** cartridge, **Rowland** electronics, **WATTs**, and **Entec** subs—produced a sound that's less "forgiving" than I personally prefer, but I had to admire the speed, dynamics, and sharp focus.

So there you have it. CE-EX is over, and I still haven't found the magic component that will allow my system to sound exactly like live music. Maybe at the next show.

Manufacturers/Distributors

Most of the products mentioned have US distributors that are easy to track down; the following are less well-known.

Artech Electronics Ltd., PO Box 1165, Champlain, NY 12919

Dimexs, B.P. 37, Succ. E., Montreal, Quebec, Canada H2T 3A5

Interlinear, 105 Riviera Drive, Unit 3, Markham, Ontario, Canada L3R 5J7

WEST GERMANY: Markus Sauer

The HIGH-END fair, held annually in mid-August in Frankfurt, is the most important audio event in the German-speaking countries. It is a hotel show, open to the public for four days with one day set aside for dealers. Held for the first time in 1981, the show proved very popular with public, dealers, and press right from the start, and is very much responsible for the acceptance of the high end in the German press. There is a parallel show, called Scala, at a nearby hotel, where mostly large dipolars are

shown. For the purposes of this report, I'll roll both shows into one.

The HIGH END was a success, as usual. Last year there were close to 10,000 visitors, and I doubt there were any less this year. The American presence at the show was as strong as ever—MLAS, Krell, Rowland, SOTA, VPI, Basis, Sumiko, Magnepan, Madrigal, Eminent Technology, Martin-Logan, Sound Lab, Nestorovic, Counterpoint, CAL, McIntosh, MIT, Klyne, Nelson-Reed, ESS, Sumo, and lots more had their more or less complete ranges demonstrated by their importers.

Since you will be pretty familiar with the American gear, let's move on to things new to you—much of the European high end. If I were to give you a complete overview of every range displayed, JA would have to devote an entire issue to this show report, so my presentation will be highly selective. The criteria for mention were: good sound at the show and technological interest.

First, German products. Dieter **Burmester** usually has one or more things at the show that you wonder why you didn't think of yourself. Remote-controllable preamps have been a minor fashion these last few years, and his new 877 is among them. But he has something for those unwilling to spend money on a whole new preamp just for a bit more convenience: the 881 volume control, a remote-operated device which you can install between any pre-



Audiolabor Souveraen incorporates D/A stage and power amplifier in one chassis

and power amp. **audiolabor** (neither child-birth nor workforce; "Labor" is German for laboratory) showed their well-regarded range, but the most interesting exhibit was the Souveraen; this is a project still under development, a D/A converter and a power amp in a single chassis—a glimpse of the future when all signal handling will be in the digital domain. Appropriately futuristic looks, too. **Pfleid** demoed an intriguing product: a single-chassis

Photographs: Markus Sauer



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full-range speaker. They have developed an advanced chassis where the joint between voice-coil former and cone shows a controlled flexibility, effectively decoupling at higher frequencies so that a titanium "dust cap" acts as a dome tweeter. Coupled to an electronics box that uses feedforward techniques to compensate remaining faults, the sound of the complete active system (\$3500) was very promising.



The AEC Monitor loudspeaker. The bright spot inside the tweeter is the glow of the plasma.

AEC demoed the Monitor speaker (\$5500), which features the best high-frequency transducer available, period: The Corona ionic tweeter (\$2000 on its own). Ion tweeters have been known for years, of course, but have been discredited in recent years by designs which emitted a very noticeable level of ozone. The Corona uses a well-designed horn to couple the plasma to the surrounding air. The ease and clarity have to be heard to be believed, in my opinion easily outperforming ribbons and leaf tweeters. The source was a CAL CD player with Counterpoint amplification, and this was the first time I could listen to piano from CD; there's hope yet!

WBT has decided that the best solder is no solder, the only metal that should be allowed to separate copper from copper in their opinion being gold (to eliminate corrosion). They introduced a complete range of plugs and sockets designed for crimping, a purely me-



Tall, dark, and handsome: the MB Quart 985S active loudspeaker

chanical connection adapted from laboratory and high-frequency applications. A full-range horn from **Martion** made nice noises with the unassuming **CS da capo** electronics, a range of small modules giving high system-matching flexibility. **MB Quart**, which has recently begun exporting to the States, is included here

"The MG-III is a remarkable speaker at any price; at \$1995 it will be a runaway best seller."

INTERNATIONAL AUDIO REVIEW (U.S.A.)
HOTLINE #31, 1984

"With me, it's now a question of trying to live without them, rather than with them. In other words, I'm 'hooked'."

HI-FI ANSWERS (U.K.)
JULY, 1985

"Here we have a remarkable, true audiophile speaker."

HI-FI NEWS AND RECORD REVIEW (U.K.)
JUNE, 1984

"One of the best sounds at the Riviera (Consumer Electronics Show)."

AUDIO MAGAZINE
MAY, 1985

"Especially with full orchestral music, the MG-III really shows its full potential."

STEREOPLAY (GERMANY)
AUGUST, 1984

"This speaker will be a classic."

HIGH FIDELITY (DENMARK)
JULY-AUGUST, 1984

The Absolute Sound Magazine.

SEE REVIEW IN VOL. 9, NO. 35
AUTUMN, 1984

Critic's Choice

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Magneplanar® MG-IIIa

because they serve to show how all the best-selling loudspeakers in Germany look: tall, slim columns, lacquer finish. They are the company who set the metal-dome ball rolling (providing the tweeter for Dick Olsher's Dahlia Debra design, for example), so of course every speaker in their range has at least one of them. They also have an intriguing project under way, a pulsating ball (working on the magnetostriction principle) which at the moment still needs a dynamic woofer but which one day will work full-range, giving the nearest thing to a point source possible.

Best sound at the show, in my opinion, came from **audio exklusiv**: the turntable (\$2500) combines a granite chassis with an acrylic platter and was coupled here with an Air-Tangent tonearm (from Sweden) and an Audio Technica AT-OC 9 cartridge, linked to the P2 preamp (\$2000), high-voltage tube amplifiers (\$1700), and the P6 electrostatic loudspeakers (\$8500), which feature an ingenious time delay/crossover network. Sound was full, airy, spacious, and involving, the only slight fault being some softness in the surprisingly extended bass. That bass softness was all-pervading at the show, a consequence of the room construction, so it shouldn't be held against the system. Second-best sound came from **hgp**, using the Viva pre and Groppo mono power amps (\$2000/\$1050) and the Klassik speakers (\$2100, with ceramic woofer, Kevlar midrange driver, and soft-dome tweeter). Sweet, detailed, and elegant. Finally, there was a very fine demonstration by **Clearaudio** (which has taken over **Souther**). They used the Audiomeca J1 (the most popular turntable at the show, Linn and Roksan tying for second), the Souther TQ1 with Clearaudio Accurate cartridge, and **Horbach** electronics and speakers to produce a very neutral sound.

Postl & Smid from Austria had some visually stunning products, especially the Stagliani turntable. **Acoustic Research** (from you know where) demoed not only the Rowen Research series, but also a complete new range of affordable speakers, dubbed the Spirit series, featuring sandwiched unequal-density baffles, advanced drivers, and minimalist crossovers, the woofers being direct-coupled to the amplifier.

Synthese, a company from Belgium, introduced a bi-wirable version of their unusual-looking Synthese 1 speakers (I won't even attempt to describe them; look at the pic-

ture on the cover of Vol.7 No.5) and a new range of electronics, including the Brilliant Power amp mentioned by Peter Van Willenswaard last month. Using 264 power transistors per channel and at least as many power-supply capacitors, it might be described as the world's first planar amp.

Piega from Switzerland has a range of speakers which share a true ribbon tweeter. The UK's **Heybrook** introduced two new affordable floorstanding models, the HB 150 and 250. **Musical Fidelity** (British Fidelity in the US) introduced a separate D/A converter, the Digilog; the MA100 class-A mono power amplifiers, which are a variation on the integrated A100 amps; and the Reference 2 loudspeakers: the drivers from the MC2 in a smaller box, designed to work in tandem with the small A1 integrated—a very effective demonstration. The humongous A470 power amp has obviously been designed to compete with the new Krell range in the nightmares of UPS employees worldwide. **Roksan** (from the UK) introduced an arm and—no, not a leg—a cartridge. The Artemiz arm features a unique bearing: one very small ball in a precision-machined indent on the non-moving part, three balls in a similar arrangement on the moving part, the contact being only between the balls, contact area being extremely small. Friction seems to be virtually nonexistent. For the cartridge, Roksan mounts a generator provided by EMT in a machined body. Having tried all kinds of glue, they settled on a three-spike mounting. I'm not exactly a fan of their Darius speakers, but even those sounded better than I've ever heard them.

Mission introduced a new range of speakers, the 782 being demoed. If you are familiar with the difference between the old and new Cyrus amps, you'll know what to expect from the new speakers. **Siltech** (of cable fame) showed their Sphinx range of mostly hybrid electronics.

I'm not quite sure what to make of the last product I want to mention, the \$85,000 active speakers from German newcomer **Fischer Audio**. These guys are obviously serious about their range, which also includes some smaller, but still very expensive, models. Even if the ultra-complicated Pegasus should prove to be the world's best, which they should be at the price, I wonder what kind of a market they'll find. Fischer Audio didn't demo the larger

A Benchmark Improved.

The STAX SR-Lambda Professional earspeaker system is an anomaly on today's novelty-chasing audio scene. Instantly acclaimed upon its introduction six years ago, its preeminence has never been challenged — except by STAX itself. Everyone has conceded the Lambda Pro benchmark status. Its successor, then, offers the rare opportunity to witness a benchmark improved.

Remarkable as the Lambda Pro's performance seems, the new SR-Lambda Signature (so named because president Naotake Hayashi originally designed it for his personal use) improves on it in important respects. The transducing diaphragms have been reduced by one-third, to one micron in thickness; this means that they can reproduce the leading and trailing edges of each waveform even more accurately. And when musical tones are not allowed to blur into the spaces between them, previously unheard details — even entire instrumental lines — assert themselves.

Obviously the Signature could not reach new heights without a standard-setting amplifier. The SRM-T1 can be driven from a preamp, or directly by any line-level source. Its two stages combine dual FET's and twin 6FQ7/6CG7 triode output tubes, uniting virtues once considered incompatible — transient speed with depth of image, low-end weight with treble naturalness.

The SRD-7 Pro energizing adaptor attracts two distinct groups — the practical and the utterly uncompromising. First, it attaches to the output of a power amplifier, permitting Signature operation with whatever equipment you now own. And if your commitment to the most sophisticated (and costly) preamps and amps has advanced beyond the theoretical, you may prefer driving the Signature in this manner.

For convenient listening, a five-meter extension cord, the SRE-Signature, is also available; it is constructed of the same PC-OCC cable used in the earspeaker's manufacture.

Citing the best STAX earspeakers' reputation as unrivaled instruments for unmasking the subtleties in recorded sound is justified. Consider the music you know best. The Lambda Signature will help you to enjoy it truly — to hear it for the first time.



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Pictured: SR-Lambda Signature earspeaker with SRM-T1 Direct drive amplifier.
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speakers, justifiably claiming that the rooms would not be able to accommodate the bass energy put out by eight 12" woofers at 16Hz flat. Maybe if you live in very spacious quarters you will be able to afford them, minimum requirements being in the small castle region, I'd say.

The overall atmosphere at the show was upbeat, dealers being as enthusiastic as their future customers. Overall, sonic standards were also very high, reportedly much better than in Paris. Manufacturers and importers had time to get to know the acoustics of the hotel, and there were few obvious set-up errors or sonic mismatches. I guess this is one of the reasons why the HIGH END is so enduringly popular; if you take a day to attend a show, you want to be impressed, not disappointed. Even the musical selection showed taste, and that was a new experience for me.



Philips CD882 CD transport only and DFA888 digital preamp

THE NETHERLANDS: Peter van Willenswaard

We know that everything is bigger in America, but what CES and Las Vegas are to you, the Funkausstellung in Berlin and the Firato in Amsterdam are to Europe. Milan has become the central show of consumer electronics for the Latin part of our continent, taking a comfortable third position. (Contrary to what many of you may believe, there is no general consumer electronics show in the UK, although I have heard rumors of the BBC organizing something this Fall. *Hi-Fi News's* Heathrow/Penta show is hi-fi only.) The big news at the Firato should have been CD-Video. It did get its official introduction here, and was on display, but failed to create a buzz. One of the reasons could be that software is still rare, consist-

ing of musical program only except for one film (a popular Dutch movie, as CD-V is a Philips development). At the same time, a number of European and Japanese brands introduced omnivorous video-record players, accepting anything from VLP to 3" CD singles and automatically adapting to the format. There is, however, no soft- or hardware compatibility with American NTSC-based VLP (or CD-V), so this is Betamax/VHS/Video 2000 all over again.

Looking more strictly at audio, we note that, as expected, DAT is still not official. From a reliable source I know that we'll have to wait another six months. Fifteen manufacturers were showing DAT recorders; **Marantz** wasn't there at this Firato, but they have one too. **Philips** chose not to show such a machine, but I have seen one in their laboratories in Eindhoven, built with a Philips-designed tape mechanism and VLSI chips. Philips' official stance is that they have no desire to market DAT as long as there is no agreement with the record industry. On the other hand, one can imagine the weight of the now-sleeping capital investment.

Although CD was already perfect at its introduction, of course, because digital audio is concerned with either 1s or 0s, thus excluding sonic differences, there seems to be persisting public need of improvement on perfection. After the welcome victory of resampling techniques and the more questionable striving for higher-bit DACs (they can't even get their plain 16-bit converters accurate), the new trend seems to be to separate data-reading and processing circuitry from the actual D/A-conversion circuitry. So there will be one more box to sell. Anyway, as we know from our experiences with the more expensive CD players, a separation of power supplies and signal grounds has a beneficial effect on sound quality. A physical separation can enhance sound quality even more, and to my experience it often does but not always, one of the problems probably being a mismatch in the digital-interface circuitry on one or both ends of the coaxial link (optical links have their own problems). Nevertheless, it's an interesting development and not only Philips, **Sony**, **Technics**, and you name 'em showed examples of these, but also **Akai**, in three different price ranges (calling the CD-reading-only unit a Cyclops). Growing even faster is the number of amplifiers with built-in D/A-conversion circuitry.

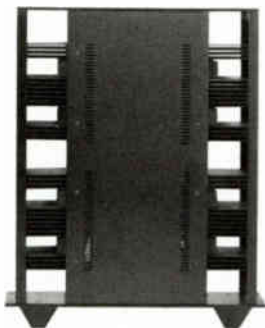
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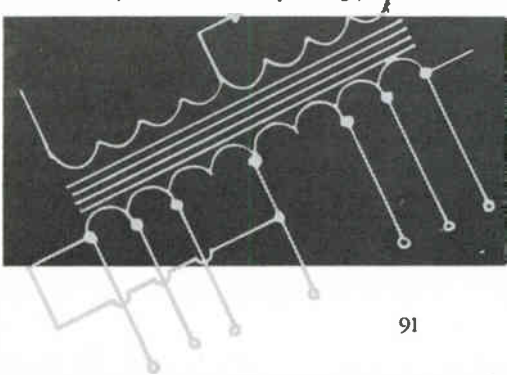
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In the past the so-called hi-fi specialists used to seek safety in a nearby hotel, thus attracting only a selected part of the invading crowds. The first time they joined the general Firato show was two years ago (Firato and Funkaustellung are alternately held every other year). Hesitations have been dealt with definitively, and this time enthusiasm and confidence shone from their faces and stands. A number of listening rooms had been arranged in a conference block next to one of the exposition halls. Usually two or three exhibitors shared a room, in happy cooperation as to time schedules and whether or not to use each other's components. This in itself already being rather unique, I must add that the general level of sound quality in the demonstrations was quite good. I remember sound quality in demonstrations improving dramatically between 1983 and 1985, and in recent years, to my surprise, the Dutch have been doing a better job than their colleagues at Frankfurt, Paris, or Heathrow. Demonstration material was mainly pop music, as too many people tend to leave the room when classical music is played (yes, even in Europe). Favorite titles were Jennifer Warnes's *Famous Blue Raincoat*, Rickie Lee Jones's eponymous debut album, Paul Simon's *Graceland*, Robert Cray's *Strong Persuaders*, and the wonderful Robert Wasserman *Duets*.

What about new products in this specialized segment of the audio market? To name a few: A new, smaller, lower-priced turntable from **Pierre Lurine** (a former Goldmund designer) called the Roma. The **Arcam Delta** Black Box, an outboard D/A converter, is now for sale. **Sony** showed their new \$8000 Reference CD player. The 18-bit **Stax** Quattro II CD player was introduced. From Holland there were a few new and very promising loudspeakers which will probably never make it to the States. What may make it are new amplifiers from cable manufacturer **Siltech**, both tube and solid-state. What will by now already be in the hands of his American importer is a new cartridge from **van den Hul**. It's a moving-coil called the MC-2, and with 2mV at 5cm/s it's a high-output. No derivation of the MC-1 or MC-10, it's a completely new design, with a different kind of magnet, and a cross-type modulator providing a better linearity and channel separation (38dB) than otherwise possible. It was designed in view of the many tube amplifiers with an MM input only.

Mr. van den Hul has also coproduced a purist CD recording. I was surprised with a copy by Multifoon, a high-end dealer located in the ancient town of Delft, who had a limited number of this CD for demonstration purposes only, as it will never be on sale in this form in our country (but vdH may distribute some abroad). It was made with Schoeps microphones, connected via an all-tube mixing console straight into a professional Sony PCM2500 DAT recorder running at 44.1kHz, so no further processing would be necessary for CD production but for some additional coding. The recorded Royal Marine Band, however, found the recording to be too "poor," and will add reverberation and equalization in the final master tape. The vdH version is entirely without such "improvements" (a standard procedure in the mastering process), and therefore as pure as can be. I did not know CD could sound this open.

Back to the shows. The **Martin-Logan** Statement was not at the Firato, but 20km away in Hilversum. The speaker system was flown in for its European introduction, and importer Audio Quartet of Paris decided this should happen in a Dutch shop called Rhapsody. The funny thing about this shop is that it isn't a shop but a house, with a very meticulously set-up system in each room. At the same time were presented the new (and equally expensive) amplifiers from **Swiss Physics**, as well as a French top-line CD player from **Micromega**, said to be very nearly as good-sounding as the big Accuphase but at half the price. It has a separately enclosed D/A converter using Philips components but completely redesigned, and the disc-play unit looks more like a record player than like a CD player: you lift a big Perspex lid, put the CD on a motor unit which is mounted on a subchassis, add the damper, close the lid, and play. (This could be the solution for people who never bought a CD because they couldn't see it spinning.)



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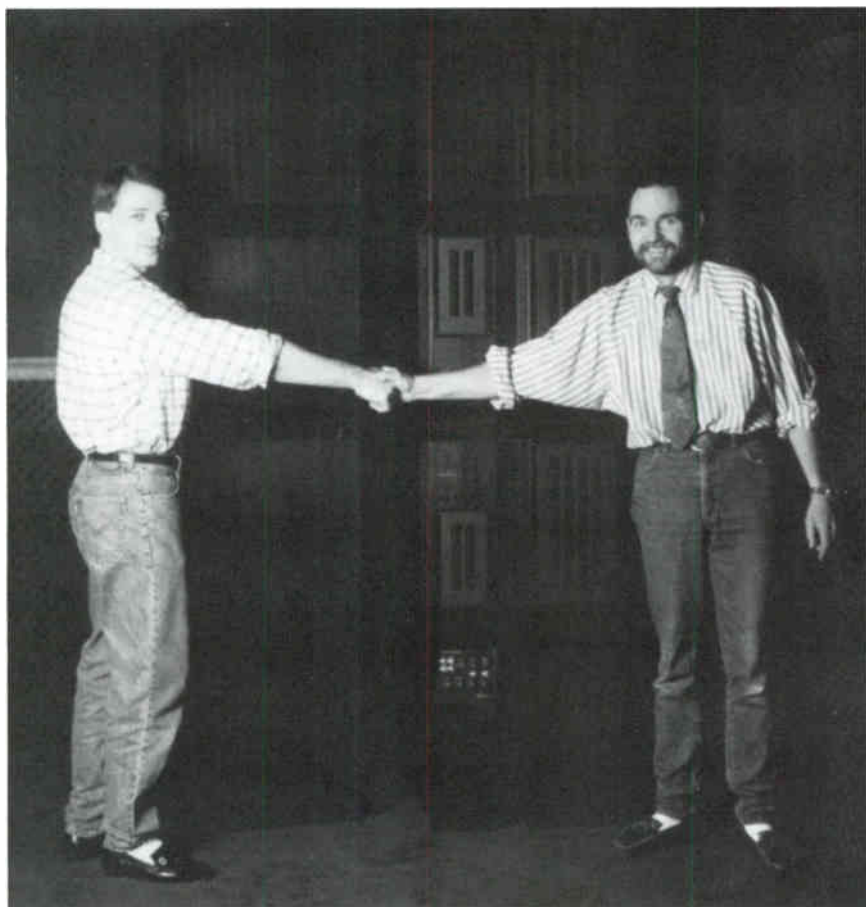
Audio Magazine
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Happy Tenth
Anniversary
Sound by Singer!



Half of Fischer Audio's Pegasus, dwarfing its designers

WEST GERMANY: Peter van Willenswaard

Journalists seem to have a habit of flying as soon as the destination is beyond the immediate horizon. From my home in Rotterdam, I prefer to do Paris by train and Frankfurt by car. This year, I *flew* by car to Frankfurt: a friend's Alfa-75 covered the remaining 300km (190 miles) from the German border to Frankfurt in less than 2 ½ hours (there is no speed limit on the West-German Autobahn), coffee-break included.

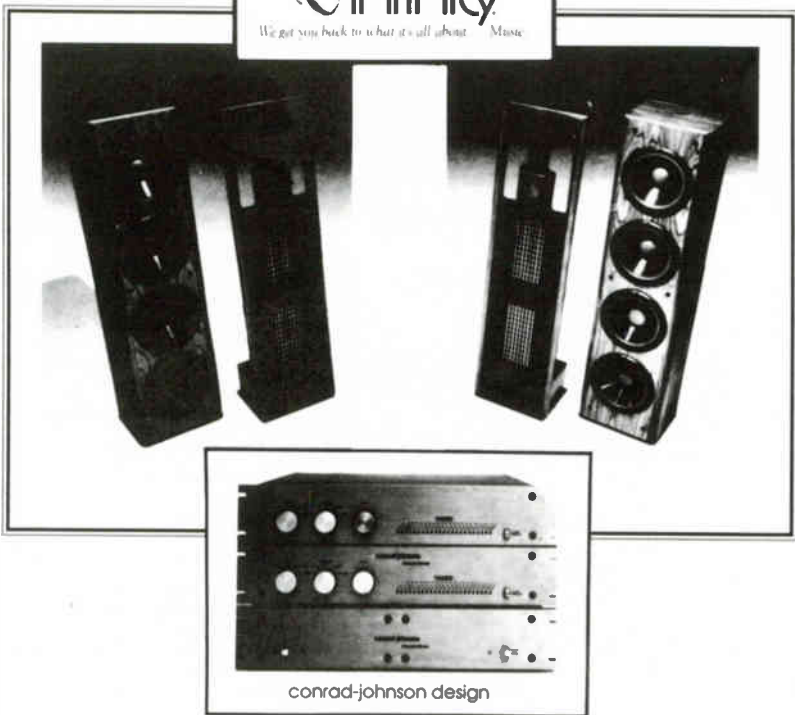
The Frankfurt High-End show is always organized in the same hotel, Gravenbruch, just south of the city. Most of the great international products can be seen and heard here, like Audio Research and Jadis, Krell and Rowland, VPI (including their big 'table) and Goldmund, CAL

and Spectral, Martin-Logan (though not the Statement) and Eminent Technology, for instance. But for someone visiting from abroad, it is the German products that draw attention. There is an active high-end community in the FRG, with lots of medium/small-sized manufacturers. Aesthetics have traditionally had a higher priority than sound quality in these circles, and they've coughed up some pretty weird designs. Take a look at the Horbach photograph; and this is no exception—I could easily show you another ten equally crazy designs. Sound quality is more than bearable, even interesting, but usually not without serious flaws.

T+A Elektroakustik showed a new loudspeaker featuring an electrostatic tweeter receiving its high-voltage modulation directly

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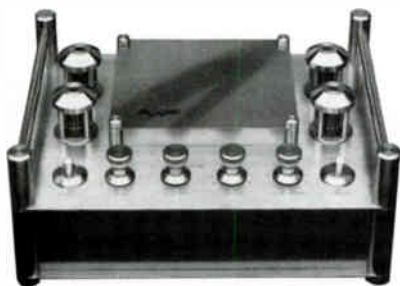
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Horns from Horbach

from a built-in tube amplifier. *The loudspeaker* not to be missed was the Pegasus from **Fischer Audio**. The photo shows the designers and half of a stereo pair. From 100Hz upward there are eight modified Fostex magnetostatics in different sizes, each driven by its own built-in (solid-state) amplifier. To avoid false spatial information these units are all used in a unipolar mode, the back-radiation being absorbed in a kind of labyrinth. Bass is provided by a tower that looks a bit like four Janis subwoofers on top of each other and contains another four amplifiers. All 24 amplifiers used in stereo have their own power supply. The system sounds very fast, easy, and loud at the same time, and very well integrated; some tunnel-like colorations could be heard at medium and mid-high frequencies, and it wasn't free of electronic hardness. They tried tube amplification, but the tubes kept jumping out of their sockets, as



Exotic tube preamp from a surprising source: Grundig

the system is capable of 129dB SPL at and above 30Hz. Even the mains plugs had to be slammed into position again every morning. I sat 2 meters away: I felt the air move through my hair, my trousers were moving, and I'm convinced they would have been literally flapping if they'd used the 14dB headroom still unused at that moment. The system weighs 1500kg, costs \$80,000, and was sold while I was there.

On static display (in the nearby Holiday Inn) was a 1kW into 8 ohms mono power amplifier called **Souveraen**. It was said to be entirely digital, but did have an analog input followed by an A/D converter. From the more conventional electronics I heard in different rooms I got the impression that German amplifiers are steadily losing their traditional electronic glare. This parallels a development on the loudspeaker front, where tweeters tend to be taken down in level a bit, thus getting more in line with design views west of the German border. There is a growing interest in tube electronics; even TV and radio manufacturer **Grundig** has introduced an exotic-looking tube preamplifier in their Fine Arts series, this being their recent attempt to get into the high end. Equally exotic were a few turntable designs from **Postl & Smid** (Austria). I conclude with some amazing news from **Burmester** (the leading designers of audio electronics in Germany): he has a working model of an outboard D/A converter providing real 16x resampling! No clever tricks with multiple 4x resampling DACs, but one 16-bit DAC per channel running at a staggering 706kHz sampling speed, fed from a custom-made digital filter doing the 16x resampling. The thing is called the Burmester 870, and the German price will be about \$5000.

S

"Because I wanted to have the world's finest amplifier and the world's greatest transfer function I built the astonishing Silver Seven."

The Silver Seven employs classic, fully balanced circuit topology and the finest components in existence.

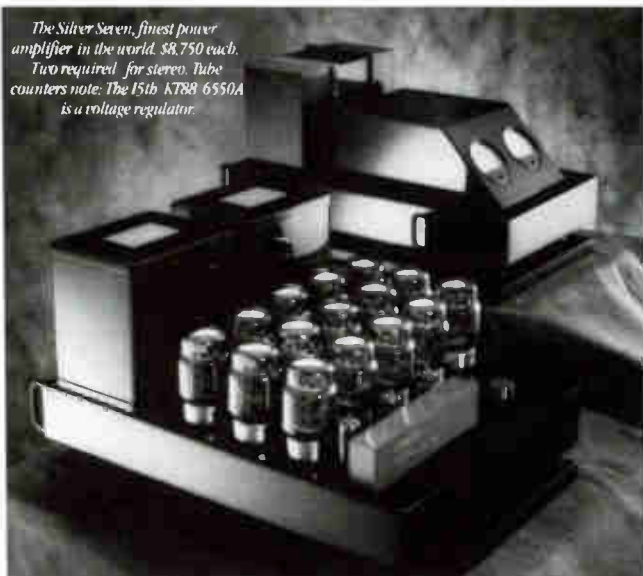
A 450 Ultra Linear output transformers with oxygen-free primary leads and pure silver secondaries.

- Wonder Cap capacitors throughout.
- Interconnects are Van den Hul Silver.
- Internal wiring is pure silver.
- Wonder Solder throughout.
- Gold input connectors and high current gold output connectors.

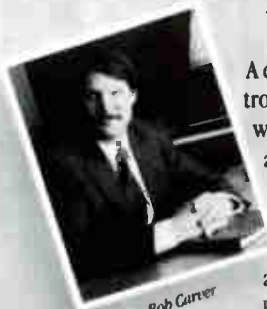
The Silver Seven's polished granite anti-vibration base floats on four Simmi's vibration dampers. The separate power supply's power transformer end bells are machined from a solid block of high density aluminum.

Capable of an astonishing 390 joules energy storage, the Silver Seven delivers a conservatively rated 375 watts into 8 ohms from 20Hz to 20kHz with no more than 0.5% distortion. On the 1 ohm tap, peak current is in excess of 35 amps!

The Silver Seven, finest power amplifier in the world. \$8,750 each. Two required for stereo. Tube counters note: The 15th 6X50A is a voltage regulator.



Before you meet the new M-401, Bob Carver wants you to meet its inspiration, the money is no object Silver Seven.



Bob Carver

The Politics of Denial, by Bob Carver

A discussion of the controversy surrounding my work, a few clarifications about Transfer Functions, and some straightforward information on two major new power amplifiers.

Few audio controversies have spilled more ink, ignited more angry letters and raised more blood pressure levels than my insistence that I can duplicate the transfer function of power amplifier designs. By returning to these pages, I'm not attempting to upset the uneasy cease-fire which has finally settled over this issue. Rather, I'd like to examine with you, gentle reader, two important mechanisms which have invisibly underlain the ongoing conflict.

The first of these is the tremendous pressure which I've somewhat innocently unleashed on the audiophile press.

The second is simply a clarification of the t-mod process, which I frankly admit to have passed over in favor of more controversial statements.

"The Carver Challenges were a horrible blight on the audiophile reviewing magazines of this world" — *direct quote in an audiophile reviewing magazine, by its editor. (The Audiophile File, Mar/Apr 1988, Vol. 1 Issue 2, Printed Edition).* Any time a publication entertains radical views — whether they be editorial or on an advertiser's page — there is a substantial and often negative reaction. (Read Larry Archibald's Final Word in *Stereophile* Vol. II, No. 7 for an excellent account of what can befall a magazine over just a single review.)

“Because I wanted to share
its magnificent sound with you we built
the new Carver M-4.0t.”

The M-4.0t. Identical transfer function
and 375 watts rms; cb. at 8 ohms
20-20kHz with no more than 0.5% thd.

The M-4.0t. A true scientific method.

100% pure.



The very essence of my work on
M-1.5t and M-1.0t power amplifiers
has been pure heresy to virtually every
other amplifier manufacturer. I've not
only dared to claim my designs to be the
technic equals of more expensive competi-
ng brands, but I've somewhat innocently
managed to embroil at least two maga-
zines in the validation of these assertions.
I regret that I apologize. Beyond that, the
reaction has been sadly predictable.

Let's face it, radical scientific
methods have always produced radical
breakthroughs; magical solutions are more
common than you think. And few are really
uncomfortable confronting a design which
has the potential of solving a problem
at a fraction of the current cost. *Even
the prospect is exciting!* Thus any editorial
staff — be it an engineering journal
or a literary digest — is faced with
the same dilemma: the inverse result of
editorially endorsing (or even fairly

examining) such radical methods will
inevitably be seen as questioning more
conventional approaches.

To sense the potential strength of
the ensuing reaction, simply count the
number of power amplifier ads in this
publication. Then factor in the owners
of competing brands. And multiply by
the editorial position of each magazine
as to which power amplifiers are cur-
rently the best. No wonder some may
consider me to be a "horrible blight."
But think of it, *What's so horrible about
trying to offer music lovers a great
amplifier at a good price?* From my
first amplifier design onward, I've
worked long and hard to develop a pow-
erful scientific method for achieving this.
If my invention of the Magnetic Field
power supply (the patent lasts 11 more
years) and the ability to sort out a trans-
fer function has furthered that goal, then
it's for the better in spite of reactions

ranging from outright denial to bitter
innuendo.

Where does this leave me on the
eve of introducing two major new power
amplifier designs? Certainly the ideolog-
ical underdog should further conflicts
break out.

And what about you, dear reader
and music lover, the very person who
must ultimately come up with the money
to buy an amp. What about you?

The question more rightfully
should be "where does this leave the
audiophile editorial press?" Are they
shuddering over a new "Carver blight,"
considering getting unlisted phone num-
bers to avoid the flood of angry calls from
other power amplifier advertisers and
either hoping to indefinitely postpone
Carver product reviews or crucifying both
designs quickly to get it over with? To
print anecdotal zingers from staff and
readers alike in issue after issue without
balance?

Honestly, I'm not *that* paranoid. but I can't help wondering. If my belief in the validity of my design approach hasn't been shaken by past years of sometimes nearly unfounded editorial attack, neither has my faith been eroded that those same writers have the potential to be fair and objective.

I ask only what has long been professed. That favorites not be played, whether those manufacturers be (as Larry Archibald put it) advertisers, friend, "enemies" or simply the accepted leaders in the field. In my opinion, future coverage and examination of the new Silver Seven and M-4.0t amplifiers will be a significant test of whether or not what benefits you as readers and listeners does indeed remain of paramount concern.

While it may appear that I thrive on controversy, I'd really rather simply be judged by my results. And that means being familiar with my methods. In the past, I've been very remiss in clarifying several fundamental points about the transfer function, t-mod methods and philosophy.

The Silk Purse-Out-Of-A-Sow's-Ear myth debunked. As Larry Archibald, Gordon Holt, and Peter Aczel will admit, *I am* capable of reproducing the transfer function of one amplifier in a dissimilar design. ("Archibald and Holt disagree with the contention that my production version of the t-mod reproduced the sound of the referenced amp [*Stereophile*, Vol. 10, No. 3]." Aczel agrees with my contention that my production version of the t-mod does reproduce the sound of the referenced amp. *The Audio Critic*, Winter, Spring 1988, Issue No. 11). This has led to the collective sound of minds snapping shut. "Ridiculous!" goes their thinking. "*Bob actually claims to be able to take a disgustingly made, cheap power amplifier and make it emulate a world class reference amplifier? Impossible!*"

We agree. Nothing could be further from the truth. As mentioned earlier, I have been remiss in not stressing an important point about the t-mod process. The success of transfer function replication is *totally dependent on the intrinsic capabilities of the amplifier being "t-mod-ed."*

In other words, I've never claimed the ability to make a bad design into a good one: The generic amplifier being modified must, in many ways, be *better* than the design whose transfer function is being replicated. It must, as a minimum, have more output current and more output voltage than the reference amplifier. Its frequency response, slew rate, noise floor, and intrinsic input impedance specs must always equal or far exceed those of the reference amplifier. Its instantaneous current rise-time speed must beat the reference. And of course, it must always have at least as much power. Only under these circumstances can one then begin layering in the specific sonic signature that the t-mod transfer function characterizes.

A brief description of my new t-mod and t-mod-ee. An interesting and frustrating phenomenon occurred during production of my last t-mod design. The reference amplifier used for QC comparison proved to be unstable — or rather, un-*constant* — as M-1.0t manufacturing continued. For that and many other reasons (including temporary vacuum tube madness, the sheer challenge of it, and the overwhelming desire to give my customers something very special), I set out to create the ultimate reference power amplifier. A design with the world's greatest transfer function. And a design that was mine to start with.

Because my heartfelt belief is that great sound should not cost \$ zillions, I've replicated the Silver Seven's transfer function in a new solid-state design, the M-4.0t. Now it should be obvious that to be successful the M-4.0t had to start out

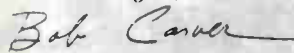
with basic parameters as good as those of the Silver Seven. BEFORE t-modification. This was, for me in many ways, a much more difficult engineering challenge than creating a money-is-no-object world's-finest-reference power amplifier. I'm not saying the M-4.0t and Silver Seven are identical. An M-4.0t weighs 277 pounds less than a pair of Silver Sevens. And you don't get the warm glow of silver-tipped vacuum tubes reflecting in polished black lacquer.

But be assured, the M-4.0t's transfer function is identical to that of the Silver Seven. And the sound it makes is the same, exactly the same.

Please understand that I didn't buy this ad to stir things up again. My hope is that it might open a few minds enough to judge my new solid state design on its merits, rather than on presuppositions, anecdotal statements, and hearsay. No matter what your opinion has been concerning my t-mod process, whether you are among those who believe in the scientific validity of the process (as evidenced by the thousands and thousands of positive comments I've received) or are among those who still can't quite believe because it seems just too good to be true, I urge you to seriously audition the M-4.0t. And the Silver Seven, although their distribution is understandably more limited.

We at Carver think you'll be impressed. Because, to mangle a phrase, "The intrinsic quality of the M-4.0t was there before the 't' in the t-mod went in."

Thank you for reading my ad.
Warmest regards,



Bob Carver

P.S. We spent close to a quarter million dollars creating the Silver Seven, but that's okay, because potentially, I, you, all of us, can benefit.

CARVER

Powerful

Musical

Accurate

Distributed in Canada by: 

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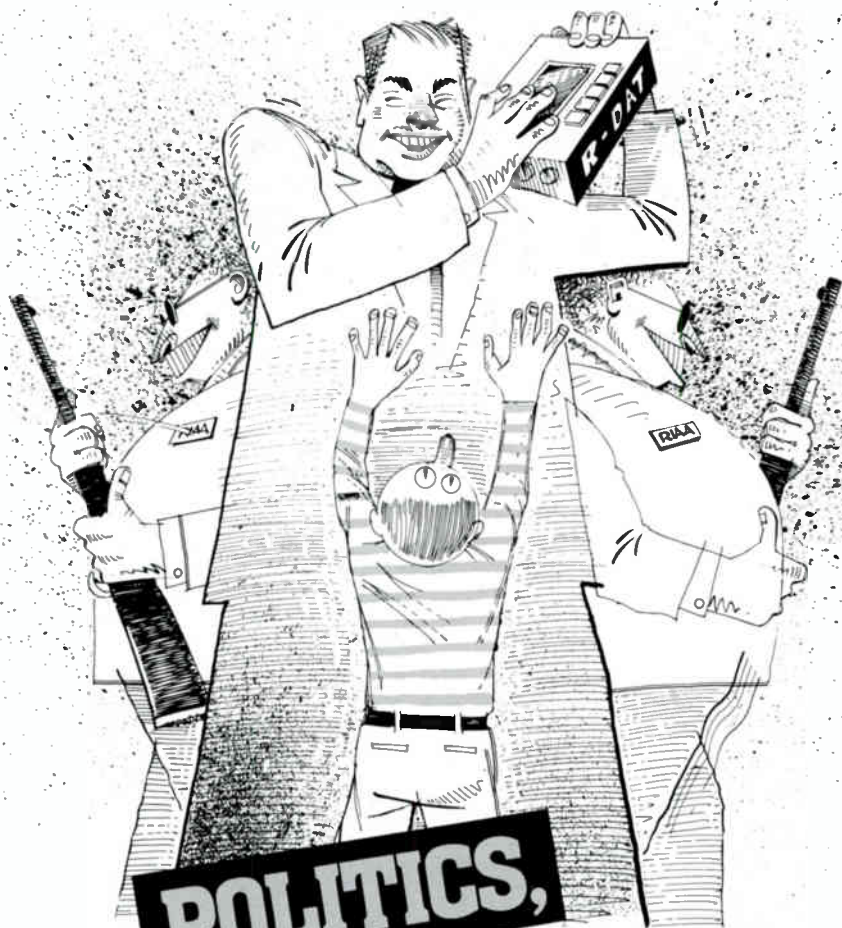


Illustration: Jim Wood

POLITICS, SUBTERFUGE & THE TAPE RECORDER

Jack Hannold

Copycode may be dead, but the RIAA's campaign against home taping is still very much alive. The industry will continue to seek punitive royalty taxes on blank tape and recorders, both digital and analog—

and on CD recorders and blanks, too, when those are marketed. And if the pop culture barons of the six multinational corporations that sell nearly 90% of all records sold can't halt the advent of DATs and recordable CDs, they'll

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at least try to prevent the marketing of consumer machines with digital editing capabilities—ostensibly to thwart both criminal piracy and legitimate copying for personal use, but actually to ensure that such decks won't lower capital costs for potential competitors. We're fighting two wars with the RIAA.

I first wrote those words in an earlier draft of this article, before I found my thesis confirmed in a startling admission in the trade press: *Billboard* quoted RIAA president Jason Berman as saying that his group "would prefer to prevent copying entirely or, if it is only limited, to compensate rights holders for home taping by means of a compensatory levy."¹

"Rights holder" is not synonymous with "artist." A distribution formula proposed to Congress in 1986 would have given only 30% of the booty from the tape tax to record stars, and another 11.5% to songwriters. The lion's share, 45%, would go to the record labels, and another 11.5% to music-publishing firms (which are sometimes label subsidiaries). The remaining 2% would go to the talent unions.²

Are consumers really hurting multinational corporations? Does every blank cassette sold represent an album sale lost to a record company? Are the manufacturers of recorders and blank tape really parasites living off the creativity of "recording artists" and their vast retinues of agents and business managers?

At least some members of Congress are as skeptical as we are. Rep. Robert Kastenmeier and Sen. Dennis DeConcini, who chair the House and Senate subcommittees concerned with copyright issues, have asked the Office of Technology Assessment to study consumer taping practices and their effects on record-industry profits. The results of the OTA study probably won't be released until April 1989,

and Kastenmeier and DeConcini plan to delay action on any anti-taping legislation until the report is out.³

But what will happen then? Before making any predictions, let's review what has happened since February 1987, where I left off in June.⁴

The Battle of the Notch

In February 1987, when Sen. Albert Gore of Tennessee sponsored a bill⁵ to put Copycode chips in DAT recorders—instead of *all* recorders, as the Reagan Administration had advocated in 1986—this didn't suggest a shift in RIAA strategy. Gore was the point man who had proposed an unprecedented 35% import duty on DATs six months earlier.⁶ But then on March 2, Rep. Henry Waxman introduced the same measure in the House.⁷

Waxman, a leading liberal, represents part of urban Los Angeles; but his district also embraces what the *Congressional Quarterly* calls "verdant enclaves of entertainment industry wealth."⁸ He has consistently supported, and frequently sponsored, special-interest bills for his Hollywood constituents. His sponsorship of this one clearly signaled a change in the RIAA's approach.

The record moguls apparently hoped that by targeting DAT, a new medium with no existing constituency of users, they could avoid antagonizing the masses of mid-fi and low-fi cassette-deck owners who had written Congress to oppose the tape tax bills.⁹ Thanks to the efforts of the Home Recording Rights Coalition and the mass audio press—especially David Ranada's work in *High Fidelity*¹⁰—they failed in that; but otherwise, their legislative tactics succeeded brilliantly, at least for a while.

By passing off what was really a copyright bill as a trade bill, the sponsors were able to evade the jurisdiction of the House Judiciary Committee, which had always viewed royalty schemes from the consumer's perspective. Instead, the measure was referred to the Commerce committees. Gore and Waxman are

1 "Electronics Manufacturers Slow on DAT Dialog," *Billboard*, Aug. 13, 1988, p.91.

2 *Hearings . . . on S.1739* (99th Congress). S. Hrg. 99-1019, p.573.

3 "Congress Embarks on Home Taping Survey," *Billboard*, Mar. 19, 1988, p.101.

4 "Music, Copyright and the Record Industry," *Stereophile*, June 1988, pp.74-83.

In case you're wondering why I left off at February 1987, it's because that's when I wrote the article. By the time it arrived in Santa Fe, the RIAA had already shelved the tape tax scheme and begun concentrating on burdening DAT machines with Copycode, so the magazine shelved the article. Then this March, when the unfavorable NBS report killed Copycode's chances, a detailed analysis of machinations behind the anti-taping campaign—and especially a debunking of the myth of harm to the record industry from home taping—once again seemed very timely.

5 S.506, 100th Congress.

6 W.2842, 99th Congress.

7 H.R.1384, 100th Congress.

8 *Congressional Quarterly Weekly Report*, Jan. 3, 1987, p.18.

9 H.R.2911 and S.1739, 99th Congress.

10 See especially Ranada, "Interrupted Melody," *High Fidelity*, July 1987, pp.44-51.



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members not only of the Commerce committees, but also of the subcommittees which would handle the initial screenings—in Waxman's case, the ironically named House Subcommittee on Commerce, Consumer Protection, and Competitiveness.

But even with this home-court advantage, Waxman seemed reluctant to let the bill stand on its own dubious merits. With the help of Subcommittee Chairman Jim Florio (D-NJ), he got the measure tacked onto H.R. 3, the omnibus House trade bill, on March 18. One week later, Waxman and Florio defeated an effort to remove the anti-DAT provision from H.R. 3 in full committee. With Washington engaged in an orgy of Japan-bashing in the wake of the Toshiba scandal, it looked like Waxman might be able to steamroller the thing through the House. But then the RIAA's luck ran out.

First, House Speaker Jim Wright (D-TX), who claimed to support the bill, nevertheless removed it from H.R. 3, saying he wanted a "clean" bill, *ie*, one without potentially controversial riders, to send to the House floor. Then the opposition both inside and outside of Congress began to react.

On April 2, members of the House and Senate subcommittees concerned with copyright issues—some of whom, on the Senate side, had supported the tape tax in 1986, but all of whom resented the RIAA's blatant attempt to circumvent their authority by going through the Commerce committees—held a rare joint hearing not on the Gore-Waxman bill, but on the alleged threat DAT posed to the record industry. This time the HRRC folks were ready. They brought their own Copycode filter to the hearing and demonstrated, to the legislators' shock and the industry's horror, just how devastating the Copycode notch could be to certain kinds of music. They also documented the possibility of false positives.

David Stebbings, who had designed the Copycode system for CBS (which was not yet part of Sony), charged that the HRRC filter was bogus. He claimed CBS hadn't released technical specifications for the encoder.¹¹ Stebbings must have an awfully short memory. He was present, as part of the CBS entourage, at the Senate subcommittee hearing of March 25, 1986 on the old tape tax bill, when a detailed

technical description of Copycode—on CBS letterhead, no less—was submitted for the record as an appendix to a joint statement by the RIAA, the National Music Publishers' Association, the Songwriters' Guild of America (George David Weiss's group), and the Department for Professional Employees of the AFL-CIO.¹²

CBS had, in fact, narrowed the notch in an attempt to make it less audible, but had failed. But the narrowing had actually increased the likelihood of false positives in the decoder, and, even worse from the RIAA's point of view, introduced the possibility of false negatives, which would ultimately prove to be Copycode's undoing. Of course, they didn't know that at the time.

The conflicting evidence on Copycode induced the copyright subcommittees, with the grudging assent of Florio's subcommittee, to call for a moratorium on Copycode legislation until the National Bureau of Standards could conduct an impartial test of the Copycode system.

Subsequently, Florio asked the RIAA to have its members refrain from using Copycode on its "product" and EIA to have its members delay marketing DAT machines without chips until the NBS results were published. The RIAA agreed, but the EIA, citing probable anti-trust violations, declined.

Waxman and Florio used the EIA refusal as an excuse to move ahead with Gore-Waxman. According to *Billboard*, Florio got the bill through his 14-member subcommittee by using "a series of parliamentary maneuvers" to hold off a roll-call vote until a quorum of eight members, with a pro-Copycode majority, could be assembled. The vote was 6 to 2.¹³

Fortunately, the full Commerce Committee didn't violate the moratorium, and that was the last of Copycode until the NBS report killed its chances in March.

Subcode Subterfuges

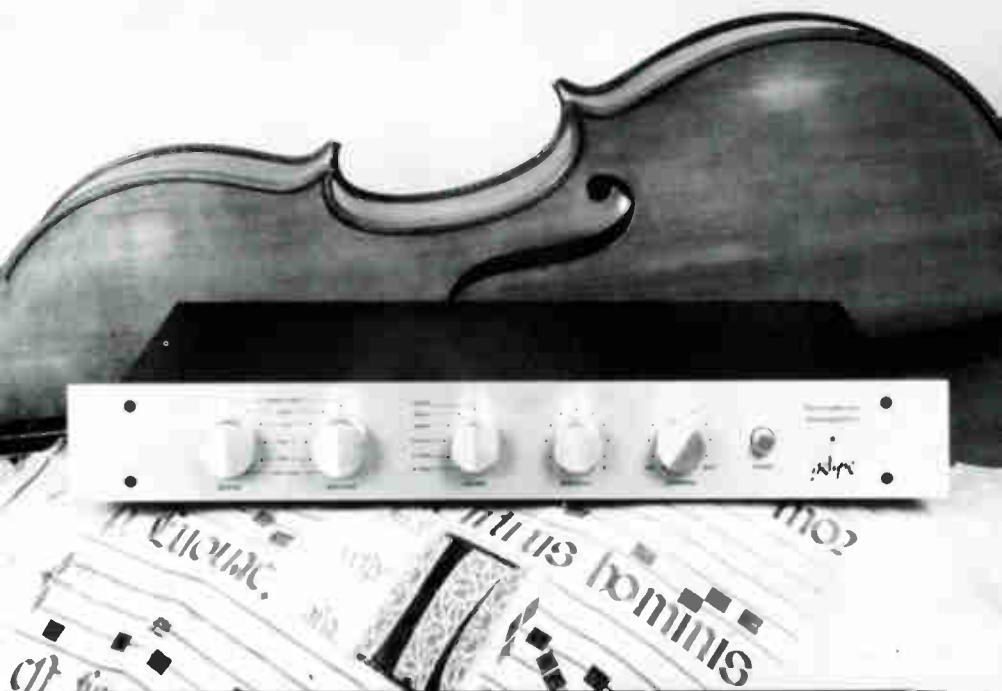
The best thing about Copycode, from the music moguls' standpoint, was that it was equally adaptable to digital and analog technology. If they could have saddled DATs with it, they would have had a precedent for similarly disabling new analog recorders—and even the audio circuits of VCRs.

11 "RIAA Agrees to a Test for CBS DAT Spoiler." *Billboard*, May 30, 1987, p. 79.

12 *Hearings on S.1739*, op. cit., p. 531, pp. 577-580.

13 "House Antidupe Bill." *Billboard*, Aug. 15, 1987, p. 80.

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Of course, they could hardly admit that that was their goal. So they concocted the perfect cover story: DAT poses a far greater "threat" to the record industry than analog cassettes, or even open-reel recording, because of the supposed superiority of digital sound—a hotly debated premise in high-end circles, as *Stereophile* readers know, but one that goes virtually unchallenged in the non-audio press. And not even the whole pro-digital camp within the show business community was buying the larger premise.

Frank Zappa, for example, said that "a guy who tapes at home *is* going to tape at home no matter *what* the quality is. I think it's a spurious argument to say that this provides some extra dimension of threat." As for the Gore-Waxman bill, he warned that "the record industry stands a good chance of wearing out its welcome" by "wasting Congress's time on this stupid thing," and urged the industry to forget about home taping and concentrate on strengthening anti-piracy laws.¹⁴

But dissents like Zappa's were rare. The cover story had worked too well to give up. So when the NBS report killed Copycode, the moguls started to talk up some purely digital anti-copying systems, such as the Philips Solo and Solo II systems, and the RIAA's own Unicopy, reportedly based on Solo technology. All of these systems are supposed to allow consumers to make one, and only one, copy of a CD on DAT. Specs are said to be proprietary and little information is available, and what little has got out sounds frightening.¹⁵

But in fact, these systems are paper tigers. All of them work not only entirely in the digital domain, but entirely in the subcodes. They do nothing whatsoever to the *sound* of DAT recordings.

It would be easy to route the bit stream from one DAT machine to another—or from a CD player to a recorder—through a "black box" buffer circuit. The buffer would simply delay the bits a few milliseconds, like the time-base correction circuits in CD and DAT machines, but it would be linked to another circuit that could recognize—and delete—copy-blocking flags in the subcode, and even replace them with copy-permitting flags, if necessary.

Record executives know as well as we do that these subcode-based systems are easy to defeat. Their support of such schemes is just a ruse designed to keep alive the myth that D-to-D dubbing represents an unprecedented threat to their enormous profits—something they consider necessary to get some sort of restriction, any sort at all, on home recording through the US Congress. But they may not have to limit themselves to purely digital systems next year, because they have another prospect—an absolutely horrifying one.

Son of Copycode

Rick Miller, the president of R. Miller & Associates of Glenview, IL, was at the Summer CES this year to unveil a new system called APS, or "anti-piracy system." That's a misnomer, since it's actually aimed at stopping home taping and, as we know, legitimate home taping and piracy are two very different things. But it's a catchy name, and it'll probably earn him some brownie points with the RIAA.

Miller won't give out any details. This one's "proprietary," too. But he will allow that it's very similar to Copycode. The difference is that, instead of removing part of the signal with a notch filter, APS *adds* supposedly inaudible tone bursts to the program signal. These bursts are detected by a chip in the recorder which, like the Copycode chip, would cut off the recording process when it thinks it detects encoding.

But those tone bursts—or, more likely, noise bursts, since sensitivity to simple tone patterns, like those occurring in music, would trigger *frequent* false positives—*can't* be truly inaudible. Miller was demonstrating his system¹⁶ in Chicago not with encoded CDs, or even LPs, but with encoded *analog cassettes*! If his noise bursts are detectable through the playback circuits of mid-fi cassette decks, they *must* be audible—objectionably so on some kinds of material. And it is inconceivable that any system that depends on an analysis of the spectral content of program material to determine whether the program was encoded could completely avoid the occasional false positive response that could ruin a live recording. And, of course, any experienced electronics hobbyist could easily bypass the chip. In other words, APS would fail all three of the tests the

¹⁴ "Artists Express Views on DAT Legislation." *Billboard*, July 4, 1987, p.79.

¹⁵ Peter W. Mitchell, "Industry Update USA: Philips Solo Dance." *Stereophile*, Aug. 1988, pp.33-35.

¹⁶ "New Antiduping Device Rises from Copycode Grave." *Billboard*, Aug. 27, 1988, p.77.

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NBS administered to Copycode.¹⁷

It shouldn't even get serious consideration, but given the obstinacy of the RIAA and its Congressional allies, it just may be a serious contender for a while. But the real threat is a royalty tax.

Overseas Duties

If you read the headline, "Australian Gov't Approves Blank-Tape Royalty Plan,"¹⁸ you might think Australia had already enacted a tape tax. But in a nation with a parliamentary government, that statement doesn't mean what it seems to mean to an American.

In Australia, "the Government" means about what it does in Britain: a Cabinet drawn from the majority membership in the House of Representatives. A careful reading of the *Billboard* article shows that the tax was not actually enacted, but merely placed on a list of bills the ruling party will try to get through the Australian House and Senate.

As of this writing, I haven't seen anything more on the subject. I don't know whether the Australian tape tax was passed or defeated, or whether it's still pending (I suspect the latter). But the scheme as endorsed by the Cabinet has two provisions that demand our attention.

First, 15% of the total revenue from this anti-consumer levy would go to a government-chartered "Contemporary Music Development Company," whose purpose would be to "foster Australian music and young Australian musicians." This sort of thing has tremendous appeal for the governments of nations like Australia and Canada which feel, not without justification, that they are so heavily influenced, culturally as well as economically, by other nations, especially America and Britain, that their own identities are threatened.

Second, the scheme provides for the dis-

bursement of royalties to artists in other countries that have similar royalty taxes and reciprocal agreements with Australia, but not to those in nations without such taxes—meaning that American and British pop artists, who dominate the charts, would get nothing until their countries fell in line with the international record industry's plan to tax every last recorder owner on Earth.

That last provision is obviously calculated to appeal to British and American politicians worried about their nations' trade deficits, but it shouldn't fool them. Only the relatively modest artists' shares of the take would cross national borders. The record labels', music publishers', and unions' shares would go to the foreign affiliates of American and British record labels and music publishers, and to foreign unions.

At least the British aren't fooled. On July 25, the UK's House of Commons voted overwhelmingly (134-37) to delete a tax on blank tape from a copyright reform bill. Francis Maude, a Cabinet member, noted that a royalty tax would benefit only "relatively well-to-do record companies and pop stars" while placing an undue burden on the visually and aurally handicapped, churches, and younger consumers. Our Congress should take note!¹⁹

License to Tape?

Royalty taxes and "technological solutions" *a la* Copycode aren't the only ideas the recording industry has ever advanced for curbing your right to tape. Consider this passage:

"Then a Washington newspaper published a report that broadcasters and record companies were seeking ways to keep home tape recordists from building up collections of free music by dubbing it off the air. . .

"The article went on to say that a spokesman for 'one major record company' was seeking a licensing system where 'the burden would be on the applicant for a tape recorder to show that it would not be used to dupe records.' "

The *applicant* for a tape recorder? Believe it or not, that passage appeared in this magazine's pages in 1963!²⁰ And from the context, it would appear that the newspaper article

¹⁷ In late October—too late to change the text of this article, but not too late to add a footnote—I heard of a report in the Sept. 11 issue of *Pro Sound News*. Murray Allen of Universal Recording is doing an independent evaluation of APS. *PSN* quoted him as follows:

"For normal pop music, you'll never hear it. On quiet classical music, you might hear it time and again, and dismiss it as ambient noise that might occur in the concert hall."

Note that Allen does not deny the audibility of the APS noise burst; he merely suggests it as unimportant—an opinion few, if any, of our readers would share. And Allen inadvertently raised another question: If the ear could easily mistake Miller's noise burst for ambient noise, isn't it likely that the APS chip could just as easily mistake *real* ambient noise in a *real* concert hall for an APS noise burst, and thus ruin a live recording?

¹⁹ "U.K. Commons Rejects Tape Levy," *Billboard*, Aug. 6, 1988, p. 3.

²⁰ Philip C. Geraci, "The Home Recordist: Hobbyist or Hoodlum?" *Stereophile*, Vol. 1 No. 6, p. 4. While this issue bears the cover date "July-Oct. 1963," JGH recalls that it was not mailed to subscribers until just before Christmas of that year.

appeared at least three years earlier.

Yes, in 1960; 23 years before the introduction of the CD, and 17 years before the first professional studio digital tape recorders, so it couldn't have been fear of digital technology that motivated that proposal. And at least a few years before Philips demonstrated its first prototypes of the "Compact Cassette" — which was first seen as a low-quality, speech-only medium—so it couldn't have been fear of the cassette's ubiquity as a music medium. And it couldn't have been fear of analog open-reel recorders, because those were never really a mass-market item.

No, that proposal was motivated by greed and paranoia—the same kind of paranoia that makes a record executive think that any kid who doesn't spend his entire allowance on records, but does spend part of it on blank cassettes, is taking malicious glee in "cheating" the record companies; and the same kind of greed that got the industry into the payola scandal of the late '50s, which precluded the possibility of a warm reception in Congress in those days. Yes, greed and paranoia, and a lack of imagination: those weasels probably just can't understand how the rest of us can be any less greedy and venal than they are (and their contacts with politicians eager for Hollywood and Nashville PAC money certainly won't do anything to change *that!*).

That's enough history for now. What can we

expect next year?

Prognostications

If the RIAA is ever going to get any of its anti-taping schemes through the US House of Representatives, it will have to be done in an odd-numbered year. No Representative wants to vote for that kind of anti-consumer legislation in an election year. But the Senate is a different matter. Only a third of its members run for office in any given year. And remember, a Senate subcommittee actually *did* approve a tape tax on March 25, 1986.

Then there's the White House. No incumbent President who hoped to be re-elected could afford *not* to veto a really unpopular bill in an election year. But 1990 is *not* a presidential election year, so we'd better hope no anti-taping legislation gets through the House in 1989.

If the OTA study concludes that home taping has no deleterious effects on the record industry—as indeed it should—it will help the consumer immeasurably. If it's as far behind schedule as the NBS report on Copycode was, it will help even more, by delaying action on anti-taping bills.

Of course, another payola scandal would help, but I wouldn't count on it. If you really want to protect your right to tape, you know who to write to, don't you?

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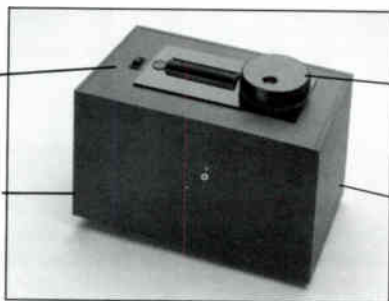
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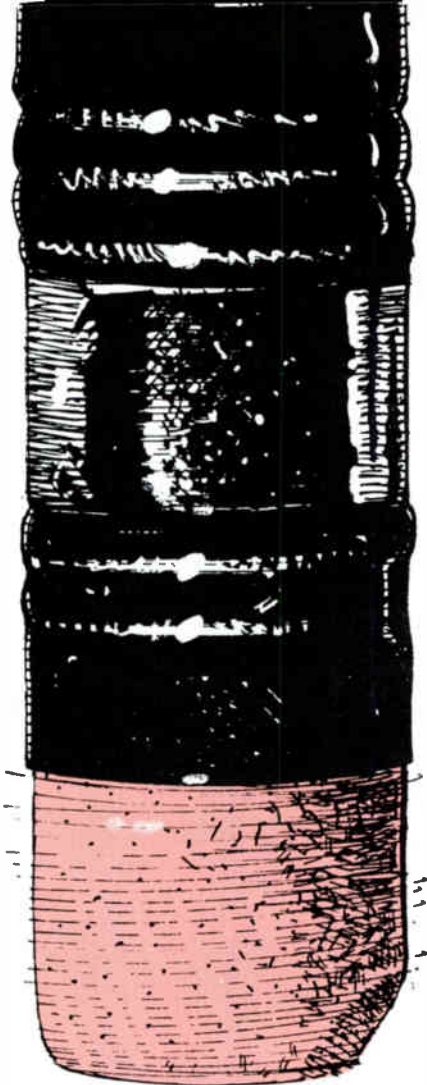
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the SONIC SOLUTION

Kevin Conklin & Richard Schneider examine the NoNoise process

No matter what you think of the sonic good or harm wrought by the compact disc revolution, you can hardly deny the enormous benefit of the recording companies reissuing on CD hundreds of historic performances, most of them long unavailable on vinyl. But the very age of these recordings presents certain problems. Those made direct-to-78 suffer from attendant background noise, clicks, and pops; those from pre-Dolby tape have hiss; and either medium will suffer great deterioration after decades of careless storage, sometimes with apparently mortal loss of intelligibility.

KEVIN CONKLIN:

Enter Sonic Solutions, a small San Francisco-based firm dedicated to the application of digital signal-processing techniques to the recovery of recorded sound. SS was founded in 1986 by Bob Doris, former president of Droid Works, George Lucas's computer animation subsidiary. He has since been joined by Mary Sauer, also formerly of Droid Works, now SS's VP of Marketing and Operations, and Andy Moore, who has long been involved with computers and digital audio. They have developed a process called NoNoise, which several audio recording firms have used to remove noise from material taken from their vaults—all sorts of material, from Louis Armstrong to the Doors to classical recordings. Philips of Holland has obtained exclusive rights to use the NoNoise logo on the de-noised classical material they issue during 1988. Their first big release is of 25 vintage "Legendary Classics" CDs, seven of which are reviewed later in this article.

The NoNoise system comprises several components running on SS's in-house Sun 3 computer. Most important is a set of noise-reduction programs, intended to be run against a PCM digital recording after it has been downloaded from Sony 1630-format tape to a Winchester disk drive (a 60-minute CD occupies

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about 700 megabytes). One process handles spurious and signal dropouts of transient duration (typically less than 10 milliseconds, never more than 100ms). The program gates the transient signal in the time domain; an arbitrary number of time slices is taken from the (presumably unblemished) signal on either side of the gate; all these values are run through an algorithm to determine the best interpolation to replace the gated interval. (SS isn't talking, but they may be using Savitsky-Golay smoothing polynomials, long employed by physicists and chemists to remove noise from spectrographic data.) One advantage to this technique is that, in contrast to traditional razor-blade tape editing, no time gap is introduced. Using the old method, several 10ms excisions within a short span could substantially alter one's perception of a recorded performance.

Sauer demonstrated the NoNoise technique for me, treating a 1968 recording of Jim Morrison made at a Hollywood Bowl performance. Morrison's microphone had a bad connector, which introduced all manner of crackly noises whenever he moved. After the NoNoise treatment, the crackle was almost inaudible, and Morrison still sounded like Morrison.

Periodic broadband noise of long duration, such as thermal noise from tape or vacuum tubes, or groove noise from 78s, is removed by a different method. A sample of pure noise, without musical content, is first taken—generally 0.3–0.5 second is required. This sample is used as a baseline for algorithmically denoising the entire recording, band-by-band, through over 2000 frequency bands. This technique is not as easy as it sounds. First, it is often difficult to find half a second of "silent" noise on a tape, given the training of recording engineers to cut in and fade out as quickly as possible around the music. An estimated noise profile must sometimes be used instead. Also, the sample must sometimes be edited to remove non-noise impurities such as music!

The signal processing may seem straightforward, but how exactly does one decide what is noise, and what is music, or such extramusical sounds as ambience or crowd rumble which many consider integral to the enjoyment of music? The NoNoise system provides several tools to help. Artificial intelligence techniques are employed to analyze the waveform, identifying spurious and hiss on such bases as periodicity and frequency. A menu-driven front

end, dubbed "Browser," is provided for the operator-editor, allowing display of the waveforms to an arbitrary level of granularity, and giving interactive control over setting gates and the application of various interpolation techniques. Finally, the whole process is automated so that an entire CD may be processed—save for final, manual touchup—in a realistic span of time. Even with a million-instructions-per-second machine like the Sun, real-time noise reduction is not possible; a 60-minute CD requiring about eight hours.

Sonic Solutions will process a CD in-house for about \$8000. Their business goal is, however, to market NoNoise systems to other companies. The software will be offered on an Apple Macintosh II system fitted with special array processor cards. The full-blown NoNoise platform will sell for \$100,000. A basic CD pre-mastering system, with functions appropriate to mixing and film Foley work, will sell for the amusing sum of \$44,100.

What of NoNoise's effects on sound and music? I find the results mixed. Quite contrary to the conclusions Robert Cowan drew in his Sept. '88 *Hi-Fi News* review of the Philips CDs, I find the system's click-and-pop removal from old 78s sonically more convincing than its elimination of the broadband hiss off more recent magnetic tape. A good example is Philips 420 778-2 (58:23), featuring Maurice Ravel conducting his *Bolero* (1932, Lamoureux Orchestra); Ravel at the piano accompanying soprano Madeline Grey in his *Chansons madecasses* (1928, with unnamed instrumental ensemble); and Serge Prokofiev conducting his second *Romeo and Juliet* suite (1938, Moscow Philharmonic). The *Bolero* especially is a must-hear, demonstrating the sensuousness and unvarying, inevitably slow tempo which Ravel rightly insisted were essential to effective performance. Ravel is much more rough-and-ready with this piece than had become common practice long before Blake Edwards and Bo Derek misappropriated it: listen especially to the raucous saxophone, an instrument in 1932 still packing Jazz-Age shock value, quite contrary to the blandly civilized playing of post-Sigurd Rascher generations.

Some audio critics have complained about an unrealistic smoothness to this CD's sound and a lack of ambience compared to the 78 (I cannot, for I don't have the 78). It does sound a little scrubbed-up, but there are also details

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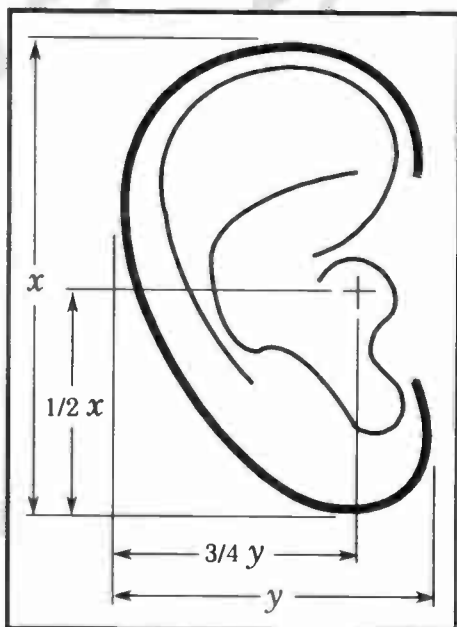
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one just wouldn't expect to emerge from the lacquer. The *Chansons* are perhaps a more complete illustration of NoNoise's pluses and minuses, soprano and especially cello being vivid and filled-out through their overtones; the piano, especially right hand, sounds dead by comparison. Background is amazingly quiet, though far from silent.¹

The original Prokofiev recording may be too dim, primitive, and deteriorated for any analysis of recorded nuance, but the Philips CD is at least comprehensible. I again diverge from Cowan in observing that Prokofiev conducts the Moscow Phil. with passion; would that all recordings of *R&J* were this gutsy, sweet, and violent.

At the other extreme, consider the 1956 Karl Bohm/Vienna Symphony recording of the Mozart *Requiem* (420 772-2, 59:58, mono). This performance is special. Bohm's reputation as a Kapellmeister has always been unfair; certainly his Mozart can be inspired: but nothing prepared me for the intensity of this reading, an exquisite juxtaposition of Teutonic significance with refinement and devotion. It's almost enough to erase doubts about Sussmayer's completion. The CD even boasts liturgically appropriate banding.

Sonically, it's a dicier issue. NoNoise does all but eliminate background tape noise, but the result is a disturbingly inelastic sound: a weird cutoff of ambience, reverberation becoming a discontinuous "foof." Again, low-to-mid-range sounds (bass and tenor voice, horn) have their overtones reproduced better than high sounds (strings, soprano). Similar, but quantitatively less, criticism may be levied on the George Szell/Concertgebouw/Beethoven 5/Sibelius 2 (420 771-2, 1964 & 1966, 73:33). The recordings of both symphonies suffer from ambience suckout and poor differentiation of sounds below *pp*, or anywhere near the analog noise floor. The Beethoven, by the way, is excellent, as urgent as Szell's work in Cleveland but without the teeth-clenching. The Sibelius is quite well-known; rest assured that this CD sounds far better than the cheap Festivo LP of several years ago, the LP by comparison connected in line and bland in texture and

dynamics, and only marginally superior in string sweetness, soundstage depth, and low-level delicacy. (The Festivo is the only LP version I have of any of these issues.)

Another great performance—one perhaps not so renowned as Szell's Sibelius—is Pierre Monteux's 1962 stereo Concertgebouw "Eroica," which includes a rehearsal of that symphony's *Marcia funebre* (conducted in French, of course—420 853-2, 61:30). This is a vigorous traversal of the symphony, the finale never deviating too far from a sense of dance. Sound is very quiet in background, sweet if uncomplicated in strings, again flat in perspective and dull in ambience.

A most interesting, if nowadays anachronistic, issue is Eduard van Beinum/Concertgebouw playing Bach's second Orchestral Suite and the complete Handel *Water Music* (420 857-2, 1955 & 1958, stereo though erroneously labeled mono, 68:44). Though the denoised sound is clinical and etched rather than painted, the music is exemplary big-band Baroque: lithe if large Bach, with appropriately Landowskized harpsichord continuo; and a *Water Music* which, if not so soulful and celebratory as Thomas Beecham's Megathons from about the same period, is certainly graceful along its leisurely pace. This CD also provides an aesthetic evaluation of the NoNoise system: it is more effective at reconstructing Bach's Music of the Head than Handel's public music of the senses.

Less recommendable is the stereo release of Pablo Casals playing two Beethoven trios: the "Ghost" (with violinist Sandor Vegh and pianist Karl Engel) and "Archduke" (with Vegh and pianist Mieczyslaw Horszowski). (420 855-2, 1961 & 1958, 74:28.) While Casals's "Ghost" is pointed and energetic, the "Archduke" drifts and drags, suffering also from Vegh's sometimes approximate approach to intonation. As with other issues, cello fares best, ambience and piano get whitened.

The real prize of the Philips lot is the disc of Emanuel Feuermann, one of the greatest cellists of the recorded-music era, playing Dvorak's Cello Concerto (1940), "Silent Woods," and G-minor Rondo (1941), along with Ernest Bloch's "Schelomo" (1942), all accompanied by Leon Barzin and New York's National Orchestral Association (420 776-2, 68:01). Not only is this CD the best-recovered and tonally most rich, it also contains powerful performances, especially "Schelomo," as near a definitive performance as there is. Feuermann's viscous cello

¹ After a careful listen to this CD, I am afraid that I can't be as enthusiastic as KC over its sonics. I assume it is due to the NoNoise process, but the sound sounds as if it has been fed through a downward expander of some kind, resulting in audible noise pumping and a smearing of the transient leading edges. —JA



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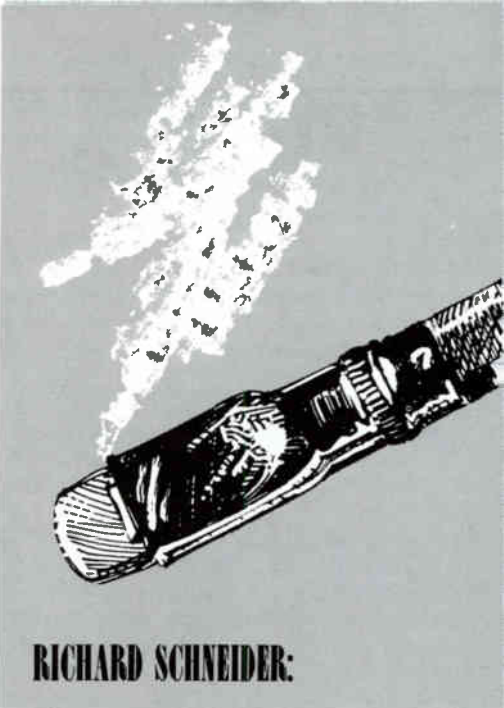
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tone reveals (to appropriate a phrase from Joyce) the redolence of milk and honey wafting from Bloch's score. (Incidentally, Philips is licensing the original Feuermann recordings from Alan Silver's In Sync Labs. The fascinating story of their rediscovery is told in an interview with Silver in the July 1988 *Audio*.)

The technical and aesthetic benefits of NoNoise are certainly mixed. Digital signal-processing techniques were originally developed to improve intelligibility of specific portions of signals, usually periodic, steady-state signals of extremely short duration. The success of applying such techniques to musical program will hinge on how closely a steady-state signal can approximate a microscopic slice of music. In addition, use of smoothing and interpolation techniques typically requires dense digital sampling, typically at higher than twice the Nyquist frequency, because some data points are sacrificed as a result of the technique and because peak distortions can be mixed with uncorrupted signal as a result of the processing. Given a 44.1kHz sampling frequency, this density cannot be realized at high audio frequencies. So it's intuitively no surprise that high frequencies, depth, and ambience information seem to be most compromised.

But the sonic problems I've observed might have been introduced in the A/D conversion process before Sonic Solutions ever got its master from Philips—the symptoms could be considered typical of unprocessed CDs. In fact, given NoNoise's capability of selectively manipulating myriad small frequency bands, it's conceivable that the software could be enhanced to correct the phase shifts and other damage done in PCM recording—not unlike what Spectral's new CD player tries to do in real time.

And one must never forget that, fine matters of fidelity aside, there are positive marketing benefits to NoNoise. Many of these reissues would be economically insupportable were it not for the promise of noise elimination, a promise largely kept. The music world is certainly richer for their release. Mary Sauer describes the situation best: she's heard the unfair parallels drawn between NoNoise treatment and Ted Turner's colorization of classic films, and the nostalgic if perhaps accurate claims that "my old 78s sound better"; but what matters most is her "delight at hearing Ravel conduct *Bolero* so slow, and my appreciation at bringing



back old material in a form consumers will accept."

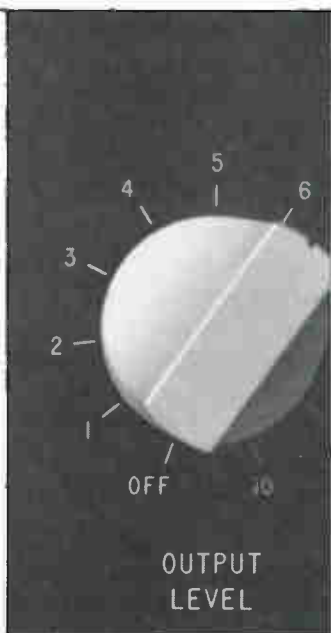
"Perfect sound forever" wasn't good enough. Philips has collaborated with Sonic Solutions of San Francisco to produce CDs from its treasured archives using a complex computer program which is intended to do away with every vestige of non-musical sound, enabling a recording from any source, from any vintage, back to the very rhyme the mythical Nipper heard his master's voice recite, to sound with every nuance captured by the technology of the day, but with a background as silent as a digital recording. A Utopian concept!

Philips' initial release of 25 *Legendary Classics* titles was launched with a lavish press conference at PolyGram's New York office in late May. The conference room at PolyGram is equipped with an excellent mid-fi media system. To paraphrase one of Richard Strauss's great self-deprecations, it's a first-class second-rate sound system, one which is capable of displaying every known species of home audio or video.

The conference was held to demonstrate the NoNoise product to the music and audio press and to record retailers. Refreshments were served. The smoked salmon was a bit flat, but the Brie was delicious.



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NoNoise Releases on Philips on CDs

Bach/Handel

Orchestral Suite No.2/Water Music
van Beinum, Concertgebouw
Philips 420 857-2

Beethoven

Symphony 3, Rehearsal excerpts
Monteux, Concertgebouw
Philips 420 853-2

"Archduke" & "Geister" Piano
Trios

Casals, Engel, Horszowski, Vegh
Philips 420 855-2

Beethoven/Haydn/Strauss Lieder

Wunderlich
Philips 420 852-2

Beethoven/Sibelius

Symphony 5/Symphony 2
Szell, Concertgebouw
Philips 420 771-2

Dvorak/Bloch

Cello Concerto, Silent Woods/
Schelomo

Feuermann, Barzin, National
Orchestral Association
Philips 420 776-2

Mozart

Requiem

Stich-Randall, Malaniuk, Kmentt,
Bohme, Bohm, Vienna Symphony
Philips 420 772-2

Mozart/Chausson

Violin Concerto K.216/Poeme
Thibaud, Paray, Bigot, Lamoureux
Orchestra
Philips 420 859-2

Mussorgsky

Pictures at an Exhibition
Richter
Philips 420 774-2

Ravel/Debussy/Prokofiev/Ysaye

Sonata in G/Sonata in g/5 Melodies/
Sonata in d
Oistrakh, Bauer

Ravel/Prokofiev

Bolero, Chanson madescasses/Romeo
& Juliet Suite No.2
Ravel, Lamoureux Orchestra/Prokofiev,
Moscow Philharmonic
Philips 420 778-2

Schubert

Die Schone Mullerin
Souzay, Baldwin
Philips 420 85-2

Schumann

Piano Concerto, Kinderszenen,
Waldszenen, A-B-E-G-G Variations
Haskil, van Otterloo, Hague
Philharmonic
Philips 420 851-2

Stravinsky

L'Histoire du Soldat
Cocteau, Ustinov, Fertey, Tonietti,
Markevitch
Philips 420 773-2

Tchaikovsky

Symphony 5, Capriccio Italien
van Kempen, Concertgebouw
Philips 420 858-2

Once the bar and the buffet table had been sufficiently ravaged, there began an earnest demonstration of before-and-after examples, given repeatedly, and with long and complicated technical details, which were illustrated with a slide show. (Just like high school, except that Brie wasn't allowed in classrooms.) To tell you the truth, the natives did get restless that night, but they seemed impressed with the emperor's NoNoise.

To illustrate NoNoise, and possibly to give their better-heeled guests something to listen to while driving home in their CD-player-equipped autos, each of us was given a copy of a CD containing before-and-after examples from the initial release. This sampler was not intended for public consumption; all that the public—and apparently most critics—will hear will be full-length afters.

I will admit to being impressed by the system's ability to eradicate impulse noise by synthesizing musical replacements based on

preceding and subsequent examples from the recording. In the conference room, I had difficulty making other judgments, except for an excerpt from Chausson's *Poeme*, recorded by Jacques Thibaud in 1950. The source was a mint-condition 78 record. The before was startlingly brilliant, the after lifeless and dull. As a glass of J&B with tonic and a bit of smoked salmon and Brie on a cracker are not a meal, I resolved to stop off and get some cold sesame noodles on my way home to do some serious listening.

The sampler contains examples from just over half the releases and runs nearly the gamut of phonological history. There are no acoustical recordings, but the electrical go as far back as 1928 (*Bolero* conducted by Ravel), and go well into the stereo, though pre-Dolby era, to 1966 (recordings of Beethoven 5 by Szell and the Concertgebouw, and a live recital given in Paris by David Oistrakh and Frida Bauer of works by Ravel, Debussy, Prokofiev, and Ysaye).

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I shouldn't have been too surprised, but at home on my system, with all its known commodities, there wasn't a single example on the CD in which the NoNoise treatment represented an improvement over the original. In every case, the treatment took more liveliness away than it could possibly compensate for with a quieter background.

In the stereo orchestral material by Szell and Monteux with the Concertgebouw, one could kiss goodbye the spacious character of the hall and the biting attack of the strings, although on the full-length release it may sound impressive to those who don't know what they're missing. Sviatoslav Richter's 1959 Sofia recital suffers more because of unevenness in the source tape. Steady-state background noise can be rather unsteady in some sources. How about Igor Markevitch's 1962 recording of Stravinsky's *L'Histoire du Soldat*, with Ramuz's original French text, Jean Cocteau narrating, and Peter Ustinov as the Devil, with an instrumental ensemble which boasts Maurice Andre on trumpet? Actually, this one is the least damaged of all, but Cocteau sounds more bitingly nasal untreated than treated, and on the full-length, I am sometimes unable to distinguish Ustinov's voice from that of Jean-Marie Ferrey, who plays the Soldier. That should not be!

It's prize time. For Most Heartbreaking it's a tie between the Oistrakh-Bauer Paris Recital and the Casals Beethoven "Ghost" and "Archduke" Trios, recorded live in Prades and Bonn respectively. Oistrakh loses all vestige of his individual character in the NoNoise treatment, becoming a mere generic violinist. The untreated Casals had a startling holographic quality (the artists are in the room) which NoNoise imploded like a vacuum.

For Most Gratuitous I nominate Emmanuel Feuermann's masterful 1940 live performance of Dvorak's Cello Concerto from an acetate source. This performance has been available on an In Sync cassette (licensed from Philips) for several years. If you have In Sync cassettes in your house, you don't have to hide them when your friends come over. The In Sync edition was already digitally remastered, and equalized for noise reduction. If Feuermann interests you, get the In Sync cassette. The acetate source is filled with uneven noise which In Sync made a reasonably successful effort to suppress, but the NoNoise attempt is a total failure, making a difficult recording impossible to enjoy.

Most Ludicrous: this grandest of prizes goes to Ravel's 1928 recording of *Bolero* with the Lamoureux Orchestra, and Prokofiev's 1938 recording with the Moscow Philharmonic of Suite No.2 from *Romeo and Juliet*. Both recordings come from highly uneven sources like the Feutmann. Quiet passages and rests have nearly silent backgrounds, but noise rises with the dynamics. The Prokofiev has the same type of sound as the original soundtracks of *Alexander Nevsky* and *Ivan the Terrible*—primitive and way below par for its time. In the interests of hearing Prokofiev's own concept of this music, one must bite the bullet, but surely one should not be asked to bite into a turd. Ravel's *Bolero* recording represents the very nadir: we should complain to Ralph Nader. And to all the injurious distractions and distortions of the Feutmann and Prokofiev treatments, Philips has added the final insult: the pitch is one half-step too high.

Philips NoNoise Legendary Classics make me feel like Peter Finch's character in *Network*. I'm mad as hell, and I'm not going to take it anymore. But what the hell can any of us do about it? Particular concern relates to Philips' ownership of the master tapes of the great old Mercury recordings. Remember what they've already perpetrated with Mercury Golden Imports? What's next?

Make no mistake about it. If the controversy over CD vs Vinyl was WWII, NoNoise vs Leave the Goddam Things Alone, for Chrissake, is WWII. CD by the likes of Chesky (any title), Danacord (the Melchior Anthology), Smolian Archives (premium offerings from broadcast archives for orchestra fund drives), Music & Arts, and the Arturo Toscanini Society have clearly demonstrated the virtues of CD applied to recordings of age and treasure. The background noise of old recordings is part of their special character. Light hands and truly golden ears at the equalizer can draw forth nuances and spatial characteristics which the original engineers could have scarcely imagined, and background noise assumes a reasonable perspective. Listeners who can't deal with a bit of hiss or scratch don't deserve to hear Casals. Such listeners should purchase only those CDs which bear the SPARS DDD code. Those of us who admire vintage recordings must take steps to ensure that other record companies do not follow the Philips example. Let's win this one for the Nipper!

S

MARTIN-LOGAN SEQUEL LOUDSPEAKER

Lewis Lipnick

Hybrid electrostatic/dynamic loudspeaker system. ESL transducer: 12" W by 48" H. Woofer: 10", high-excursion, super-light, high-rigidity cone, double-stacked magnet assembly with electrically tapered magnetic contour, and servoless voice-coil. Crossover: 125Hz center, 6dB/octave, phase-coherent slopes, first octave; 12dB/octave thereafter. Frequency response: 28Hz-24kHz \pm 2dB. Dispersion: 30° horizontal, 4° vertical line source. Sensitivity: 88dB/W/m. Power handling: 200Wpc. Recommended amplifier power, 80-160Wpc. Weight: 110 lbs each. Dimensions: 14" W by 13" D by 71.5" H. Price per pair: \$2250 (light or dark oak), \$2300 (walnut), \$2850 (rosewood). Approximate number of dealers: 50. Manufacturer: Martin-Logan, Ltd., PO Box 741, 2001 Delaware, Lawrence, KS 66044. Tel: (913) 749-0133.

Over the past four years, I have owned two speaker systems from Martin-Logan: the CLS and the Monolith. Except for the B&W 801 Series 2 Matrix Monitor, which remains the king of the mountain in my system, the Monolith occupies a special place in my heart. The Monolith is the only loudspeaker I have had in my home apart from the 801 that has the distinction of being a "wonderfully non-audio-ophile product"; it is a musical reference transducer. In some ways, the Monolith even surpasses the 801 Matrix: there is unquestionably more transparency throughout the midrange. However, in terms of tonal balance, top-to-bottom coherency, and overall musical reality, it definitely takes a back seat to the 801. To date, the only electrostatic/dynamic loudspeaker system I have heard that seamlessly mates the two kinds of drivers *and* delivers the realistic impact produced by a full symphony orchestra, chorus, and organ is the Martin-Logan Statement. But given the somewhat high price (around \$39,000) and limited availability, it is probably not going to be an option for the majority of *Stereophile* readers.

On to the CLS. I found many things to admire in this speaker during its 18-month tenure in my home. But it just didn't have enough "meat on the bone" for me. All musical instruments move air when played; some with more mass and weight (lower woodwinds, brass, percussion, pipe organ), and some with less (strings, upper woodwinds, etc.). Although the CLS is capable of tremendous soundstage depth and midrange clarity, it falls flat on its face when confronted with real-life dynamic source material. Of course, the CLS is not the only full-

range ELS to suffer from this type of sonic anemia; all other similarly designed products, regardless of size (the big Sound Labs, for example) have left me just as unimpressed.

Enter the Sequel. One could probably describe this speaker as the Monolith's little brother, since it also incorporates a curved ESL transducer mated to a dynamic woofer. And, as with everything else in life, the Sequel offers a menu of tradeoffs. These tradeoffs, however, are far less musically invasive than those encountered with the CLS, and represent limitations that I could more easily live with. When one considers that the Sequel sells for \$250/pair less than the CLS, it stands out as a relative bargain.

When my review pair of Sequels arrived, I was immediately impressed with the high quality of fit and finish, but you'll probably either love or hate this speaker's looks. I think it's an elegant design, and while I do not find it very intrusive, my wife Lynn-Jane finds it visually unacceptable,¹ its tall, narrow aspect making it stand out more than some other bipolar designs, such as the CLS or Apogee Caliper. But it's how they sound that counts, isn't it?

Like the Monolith, the Sequel has a curved electrostatic element mounted on top of a vented woofer enclosure. There is a curved, serrated, glossy black metal grille extending from top to bottom, framed by two vertical parallel wood trim strips. My review pair came with the standard light oak finish. I have the feeling that, had they been trimmed in darker wood, the domestic intrusion factor would

¹ It's important to note, however, that I haven't yet had any speaker that Lynn-Jane finds attractive; according to her, some are just less ugly than others.

not have been so high. Input signal and AC connections are located at the rear, on top of the woofer enclosure.

To find out how this speaker would react to different amplifiers and cables, I varied the combinations as much as possible. Unfortunately, I had only two power amplifiers at my disposal with which to work (Mark Levinson No.23 and Adcom 555). Dan D'Agostino at Krell had promised me a sample of his new KSA-200, but it didn't arrive in time for this review. Straight Wire Music Conductor, Krell Path, and Live-Wire Clear speaker cables were all used during the review process. Set-up of the Sequels was quick and easy, since they could be moved (with some difficulty) by one person.

After initial break in (about 20 hours of hard playing), I felt that they were ready to be seriously auditioned. The first thing that struck me was how much more immune to room placement the Sequels were than either the CLSes or Monoliths. They did, indeed, sound better when placed a minimum of 3' out from rear surfaces, but closer placement (16") did not seriously degrade tonal balance or soundstage depth. I also discovered that they were more sensitive to toe-in than the Monoliths, but less so than the CLSes. No toe-in tended to produce midrange aberrations and lack of presence, while severe inward angling shrank soundstage width. I was also pleasantly surprised by the Sequels' ability to reproduce natural soundstage depth, as well as the quality of low bass. Deep bass transients and harmonic textures were remarkably well defined, but, curiously, at the expense of the sonic weight and impact that usually accompanies speakers with realistic bass extension (more on this later).

Sonic & musical impressions

Just as with other good speakers, final placement in my listening room took about two hours. They worked in several locations: close in and severely angled (headphone effect); toward the rear wall, widely spaced (wide soundstage, but not much depth); toward the rear wall, 5' apart, without any inward angle (great depth and focus, but truncated lateral soundstaging); and about 4' out from rear surfaces, about 5 1/2' apart, angled in very slightly (by far the best sound in my room). This speaker suffers less from the venetian-blind effect common to all planar bipolar speakers. It is necessary to sit within the listening win-



Martin-Logan Sequel loudspeaker

dow in order to receive all ambient information in recordings. But off-axis seating does not collapse the stereo image, or totally negate the far-field speaker, as is often the case with many other similar products. If I had to hang adjectives on the overall tonal balance of the Sequels, I would probably use such terms as "warm" and "clear but distant." Although different elec-

tronics and cable combinations had significant effects on sonic results, the Sequels were clearly less sensitive to these changes than the twice-as-expensive B&W 801 Matrix Monitors. With 801s, the differences between Straight Wire Music Conductor and LiveWire Clear are unmistakable, the latter being much more open, less brittle, and more musically liquid. With the Sequels, some of these differences were still there, but to a lesser degree. The same occurred with the Levinson No.23 and Adcom 555. There is no question in my mind which is the better amplifier, but with the Sequels, the lesser product didn't seem to bother me as much with the nasality and congestion I had experienced with the 801s. But perhaps this is the way it should be; after all, a \$2250 speaker will probably not be used in conjunction with \$10,000 worth of preamp and amp. Nor should it be. Furthermore, if I were forced to make a choice, I would much rather have a speaker that sinned by omission than commission. There are certainly plenty of the latter available (including some much more expensive products); the engineers at Martin-Logan have wisely chosen to place the Sequel's sonic trade-offs in areas that are unlikely to intrude upon overall musicality in a \$4000-\$5000 audio system.

Don't get me wrong—the Sequel is no loser. It is one hell of a good-sounding speaker, and unquestionably a bargain at the price. I haven't yet heard any other speaker that offers as much musical, sonic, and visual value for the dollar. But it isn't going to compete with the Monolith or the 801 Matrix. It also does not have as “open” a sound as the CLS. Given these qualifications, some discussion of this speaker's musical capabilities might be of value. When I mentioned earlier that the Sequel was “clear but distant,” I attempted to describe something that defies description. It could be attributed to a slightly recessed midrange that places everything well behind the speaker (unlike the Monolith or CLS) or to the limited size of the electrostatic panel. I could not say. But these speakers do give a somewhat detached, if not actually distant, perspective to all program material. There is soundstage depth aplenty, and excellent recapture of hall ambience, but no sense of immediacy, even with aggressively recorded pop material. If you like to be “set apart” from the performance, and find a somewhat laid-back perspective to your liking, you'll probably go crazy over the Sequel. But if you're like me,

and want a less detached view of the musical proceedings, with more of a “hands-on” perspective, then the Sequel might leave you feeling a bit viscerally deprived.

Part of this laid-back quality could also probably be attributed to a noticeably thin midbass (but not nearly as much so as with the CLS). Massed cellos, basses, lower brass and woodwinds, as well as organ, were definitely emasculated by the Sequel. Several recordings with which I am familiar lose considerable weight and impact, even though the overall musical product is still enjoyable. The new Chandos recording of Richard Strauss's *Ein Alpensinfonie* (Neeme Jarvi, Scottish National Orchestra, Chandos CD 8557) is a good case in point. It's still a great performance through the Sequels, and one with which I probably would have been satisfied, had I not first heard it with the 801 Matrix Monitors. But there was just enough left out to make me feel as if my ears are slightly clogged, or some color and character had been removed from the performance. The SNO has what is probably the loudest, biggest, gutsiest-sounding bass trombonist in the history of orchestral performance, and he doesn't let you down in this recording. With the 801s, this one-man brass bombshell moves the walls of my listening room. With the Sequels, he sounded like a rather loud, generic bass trombonist. Maybe not a major sonic omission, but significant enough to make the difference between great and just OK for me. This is not a case of leaving out definitive musical material; it's just the difference between hearing a performance from afar and being personally involved with the proceedings.

In spite of this limitation, low bass is remarkably deep for a speaker incorporating a single 10" woofer. This is just one of many things that makes the Sequel an interesting study in contradictions. Organ pedal, bass drum, bass tuba, contrabassoon, *et al*, were well defined in pitch and attack, but lacked the visceral weight present in the contra octave of music. What makes the Sequel such an enigma in this respect is the magnificent way it can clearly delineate all of the instrumental lines of full orchestral material, without making everything sound clinical and threadbare, as is the case with many other electrostatic designs.

This leads to the areas of harmonic integrity and accuracy, and to the Sequel's greatest strength. Woodwinds, human voice, and piano

are very difficult for any speaker to reproduce. Even such products as the Infinity IRS Beta don't come close, in my opinion. In fact, the only other speakers I have heard that do this right are the B&W 801 Matrix, Martin-Logan Monolith and Statement, and Apogee Diva. At first, musical material in this critical lower to mid-midrange may sound hollow and "unfilled" with the Sequel. But after some serious listening, it became apparent that this speaker is really a gem in disguise. I could detect very fine harmonic shadings and nuances that are totally lost on many of the so-called sacred cows of Speakerland. And one more thing: Attacks and releases of massed voices, winds (both wood and brass), and organ were reproduced with astonishing clarity. So while the Sequel may not be able to kick you in the butt with visceral impact, it can give you insights into the musical performance rarely encountered with *any* speakers, particularly at this price point.

While the Sequel is capable of very deep, natural soundstaging, vertical and lateral dimensions are somewhat limited. When I placed the two speakers as far apart as the Monoliths and CLSes had been, I got a wonderfully wide stage, but at the expense of truncated depth. And when I placed them close enough together to regain natural depth, the lateral dimensions suffered. Even though vertical dimensionality seemed sufficient, I had the feeling that the Sequels dropped the ceiling over the stage by several feet, making all recording venues seem less spacious than with the Monolith or 801 Matrix.

But even with these shortcomings, the Sequel did something for me that no other bipolar radiator has ever achieved: it reproduced the placement and size of voices and instruments with the same accuracy as the best dynamic designs. I've always had a problem with all dipoles in this area. Point-source dynamic speakers, while usually not having the transparency of electrostatic drivers, do a better job of realistic soundstaging; or did, until the Sequel came along. While my 801 Matrix Monitors still produced a more believable three-dimensional image, the Sequels were not far behind. Rather than making instruments and voices sound like layered cardboard cutouts, as with most other electrostatics I've heard, the Sequels really fleshed out the performers, presenting a more realistic and less plastic rendition of the music. Even the Monolith doesn't do this as well. I won't attempt to explain this

phenomenon, except to say that it makes the Sequel one of the most lovably listenable speakers I've heard in some time.

The only other major area of sonic and musical reproduction worth discussing is dynamic capability. The Sequel can play very loud, without any distress. But after a point, the sound becomes congested, thick, and tubby; never bright or glassy, as with some lesser electrostatic designs. If you are one of those listeners who wants to hear the orchestra from the vantage point of the podium, rather than the rear of the hall, the Sequel may not be your ticket to bliss. If, however, you are willing to accept a less "up front" perspective, and can live with somewhat limited peak dBs, then the Sequel should probably be on the top of your audition list. On the other side of the coin, this speaker does particularly well at low volumes; it doesn't dry up on the bottom end of the dynamic scale (apartment dwellers take note!). Those insomniacs who love to fire up their audio systems at 2am won't have to worry about waking up the rest of the family. The Sequel will give you everything, from top to bottom, at surprisingly low volume levels.

Conclusions

This review has been frustrating to write, principally because though the product in question does so many things well, it still misses the 100% mark. I probably would not be as critical with lesser, similarly priced competing products, since none that I have heard come anywhere close to the Sequel in performance. To take this point further, it would probably be safe to say that there is nothing that really offers as much musical insight and value for the money. For those audiophiles *not* looking for musical insight, the Sequel will probably be a serious disappointment. But for those of us more interested in finding something that makes credible music, in spite of some significant shortcomings, the Sequel is an option. No, it does not measure up to the Statement, Monolith, Diva, or 801 Matrix, and its limitations would cause me to think twice before making a purchase. However, I would much rather live with the Sequels' visceral limitations and somewhat detached perspective than the Infinity IRS Beta's bigger-than-life technicolor hi-fi displays. It all boils down to what you really want from an audio system. Fireworks you will not get with the Sequel. But music you will. **S**

SONY CDP-R1/DAS-R1 CD PLAYER

J. Gordon Holt



Sony CDP-R1/DAS-R1 CD player

Two-piece CD player and D/A processor. Controls: CDP-R1: AC Power, Drawer Open/Close, Play, Pause, Track Advance/Retreat. DAS-R1: AC Power, Source selector (CD, Aux 1, Aux 2). Infra-red remote control. Dimensions: Each unit 18.5" W by 5" H by 16" D. Weight: CDP-R1, 38 lbs; DAS-R1, 38 lbs. Price: \$8000. Approximate number of dealers: 20. Manufacturer: Sony Corp., 1 Sony Drive, Park Ridge, NJ 07656. Tel: (201) 930-7156.

Two of the most cherished terms in the lexicon of high end are "no holds barred" and "cost no object." These are usually applied, together, to the most expensive version of something currently on the market. But is either term really appropriate for an audio product? The answer is a flat, unequivocal No. No consumer product has ever conformed to the real meaning of those terms, and it is unlikely that one ever will.

Consider for a moment their literal meanings. "No holds barred" means that if anything could have been done to make the product better, it would have been. "Cost no object" means no expense has been spared in producing this paragon of perfection which is destined to remain unsurpassed until the manufacturer's next incremental improvement comes along. Both terms make for great hype, but reality dictates a rather more practical approach.

To begin with, many of the things which are known to improve the sound of an audio product are open-ended. Take voltage regulation, for example. Improving this improves the

sound, but improving it even more improves the sound even more. So where do you stop? Should a head-amp's power supply have 100 Farads of capacitor storage, a current capability of 30,000 amperes, and a signal-modulation ripple of 0.00000012%? Of course not; that's absurd. The product would be much too bulky and much too expensive for anyone to consider buying. But, taken literally, "no holds barred" and "cost no object" would mandate such design extremes. Idealism is all well and good, but one has to be *reasonable* about such things. You make things as nearly perfect as you can, up to the point where further improvement would not, in your opinion, justify the cost, and let it go at that.

The fact is that, protestations of perfection notwithstanding, even the priciest product designs must involve many design compromises. All manufacturers know this, even if they don't tell their advertising department about it. So, next time you read about a no-holds-barred, cost-no-object audio component, think of what such a product would entail

and be appropriately skeptical. Having said that, we can now consider Sony's new CD player, which, although not claimed to be no-holds-barred or the state of the art, clearly aspires to be both.

Apart from any questions of actual value, the R1 looks as if it is worth every penny of its considerable price. All sides except the ends are of heavy-gauge aluminum with gold anodizing, the end panels are of what appears to be high-gloss rosewood (they're actually Tamo Ash), and each unit weighs enough to give the impression that there's a lot of hardware in it.

The CDP-R1 Player

The player unit contains the laser-optical player mechanism, servo system, signal processing and error-correction circuitry, and a dedicated power supply. The simplified front panel shows only seven pushbuttons and a largish rectangular area for the disc drawer and fluorescent readout display. At the far left bottom corner is the AC switch, and to the right of the display are buttons for Door Open/Close, Play, Pause, and Stop. Above these are two smaller ones for Forward/Backward track change (Automatic Music Selector). All these controls, with the exception of AC power, are duplicated on the remote control unit, from which all other operations are controlled. And some of those other operations are unique to the R1.

Along with all the usual functions, including Shuffle Play (whose utility I still question), there's one called Custom File. This allows you to program-in data and playback instructions for each individual disc, then store them in a permanent memory for automatic recall each time the disc is played. You can store text, which is displayed on the DAS's LCD screen each time the disc is loaded; you can program the order in which tracks are played; and you can mark up to six of your own Index points on a disc for later call-up, just as though they had been originally encoded on the disc.

When you load a disc and close the drawer, the player scans the disc's "table of contents" (TOC), and a microprocessor notes the number of tracks and their precise playing times. If no Custom File programming is done, the TOC information is erased next time the drawer is opened, but if you store any Custom File data for that disc, both the data and the TOC information are stored in a nonvolatile memory—memory which is retained when the player is

turned off and even, for about a month, if AC power is lost. There's room for storing data for up to 226 discs, and each time another disc is loaded, the microprocessor compares the TOC data with what it has in its memory. If they match, it automatically brings up the program for that disc. The identification is virtually infallible; the chances of two discs having identical numbers of tracks of identical playing times is zilch!

This echoes Philips' "Favorite Track Selection," and is well thought out and pretty much bullet-proof. I'm not convinced, however, that it will be of much value for the average audiophile. Some of the Sony's options include filling the name of the artist or record album, the name of the person who gave you the disc, or numerical data showing such things as equalizer settings (God forbid!) and the optimum volume control setting for that particular recording. This is fanciful stuff, considering that the LCD only displays 10 characters, and you can't have more than one display per disc. (Try abbreviating "Beethoven: Symphony No. 6" down to a meaningful 10 characters, and if you have two versions of the work, just forget about identifying one as Herbert von Karajan and the other as Felix von Weingartner. All this stuff is on the disc box anyway, and if you don't know what's in the player when you have the box in your hand, it's time you took an evening off to reorganize your collection or yourself. If the disc was a gift, the place to note that is on the album insert.)

Most consumers will probably only use Custom File's programming feature, while music educators, broadcasters, and people in film post-production work will appreciate the Custom Indexing feature and its ability to shift an index point forward or back by 0.15-second intervals. But I find it hard to see how Custom File's other uses can justify their inclusion. When the time comes that it can display up to 10 lines of text on a video screen, Custom File will be a worthwhile addition to CD's already impressive lineup of convenience features.

Sony's design engineers seem to have a phobia about mechanical resonance. If there was any possibility of anything in the R1 resonating, they damped it. The player frame is shock-mounted and made of an antiresonant mineral-loaded resin, the disc door has an acoustical seal around it which excludes sound waves when it is closed (to prevent them from vibrat-

ing the disc), and the player's feet are supposed to serve a damping function, although I fail to see how "extremely hard" ceramic feet with non-flexible rubber "isolators" can provide any isolation except at frequencies so high that environmental disturbance would probably not be a factor anyway. Even some of the discrete parts, like the larger electrolytic capacitors, are isolated from their circuit boards by soft rubber bushings to prevent resonance. How much all of this meticulous attention to minutiae yields improved sound quality can only be guessed at. I could only judge the end result, which is very impressive.

The transport's tracking servo uses two predictive techniques to minimize the time and the amount of servo current needed to "recover" from a blemish-induced signal dropout. One of the subcodes recorded along with the signal on a CD is a sequential time code, which allows (among other things) the player to find any spot on the disc according to its time from the start of the track. This information can also be used to get the optical head "back on track" after a surface scratch or blob of dirt has momentarily interrupted its "view" of the signal track. When an obscuring blemish has passed, the system looks for the time code closest to but higher than the last one it saw, and repositions the head over that track. The correction is almost instantaneous, but the sudden draw of extra servo-supply current can cause a momentary depletion of the player's power supply. The more positional correction needed, the more current the servo must draw momentarily from the power supply, and this can cause a brief drop in power supply voltage, leading to time jitter in the signal coming from laser pickup. With conventional players, it can also affect the DAC performance.

To minimize such voltage dips, Sony uses servo position prediction, which calculates the most likely future position of the optical head on the basis of what the servo was doing just before the system lost its view of the signal path, and correction-time prediction based on the rotational rate of the disc, in order to get the head as close as possible to where it should be *before* final correction is needed. This reduces the time required and the amount of power-supply depletion when final correction is performed. A very clever idea, but . . . The CDP-R1 is one of the few CD decks that hardly needs this kind of thing.

It contains no analog circuitry and no D/A converters—hardly anything that would be affected by variations in power-supply voltage; all that stuff is in the DAS-R1. So the predictive correction would appear to be unnecessary. In fact, it does serve two purposes: It reduces the small thumps produced by counterforces in the tracking system when recovering from dropouts, and (in theory) it reduces distortion during the positional recovery period.

The DAS-R1 D/A Converter

The separate DAS-R1 is a multifunction digital/audio converter housing the sample-and-hold circuits, four time-staggered 16-bit DACs, 8x oversampling, 18-bit digital filters, the audio section, the master clock oscillator, and *its* own power supply. It has three digital inputs, individually selectable from a front-panel rotary switch, and the unit's sampling rate switches automatically (32, 44, or 48 kHz) to match the sampling rate of the source.

Though the transport has its own internal clock (synchronization) generator, this is disconnected when the two-way fiberoptic coupler pair is used to carry signal data from the CDP to the DAS and the clock signal from the DAS to the CDP. This use of one clock is necessary, according to Sony, because of the extreme demands of the 8x oversampling on the timing accuracy of the clock signal controlling the DAC switching. The DAS-R1 also has two standard coaxial serial data inputs, selectable from the front-panel Source switch, and will handle any source that delivers a compatible digital bitstream. (For example, it will work with DAT, digitized satellite audio, and any CD player that has a bitstream output. It won't work with the Sony PCM-F1, even though that has the requisite 44.1kHz sampling frequency, because the digital data available from its output are organized into a format compatible with the video frame rate.)

A major problem with 16-bit D/A converters is that the binary digit representing the bottom-most encodable signal-level change (the least-significant bit) often produces increments that are too large or too small, causing asymmetrical decoding of very-low-level signals. One solution to this, found in a lot of so-called 18-bit players, is to use a 16-bit DAC with a register-shifter, which moves all bits upward by two steps when signal level is low, and downward by two steps when signal level is high. The idea

is to keep the system operating as much as possible above the LSB level, where the greatest nonlinearity is likely to occur, but this approach can result in switching glitches each time such register shifting takes place. The DAS-R1's use of time-staggered 16-bit DACs and an 8x oversampling filter results in 18-bit resolution, requiring no register shifting. It also allows for more accurate conversion from numbers to voltages. Here's how.

The number of discrete volume levels available from a digital system is equal to 2 to the power equal to the number of bits. Thus, 16 bits gives 2 to the power 16, or 65,536 different levels, while 18 bits gives 262,144 different levels. At 18 bits, there are four possible signal levels for every 1 in the original bitstream. For example, instead of counting (from the LSB) 0, 1, 2, and 3, 18 bits can count 0, 0.25, 0.5, 0.75, 1.0, 1.25, and so on. It is customary for 18-bit designs to round off the fractions by halves, assigning 0 to all values of 0.25 and 0, and assigning 1 to all values of 0.5 and 1. Any resulting errors can cause a grainy hiss that Sony has dubbed re-quantization noise.

In the DAS-R1, each sampled quantization level is treated individually; no numerical rounding-off occurs. If a binary 0.25 is delivered 4 times, the system outputs 0, 0, 0, and 1. There may still be errors, but now they occur at twice the frequency rate they would otherwise, placing the resulting re-quantization noise at four times the original 44kHz sampling rate instead of twice that frequency. Most of this is then closed out by the sample-and-hold circuit (the aperture chopper).

Because 8x oversampling puts very stringent demands on aperture timing and sample-and-hold settling speed (the time required for a switched voltage to overshoot the mark and return to its new setting), the DAS-R1 employs four D/A converters in what Sony calls a staggered overlap configuration. The 353kHz samples for each channel are switched alternately between two of the converters, so that each gets twice as much processing time as it would otherwise. The outputs from both converters are then averaged, as are noise and (in theory) distortion, resulting in 3dB reductions in both. In addition, the paralleled outputs of the DACs draw twice as much current from the voltage rails as would a single DAC, providing an additional (theoretical) 6dB of noise reduction, which totals 9. Of course, all this extra S/N goes

out the window when you play a CD that has been dithered¹ (and you wouldn't want to listen to one that hasn't), so the reduced noise is academic anyway. (The reduced distortion isn't, though.)

The 353kHz sampling allows the digital fil-

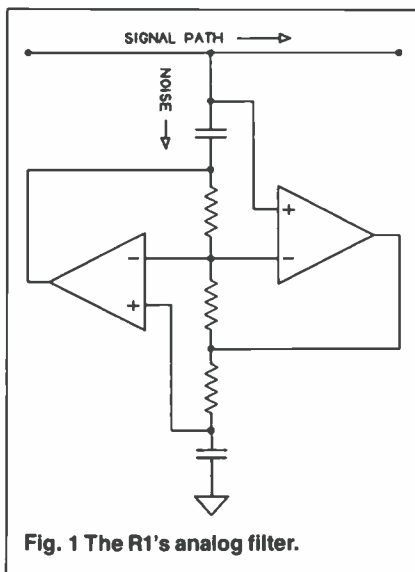


Fig. 1 The R1's analog filter.

ter to get rid of practically all out-of-band spurs but itself; but the concept of overkill demands more, so an analog filter has been added too. Located between the signal path and ground, this behaves as if it is a virtual short-circuit to ground for all frequencies above the system's 20kHz signal limit. Two operational amplifiers are arranged in what amounts to an active negative feedback circuit, so their output cancels their input—with the necessary crossover components to ensure that nulling takes place only above 20kHz. Below that frequency, the filter circuit is not "seen" by the signal at all.

The audio section uses discrete transistors—a first time for Sony—and is almost but not quite DC-coupled throughout. There is a capacitor only at the output, and this too is of a special design. Manufactured by Sony, it incor-

¹ Dithering involves the addition to the signal, prior to A/D conversion, of a small amount of white noise (hiss). This raises the CD system's noise floor by about 6dB, reducing it to 90dB, but it also extends the dynamic range to about 15dB below the system's normal capability, and drastically reduces quantization noise and distortion. Without dithering, digital reproduction sounds raw and grainy.

porates a unique hybrid construction: The dielectric is a "compound" of polypropylene and polycarbonate. The idea, presumably, is to get the best sonic qualities of both. The dielectric is coupled to the pigtail lead-outs by gold foil, and the entire unit is hermetically sealed in a resin material for low microphonics and isolation from atmospheric contaminants.

Also unusual in the R1 is the way anti-corrosion protection is applied to the circuit boards. Usually, this thin layer of nonconductive material is applied over the entire surface of the board, covering traces and land areas alike. In the land areas, the coating acts like a dielectric, and according to Sony, this adversely affects the sound. In the DAS-R1, the protective coating is applied only over the copper traces where it is needed, leaving land areas of the board clear.

Tests

The R1 fared very well on both the CBS CD-1 and Pierre Verany PV.788031/788032 test discs.

The CBS has several series of 1kHz tones of diminishing level, down to -90dB and below, with and without dither added. Nearly every player I have tried them on has produced severe harmonics and/or buzzing from the undithered -80 and -90 tracks, and most were incapable of producing a recognizable pitch from the -100dB dithered signal; it became undifferentiated hiss. With the R1, the undithered -80 track had perceptible even-harmonic content and the -90 track had noticeably more, but there was virtually no perceptible buzzing, indicating God-knows what. The dithered -100dB track was (as always) very hissy, but the 1kHz tone was still clearly audible. (Note that -100dB is 4dB below the theoretical dynamic-range floor of a 16-bit system; proof that dither does what it is claimed to do.) Measured departure from linearity at very low levels was the best John Atkinson (who did the testing) has seen: within the experimental error limits, down to -80.77dB (*ie*, perfect), and between 0.5dB and 1dB of compression at -90.31dB (*ie*, effectively perfect). The undithered waveform at this level had an almost perfect three-step shape (it consists of a progression of the code-words representing -1, 0, and +1), though some asymmetry was visible in that the positive-going step was smaller than the negative-going.

The Pierre Verany disc contains tests that no other CD test discs have: tracks to test for a

player's ability to cope with normal and abnormal variations in signal-track speed and spacing, ill-defined pit-to-land transitions, and the triple-threat challenge of two dropouts occurring in quick succession. Some of these gave the R1 a real workout, and the fact that it failed some of the most demanding ones (ones that no other player would probably track, either) allowed me to quantify some of its limitations. Details:

According to Verany's instructions (which are another hilarious example of what I call Finglish—foreign English, sort of like generic Japlish), it is unlikely that any player could do as well on these as the Sony did. But then Sony CD players have long had a reputation for unequalled tracking and error-correction capabilities. And it probably helped that Sony used this same test disc for evaluating the performance of their R1.

On the first P-V tests, 23 tracks cover the variations in pitch (spacing) and linear velocity of the data tracks which are permitted by the CD specifications "red book." The R1 sailed through all of them without a glitch. The next four tracks contain simulated dropouts, similar in test function to those of the Philips 5A test disc but differing in that, while the Philips disc has the blemishes applied to the disc surface, the P-V used instead interruptions of the laser cutting beam to produce essentially the same interruptions in the recorded pit patterns. The effect is not quite the same, though: while interruptions at the disc surface are subject to defocusing by the optical system, and are thus "seen" as having indefinite boundaries, the laser-simulated "blemishes" are sharply focused and have "hard" boundaries. Nonetheless, the P-V disc serves well enough as a standardized test for comparing one player with another.

The error-correction tracks on the Verany disc have "blemishes" ranging from 0.05 to 4.0mm across. The CD standard calls for the ability to fully correct a data loss of up to 0.2mm across, but the Cross-Interleaved Reed-Solomon Code used for CD error correction allows, theoretically, for full correction of dropouts of up to 2.4mm across. The R1 did not quite achieve the ideal; at 2mm, there were occasional bursts of 1rpm clicks, and at 2.4mm, the clicks occurred once for every disc revolution. At 2.5mm, there was intermittent muting—indicating the limit of the player's

interpolation capability. The results were the same with the closer-spaced tracks which followed: clicks were occasionally audible at 2mm, and muting set in at 2.4mm.

The successive-dropout tests consist of two signal interruptions of the same size, separated by an equivalent space. The test indicates the rapidity with which a player's error-correction system can "reset" itself after having performed a correction. The R1 had no trouble with this test, responding exactly as it had to the single-dropout tests.

At Last, the Sound

Equipment used for my tests included the Ortofon MC-3000 cartridge in the Versa Dynamics 2.0 arm and turntable, Vendetta Research MCP-1 line-level head amps, a Mod Squad Prism CD player, Revox A-77 15ips open-reel tape deck, the Threshold FET-10L line controller, and Sound Lab A-3 full-range electrostatic speakers. Audio interconnects were Monster 1000s, and speaker cables were AudioQuest Greens. The listening room is extensively treated with ASC Tube Traps, for standing-wave control. Program material was some of my own tapes, and CDs and analog discs from Sheffield, Opus 3, Telarc, and Reference Recordings.

I allowed the R1 48 hours of warmup before starting to listen. Tests were conducted using both the two-way fiberoptic connector and the coaxial electrical cable, but if there was any difference, I was unable to hear it.

First, it must be said that this is unquestionably the best-sounding CD player Sony has ever made. That, of course, is only fitting, since it is by far the most *costly* CD player Sony has ever made. And, yes, I would say it is also one of the best CD players I have heard from *any* manufacturer. But only *one* of the best? Come on now, this is a state-of-the-art, almost-no-holds-barred price. It should be head-and-shoulders above its cheaper competition. It isn't, altogether.

While no one is yet claiming that CD reproduction is as good, yet, as it has the potential to be, there are many—myself included—who do believe it is getting pretty damned close. What this means is that perfection, in terms of the medium's potential, may be close enough now that *no* new player is going to be able to sound dramatically better than the best we've had to date. The second thing to consider is

that, in high-end audio, increasingly small increments of sonic improvement come at increasingly large increments of price. Much of the apparently extreme price of the R1 is simply another example of a known and accepted phenomenon.

The R1 falls into that category of players whose sound is most easily described in terms of what it does not add to or subtract from the program material. Overall, it is one of the most suave-sounding CD players I have heard—as smooth and effortless as LA described the similarly priced Accuphase as sounding, yet with (apparently) significantly more detail and snap. Unlike previous Sony players, which many listeners felt to be too bright and forward-sounding, the R1 seems neither forward nor laid-back, and it has a much more relaxed quality to its sound than the earlier players had. Highs are gorgeously open and delicate, with a sweetness more tubelike than solid-state, yet more detailed than tubes.

Soundstaging and ambience reproduction are stunning! I do not usually consider either to be of overwhelming importance in sound reproduction, yet the excellence of both from the R1 was so startling that they were the first things that struck me when I started listening to it. This was the first time I have heard the room behind Amanda McBroom's second recording (*Growing Up in Hollywood Town*) sound exactly the way she described it during a conversation some years ago. The Mod Squad player, which JA loaned me for comparison purposes, did very nearly as well, but the impression of a bounded space with a unique acoustical flavor was slightly less definite.

Only at the low end—where previous Sony players were unsurpassed—did the R1 fall noticeably short of state-of-the-art performance. It heavies-up the bass. Not conspicuously, and certainly not annoyingly (most of us prefer too much bass to too little), but unquestionably. How can I be so sure about that? Because I have on hand, and routinely use for listening tests, four other signal sources which, over time, have proven to be reliably middle-of-the-road in LF balance: original open-reel tapes, original PCM tapes, and good analog discs played on the Versa Dynamics record player. All of these hew to a LF-balance center which is lighter than that of the R1.

I made a number of comparisons between CDs and their vinyl counterparts played on the

Versa Dynamics, and the results were consistent. The whole low end was heavier from the Sony than from the analog playbacks. Not boomy, or soggy, just more. This had not been the case with previous Sony players, and it was not the case with the Mod Squad unit with which I was comparing the RI. Other sources—open-reel tapes, original PCM tapes—confirmed that the analog discs, and the CDs from the Mod Squad, had pretty close to neutral balance, being neither too much nor too little.

Of course, there was no measured LF rise from the RI, and I didn't expect there to be. But in the absence thereof, I can only conclude that the power supply for the audio section is somehow inadequate, maybe in regulation. I cannot think of anything else that would cause the low-end heaviness.²

Extreme highs on the RI were quite simply superb—silky and open, yet immensely detailed and focused, like the minute details revealed by a very fine camera lens. Because of this and the effortlessly liquid midrange, the RI's sound wears very well. Perhaps LA could not enjoy listening to CDs for three hours straight through the RI, but I have for many days since I started using the RI.

Conclusions

Assuming I could afford the RI system, which

I can't, would I buy it? Though the RI is the best CD player I have heard at the time of writing, I don't think so. First, as I do not own a DAT machine and satellite audio downlinks are at present nonexistent in the US, the DAS-RI's ability to handle these would be irrelevant. Second, though the rate of improvement of CD playback technology has slowed down, it is still fast enough that it is almost certain the DAS-RI will be surpassed by something else within a year or so. And third, despite all the things it does unprecedentedly well, I feel that the RI is not as sonically neutral as it should be at the price.

At this price level, the RI should do *everything* better than the cheaper competition, not just most things. It is possible that the RI's bass balance is accurate and all my other signal sources are inaccurate. Possible, yes, but unlikely, in my opinion. However, it does disturb me to shoot down such an otherwise excellent CD player as the RI on the basis of that single questionable trait. I must also draw readers' attentions to our current recommendation (in Class A of "Recommended Components") of another similarly priced player, the Accuphase DP-80/DC-81, which was described (by JA) as having much the same LF balance as the RI. So I can only sum up this review on a note of cowardly ambiguity: If the Accuphase is Class-A-recommended, then the RI must certainly be likewise Class-A-recommended (and may, in fact, be a bit better in some areas). **S**

² Interestingly, I found the fiberoptic connection to give more LF than the coaxial data link.
—JA

CAMBRIDGE AUDIO CD2 CD PLAYER

George M. Graves II



Cambridge CD2 CD player

16x oversampling, 16-bit CD player with infrared remote control. Dynamic range: greater than 100dB. S/N Ratio: greater than 100dB. Channel separation: greater than 100dB. Maximum output level: 4V rms. Dimensions: 17" W by 3 1/3" H by 10 1/2" D. Price: \$1699. Approximate number of dealers: 25. Manufacturer: Cambridge Audio Systems, St. Ives Industrial Estate, Burrell Road, St. Ives, Cambridgeshire PE17 4LE, UK. Importer: Celestion Industries, Inc., 89 Doug Brown Way, Holliston, MA 01746. Tel: (508) 429-6706.

Until recently, this reviewer was generally advising people not to invest in top-of-the-line models, or in specialty players which sported big price tags to go along with their better-than-average sound, the reason being the fast rate of technological change. Things have slowed somewhat this year. The newest machines don't sound *that* much better than the 1987 models, and in fact some of last year's players are still considered among the best (the Accuphases, for instance). The rate of improvement is slowing. A fancy CD player bought today will probably hold its position for about a year to 18 months, as opposed to two years ago, when the average (as computed in these pages by our own JGH) was about 38 days.

Cambridge is a small British company which has been making high-quality amplifiers more or less for the home market for around 12 years. They made quite a worldwide splash a couple of years ago with their very expensive, two-chassis CD1 player. This machine brought raves from critics both at home and abroad and smiles to the faces of all who heard it (it sure impressed me at the time). Unfortunately, too much good publicity can be almost as damaging to a small company as bad publicity. In the case of Cambridge, it was simply that the good press increased demand for the CD1 beyond such a small company's ability to produce them. This led to an apparent downfall of quality control, followed quickly by a reputation for unreliability. Celestion, the speaker folks, are now distributing the line and say that all QA problems are in the past and that Cambridge products are once again up to their usual high standards (the review sample has given me no problems of any kind, and I've been using it daily for more than two months).

The CD2 is the latest Cambridge player to hit these shores. It boasts the dual 16-bit Philips D/A converters and 16x oversampling. This puts the sampling component at almost 706kHz, which is far, far outside of the audio bandwidth, making it unnecessary for Cambridge to use steep analog filters after the DACs; a simple, gentle-sloped 6dB/octave filter is sufficient to reject what ultrasonic spurious remain after digital filtering. A conventional DAC operating at the 44.1kHz sampling rate needs an output filter with better than a 40dB/octave slope to be effective. Many first-generation CD players were designed with so-called "brickwall" analog filters having as many as nine poles (stages

of filtering) to meet this requirement. The results of these designs, as anyone who heard the Sony CDP-101 can attest, were sonically disastrous. To obtain the resolution possible from 16x-oversampling, Cambridge's Stan Curtis uses four time-shared DACs per channel, each running at one quarter the 16x rate and handling a quarter of the data, and sequenced so that the summed output is equivalent to a complete 16x reconstruction.

But there is more to CD players than just sampling rates and filter designs, and in these other areas, the Cambridge is a mixed bag. I counted four separate power supplies, each isolated from one another and regulated to feed the optical, control, digital, and analog sections of this player. All components seem to be first-rate; the analog section literally bristles with polypropylene and polystyrene capacitors. The only area where my eyebrows rose was in the choice of active analog devices. The CD2 seems to use IC op-amps throughout. Now, as a semiconductor engineer, I can tell you that as good as today's best op-amps are, they are still inferior in sonic (as well as measurable) performance to discrete components. If this were not so, the likes of Nelson Pass of Threshold, and John Curl, to name two prominent solid-state audio designers, would use these components in their products. The fact that they do not is testimony enough to the inferiority of IC operational amplifiers for audio purposes. If no self-respecting audio designer would use op-amps for his phono stage, why would he use them in the analog stages of a device that is supposed to replace the phonograph in our audio systems? Not that the inclusion of ICs in the analog section of the Cambridge CD2 prejudices me. In point of fact, I purposely don't look at a component's innards until my listening is finished, and all of my notes made. But it certainly makes one wonder . . .

There is no on/off switch in the CD2 *per se*, just a button marked "standby." As far as I can tell, the standby mode merely shuts down the front-panel display, and won't allow the user to open the drawer while the display is dark. However, if you hit standby while a disc is playing, it will continue to play, and indeed all of the controls, as well as fast forward and reverse, still operate. You can even pause or stop the disc, then restart it with the play button, but you cannot remove the disc from the drawer or replace it with another. Curious operating

design! This clearly indicates that the circuitry in the CD2 is on all of the time, which is probably good because this player doesn't sound its best until it has warmed up.

Sound Quality

My "reference player" has been, for some time, the digital section of the Denon DAP5500 digital preamp coupled via the "digital-direct" jacks to whatever CD player happens to be at hand. The Denon has been unique because both its digital and analog sections are first-rate. It sports four D/A converters operating as two push-pull pairs, and the analog section is all FET, with no coupling capacitors and no ICs in the audio path. I have heard no stand-alone CD player which comes even close to this unit's overall sound quality. It has depth, natural soundstage, and "air," and can make even the most pedestrian CD player sound glorious (providing, of course, that said player isn't so pedestrian as to preclude a digital output jack). And even though there are marked differences in the sounds of different players through the Denon, there is an even more marked difference between cables used to connect the two.

Figuring that the optically coupled digital input on the DAP5500 is probably less colored than any coaxial connection, I borrowed a Denon DCD-1700 CD player which sports both an optical and a coaxial digital output connector. Connecting the optical output to digital input #1 on the Denon preamp, and the coax output to input #2, I was able to switch back and forth quickly. Since they both fed the same circuitry, and were digital in nature, there was no problem with level matching. I then tried different cables, comparing each to the optical connection, until I found one (a Hitachi LC-OFC 75 ohm video cable) which sounded closest to the optical cable. This cable is the one that I have since used with all CD players not equipped with the EIAJ (Electronic Industries Association of Japan) standard optical interface. As the British Cambridge CD2 is not so equipped, all tests were made with this Hitachi cable.

To compare the analog section of the Cambridge CD2 with that of my reference analog section in the Denon DAP5500, I connected the player's coaxial digital output to digital

input #2 on the Denon. I then connected the analog outputs of the CD2 to the high-level analog input #2 on the Denon preamp. In this manner, both the D/A section of the Denon and the analog output of the CD2 would take the same path to the power amplifier; and, since the digital portion of the playback was the same for both (the CD2 transport), I could be reasonably sure that any differences heard would be between the D/A sections, analog filters, and amplifying stages associated with each.

The first thing that I noticed was that the quality of bass response from both units was remarkably similar. This is the first time that this has been so. Usually, presumably due to the Denon preamp's huge power supply, the bass response elicited from it was of much better quality than could be had from the CD player standing alone. With the Cambridge CD2, this was not the case. Both analog sections went remarkably deep with good transient response and, in fact, reproduced the "Fireworks" cut on the *Digital Test* CD (Disques Pierre Verany PV.788031/PV.788032) so similarly, that in blind tests, neither I nor any member of my informal listening panel could tell them apart.

The midrange of the Cambridge player was very neutral. If there is one place in the musical scale where CD players generally excel, it's the midrange. The trumpets of Andre Jolivet's *Second Trumpet Concerto* on the CD test disc were reproduced with good bite. When compared with the Denon, the CD2 became less thick and congested when the trumpet chorus played loudest. The delineation of voices was also slightly superior on the Cambridge player. The human voice came through beautifully on the Cambridge, with a hair less "chestiness" than I have noticed on some CD players. The DAP5500 is also very natural on voices, but they seem to have a bit more air around them than through the Cambridge.

The place where the Cambridge really shines, though, is in the retrieval of low-level information. On Reference Recordings' CD (RR-15CD) of Respighi's *Church Windows* (one of the best-sounding orchestral recordings of probably the worst performance of this work in history), the orchestra performs in a large high school gymnasium-cum-auditorium. After the thwack on the giant tam tam in the "St. Michael Archangel" tableau, the sound reverberates through a silent room and disappears into the room ambience. On my refer-

1 It apparently follows current UK audiophile practice in that turning off the displays cleans up the sound a little, presumably due to the absence of switching noise on the ground lines. —JA

ence converter, the ambience dies away almost at once, but on the CD2 it lingers almost to the point where the orchestra takes up playing again. I have never heard this before with any CD player. If CD manufacturers continue to find ways to improve the retrieval of low-level information, one of the major objections many have to the CD format may be finally overcome.

The highs are another story. To me, the top end of this player sounds a little strange—not bad, mind you, but strange. Strings are not steely as they can be with many CD players, but the top overtones seem to dry up. The Denon, by comparison, has a top-end “bloom” which I find quite natural. The overtone structure, most notable on strings, goes on and on, without ever getting hard, gritty, or harsh. The CD2 extends well at the top too (it also measures flat to 20kHz), but with a powder-dry transistorsy texture that I find annoying on long listening sessions. I hate to use the term “air” again, but that is, in the final analysis, what the last octave of the Cambridge CD2 lacks.

The soundstage on the CD2 is simply the best that I have yet encountered. It is wide, deep, and rectangular. Again, on *Church Windows*, each instrument is located exactly where it should be in both axes of a correctly arrayed symphony orchestra recording. The presence of the ensemble in the room is almost palpable. By comparison, my reference, the Denon, is a tad foreshortened at the back edges, and while the strings extend all the way to the edge of my speakers, the percussion and low brass do not. The Denon also fails to locate instruments in space with the precision of the CD2. I often get the feeling, when listening to CDs or especially my own master tapes (which I have transferred to DAT) through the Denon DAP5500 D/A section, that the imaging is somewhat vague.²

Disc two of the Pierre Verany Test CD contains tracking tests. Because, despite what the experts say, I have heard evidence which indicates that corrected errors from digital sources can make the sound metallic and dirty if not actually discontinuous, I tested the CD2 for its ability to negotiate this laser obstacle course. The test is made up of 14 40s tracks which consist of a 1kHz tone. Each track has embedded in it successively larger blank spots. The CD

standard contains specifications to insure that any CD player should be able to track through any foreign detritus with a diameter of 0.20mm or less. And the CIRC correction codes used in all players should, in addition, allow the player to “correct” for losses of information over a dropout of 2.47mm duration (about 1.9 milliseconds). On the test disc, track 25 (the first of this series of tests) has a 0.05mm dropout imbedded in it, track 27, the 0.20mm spec limit, and track 38 (the last of the series) a dropout of 4.00mm (almost twice the theoretical limit). The CD2 sailed through tracks 25–34 (2.00mm) with flying colors. Track 35 showed serious error conditions via the front-panel error light (it flashed almost continuously), but I could hear no audible indication of this, and tracks 36 through 38 caused the Cambridge player to mute at the beginning of each track several times before settling down to play normally. This is superb performance, and means that the CD2 should play almost any disc without problem. (Unless, of course, you have small children. No one has yet designed a CD player which can cope with peanut butter and strawberry jam.) Comparing this performance with my Sony Discman, it started muting and skipping often above track 26, and my Sony CDP-620ES II failed after track 29. The Discman has never been a satisfactory tracker, but I considered the 620 to be excellent in this regard, and was somewhat surprised at my findings.

Conclusions

Conclusions? CD players, like fine record-playing equipment, will always be changing, trading one parameter off against another, in search of digital audio's “Holy Grail,” and each manufacturer has his own idea about what is important. Some manufacturers will stress soundstage, some bass response, others will concentrate on getting the top end right. Each will know that by concentrating on one or two areas of music reproduction, other areas will, of necessity, be compromised. The Cambridge CD2 is, by anyone's definition, a great CD player. It does many things well, and some things better than any other player that I have heard to date. It also has this powder-dry top that I, for one, find irritating to the point that I'm not willing to replace the D/A section in the Denon DAP5500—just yet.

S

² Which it most certainly is not on my analog masters.

PS AUDIO 200cx POWER AMPLIFIER

Thomas J. Norton



PS Audio 200cx power amplifier

Solid-state stereo power amplifier. Rated power: 200Wpc into 8 ohms, 400Wpc into 4 ohms, continuous power from 20Hz–20kHz. Dynamic headroom: 1dB. Minimum load impedance: 2 ohms. Distortion: 0.01% THD. Slew rate: greater than 150V/ms. Input impedance: 100k ohms. Damping factor: 200. S/N ratio: 90dB (no conditions given). Dimensions: 19" W by 6" H by 17 $\frac{3}{4}$ " D. Weight: 69.9 lbs. Price: \$1950. Approximate number of dealers: 110. Manufacturer: PS Audio, 4145 Santa Fe Rd., Bldg. #2, San Luis Obispo, CA 93401. Tel: (805) 543-6655.

Three years ago both JGH and AHC reviewed the original PS Audio 200c (Vol.8 No.8). To varying degrees, both were impressed by the amplifier, which subsequently found its way into *Stereophile's* "Recommended Components" list. It remained there until last year, when PS came out with a revised version, the 200cx. I had the opportunity to evaluate a sample of this new model immediately after its release, and was about to immortalize my impressions on floppy disk when PS announced yet another change. It was not as extensive as the "x" revision, but nevertheless I felt that a reevaluation would be appropriate prior to publication. The review was put on hold while the amplifier was returned for an update.

Perceptive readers will have noticed this product—in both its cx and cx' guises—sneaking in and out of my reference system in various reviews. The original cx was one of the amps used to assess the VMPS Tower II/R, the newer cx' found its way into my recent preamp reviews. (The "prime" designation is mine and will be dropped forthwith to avoid the threat of 10,000 audiophiles marching lockstep to their local high-end dealers looking for a model with a nonexistent suffix.) Completion of the

review was intentionally held up until my pair of B&W 801 Matrices could be put into service on a proper pair of stands. That long-delayed, seminal event having occurred, the 200cx evaluation could at last proceed.

The 200cx is similar in design to the original 200c. Since it's hardly fair to new readers to refer to a three-year-old review, a few words on the design are in order.

The 200cx is a direct-coupled amplifier, but unlike the earliest runs of the model 200c, the 200cx (and later versions of the c) incorporates a servo network to eliminate the risk of any DC offset at the amplifier's input being amplified, leading to instantaneous destruction of a user's loudspeakers. The DC-offset warning lights which graced the front panel of the first 200c have been eliminated; they're no longer necessary. For reasons which are unclear—perhaps nostalgia—an additional pair of capacitor-coupled AC inputs, designed into the original amp, remain. One potential use for these inputs (although I doubt PS's intended one) does come to mind. An owner desiring to use the 200cx as the high-frequency amplifier in a bi-amped configuration could have the internal capacitor in this input replaced (or bypassed,

which could cause the required increase in its value) with a value giving a passive rolloff at the desired crossover frequency. The normal DC inputs would still be available for full-range use when required.

The 200cx is a fully complementary design operating in class-AB, and runs quite warm, even at idle. While sharing these characteristics with the earlier 200c, the new amplifier incorporates a faster slew rate (more than doubled),¹ a reconfiguration of the internal current sources, and a slight reduction in loop feedback—from 12 to 9dB. For those unfamiliar with that term, loop feedback—sometimes referred to as global feedback—is feedback from the output of the amplifier back to the input. In contrast, local feedback is often used around each individual stage. Apart from the output stage, PS does not use the latter; the 200cx's total design feedback is 9dB. Increasing feedback² does all kinds of impressive things to the steady-state measurements of an amplifier, supposedly curing everything from the heartbreak of psoriasis to bad breath. Most high-end designers, on the other hand, believe that the less feedback you can get away with, the better—arguing that it has a number of adverse effects on non-steady-state signals, *ie*, music. It is a better path to musical reproduction to render the open-loop circuit more linear in the first place. Feedback may do nothing for your epidermis or expiration, but it *does* widen frequency response and reduce measured distortion. With earlier generations of designs and available parts, it wasn't possible to obtain an adequately wide enough frequency response and low enough distortion to satisfy even the measurement-phobic *without* the use of heavy feedback. But those days are long past. Huge amounts of negative feedback are simply no longer necessary, unless you're selling to a market hung up on 0.0001% distortion.

PS claims a significant sonic improvement of the 200cx over the c. Unfortunately, I did not have a sample of the original amplifier for a direct comparison. But owners of the 200c who feel left out should know, if they don't

already, that an electrical upgrade is available from PS for \$200 plus shipping. The price seems more than fair in light of upgrade costs elsewhere, but also leads me to believe that the actual parts changes in the new design are not extensive. A cosmetic upgrade will cost you an additional \$200—a reminder of the high costs of sheet metal and silk-screening. And while we're on the subject of sheet metal, the general appearance and finish of the 200cx is very good; it's short of excellent only because the manufacturer has apparently chosen to avoid knock-'em-dead looks which add substantially to the final cost. There's no sign here of hundreds of square feet of heavy, black-anodized, external heatsinking or a front panel that looks like it could withstand World War III. I'm no less impressed than the next person with the visible panache of Krells, Rowlands, Levinsons, etc., but that sort of construction and finish is expensive, and not in itself indicative of better sonics.

The PS may be unlikely to become a conversation piece on looks alone (an observation, not a criticism), but it gives nothing away to any of the higher-priced competition in sheer *masiveness* and solidity, with heavy copper bus bars, 1200VA transformer, and solid copper-cased output transistors. Picking up the 200cx by grasping diagonally opposite corners of the case resulted in no sign of flexure, just a sore back from its near 70 pound weight. But lifting that weight would be made easier if the amplifier had front-panel handles to go along with the rather small ones on the rear.

I only have one other criticism of the construction of the 200cx: my sample had a noticeable mechanical hum. It was no problem in my large listening room (barely audible 10' away at the listening position with the system silent), but just might be an irritant in a smaller room.

I auditioned the 200cx in a system consisting primarily of the Klyne SK-5a preamp, CAL Aria Improved and Tempest II CD players (mainly the Aria), VPI HW19/II turntable with Well-Tempered Arm and Audio Technica AT-OC9 cartridge, and B&W 801 Matrix and (alternately) Epos ES14 loudspeakers (mostly the former). Interconnects were Monster M-1000 and Interlink Reference 2, speaker cables Monster M-1 (not bi-wired).

For several weeks prior to the evaluation of the 200cx, my reference system had been set up with the Motif MS100 amplifier. My first

¹ This isn't strictly true. According to PS, the very first samples of the 200c (including, apparently, the one reviewed by AHC and JGH, going by the specs at the top of their reviews) had a slew rate of around 300V/ms. This was reduced to 70V/ms later in production—presumably for reliability improvement.

² I'm sure all readers are aware that feedback in an amplifier always refers to *negative* feedback. Positive feedback is fine if you want an oscillator.

reaction on insertion of the 200cx was of a noticeably leaner balance and a more prominent high end. But the Motif is somewhat laid-back in the brightness region. The more I listened, the more I came to appreciate the strengths of the PS. Despite my initial impressions, the HF response of the 200cx proved to be first-rate. It did tend to be unforgiving, and I never quite got over the feeling that there was a low-level spotlight at work somewhere in the low- to mid-treble that subtly enhanced detail. But on good recordings the emphasis was never overdone, never became unnaturally analytical. As always, the choice of associated equipment, particularly the loudspeaker, proved important. The earlier version of the 200cx had been too bright through the Synthesis LM300s, and my feeling is that I would find the same to be true with the latest cx combined with those same transducers (which have long since departed the premises). The Motif had been superb on the Synthesis LM300 (JGH apparently found a similar synergy with the Synthesis SRS), but was a little subdued through the 801F Matrices. The PS, however, was superb on the latter; properly paired with suitable loudspeakers, I found the high end of the 200cx to be the equal of that of any other amplifier I have yet used, and unsurpassed in terms of clean, lively HF detail.

The low-frequency performance of the 200cx was exceptional. It didn't initially impress me as special—somewhat cool and lacking in obvious warmth—but didn't take long to demonstrate its real capabilities. It may have sounded lean at first, but I soon came to appreciate the 200cx's clarity and lack of any exaggeration through the mid- and upper bass. And if your loudspeakers are up to it (the 801F Matrices certainly are, even *sans* the B&W EQ box which I haven't yet put to use), you'll find out where the beef's been. The 200cx is one of those amplifiers which sails along unassumingly until presented with a low-end challenge, at which point it proceeds to elevate the listener three feet off the floor and pin said listener against the opposite wall.

Regular readers are likely holding their breaths at this point, expecting reference to my favorite low-frequency tests, *KODO* and *Dafos*. Breathe easy, folks; the PS did superbly on both. But for the sake of variety, I discovered (rediscovered, actually) two LPs I hadn't played in some time, *Rhythm Devils* (Wilson Audio

W-8521) and *Summer Prayer* (RCA Japan, RVC-2154). The latter has a remarkably deep, taut, low end—some of the most exceptional percussive bass I've ever heard on a recording. The PS did it full justice. Nor did it slight the same recording's wide variety of HF details and stirring dynamics. *Rhythm Devils*, over the PS, had a deep, shuddering, palpable extreme bass. Tightness was not the point here—there's no way the profoundly subterranean activity that filled the listening room could be tight—but I was left with little doubt of the 200cx's ultimate low-end capabilities.

Focus. That word keeps popping to mind to describe the overall midrange quality of the PS. Focus which put instruments in their proper perspective within the overall soundstage—neither bloated nor miniaturized. Overall soundstaging was well defined; the instrumental positioning of the 39 different varieties of percussion on *Summer Prayer* was precise across the lateral plane between the loudspeakers, with no smearing of individual instruments or instrumental detail.

Only in the reproduction of natural instrumental warmth (where appropriate) did I find the PS to fall short of the best. That cool, lean characteristic I have alluded to previously was not a serious flaw, but the balance did tend to tilt that way. I only consider it worth mentioning because it may cause matching problems with another component having a sound which also leans (I couldn't resist) in the same direction. The Motif, in contrast, had, on the right program material, a natural glow and sweetness which the PS could not match. But much of this was very likely due to the difference in spectral balance between the two amplifiers: the slightly laid-back brightness region of the Motif brought its inherently superb midrange into greater prominence. The outstanding clarity and inner detailing of the 200cx was, however, more than adequate compensation. Listen to the natural sheen and clarity of Lucia Popp's voice on *Die schönsten deutschen Kinder- und Wiegenlieder* (Orfeo C 078-831 B, CD) to understand what I mean. Or, if your taste runs to the more down-home, try *Metamora* (Sugar Hill Records SH/PS-1131,³ LP). The exceptional reproduction of transients, combined with the natural balance of blend and separation of the individual voices (try "Little Potato") was thrill-

³ PO Box 4040, Duke Station, Durham, NC 27706.

ing. And if you can't figure out all the instruments used on *Musique Arabo-Andalouse* (Harmonia Mundi HM 389, LP), don't blame the PS. The 200cx gave a real sense of the exotic nature of the music, revealing all of its intricacies and subtle nuances. The HF response of both of these albums is definitely on the bright side, but the PS did nothing to gloss over this balance. Neither did it push it over the top.

It took me a while to fully appreciate the PS's reproduction of depth. It did seem, initially, to lack a fully developed sense of instrumental three-dimensionality—that sense that each instrument, of itself, is fully fleshed-out. I believe that to be a result of its slightly cool, detached nature. Soundstage depth, on the other hand, was well reproduced. It doesn't quite have the striking quality of the more pricey competition, but a close comparison showed the PS to be impressively close to, if not quite the equal of, the Motif—a solid-state amplifier with notably good front-to-back layering. I've mentioned the introduction to *Caverna Magica* (CBS MK-37827, CD) before. The PS presented a fully developed sense of left-to-right and front-to-back movement here as our hero and heroine mill about in the cave (no doubt searching for Andreas Vollenweider). One recording does not, however, a conclusion make, and on a wide variety of LPs and CDs the Motif subtly edged out the 200cx in its reproduction of the finer points of depth and am-

bience. But the differences were *not* striking in my reference system; the PS did not disappoint in the re-creation of a three-dimensional soundspace.

I've briefly touched upon the 200cx in comparison with the Aragon 4004. A few more words are in order to sum up my general feelings about the differences between these two amplifiers. Both are excellent performers. The Aragon is the warmer-sounding, and although both have superior LF extension, the slightly leaner-sounding PS comes across as marginally tighter and better defined. The Aragon is less airy and open at the high end, though by no means recessed or "sweet" in the tube sense. In my opinion the PS is the more neutral, yet the differences are such that I'm sure to get an argument from proponents of the less expensive 4004. The Aragon is rated to drive extremely low-impedance loads, however, and the PS is not, which might be an important factor for some users.

I haven't yet compared the PS to any of the so-called "super" amps—those bought on 30-year mortgages. I hope to; you'll be the first to hear the results. But I have not yet heard a better amplifier in my system, all factors considered. No amplifier is perfect; the 200cx is no exception. But I have no reservations at all in giving it a strong recommendation. A best buy at \$2000? Believe it. **S**

AFFORDABLE PREAMPLIFIERS

John Atkinson reviews three models from Rotel, Parasound, & NAD

Rotel RC-850: Solid-state preamplifier with four line-level inputs, one phono input switchable between MM and MC, two tape loops, one video loop, and bass and treble controls. Specifications: Frequency response (phono): 40Hz–100kHz ± 0.2 dB. Frequency response (line-level): 4Hz–100kHz ± 0 –3dB. Input impedance: 47k ohms in parallel with 100pF (MM phono), 180 ohms in parallel with 100pF (MC phono), 24k ohms (line). Output impedance: 1200 ohms (main). Maximum output level: 10.75V RMS into 1M ohm. Sensitivity (phono): 2.5mV RMS input for 1V output (MM), 260uV RMS input for 1V output (MC). Sensitivity (line): 150mV RMS input for 1V output. Maximum input levels at 1kHz: 180mV (MM phono), 20mV (MC phono), 5V (line). S/N ratio (A-weighted): 78dB (MM phono), 64dB (MC phono), 95dB (line). Dimensions: 17.5" W by 1 $\frac{15}{32}$ " D by 2 $\frac{1}{2}$ " H. Weight: 8.8 lbs. Price: \$249. Approximate number of dealers: 75. Manufacturer: The Rotel Co. Ltd, Tokyo, Japan. Distributor: Rotel of America, PO Box 653, Buffalo, NY 14240. Tel: (416) 751-4525.

Parasound P/FET-900: Solid-state preamplifier with three line-level inputs, one MM phono input, two tape loops, and bass and treble controls. Specifications: Frequency response (line-level): 10Hz–80kHz ± 0.05 dB (tone defeat on). Input impedance: 47k ohms in parallel with 150pF (phono), 47k ohms (line). Measured output impedance: 700 ohms (main). Maximum output level: 10V

RMS at less than 0.02% THD. Sensitivity (phono): 2.6mV RMS input at 1kHz for 1V output. Sensitivity (line): 200mV RMS input at 1kHz for 1V output. Maximum input levels at 1kHz: 220mV (phono), 2V (line). S/N ratio (A-weighted): 85dB (phono), 104dB (line). Dimensions: 17¼" W by 9½" D by 2½" H. Weight: 11 lbs. Price: \$395. Approximate number of dealers: 70. Manufacturer: Parasound Products Inc., 950 Battery Street, San Francisco, CA 94111. Tel: (415) 397-7100.

NAD 1300: Solid-state preamplifier with three line-level inputs, one phono input (MC or MM), headphone output, two tape loops, one external processor loop, and bass and treble controls. Specifications: RIAA error (phono): ± 0.3 dB. Frequency response (line-level): -0.3 dB points at 20Hz and 20kHz. Input impedance: 47k ohms in parallel with 100/200/320pF (MM phono), 100 ohms in parallel with 1000pF (MC phono), 100k ohms in parallel with 220pF (line). Output impedance: 150 ohms (Normal, High), 1000 ohms (Tape/EPL). Maximum output level: 12V RMS (Normal), 12V RMS into 600 ohms (High). Sensitivity (phono): 1.3mV RMS input for 0.5V output (MM), 60uV RMS input for 0.5V output (MC). Sensitivity (line): 80mV RMS input for 0.5V output. Phono input S/N ratio (IHF A-weighted, with cartridge connected): 80dB ref. 5mV (MM), 78dB ref. 0.5mV (MC). Line input S/N ratio (A-weighted): greater than 100dB ref. 0.5V out. Dimensions: 17" W by 10" D by 3" H. Weight: 9.5 lbs. Price: \$398. Approximate number of dealers: 300. Manufacturer: NAD (USA) Inc., 675 Canton Street, Norwood, MA 02062. Tel: (617) 769-7050.

A few issues back, in my review of the Mark Levinson No.26 and No.20 (Vol.11 No.5), I mused on the fact that the preamplifier, being the heart of a system, had a more significant effect on sound quality in the long term than, say, the loudspeakers. It was worth spending more on a preamplifier, therefore, than on loudspeakers. Needless to say, this viewpoint was regarded by many readers as dangerously heretical. I decided, therefore, to investigate the sonic possibilities of budget-priced preamps in this issue, even the most expensive being less than one-tenth the price of the Mark Levinson.

By coincidence, all three models chosen are manufactured in Taiwan, though two companies, NAD and Parasound, are as American as apple pie. The third, Rotel, is Japanese (though with a strong strain of English design philosophy). Putting my customary preamplifier, the Krell KRS2, to one side, the references used for this review were the \$635 Audio by Van Alstine Super PAS (reviewed in October), and the \$659 PS Audio 4.6 (reviewed by Tom Norton in September) used with its normal external power supply, not the \$469 M-500 upgrade! Fig.1 shows the measured RIAA response of the PS 4.6, for reference purposes. Flat through almost the entire audio band, with a well-

extended bass response, it starts to roll off at the top of the top audio octave. Power amplification was provided either by a 1986-vintage Krell KSA-50 or by a pair of VTL 100W monos, these sitting on Mission Isoplates. Loudspeakers were the Celestion SL700s, used on their matching stands; source components included my stock Revox A77 for master tape replay, Marantz and Precision Audio CD players, and the fully loaded Linn LP player (Sondek/Ittok/Troika) sitting on a Sound Organisation table; interconnect was either Monster M1000 or Tiare solid-core silver; speaker cable was Monster M1, two runs being used to bi-wire the SL700s.

As well as being used as the main system preamplifier, bypass testing was carried out with each preamplifier set to unity gain at 1kHz (harder said than done with the stepped volume control of the Parasound) and inserted in the tape loop of the PS Audio 4.6, used in its "Straightwire" mode so that no other active circuitry could impose its signature on the sound. I first used the Ben Duncan PAS-01 passive control unit for bypass testing, but changed to the PS because it will be more readily accessible

I found it interesting to compare these three large-company products with one from a supposed "tweak" company, PS Audio, and not just regarding sound quality. (Though I emerged from the lengthy listening sessions with more than a little respect for the Californian preamp's sonics.) The PS 4.6 appeared to be the best-made of the four solid-state models, contrary to what you might have been led to believe, given the high end's traditional reputation for assuming that excellence in sound quality will always compensate for shoddiness of design and manufacturing.

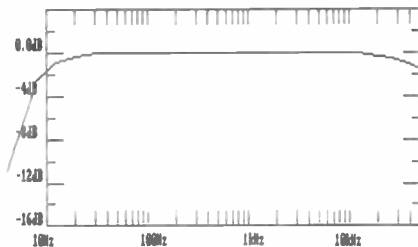


Fig. 1 PS Audio 4.6 RIAA error



Rotel RC-850 preamplifier

to readers wanting to repeat these tests. (The high input sensitivity of the VTIs made it easy to achieve adequately high listening levels, despite the absence of any line-stage gain.)

A note on the auditioning of the preamps' phono inputs: not being familiar enough with the sound of any current MM pickup to be confident about using it as a reference, I decided to stick with the Linn moving-coil.² The Parasound, therefore, could only be auditioned with the *HFN/RR* Black Head transformer in the signal path, which could be thought of as putting this preamp at a disadvantage compared with the other two, which do have MC inputs.³ I reassure readers, however, that I carried out checks by also auditioning the MM inputs of the other two preamps with the Black Head in-circuit, and also by conducting bypass tests on all three with the CD player driving the phono inputs via an Old Colony inverse-RIAA network. My comments on the sound of the three preamplifier phono inputs are based on an amalgam of this complete auditioning. (I need hardly add that the playback levels were matched for all the comparisons, removing volume discrepancies as a source of subjective differences. Audiophiles who don't practice such good housekeeping for their tests should be sentenced to a diet of Tiffany recordings until they learn to mend their ways.)

I ran a conventional set of measurements on the three preamplifiers. This was not so much to find a cause behind any facet of each unit's sound quality, but to see if there were any particular aspects which would lead to system incompatibility problems. At this price level,

I would be surprised by any electronic component that didn't depart from neutrality, so careful system matching is even more essential with these preamplifiers than with expensive models.

Rotel RC-850: \$249

This basic preamp offers four line-level inputs, two tape loops with dubbing allowed in either direction, and a phono input, switchable between MC and MM. Its low price, however, is not reflected in the quality of its construction, the chassis having a solid feel, the circuit a rational layout, and good-quality components—metal-film resistors and polystyrene-dielectric capacitors—being used in the signal path. Internally, one large printed circuit board carries the in/out socketry and all the circuitry, apart from the mains transformer and the headphone socket. Following the signal from input to output, the phono inputs feed a rear-panel slide switch, selecting both the gain of a low-noise Signetics NE5534AN IC head amplifier and the input shunt resistance. Shunt capacitance is defined by a pair of 100pF polystyrene capacitors; these can be easily changed by the dealer to match cartridges requiring more or less capacitance. This first stage feeds the RIAA equalization circuit, this again based around NE5534AN dedicated audio op-amps, which in turn lead, via series electrolytic caps bypassed with polystyrenes, to the source selector and tape monitor switches. The line-level inputs are routed to the switching by pcb tracks, separated by ground tracks to minimize crosstalk. Two of the line inputs are marked "AV/AUX," and have a third, video, socket, these internally joined to allow video dubbing in either direction. The phono and CD input sockets are gold-plated.

The volume control, a rather ordinary-looking component (though usefully *not* detented), is followed by the tone control circuitry, this founded on two NE5532 dual op-

² As pointed out by JGH last month in his follow-up review of the Threshold SA-1 power amplifier and Sound Lab A-3 loudspeakers, changing two variables at once leads only to sonic confusion. It is essential when reviewing any component to ensure that it represents the only change made to the system.

³ Parasound's Richard Schram recommends the Denon AU-320 transformer if the P/FET-900 is to be used with an MC cartridge. Although I do possess an example of this classic step-up, as luck would have it, it is still in storage in England.

amps. A front-panel switch allows this section to be switched out of circuit and also provides stereo/mono switching. Although there is no balance control as such, the two halves of the volume control are friction-locked and can be adjusted independently. The output stage of the RC-850 consists of another dual op-amp, from JRC, this also driving headphones via a front-panel socket—plugging in cans doesn't mute the main output. The dual-20V-rail power supply uses discrete series-pass transistors; a relay mutes the output for approximately 10 seconds after turn-on; and two switched utility sockets are provided.

The sound: The first set of listening tests was done with the Rotel set for exactly unity gain, its tone controls set to "off," and inserted in the PS Audio's tape loop. As explained earlier, in its "Straightwire" mode, the PS Audio's output is taken directly from the volume pot, imposing very little coloration on the sound. Comparing the sound from CD via the Rotel with what is effectively a piece of wire (with a few switch contacts) revealed that it does have a characteristic signature. Tonally, the RC-850 was commendably neutral; however, it did seem to have somewhat of a "bowdlerizing" effect on the sound of instruments. When listening to a new component, I tend to reach for a piano recording first, the complex sound of the instrument being very hard to reproduce faithfully. In this instance, it was the last CD in the complete series of Beethoven piano sonatas recorded for Nimbus by Bernard Roberts, NI 5060, which features the "Pathétique." I am not sure what piano Mr. Roberts used for the recording, but via the PS Audio it sounds very much like a Steinway, the complicated and characteristic meshing and intermeshing of harmonics as notes decay rendered very obvious. Switching the Rotel into circuit made the sound more like that of a "generic" piano, a veiling in the mid-range reducing the sonic differences between Mr. Roberts' piano and, say, the Steinway used by Minoru Nojima on his Reference Recordings Liszt recital.

Next went on the new Mahler Symphony 5 from Leonard Bernstein (DG 423 608-2). The sound of the introductory orchestral climax via the Rotel was clean, without too much "splash" in the treble. However, the solo trumpet introduction, where the player almost double-dots the part, increasing the music's drama,

came over with less tension than when the CD player was fed straight to the power amps via the PS Audio's volume control pot. This "slowing" of the music's pulse was a consistent feature to emerge during my auditioning of the RC-850. The Flim & the BB's (hate that unnecessary apostrophe!) track "Tricycle" (from the eponymous album, DMP CD-443) is infamous in audiophile-land for the degree of "jump factor" encoded within its pits. Yet it came over as too polite through the Rotel, lacking some of the tension that it usually has in spades.

It is not that there was any coloration present, apart from a slight lack of control in the upper bass—compared with the straight-wire reference, bass guitar and kick drum were insufficiently differentiated—rather, there was too little of the transient impact that defines the music's framework. Despite a commendable degree of neutrality in such a low-priced component, there was something about the line stage that prevented the music from holding my attention.

Turning to the auditioning of the phono stage, the noise level was gratifyingly low with the input set to MC, and the sound was clean, lacking any kind of hardness. But "inoffensive" was the word that appeared more than once in my listening notes, the musicians again sounding more tired than I had become used to with the reference. There was also more coloration present than via the line stage alone. There was a slight exaggeration of disc noise and more of a tinkly quality to cymbals and sibilance, almost as if the cartridge was being loaded with 47k rather than the 180 ohms specified (the input impedance actually measured 190 ohms). The low frequencies were also flabby. Putting the Tracy Chapman album on the Linn, the second track on side one, "Fast Car," features Larry Klein (Mr. Joni Mitchell) playing a bass guitar with a 16'-register sound. The Rotel rendered this with rather a second-harmonic tonality, fuzzing up the low-bass growl somewhat and reinforcing the "slow" impression. In my experience, this kind of too-limited control in the mid-to-low bass often correlates with a limited power supply.

The main failing of the phono stage, however, was the reduction in the sense of space around individual images, as well as a sense of the soundstage no longer quite reaching out to the loudspeaker positions. Admittedly this

was in comparison with the nearly-three-times-the-price PS Audio and Van Alstine preamplifiers, but it is this aspect of reproduction, which contributes to the musically essential you-are-there feeling, that I regard as ultimately important. The *acapella* "Behind the Wall" track on the Chapman LP, for example, presents the singer with a degree of solidity to her centrally placed image via the PS 4.6; the Rotel rendered her more flat, with less apparent depth.

Measurement: Fig.2 shows the frequency response of the complete preamplifier, measured via the phono inputs with the tone controls out of circuit. This is commendably flat between 40Hz and 30kHz, with any error within the tolerance of the inverse network. There is a faint hint of lift between 3kHz and 16kHz, however, which may tie in with the subjective nature of the treble. Integral infrasonic filtering curtails the response below 25Hz, this sensible in view of the less-than-ideal turntables likely to be used with this inexpensive component. The measured response rolls off slightly earlier than the specification, -3dB at 105kHz rather than -0.2dB at 100kHz, but I must say that this wide-open HF response on the phono input might be too susceptible to RF pickup in a region less of a radio-frequency desert than Santa Fe if there is any non-linearity present to demodulate the RF. Yes, the input NE5534 op-amps appear to be uncompensated, in order to maximize their gain-bandwidth product, but as this IC's open-loop gain drops from 55dB at 100kHz to less than 30dB above 1MHz, it is asking a lot of its intrinsic linearity at 100kHz and above to ask for extended bandwidth *and* high closed-loop gain. Response via the line inputs was also extended in the highs, the -3dB point lying well above than 100kHz. (I measured -0.5dB at

102kHz.) The tone controls were gentle in their action, the maximum boost at 20Hz and 20kHz being 4dB or so, while the maximum amount of cut at those frequencies was between 6.5dB and 7dB. This gentle action is preferable to controls with a more aggressive action, in my view, for modifying system or program imbalances.

I found the input overload levels to be somewhat lower than specified, 1.9V RMS into the line inputs being sufficient to drive the preamp's output to its maximum 10.75V RMS level with volume control full up compared with the 5V specified. (If this seems too low to handle the maximum 2V RMS typical of a CD player, remember that the volume control precedes the active circuitry and lowering its setting will avoid the circuitry being driven into clipping.) As the specified overload level is given as just 5V, however, with no indication whether this is a peak, peak-peak or RMS level, I assume that it is a peak-peak 5V, which is equivalent to around 1.8V RMS, tying in with the 1.9V measured. Similarly, the phono overload at 1kHz is given as 180mV, whereas I measured around 65mV RMS, equivalent to 183mV peak-peak. Phono input overload at 20Hz and 20kHz occurred at 30mV RMS and 430mV respectively, the latter actually due to the output stage clipping rather than due to the phono circuit overloading. There appears to be ample headroom, therefore, and it is extremely unlikely for the Rotel to have problems even with high-output MM cartridges.

Looking at interchannel crosstalk to see if there was any correlation with my impression of a less wide soundstage than ideally should be the case, the line-level inputs featured separation of more than 80dB at 20Hz and 1kHz, and 63dB at 20kHz. This is excellent performance, crosstalk at the first two frequencies being buried beneath the noise floor, and is better than many high-end products. Separation via either the MM or MC stages was only a little worse, however, at 70dB at 1kHz and below, this worsening to 56dB at 20kHz. All these figures are better than that offered by even an excellent pickup cartridge like the Linn, so must be ruled out as being connected with the subjective impression of a rather narrow stereo stage. Noise on the phono input was quite low, measuring -72dB set to MM and -54dB, MC. Both figures are unweighted and improved by 4-5dB when A-weighted. The output impedance measured close to spec at

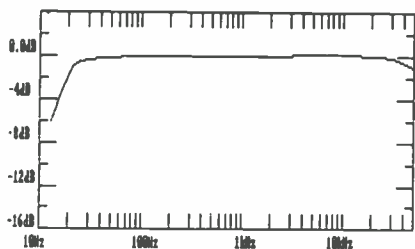


Fig. 2 Rotel RC-850 RIAA error



Parasound FET/900 preamplifier

1150 ohms, low enough for the RC-850 not to be too bothered by high-capacitance cables, though cables between it and the power amplifiers would best be kept reasonably short, 2m or so.

Conclusion: Well-engineered and made to a high standard, this preamplifier ostensibly has a commendably neutral sound. However, I wished I had liked the RC-850 more, it not so much doing things wrong as failing to do quite enough things right. The company has an excellent reputation for producing products with a better-than-average sound quality—witness Lewis Lipnick's review of their 820BX2 CD player in August—and I had hoped that this preamplifier would have proved to be a giant killer, offering a sound to compete with models costing considerably more. Unfortunately, what virtues it has are let down by the rather uninviting nature of its sound. Perhaps the compromises involved in producing such a low-priced product are too great, in which case the more expensive RC-870BX (\$449) may well better reflect this company's potential.

Parasound P/FET-900: \$395

Introduced at the 1988 Summer CES, this preamplifier from San Francisco-based Parasound does away with mechanical switching for source select and tape functions, replacing it with CMOS integrated-circuit switches similar to those used in the British Linn LK1 and Quad 44 and 34 models. Construction is to a good standard and the circuit is carried on two main pcbs and three small ones. Following a signal from the phono inputs, the MM-only RIAA amplifier is based on discrete FETs, its output joining the line-level signals at the switching ICs, these controlled by DC voltages controlled by front-panel pushbuttons. The manual states that to get the best sound quality, the tape-out selector can be deactivated. It appeared that this could be done by selecting sources from left to right, then pressing Tape Dub 2-1 at the far left (though this didn't always work).

The selected signal is taken first to a small pcb

carrying a rotary "loudness" control, this off when fully clockwise, then to the volume control, this identical (apart from value and the fact that it is stepped) to the one used by Rotel. The only departure from a rational layout is seen here, as a relatively long piece of cable connects the v/c pcb to the stereo/mono switch, this on the other side of the front-panel bank of push-buttons. The output from the volume control wiper is taken to the balance control, then to the tone-control amplifier, this again based on discrete FETs, as is the output circuit. Separate bass and treble controls are provided, as well as a tone defeat button. As far as I could make out without a schematic, the only capacitors in the signal path are a pair of 3.3uF WIMA polystyrenes. All the circuits are said to operate in class-A; however, it is rare to find any preamplifier that *doesn't* operate in class-A, unless it uses IC op-amps in the signal path.

A relay mutes the output for approximately three seconds after turn-on to allow the circuitry to stabilize; the CMOS circuitry then chooses whatever source was selected when the unit was last turned off.

The power supply uses transistors to regulate the $\pm 24V$ audio circuitry voltages, with IC regulators used to provide $\pm 15V$ rails for the Toshiba switching ICs. All the in- and output sockets are gold-plated, and three utility mains sockets are provided, one unswitched and two switched.

The sound: After I had carried out some measurements and done some preliminary auditioning via the P/FET-900's line-level inputs, Parasound requested that they supply a second sample for review, the reason being that the first was faulty: it "popped" when the tone defeat button was switched in or out. I had noticed this but had also felt that the sound was not as good as I would have liked at this price level. The second '900, however, suffered from a dead left channel, due, I am informed, to a unique sample error which meant that the output muting relay wouldn't fully close on one channel when the line voltage was lower than average. I accordingly asked Parasound to send

a third sample, with which all subsequent listening was done. This third sample, I am assured by Parasound's Richard Schram, is representative of current production.

The Parasound was allowed to warm up for 6 hours or so, set to unity gain, and inserted into the PS Audio's tape loop. Though its line stage didn't invert signal polarity with the tone defeat button in, switching the tone controls into circuit still caused a slight popping noise as the circuit became polarity inverting. I listened first to the line stage on its own, comparing it with the straight-wire bypass. Again I reached for the Nimbus Bernard Roberts CD. The P/FET-900 was not quite as tonally neutral as the Rotel, the sound taking on a slightly forward tonality in the upper midrange; this was certainly not to any extreme degree, but was identifiable as a faint nasality to the sound. The noise of the piano's action also became slightly more percussive, and the hammers appeared to have less felt on their heads. In addition, the midrange seemed just a little more uneven. In the first movement of the "Pathétique," after the *grave* opening statement, a long descending chromatic scale winds down from a high E-flat to the B-flat more than two octaves lower to prepare the way for the *allegro*. One of my favorite passages for examining a component's midrange, the reference presented this as perfectly even; the Parasound, however, seemed to present some notes as being more prominent than others.

This is a very cruel test, throwing departures from neutrality into sharp relief even with expensive preamplifiers. In actual fact, the Parasound was doing well. However, this slightly forward aspect of the low treble was also noticeable on the Sigiswald Kuijken recording of the Bach Partitas and Sonatas for solo violin (Deutsche Harmonia Mundi CDS 7 49290 2), where the violin image was pushed slightly forward in the image, sounding slightly louder, and its already astringent, period-instrument sound becoming slightly more so on its A and E strings when compared with the bypass. The bypass also had slightly more energy in the very top octave, giving a feeling of more "air" around the instrument.

How did massed orchestral forces reproduce? A recent recording recommended by Lewis Lipnick is the Telarc coupling of the Faure and Durufle *Requiems* (CD 80135), which features a wide, deep stage and natural

voice and string tonality. I have to admit that any audible differences were much harder to hear than with the solo violin or piano: a slightly more "shut-in" quality in the highs; perhaps a very slight coarsening in the midrange. It was time to move on to some nonclassical: Flim & the BB's (what else?). To my surprise, compared with the bypass, the P/FET-900 sounded, of all things, "faster." A sloppy adjective, but it is hard to think of a word more appropriate: transients seemed more pronounced, the music seemed more dynamic. The sound was more enjoyable in this respect, the "thunderclap" tom-toms in the "Tricycle" track subjectively knocking me out of my listening chair at the identical objective level to the PS Audio. The obvious assumption to make is that the Parasound was exaggerating things, but I was not so sure. Yes, the straight-wire bypass *should* be more accurate, but remember that it actually passes the buck for driving all the cable between the CD player and the power amplifier back to the CD player's output stage. Maybe what I was hearing was the fact that the Parasound gets a better handle on the cable than do either of the CD players used for the tests.

This is, of course, conjecture, so I will change to LP as the signal source, the MC pickup amplified by the Tim de Paravicini-designed "Black Head" transformer, as explained in the introduction. On went "The Look of Love" from my original 1966 English RCA release of *Casino Royale*, Rusty Springboard in full *sotto voce*. Tonally, the rundown went as follows: top octave usefully slightly lower in level than the PS Audio; midrange good, if again rather forward at the top of the region; lows a little fuller in the upper bass, and not as much ultimate extension. The more significant subjective difference, however, concerned the retrieval of fine detail. This track has a *guiro* accentuating the second beat of each bar in an implied claves rhythm. The PS Audio allows you just that little bit more easily to hear the return signal from an echo plate or chamber, localized in the same position as the *guiro* in the stereo stage. Similarly, the PS Audio presents images with more of a "palpable presence," to fall back on a cliché coined by the Audio Cheapskate.

This slight diminishing of soundstage depth was also apparent with the Radka Toneef *Fairytales* album (Odin LP03). Listening to my favorite track, "Nature Boy," Miss Toneef's voice was

lighter in texture than with the PS Audio, but presented just a little more one-dimensionally, the image being foreshortened.

I finished my auditioning of the Parasound with the Chesky Sibelius 2. The string tone was again just a little more astringent than the reference, the upper bass was a little looser, and you couldn't "hear the walls" as well. However, more serious, for me at least, was a feeling that, in a manner similar to the Rotel's phono stage, the pulse of the music was somehow diminished; not by much, admittedly, but enough to disturb. In this respect, I preferred the sound of the phono section of the similarly priced NAD 1300.

Measurement: Fig. 3 shows the overall frequency response of the third sample of the P/FET-900 measured via the phono inputs. Noticeable is a very slight degree of exaggeration in the low bass, reaching a maximum of 0.3dB at 30Hz, below which it starts to roll off, if anything a little too gently, considering that it is likely the P/FET-900 will be used with inexpensive turntables. (The first sample had slightly more low-frequency boost.) There is a touch of lift at the top of the audio band, while the HF response extends too high, in my opinion, not reaching its -3dB point until above 100kHz, which, as with the Rotel, might make this preamp more prone than usual to picking up RF with MM cartridges (though the use of discrete FETs rather than op-amps in its phono stage, as well as the overall lower gain required, may well help here). Measuring the line-level inputs, the response was flat in the audio band, with -3dB points at 4Hz and at more than 100kHz. As explained above, switching in the tone-control stage inverted signal polarity. The tone controls are specified as having a ± 10 dB action at 85Hz and 12kHz. Looking at the edge-of-band behavior, this translates to a maximum 10dB boost and 12.5dB cut at

20Hz and 20kHz. I have to admit that I am no big fan of loudness controls, it being impossible to establish a true baseline level where the response should be flat. However, the Parasound's loudness contour seems well-designed, with the maximum amount of tonal modification, appropriate for very low listening levels, shown in fig. 4. The loudness control becomes inoperative when the volume control is past the halfway point.

The S/N ratio via the (shorted) MM input was a little worse than the Rotel, but very good, nevertheless, at 68dB unweighted and 76dB A-weighted. Crosstalk via the line-level inputs was buried in the noise at 20Hz and 1kHz, lying at -52dB at 20kHz. Via the phono input, separation was 64dB, 67dB, and 49dB at 20Hz, 1kHz, and 20kHz, respectively.

As the volume control is detented, I checked its action. The steps range from 1dB at the very top of the range to 6dB or more at the very bottom, with less than 1dB/step around the 12 noon position, and 1.5-2dB between 12 and 9 o'clock. The two channels tracked each other to within a 0.5dB accuracy over most of the range, this worsening to a 1dB tolerance or worse with the volume control set at 10 o'clock or lower. This is good at this price level.

Looking at input overload levels, the maximum output-stage swing at 1kHz is ± 22 V peak-peak, this given by 3V RMS into the line inputs with the volume control wide open. One concern with CMOS switches is that, unlike mechanical devices, they cannot swing more than a certain voltage. Feeding the test signal into the CD input and looking at the tape output, the P/FET-900's switches didn't overload until asked to swing more than 10.5V RMS. One anomaly was that hard-clipping the CMOS switches at 20kHz (12V RMS input) caused a drastic latch-up with a correspondent 15V DC-level shift. Fortunately, this is extremely unlikely to be triggered in use (I'd almost say

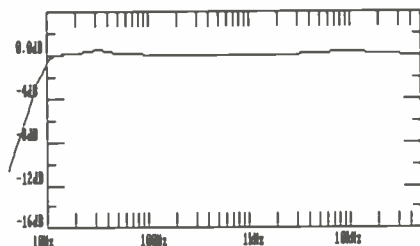


Fig. 3 Parasound RIAA error

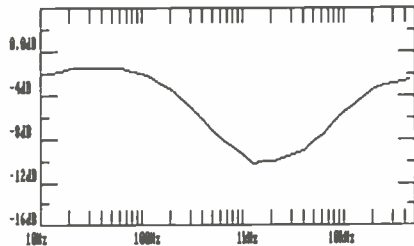


Fig. 4 Parasound max. loudness contour



NAD 1300 preamplifier

impossible). Looking at the signal available from the tape output, the phono input appeared to overload at 95mV RMS at 20kHz, 170mV RMS at 1kHz, and 765mV RMS at 20kHz, though it actually appeared to be the CMOS switches that were clipping rather than the phono circuitry. This amount of headroom is excellent, and this Parasound shouldn't ever be overdriven even by very-high-output MM cartridges.

I measured the output impedance as 700 ohms—the P/FET-900 should have no problems driving reasonably long cables.

Conclusion: Very slightly more forward in the upper midrange than the Rotel RC-850, the Parasound P/FET-900 is less veiled overall, while not approaching the transparency of the more expensive PS Audio 4.6. It does reproduce more musical information than the cheap Rotel, the sound generally not becoming uninvolved (though the phono stage does err in this direction). I felt that its line stage was better, overall, than the phono stage, though at the price, this preamplifier offers a good balance of virtues for those who prefer to use a good MM cartridge or a high-output moving-coil. A safe Class D recommendation in *Stereophile's* "Recommended Components."

NAD 1300: \$398

By far the most complicated of the three preamps tested in terms of facilities offered, NAD's "Monitor Series" 1300 provides two buffered tape loops, an external processor loop (which can also be used as a third tape-recorder loop), a headphone output, a "null" switch, switchable bass equalization to extend the low-frequency range of small loudspeakers, and treble and bass controls, each with a choice of three turnover frequencies: 3kHz, 6kHz, 12kHz, and 50Hz, 125Hz, 250Hz, respectively. An 18dB/octave infrasonic filter, cutting the response below 20Hz (−3dB at 14Hz) can be switched *out* by pressing a button; the default

position of having the filter in-circuit seemed intuitively wrong to me.

The null circuit replaces the normal conventional stereo feed to the output sockets by the difference (L−R) between the two channels. It can therefore be used both to optimize cartridge alignment and to adjust an FM antenna to give the best rejection of multipath distortion and extraneous noise on the subcarrier. (You could also use this switch to eliminate a centrally placed Barry Manilow or John Denver from their recordings—but *who* would want to do *that*?)

Looking inside the 1300, one large pcb carries everything apart from the mains transformer, headphone and bass EQ circuitry, and the volume control, this detent-less and similar in quality to those used in the other two preamps reviewed. Rather than use the pot as a conventional series voltage-divider to ground, NAD's engineers have configured the pot as part of the feedback loop around an operational amplifier. In this manner, the line-stage gain is varied according to the volume control setting, which, NAD feels, avoids clipping or slew-rate limiting. The phono circuitry is based on discrete transistors, with an FET input stage. This is said to linearize the circuit well into the MegaHertz region, thus avoiding the possibility of demodulating any stray RF. A rear-panel slide switch selects a 26dB-gain moving-coil headamp, with a 100 ohm input impedance. This stage, which NAD claims takes full advantage of the inherent low noise of low-output MCs to yield lower-noise playback than with conventional MM pickups, is powered from voltage rails buffered from the rest of the circuit and regulated by Darlingtons capacitance multipliers. Another switch selects input shunt capacitance for MM cartridges.

The rest of the circuitry is based on JRC op-amps; the output circuitry is, again, discrete transistor. An additional pair of output sockets delivers the signal from a beefier output stage, in effect a baby power amplifier, the preamp

then being able to swing its full output into a 600 ohm load. (This output, which also drives even low-impedance headphones from a front-panel socket, is set 14dB higher than that from the normal sockets.) The output is muted via a relay for five seconds after turn-on. The "normal" output is also muted when headphones are plugged in, though the "high" outputs remain operative.

Almost uniquely, in my recent experience, the 1300 comes fitted with shorting phono plugs fitted to its line-level inputs other than CD. These can be replaced by the interconnect from the appropriate sources, but if left plugged in, will cut down on inter-input crosstalk. There are four utility mains sockets on the rear panel, two unswitched and two switched, and attractive 19" rack handles, with red inserts, are available as a \$30/pair accessory.

The sound: The NAD 1300 was set for exactly unity gain, its tone controls, infrasonic filter, and bass EQ switched out of circuit, and inserted in the PS Audio's tape loop. Unlike the Parasound, the signal polarity at the "Normal" outputs with the tone-control circuitry bypassed was still inverted by the line-level stage, the same proving true for the "High" outputs. This factor complicated the auditioning—both speaker cables had to be reversed every time I changed preamplifier. (The most useful test signals I have found for determining line-stage polarity are Track 51 on the Technics Test CD, which has a totally asymmetrical raised-cosine waveform centered around the waveform midpoint, and Track 88 on the Japan Audio Society Test CD, which also has a raised-cosine waveform, this offset to the positive side of the time axis.)

Cursing inwardly—limiting the variables under test to just one is always harder than it might appear from the outside, and I have found that reversing absolute signal polarity can often be more audible than the intrinsic differences between similar electronic components—I sat down to some serious listening. At first, the NAD 1300's line-level circuitry appeared not to be introducing any audible differences, but, over the long run, a number of aspects to its sound became apparent. First was that, like the Parasound, the 1300 sounded more dynamic in its handling of the drums on the Flim & the BB's track. Second was the bass. While not having quite the subjective exten-

sion of the PS Audio, the NAD's low frequencies had good midbass weight. Ultimately, however, I preferred the straightwire sound, the bass drum in "Tricycle" having a better-defined, less woolly pitch center, with a more realistic relationship between the sound of the beater hitting the head and the follow-on tone.

When it came to the midrange, the NAD had a slightly "reedy" signature, most noticeable on massed strings, while high frequencies were very slightly exaggerated. The snare and hi-hat sounds on the drumkit track on the *IFN/RR* Test CD were just a little bit "whiter," or crisper. This wasn't nearly so extreme as to introduce any high-frequency "grain," but while the resolution of recorded depth in general was excellent, this aspect of the NAD's tonality did render the soundstage rather more shallow in the treble. While the fine detail of recorded ambience was easily to be heard via the NAD, the sense of instruments having a spatial solidity was less well developed than with the bypass situation. However, while not as undetectable as some, having a little more of a signature than the Parasound, this line stage is still pretty neutral.

OK, fundamentally a good-sounding line stage—how did the NAD 1300's phono section cope with the demands of music? On to the Linn went the Nojima Liszt recital (Reference Recordings RR 25). The first thing to strike me was the very low level of background noise. Sounds emerged from a velvety darkness which, if not quite as black, as sepulchral, as that from CD, was still much quieter than the MC stages of even quite expensive preamplifiers. The reediness in the midrange was more pronounced, though the NAD did show good resolution of the piano's complex harmonic structure. It also captured the purr of the piano's left-hand registers almost to perfection. Tonally, while the NAD gave excellent string tone, it did have a little more extreme high-frequency extension compared with both the PS Audio and with the Parasound. Looking at the relevant response curves, you can see that the 1300 does have a fraction of a dB more output than the PS Audio above 5kHz, but it's hard to imagine that this would be significantly audible. Old analog recordings, however, did have slightly more high-frequency tape hiss noticeable, while groove damage on Dusty Springfield's "The Look of Love," which has been well-chewed by pickups over the years, was

slightly more prominent via the NAD compared with the PS.

This track also revealed the major aspect of the phono-stage sound: voices sounded smaller, more recessed, even more delicate, than they did with the Californian preamp. The PS Audio revealed more of the space around voices and instruments, giving them a realistic solidity, but in comparison with the NAD, was made to sound too forward, too robust in the midrange. The PS Audio's less dry high treble did give voices less of an electronic edge, however.

Low frequencies were also a little recessed from the NAD. One of the aspects of the PS Audio's sound from LP is its bighearted bass, extended with exceptional weight while remaining well-defined. The NAD has a "smaller" sound at low frequencies, double bass even sounding physically smaller. It was better in this respect, however, than the Van Alstine tube preamp, which has a propensity for a thin low-frequency balance.

Which phono section was better? I can't say; we're talking apples and oranges here. The PS 4.6 has the edge on soundstaging depth and tonal neutrality, especially in the treble; it can sound rather brash in the midrange, however. The NAD 1300 has very low noise, a more refined presentation of detail, but has less depth at high frequencies than through the rest of the range. If the PS Audio sounds best with large orchestral works, it comes across as having insufficient resolution of detail with rock music and solo female voice, which is where the NAD shines. The 1300, however, can sound "electronic," too light, with a lack of solidity to individual images, on orchestral music. The Van Alstine has a treble balance closer to that of the NAD, but lacks both bass weight and extension. (I must admit, however, that I prefer the sonics of this all-tube preamp, overall, to those of the NAD. The NAD, however, is much more a real-world product.)

My final auditioning session was to investigate what the 1300's bass EQ had to offer with the Celestion SL700s. The amount of LF boost is modest, which is a good thing. Applying such tonal correction depends heavily on the speakers having sufficient dynamic range to cope with the increased excursion. The obvious *visual* effect with the EQ switched in was an absence of the usual cone wobbling from warp signals, the NAD LF boost being com-

bined with an effective infrasonic filter. The effect of the EQ had its positive points. Extending the Celestions' response by what appeared to be an octave at normal listening levels (80–90dB average) added a degree of realism to the speakers' bass register, as well as making the treble sound more balanced, more in proportion. (Small speakers with optimally damped LF alignments often can sound treble-forward, and the SL700 is no exception.) However, there was a negative aspect, the character of the low frequencies changing a little too much, becoming more lumpy, even a little "slow." The Celestion SL700 has such superb upper-bass definition that even small amounts of degradation are only too easily audible. With less refined small speakers, however, I can imagine the NAD's bass equalization being a particularly useful feature.

Measurement: The moving-magnet RIAA response is shown in fig. 5. Sensibly curtailed in the bass with the infrasonic filter on, it starts to rise above the audio band, reaching a maximum of 1.5dB around 100kHz. This should have an innocuous effect on sound quality, given the claimed linearity of the circuit in the MHz region. The infrasonic filter cuts the response below 20Hz, measuring –3dB at 14.5Hz and –6dB at 11Hz. With it switched out (button pushed in), the response extends to well below that figure, reaching –1dB at 9Hz or so. The signals available from the two tape outputs and the EPL output are taken after the infrasonic filter so that turntable rumble and/or disc warp information that might lead to recorder problems can be removed. The line-level response is flat through the audio band, starting to roll off gently above 30kHz, being –0.3dB at 78kHz, which is higher than the specification would suggest.

Fig. 6 shows the effect on the preamp's output response of switching in the LF EQ circuit.

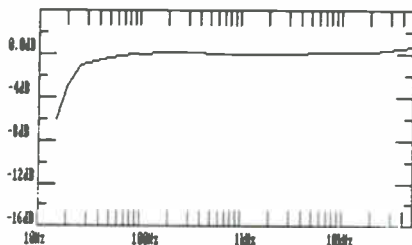


Fig. 5 NAD 1300 RIAA error

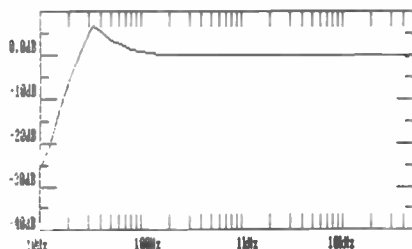


Fig. 6 NAD 1300 LF EQ

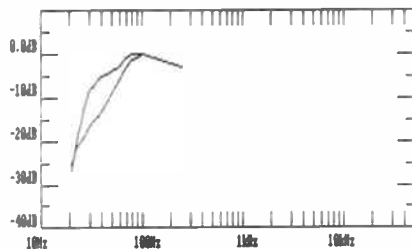


Fig. 7 NAD extension of SL700 response

The measured response peaks by 6.8dB at 34Hz (compared with the spec's +6dB at 36Hz), which will effectively flatten the response of a small speaker to around 35Hz. Note the sharp infrasonic filtering, however. Such LF response restoration depends on the speaker's woofer having sufficient headroom that it will not be driven into overload on normal music program; filtering out very low-frequency garbage is essential when the boost is applied to speakers with small-diameter woofers if the sound is not to suffer from Doppler distortion (though all the published research indicates that such distortion has to be gross before it becomes audible). Fig. 7 shows the nearfield response of the Celestion SL700 used for the auditioning with and without the NAD 1300's bass EQ. You can see that it has acquired useful extension in the low bass, with its nearfield -6dB point dropping by almost an octave, from 60Hz to 36Hz. Measured in-room, boundary reinforcement will bring the -6dB point down to around 30Hz with the NAD, giving a musically flat response down to below the bottom of the double bass's range at 42Hz.

NAD's engineers have put a lot of thought into the design of the 1300's tone controls. Both bass and treble controls have three center frequencies, with the band boosted or cut covering one-and-a-half octaves. In this manner, if the controls are set to the lowest and highest frequencies respectively, the response at the frequency extremes can be varied with-

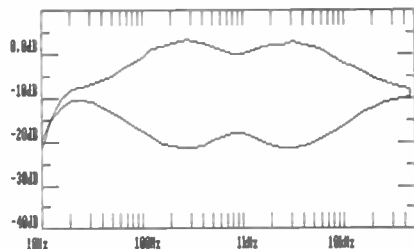


Fig. 8 NAD 1300 tone control action

out affecting the quality of the important mid-range. Conversely, selecting the highest and lowest center frequencies, 250Hz and 3kHz, with both treble and bass controls set to full boost or cut, gives the curves shown in fig. 8, with considerable overlap apparent in the mid-range. This "Semi-Parametric" action, as NAD terms it, in conjunction with the bass equalization, offers considerable flexibility combined with subtlety in getting the best tonal balance from a system. NAD offers useful advice in the instructions for getting, for example, the most musical sound from CD by judicious use of equalization. (I must say, however, that philosophically, I still prefer not to use tone controls, even when they are as well-designed as they are here. Am I perverse? Yep!)

Noise levels were very low, the noise floor on the MM input when short-circuited (unweighted) lying at -70dB unweighted and 76dB A-weighted ref. 0.5V RMS output (corresponding to S/N ratios of 82dB and 88dB respectively ref. 5mV input). These figures worsened to a still very good -48dB/63dB with the MC head-amp switched in circuit (equivalent to 66dB/81dB ref. 500uV input). The large improvement with the A-weighting network switched in suggests that much of the noise on the MC input is low-frequency and thus relatively innocuous in nature. Separation on the line-level inputs with the appropriate input shorted was respectable, with 63dB, 71dB, and 62dB measured at 20Hz, 1kHz, and 20kHz, respectively. The output impedances differed rather from the specification in that while I found the "Normal" sockets to deliver their signal from a 105 ohm source impedance, the "High" sockets had a 40 ohm impedance. A puzzle. One thing for sure, however: the NAD 1300 should both be able to drive long, highly capacitive cables without problem, even from the normal outputs, and should be relatively unaffected by different cables.

Conclusion: The NAD 1300 offers perhaps the most features to be found in a preamplifier at this price level, and displays a high degree of engineering proficiency, combined with a basically excellent sound quality. Yes, its line stage has a detectable signature when compared with a straightwire bypass, but the degree of sonic degradation is relatively small. Indeed, the extra sense of dynamics endowed by the NAD is a musical bonus. In addition, the 1300 boasts a phono section that has a more delicate sound than the PS Audio 4.6, and only loses out to that high-end model in its cooler presentation, slight lack of midrange transparency, and shallower stereo stage in the treble. The basic PS Audio 4.6, without its optional beefed-up power-supply module, costs rather more at \$659 than the 1300, of course; I consider the NAD an excellent preamplifier that should, by rights, cost rather more than a hair under \$400. Recommended.

Postlude

Do I still think that the preamplifier is the sonic heart of a system? 'Fraid so. Nothing that I heard while conducting these reviews caused me to shift from my position (stated in "As We See It" in the November 1987 *Stereophile*) that when it comes to acting as a wide-open window to the music, every facility and function added to a basic preamplifier detracts, even if slightly, from the ultimate sound quality. If I had no money limitations, I would be forced to choose something like the Mark Levinson No.26 to get the best sound from LP (that is, if I ever finally tire of my Audio Research SP10 II).

However, many of us do have to live on a budget, and one of the five preamplifiers listened to during the course of this review would be a good buy. What I'll do, therefore, is just informally rank the five in all the basic areas I feel to be important to music reproduction, the best being listed first, passing the buck to you for making the final purchase decision:

• Increasing order of price: Rotel, Parasound, NAD, AVA Super PAS, PS Audio.

- Useful facilities offered: NAD, Parasound, Rotel, PS Audio, AVA.
- Ease of ownership:⁴ Rotel, NAD, Parasound, PS Audio, AVA.
- Line stage tonal neutrality: PS Audio,⁵ Rotel, Parasound, NAD, AVA.
- Line stage transparency: PS Audio,⁵ AVA, Parasound, NAD, Rotel.
- Line stage retrieval of detail: PS Audio,⁵ NAD, AVA, Parasound, Rotel.
- Line stage soundstaging: PS Audio,⁵ AVA, Parasound, NAD, Rotel.
- Phono stage tonal neutrality: PS Audio, Rotel, Parasound, NAD, AVA.
- Phono stage transparency: PS Audio, NAD, Parasound, AVA, Rotel.
- Phono stage retrieval of detail: PS Audio, AVA, NAD, Parasound, Rotel.
- Phono stage soundstaging: PS Audio, AVA, Parasound, NAD, Rotel.
- Overall sense of dynamics: NAD, Parasound, AVA, PS Audio, Rotel.
- Sound quality for money: NAD, AVA, Parasound, PS Audio, Rotel.
- Character best suited for rock: NAD, Rotel, PS Audio, Parasound, Rotel.
- Character best suited for classical: PS Audio, AVA, Rotel, Parasound, NAD.
- Overall musicality (CD playback):⁶ PS Audio,⁵ Parasound, AVA, NAD, Rotel.
- Overall musicality (LP playback): NAD, AVA, PS Audio,⁷ Parasound, Rotel.

Happy listening. And don't forget to listen to the Adcom GFP-555 and B&K PRO-10MC, or to the Superphon CD-MAXX for CD-only playback.

S

⁴ More subjective than any of the other categories, this includes apparent quality of construction, estimated reliability, availability, ease of system matching, and other such gray areas.

⁵ When used in its "Straightwire" mode.

⁶ I know, I know. Even more subjective. Maybe I should be writing for *The Hi-Fi Heretic*.

⁷ Ultimately, I preferred the sound of the basic 4.6 from LP with the Black Head transformer providing the MC gain (although this may be related to the fact that only after all the auditioning was finished did I find that the MC input shunt resistance was set to 100k ohms). I'll report in a future issue how I reacted to the change provided by the PS M-500 upgrade power supply.

QED PASSIVE CONTROL CENTER

Thomas J. Norton

Full-function passive preamplifier. Four high-level inputs. Two tape-monitor loops. Dimensions: 12.1" W by 1.7" H by 3.7" D. Weight: 2 lbs (est.). Price: \$250. Approximate number of dealers:



QED PCC passive preamplifier

100. Manufacturer: QED, Unit 12, Ashford Industrial Estates, Shield Road, Ashford, Middlesex, TW15 1AU, England. Distributor: May Audio Marketing, PO Box 1048, 76 Main Street, Champlain, NY 12919. Tel: (518) 298-4434.

If you haven't heard of QED, you don't belong to an exclusive club. That is, unless you're one of our UK readers. In England, QED is a well-known purveyor of audio accessories of all sorts: record cleaners, loudspeaker stands, interference suppressors, wire and cable, and outboard attenuators and cartridge-loading networks. They also manufacture what may be the widest assortment of outboard switch boxes on the market. I don't mean comparator boxes (although they do make those for dealers), but input expanders (for those who need more high-level inputs), tape-loop expanders (for converting a single tape loop to three), and loudspeaker switchers of every sort (including a heavy-duty speaker/headphone selector box).

A couple of years ago QED came out with a CD passive preamp, the CD-P, permitting a user to bypass his or her active preamp when using CD as a source. It consisted of two inputs: one to be connected to the output of an existing preamp, the other for direct connection to a CD player. A switch routed either of these inputs to the power amp, and a volume control *in the CD circuit only* gave control of CD playback level. I tried out this device and found that it worked well. But I believed then, and still do, that above a certain reasonable quality level in the main system preamp, this arrangement merely created additional wiring and complexity. But it does give audiophiles who desire a direct bypass position the option of adding one if their present preamp lacks this feature. Then QED released their own version of a complete passive preamp—a switching block with level control. Here was a product I felt to be of wider potential interest.

The QED Passive Control Center (PCC) combines the functions of the earlier (and still avail-

able) CD-P with six high-level inputs: aux, tuner, video, CD, tape, and DAT. The aux input may be driven from the rear-panel jacks or from an additional pair of jacks at the front of the unit. Both DAT and tape inputs incorporate full tape-monitor loops. The switching is configured to permit recording of any source while listening to it or any other. The DAT loop may, of course, be used with *any* recording device (not just DAT), and either of the tape loops will function just as well with any type of external processor instead of a tape deck. As with any passive device of this nature, the lack of output isolation (buffering is the proper term) means that the added output loading of tape decks, etc. connected to the tape outputs may affect the total loading on the PCC, possibly degrading the sound. This will *not* occur when the source and tape switches are in the Off position; that apparently disconnects the tape outputs—a good feature. It may occur when actually recording, but the worst-case impedance load of most tape decks occurs when they are switched off and *not* recording.

The PCC is well built, although you won't confuse it for an instant with the expensive heavy hitters! All jacks are gold-plated, the volume control is a quality ALPS unit (10k ohm value), and the switches are heavy-duty, positive-action, rocker types. The layout is somewhat unconventional; all controls are on the top instead of in front. The amount of effort required to move the (rather stiff) selector switches would likely make front-mounted controls impractical in such a lightweight unit, but a sloped front panel is more convenient.

It even comes packaged in an accessory-rack bubble pack, implying perhaps a potential impulse purchase. It's relatively inexpensive, but a \$250 impulse? Is Donald Trump an audiophile?

Internal connections are hard-wired with what appears to be ordinary hookup wire, but a heavier gauge is used in the CD-replay circuit.

In the February 1988 *Stereophile*, British designer Ben Duncan described a DIY (do-it-yourself) passive preamplifier, discussing the limitations of such a design in real-world applications.² JA expanded on this in his introduction to the same article. I have also expressed my feelings on passive preamplifiers in *Stereophile* reviews of the Sumo Athena and PS Audio 4.6 (September 1988). Despite Paul McGowan's well-taken points in his response to the latter review, I retain a certain conservatism when it comes to passive preamps. There is no question that in the right system they can give low-cost, high-end sound with high-level inputs. But that system must include sources with high enough gain to drive the amplifier to the required output level with the chosen loudspeakers, a low output impedance for those sources, and an amplifier with a high input impedance. The latter requirement is driven by a passive preamp's relatively high (and variable—depending on the volume setting) output impedance.

The optimum impedances will depend upon the design of the passive preamp; good ballpark minimum figures for use with the PCC (with its 10k ohm potentiometer) are sources with output impedances below 1000 ohms and amplifier input impedances above 50k ohms. The PCC will *function* outside of those limits, but at the increased risk of gain and frequency-response aberrations. The picture is further complicated by the effect of both the length and electrical characteristics of the interconnects selected—particularly the link to the power amplifier. Long cables should be avoided, particularly in view of the fact that many popular audiophile cables are somewhat high in capacitance—the villain in this piece.

Whoa, you say. This is all getting *tooooo* complicated. Not really. The best piece of advice I can give prospective owners of a given passive preamp—like the PCC—is to audition the device in their own systems. Look first of all for adequate gain. Does it play loud enough for your Devo commemorative parties? Your von Karajan marathons? Listen also for signs

of high-frequency attenuation. This rolloff will probably be subtle, and here's where the going gets sticky. If you've been using cheap 'n' not-so-cheerful electronics (to paraphrase Ben Duncan), you'll have to decide for yourself if the almost inevitably sweeter sound you'll hear is due to the elimination of active stages of dubious heritage or some slight HF rolloff caused by matching problems.

The reason to go to all this trouble, of course, is improved sound. In this case, better sound for a reasonable cost. To audition the QED PCC, I selected a CD player which has well above average output—the Mod Squad Prism—and auditioned the combination through a system consisting of the PS Audio 200cx amplifier, the B&W 801F loudspeakers, and Monster M-1000 interconnects (2 meters from PCC to amplifier) and M-1 loudspeaker cable.

There's comparatively little that need be said about the "sound" of the QED. The Mod Squad player drove the system to more than adequate levels; my earlier observation of a lack of dynamics when using passive line stages and CD players of more typical output did not apply here. I closely compared the PCC to the line stage of the Klyne and found that the QED was a very, very close competitor. I occasionally missed having a balance control, but it was not a serious irritation. The longer I listened to the QED, the better it sounded. In imaging, low-end weight, and general overall lack of any irritating characteristics, it was every bit as good as (but no better than) the SK-5a. But the Klyne did sound subtly better in some respects: a bit more open, a slightly better sense of depth, a little more natural warmth on voices. My choice of modifiers here is deliberate; the QED was more than competitive with a preamp of considerably higher cost.

But the Klyne was still the winner. How can that be? Doesn't it have all that nasty, active circuitry in the way? I can only refer you to my earlier comments, plus the fact that plenty of people are around to argue that the transparency of the internal wiring, switch contacts, and potentiometer of even a passive preamp cannot be taken for granted. As one who survived seven years of EE classes, that conclusion does not fully satisfy me; my professors would be appalled by it. But engineers have spent decades developing active circuitry; outside of high-end audio, the performance of passive parts is assumed to be a given, except for efforts to

² Ben Duncan elaborates further on this subject in his similar article in the September 1988 *Hi Fi News & Record Review*—which presents a slightly more elaborate version of the same design.

improve their reliability and longevity. We audiophiles generally make a nuisance of ourselves by insisting that *nothing* be taken as a given.

I still prefer to use a *good* active preamp for its available gain and system compatibility, not to mention my need for a good phono stage.

True, you can plug your existing preamp into one of the high-level inputs of the PCC for the latter, if you don't mind the resulting wiring kludge. But I can't deny that the PCC does its job well. In the right system it just might save you a bundle with little sonic sacrifice. **S**

PHILIPS FT-565 AM/FM TUNER

Don Scott



Philips FT-565 FM tuner

Measured Specifications: FM stereo/AM tuner with digitally synthesized tuning. Usable sensitivity: 1.9uV/10.8dBf mono, 5uV/19.2dBf stereo. 50dB quieting sensitivity: 20uV/31.2dBf with noise reduction, 36uV/36.3dBf without noise reduction. Capture ratio: 1.6dB. Selectivity: 75dB alternate channel, 10dB adjacent channel. S/N ratio at 65dBf: 76dB mono, 70dB stereo. Stereo THD: 0.8%. Stereo separation: 53dB. SCA rejection: -40dB. AM suppression ratio: 55dB. 19 and 38kHz products: -35dB. Power consumption: 18W. Dimensions: 16.5" W by 10.25" D by 2.375" H. Weight: 5 lbs. Price: \$259. Approximate number of dealers: 200. Manufacturer: Philips Consumer Electronics Co., I-40 & Straw Plains Pike, PO Box 14810, Knoxville, TN 37914. Tel: (615) 521-4316.

Philips has not marketed home components other than CD players in the USA for 10 years. While the company has proven its ability in CD technology, the tuner tested in this review is not state-of-the-art. Still, it's a good value.

The cabinet is all metal, with black wrinkle finish. From left to right are power on-off, 2-level muting/scan level, high-blend, combined mono/stereo mute off, aqua 4-digit frequency display with accompanying Stereo and Tuner indicators, a malfunctioning (on my sample) 5-level signal meter which jumps directly from 2nd to 5th level, 16 FM and 8 AM memory and preset controls, a large tuning bar, and AM-FM switches. The FT-565 tunes in 100kHz increments, and mono/stereo can be put into memory. All modes/functions are illuminated. The rear panel lacks a 75 ohm input; therefore, a 75-300 ohm transformer may be needed.

Circuit Design

This is a bare-bones tuner with a minimum of parts. Fortunately, it has a hefty, well-filtered power supply which aids its good S/N ratio.

The added features of scan/mute level and high-blend add only six parts. Mute levels are clearly marked on the circuit board if you wish to lower the factory settings to take advantage of the tuner's excellent effective stereo sensitivity. I did, by about 10%.

Specifications

Philips has chosen to use a rather narrow bandwidth in the FT-565. This restriction yields distortion figures of 0.8% THD in stereo. Most audible effects of this distortion are canceled when using the high-blend because they consist of out-of-phase high-frequency components. On the plus side, 10dB adjacent-channel selectivity is better than the usual 4dB for warding off splatter with a medium-strength station next to a stronger. 40dB is ideal for reception of a weak station next to a stronger one. However, a directional antenna yielded a surprising number of stations with the FT-565. Image rejection is also good at 80dB. This aids in receiving only the desired dial frequency and helps reject interference from cable, TV

signals, and computer clock radiation. All other specifications are typical of medium-grade tuners, with the exception of 19, 38, and 67kHz rejection. -35dB is not sufficient to avoid adding high-frequency IM to the distortion caused by the restricted IF bandwidth, nor is -40dB SCA rejection adequate for removing SCA birdies during quiet passages. Fortunately, using the high-blend helps here too, although some stereo separation is traded off.

FM Audio Quality

If you're familiar with the masking quality of the Quad 34 preamp—not necessarily bad, but smoothing off the rough edges—this also describes the audio of the FT-565. It is not accurate, but pleasing, on stations that normally transmit extra grit and nasties—and plenty do. Bass response is +1dB from 50–250Hz, with a rapid rolloff. This mild boost creates extra warmth and heft on rock, but the FT-565 lacks the dynamic bass wallop delivered by the JVC FX 1100, Quad FM-4, and Bogen TP-100. Midrange is only slightly over-smoothed. Treble is not dull, but lacks the fine tinges and sheen found on really good FM. The tuner's positive audio attributes are its excellent stereo separation (53dB) and effective high-blend. Combined, they maintain good stereo effect while allowing quiet reception of stations in stereo with as low as 20uV/31dBf, which are normally mono candidates. Mono sum material is not as prominently centered as on the JVC FX-1100 or the latest-production Magnum FT-101. Overall, though, I don't want to give the impression that the FT-565 sounds poor; it's just colored, most often in the direction needed. On stations that have accurate audio, the Luxman T-117 is a better choice.

AM Section

AM Sensitivity is given as 500uV/m. However, it is a typical 300uV/m. There is less distortion

on weak and medium-strength stations, but strong stations are very distorted, indicating poor AGC. Further comment is not deserved.

Conclusion

The world's largest electronics firm should be able to manufacture super-grade components and have the marketing savvy to reenter the US market with a bang, using accepted quality European-based items. Instead, the label Made In Japan, in my opinion, means that Philips offers nothing special to the buyer who wouldn't mind paying for that extra bit of quality. This is not to say Japanese components lack quality, but that a non-European label does not fit the company's image.

In comparison with the best buy at this time, the Nikko NT-950 (Vol.10 No.6, \$269), the FT-565 is a mixed bag. The NT-950 has the advantage of dual IF bandwidth and good AM on late-production units. On the flip side, the FT-565 has a more effective high-blend and should not be overlooked as a low-cost possibility.

Postscript

At the 1988 Summer CES, several readers mentioned that clarification is needed as to what tuner is best. Current findings indicate the Onkyo T-9090 II and the Denon TU-800 as the only choices where good adjacent-channel reception and sound are needed. If you can live with slightly less selectivity, the Luxman T-117 or T-02 and the JVC TX-1100 offer slightly better sound. In the lower-cost category, the Nikko NT and Arcam Alpha are good bets. The Magnum tuners are being reevaluated, and there are 10 newly released tuners to be reviewed. As a result, there will be a new list of winners and losers. I'm still amazed how well my 11-year-old Sansui TU-9900 fares against the best. It usually wins. A new Adcom prototype is also shaping up as a potential best buy, and holds up well against the Sansui. **S**

FOLLOW UP

PS Audio 4.6

I suspected that my review of the PS Audio 4.6 (and also that of the Sumo Athena, both in September 1988) would cause some controversy. PS Audio's Paul McGowan made some valid points in his response, one of them a reaction

to a possible lack of clarity on my part, two others indicating possible philosophical differences between us on the relative benefits of passive stages.

When I discussed the on/off surges of the 4.6, I was *not* referring to normal operation.

The front-panel Off switch, since it merely disconnects the preamp's outputs and does not shut off power to the unit, cannot cause any such surges, and I do not believe I implied that it did. What *will* cause a surge is an actual power interruption, either owner-inflicted or as a gift from the local power company. The latter is unusually generous in my area, so we get a lot of free presents—usually brief and usually when no one is home. So I may be particularly sensitive to the problem. Possible system damage from on/off surges thereby generated in the 4.6 may be eliminated by disconnecting the preamp outputs when not in use—accomplished easily in the PS by selecting "Off."

The best discussion I have seen to date of the interfacing of a passive preamp with the rest of the system is in a Ben Duncan article, "Passive Activity," in the August 1988 *Hi-Fi News & Record Review*. (See also a similar but abbreviated discussion in his DIY article in the February 1988 *Stereophile*, and my further comments in a review of the QED Passive Control Center in this issue.) I chose to emphasize in my reviews of the PS and Sumo preamps the situation I *know* will be compatible with virtually *any* user's system—line stage in-circuit. I have no argument with using bypass when system matching makes this possible. But readers should not assume, when the "line-amp" and "bypass" modes sound different, that "bypass" is, by definition and *ipso facto*, automatically "right." It ain't necessarily so.

Sumo's reaction to my use of the Dynavec-tor 17D was predictably stronger than PS's. The explanation as to why I selected this pickup was more detailed in the review of the PS 4.6, and Sumo only received a pre-publication copy of the Athena review. The 17D, a (not unexpectedly) controversial choice, was *not*, as I have stated, my reference pickup. But I still feel it to be fully competitive with low-output moving-coils likely to be used with budget preamps. That is *not* the same as saying that a more recent, near state-of-the-art cartridge would be wasted in such an application. It's merely an economic fact of life. More to the point, the 17D was extensively auditioned through the Klyne SK-5a to ensure its suitability for this evaluation. I do not like to use a pickup for a preamp review unless I am convinced that its (uncompensated) response is relatively neutral, certainly not if I have a choice. I particularly like to stay away from a

moving-coil cartridge with a clearly rising high-frequency response. I admit this eliminates many otherwise good performers as references. An audiophile can choose such a cartridge because it is synergistic with his or her system and end up with an excellent overall balance! A reviewer, who must use a reference component with a wide variety of products under evaluation, cannot afford this luxury. I hope to have more to say on the subject of pickup cartridges—the good, the bad, and the unflat—in a survey review in the near future.

—TJN

AVA Super-PAS preamplifier

If you remember my review of the Van Alstine Dynaco PAS tube preamplifier modification in the October issue, I was puzzled by a measured anomaly in the frequency response of its phono section. Using a spot-sinewave technique gave the response shown in fig.1, with an apparent low-bass boost, whereas using pink noise and a one-third octave analyzer gave the rather LF-shy response in fig.2. Both responses were taken with the signal sources identically buffered from the inverse-RIAA network, so the possibility of different interactions between the two generators and the network was removed.

I conjectured at the time—too briefly, in retrospect—that the voltage gain from a circuit using two cascaded 12AX7 tubes—between 70dB and 80dB, greater for the premium 5751 tubes—was barely sufficient for the need both to provide 40dB stage gain and to accomplish the RIAA equalization, which applies 39dB more gain at 20Hz than at 20kHz. In effect, there's not enough loop gain in the very low bass to enable the circuit to be fully linearized by negative feedback; this might correlate with the differences between the two measured responses. It would also lead, I said, to a greater than usual dependence of the phono-stage sound quality on the cartridge used and a sensitivity to low-frequency overload.

A recent letter from Stanley Lipshitz, of the Audio Research Group at the University of Waterloo in Ontario, pointed out that the different measurements thrown up by the two techniques were not, in fact, as unusual as I had described, the basic non-linearity of the cir-

¹ But note JGH's frequent comments on the problems this may cause in properly reproducing more spectrally flat program sources, especially CD.

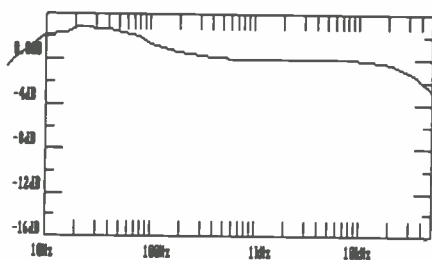


Fig. 1: Super-PAS RIAA error, spot-sine-wave technique (2dB/div.).

cuit at low frequencies being to blame. Unlike a linear circuit—which, of course, is what all amplifiers are supposed to be—which will measure the same no matter what method is used, the non-linear circuit *will* change its behavior according to the excitation, explained Stanley, and he pointed out that the lack of subjective and objective correlation which had puzzled me was “a consequence of improper test controls and not . . . due to the scientific method of our measurements being unable to explain what we hear.”

Hanging my head, I still feel, however, that my argument does have some validity; that without more data, it is hard to predict which of the responses measured actually correlates with the Super-PAS's sound quality. (It is, in fact, the thin-sounding fig.2; for those who “know” that reviewers hear what they measure, it was the discrepancy between the response shown in fig.1 and the sound that led me to investigate further.) But even before receiving Stanley's letter, I had been worrying about the Van Alstine preamp's LF performance and had carried out some additional tests. The first was due to my worry that the pink noise source, with its high crest factor (peak-to-mean ratio) compared with the pure tone, was clipping the phono stage, resulting in the apparent measured bass roll-off. With the 10mV input level used, a crest factor of 20dB would cause waveform clipping at low frequencies. Repeating the measurement with the pink noise source replaced by third-octave warble tones, which have a much lower peak-to-mean ratio, and at the same average level, to my surprise gave the same result. This reinforces the notion that it is the spot-sine-wave measurement which fails to correlate with the sound quality and lowers the possibility of *gross* non-linearity being to blame for the measured response. The fact that the measured response is extremely sensitive to level, however, lowering the input

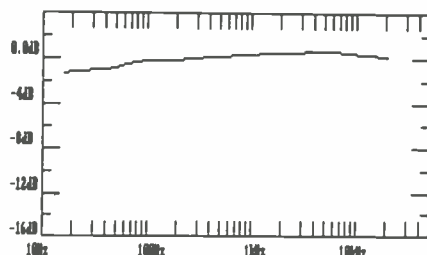


Fig. 2: Super-PAS RIAA error, 1/3-octave pink noise (2dB/div.).

signal to 5mV giving a spot-sine-wave response identical to fig.2, does suggest that Stanley Lipshitz's criticism has some validity. The bump in fig.1's low bass is presumably due to the addition of distortion products produced at the particular input level.

A more important point made by Stanley, in that it reveals a potential compatibility problem, was that with the Super-PAS effectively running open-loop at low frequencies, it is likely that with “typically underdamped arm-cartridge systems having resonance frequencies below 10Hz, a phono preamp like this will always be driven into non-linearity by low-frequency warp excitation.”

This is a serious point: if this is indeed the case, then I would have expected the sound from the PAS consistently to be very much worse than I had experienced, particularly as the PAS, like pretty much every other preamplifier, lacks any infrasonic filtering ahead of its phono stage. I therefore did some further investigation into the circuit's behavior at low frequencies. Using a 20Hz sine-wave signal injected straight into the circuit without any RIAA pre-emphasis—my understanding is that it is the low-frequency content of the *raw* signal off-disc which will be the problem—and looking at the signal from the tape-out sockets with a ‘scope, the waveform shape at input levels up to and around 25mV was good.¹ It wasn't until the 20Hz level was increased to around 75mV that the sine-wave shape began to lose its symmetrical purity, showing obvious added second-harmonic content. Increasing the input level to 120mV just drove the positive-going half-cycle into clipping, while the negative-going remained gently rounded. This last level must only be considered approx-

¹ It would have been better to get an idea of the circuit's departure from linearity with a distortion meter or spectrum analyzer, but unfortunately I didn't have access to one at the time of doing these tests.

imate, as the circuit gain appears to reduce when first clipped, the waveform "bouncing," then rounding off slightly. Only when hard-clipped do the square corners remain square.

Replacing the 20Hz tone with 10Hz gave a similar progression, but with lower levels: 10mV, 40mV, and 75mV respectively. Reducing the input frequency to 6Hz, the frequency at which warp signals will have their maximum amplitude, revealed even lower headroom: a clean waveshape at 10mV, but noticeable asymmetry at 25mV and initial clipping of the positive half-cycle at 40mV. For comparison, a typical op-amp or transistor-based phono stage retains its waveform purity until it runs out of voltage swing, when it suddenly hard-clips and squares the waveform peaks. Sometimes, hard-clipping also introduces DC shifts and/or violent swings between the voltage rails every cycle. In this context, the effect on sound quality of the Super-PAS's ultimate non-linearity would seem relatively benign. (Though it would still be expected that the rest of the music spectrum would be intermodulated by the non-linearity.)

But, of course, this is only relevant if the phono stage *is* being driven into overload by high-amplitude LF signals from LP warps. Looking at the raw output from my Linn player (Sondek/Ittok/Troika) on the 'scope (DC mode) and eyeballing the noise from an unmodulated groove on a test record showed that the infrasonic content was approximately 14dB below a reference 1kHz tone laterally cut at 5cm/s; *ie*, a level of around 1.0mV peak-peak when amplified by the 20dB gain of the *HFN/RR* Black Head transformer I used for the review. (If this seems very low, remember that the Super-PAS's RIAA equalization, which doesn't have any high-pass filtering action at very low frequencies, will amplify this by approximately an additional 24dB compared with the 1kHz tone.) Even the worst LP in my collection only gave a peak-peak warp signal 10 times as large. As these warp signals off-disc are well below the level at the input where a 6Hz signal becomes visibly distorted, I am reassured that my review findings on the preamp's sound quality are well-founded, and not due to my liking the sound of a circuit driven into gross non-linearity.

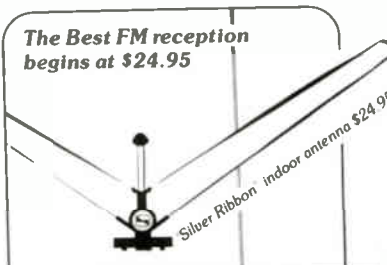
Does this mean that Stanley is wrong? Not at all. (The day Stanley Lipshitz is found to be in error is the same day that a hi-fi system is

found to sound identical to live music!) Rather, it shows that with a well-balanced tonearm/cartridge combination, the placement of its low-frequency resonance in the 10-13Hz region, combined with good LF damping, will give sufficient rejection of disc warp information that the Super-PAS phono stage will not be overdriven. But if arm and cartridge *are* mismatched, then Stanley's warning will be only too true, to the detriment of the sound.

I reinforce the statement made in my original review: users of the AVA Super-PAS will have to be very careful about choice of tonearm and cartridge. If the fundamental resonance is too low—as will be the case with a very-high-compliance pickup (a Shure or Stanton) used in a conventional medium-mass arm, or a medium-compliance cartridge used in a high-mass arm (such as the Fidelity Research FR series, the Eminent Technology 2, or the Maplenoll)—or if the cartridge has insufficient suspension damping at low frequencies (the inexpensive Grados, in particular, have this characteristic), then the Super-PAS will sound not nearly as good as it should. Take your dealer's, or even Frank Van Alstine's, advice on suitable LP-player combinations.

The AVA Super-PAS modification remains strongly recommended. —JA

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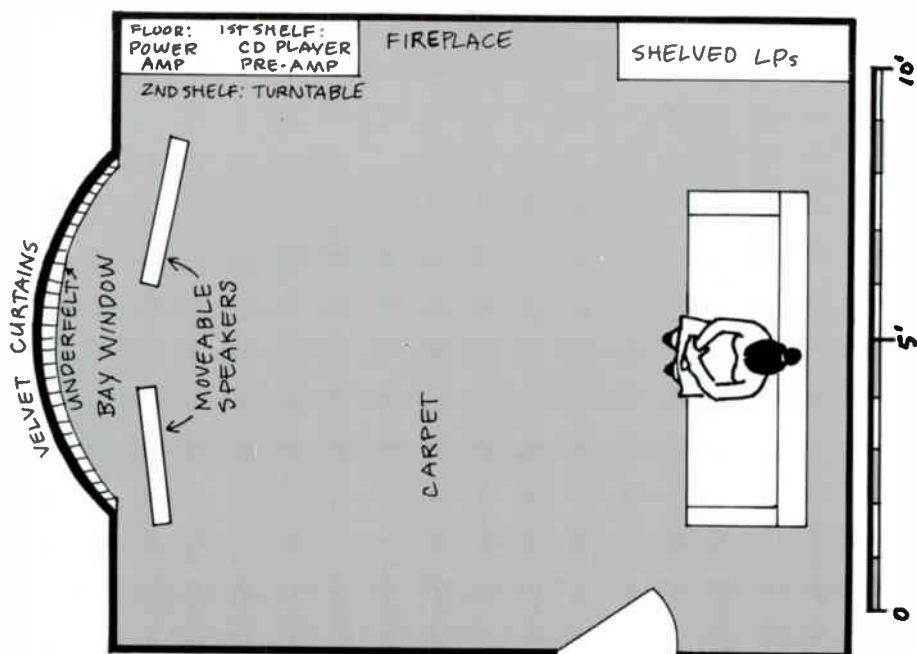
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A MATTER OF TASTE



BARBARA JAHN

My taste in music is really quite wide, thanks to the availability of a record lending library in my home town of Camberwell, in London, England, during my formative teenage years. I would stagger home each week clutching a motley assortment of LPs, the "prizes" being the new, as yet untainted, acquisitions—nothing more musically complex than that! At the time, I realize now, I had a special interest in twentieth-century music; nothing was too frightening or too complex to grasp, for almost everything I tried—from Guillaume de Machaut to Charles Ives—was new to me. The music I decided I couldn't

live without, following these visits, I bought for myself: Verdi's *Requiem*, Britten's *Church Parables*, Elgar's *Symphony 1*, Brahms's *Piano Concerto 1*, and Messiaen's *Turangalila Symphony* were among them.

I was slow to absorb chamber music then, but it is now my most treasured listening experience, thanks to a music-degree course in Cardiff which provided free weekly concerts of live chamber music given by the University's own ensemble. During those impecunious years my record collection grew very little, although a stall holder in the indoor market in Cardiff yielded an Aladdin's Cave of second-

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hand goodies that I, more often than not, had to learn to live without. Even so, Mahler 10 (Ormandy/Philadelphia), the complete Beethoven String Quartets (Amadeus), and the Mozart *Requiem* (Barenboim/ECO) were somehow afforded (thanks to a diet of beans on toast for weeks on end), and still remain firm favorites to this day (as do the beans). The University also ran an annual Twentieth-Century Music Festival, which lasted for two weeks and burned all the brighter for the presence of such luminaries as Messiaen, Britten, Tippett, Rostropovich, and Peter Pears. There I had the good fortune to experience a lot of excellent live music, but since then my attendance at concerts has become (comparatively) limited by family demands, evenings giving piano lessons, and the inevitable hours spent in front of the hi-fi, reviewing. These are somehow cast aside when the possibility of a chamber-music concert presents itself, and of late I have been able to go to more orchestral concerts, too. I hope this trend will continue.

I use two hi-fi systems, one for general listening (which includes tuner and cassette deck), and one that has the particular qualities needed for reviewing: analytical detail and consistency. I rarely change the components of the second system (financial considerations do play a part), and while I would be the first to admit that there may be better pieces of equipment on the market now, I know and can "listen through" the inadequacies of my own system as a result of this consistency. So, at present, I use old-style Quad electrostatic speakers (although I'd love the new ESLs as well, I'm not convinced that they are better, just different), Quad 303 power amp and 34 preamp, a heavily modified Thorens TD 160B deck and SME IIIS arm with damper-trough, at the moment carrying a Shure M97HE cartridge. Although I have tried a wide variety of cartridges, I have returned time and again to the Shure because of its ability to track almost anything and the clarity of the image it produces—none of the up-market cartridges seem to suit my particular system and listening environment quite so well. A Marantz 65 Mk.II CD player completes the system. (When will *Stereophile* get 'round to sending me my complimentary Accuphase DP-80/DC-81???)

Given the small size of my listening room, it has proved surprisingly efficient at bringing out the best qualities of this system, after having car-

pet underlay attached to the wall behind the speakers to mop up excess rearward resonances.

When time permits, the works I most often listen to (as well as those already mentioned) are the Mahler symphonies, anything by Richard Strauss, Brahms, Prokofiev, and Stravinsky, and my latest discovery, the Campra *Requiem*. The "super" discs I use as sonic references and which also offer fine performance are, perversely, totally different:

- *There is Sweet Music—English Choral Songs, 1890-1950*. John Rutter, Cambridge Singers (Collegium COLCD 104, CD; COL 104, LP). All parameters of this recording are superbly balanced on both LP and CD formats—a delight.
- Bax: Symphony 2, *Nympholept*. Bryden Thomson, LPO (Chandos ABRD 1203, LP). Enormously complex orchestral textures are elucidated without loss of warmth or atmosphere.
- Bruckner: Motets. Matthew Best, Corydon Singers (Hyperion CDA 66062, CD). In the wonderfully atmospheric acoustic of the church venue used here, it is awe-inspiring to experience the wide dynamic spectrum of these performances.
- Poulenc: *Le Bal Masque, Le Bestiaire*, Sextet, Trio. Thomas Allen, The Nash Ensemble (CRD 3437, CD). A crisp, fresh, and lucid recording, with exact placing of all instruments and voices on the soundstage.
- Liszt: *Via Crucis*. Reinbert de Leeuw, Piano, Netherlands Chamber Choir (Philips 416 649-1, LP). The spiritual ethos and meditative repose of this work are heightened by the warmth and intimacy of the acoustic.
- Villa-Lobos: Preludes & Etudes; Ginastera: Sonata. Eduardo Fernandez, guitar (London 414 616-2, CD). All the modes of attack and beauty of rhythm and phrasing that make these performances so communicative are realized with intimate and exciting immediacy.
- Paul Simon: *Graceland* (Warner Bros. 25447-2, CD). Wonderfully original sounds captured with a sensitive recognition of their freshness by the recording engineers.
- Berg: 3 Orchestral Pieces; Webern: 6 pieces for Orchestra; Schoenberg: 5 Orchestral Pieces. James Levine, BPO (DG 419 781-1, LP). Focusing of pinpoint accuracy, and excellent timbral reproduction of these colorful scores.
- Bach: Goldberg Variations. Kenneth Gilbert (Harmonia Mundi HMC 90.1240, CD). Great

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- Lloyd: Symphony 7. George Lloyd, BBC Philharmonic Orchestra (Conifer CDCF 143, CD). To retain the depth of soundstage and inner textural clarity in these stunning climaxes is a test of any system.

- Beethoven: Symphonies 2 & 8. Roger Norrington, London Classical Players (EMI CDC 47698-2, CD). Such detail, made all the more obvious by this much reduced orchestra of original instruments, brings new vistas to these works.

- Beethoven: Symphony 9. Roger Norrington, LCP, Schutz Choir (EMI CDC 749 2212, CD; EL 49221-1, LP). Slightly raw-edged, but these authentic sounds *are* abrasive, and have been captured with great precision and bite.

- Poulenc: Piano Works. Pascal Roge (London 417 438-2, CD). A well-focused image, and beautiful inner balance.

- Brahms: Lieder. Jessye Norman, Daniel Barenboim (DG 413 311-2, CD). An intimate presence created by tight focusing of performers and instrument.

- Liszt: Lieder. Hildegard Behrens, Cord Bar-

ben (DG 419 240-2, CD). Sensitive balance of artists, fine presence, and lucid voicing.

- Tchaikovsky: *Romeo & Juliet*, *Nutcracker* Suite. Lorin Maazel, Cleveland Orchestra (Telarc 80068, LP). The sparkling virtuosity of these performances is matched by the precision and warmth of the recording.

- Rachmaninov: Cello Sonata, *Vocalise*; Sibelius: *Malinconia*; Dvorak: *Polonaise*. Heinrich Schiff, Elisabeth Leonskaja (Philips 412 732-2, CD). A sensitive balance of these performers in a "natural" acoustic makes this easy listening.

- *Die schoensten deutschen Kinder und Wiegenlieder*. Lucia Popp, Reinhard Seifried, Instrumental ensemble (Orfeo S 078831 B, CD). Approaching an artificial brilliance and sweetness, but just right for the music.

- Alwyn: *Miss Julie*. Jill Gomez, Benjamin Luxon, etc., Vilem Tausky, Philharmonia Orchestra (Lyrita SRCS 121&2, 2 LPs). Good movement around the soundstage highlights this searing drama.

- Paul Simon: *Hearts & Bones* (Warner Bros. 23942-2, CD). Warm but vivid images, dynamically reproduced. **S**

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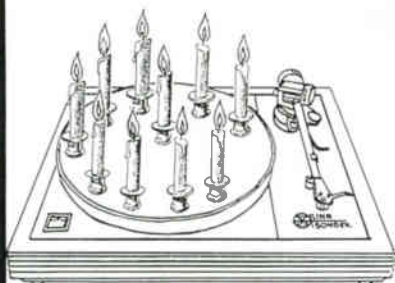
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Michael Tilson Thomas

Christopher Breunig

This season, Michael Tilson Thomas takes up the reins as Principal Conductor of the London Symphony Orchestra, and the first concerts have had a sense of occasion that (so routine is the average London offering) was beginning to look like the sole prerogative of young Simon Rattle bringing his City of Birmingham SO to the capital.

A popularizer, a communicator, Tilson Thomas nevertheless expects audiences to grasp the purpose of his programs. Happily, and inevitably, recordings go hand in hand with the concerts: he has a big existing discography with CBS, involving three of the London orchestras, besides the Cleveland, Buffalo, Los Angeles, New York, Concertgebouw, and Bavarian



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Radio Orchestras. The first DG recordings from Michael, at 26, showed the diversity of what was to follow: Tchaikovsky's least played Symphony, "Winter Dreams," Stravinsky's rare cantata *King of the Stars*, Debussy chamber works, Piston, Ruggles and Ives, etc.

His grandparents founded the Yiddish Theater in America and his parents were in the movie business. But, living in Hollywood, they had become disillusioned with the prevailing standards. "Do something that's more in tune with this time," they implored. Michael was good at science and mathematics, but the pull to music was strong. He made a promise that, if nothing seemed to come from his music studies at the University of Southern California by the time he reached 20, he would study science again.

But with a call from Piatigorsky on his 20th birthday, telling him that he was to be conductor of the LA Young Musicians Foundation Orchestra, there were no further doubts. His parents were relieved that he wasn't taking up the theater, and thought music was "more respectable, more academic," yet this was "a complete mistake, because music *is* a side of show business!" In 1968 he won the Koussevitzky Prize; the following year he became assistant conductor at Boston. He stayed with them until '74. From '71-'79 he was music director at Buffalo; and it says much for the long-term view taken by CBS that they recorded Tilson Thomas and the Buffalo Philharmonic in the entire corpus of one of America's "most enigmatic, granitic composers," Carl Ruggles.

Ives, too, figures large in Tilson Thomas's repertory. He sees him as a romantic symphonist, yet "there is so much that is paradoxical. He relies on you to find your own convoluted path through the text." The recording project to complete the Symphonies involved, at first, the Amsterdam Concertgebouw, which he considered ideal with their golden, warm sound. With the "more hard-edge, proclamatory, and rhythmic pieces" he is working with the Chicago SO.

Recently released is a coupling of the *New England Holidays* Symphony, with its hazy, numbed—until the convergence of the military bands—beautiful second movement "Decoration Day"; two versions of *The Unanswered Question* (the later scoring more dissonant in changed woodwind/trumpet parts);

and *Central Park in the Dark* (CBS 42381: all three formats available). Producer Steven Epstein has given the music a spacious, atmospheric (the beginning of *Central Park* is so extraordinarily like the "night music" writing in Bartok's Piano Concertos 2, 3), and generously scaled quality, with some fantastic "slam." Perhaps his use of slight defocus will irritate some, but in terms of weight this is impressive, and the impressionistic style is certainly apt to Ives's waywardness.

It is in this kind of complex, modern music that Tilson Thomas remains most convincing: rather than in, say, Beethoven. (I agree with every word of Mortimer Frank's Vol. 11 No. 10 review of the St. Luke's "Eroica.") I also hear a certain elegance in the Ives CD, even where the textures are most dense and rowdy. And this I find very characteristic.

From an early age he loved complicated, dissonant music. Other children were playing nice-sounding pieces "and I'd come crashing in with Bartok, or Henry Cowell, for instance." As a young professional musician he found Boulez, Stockhausen, and Stravinsky came more easily than the classical scores. "But now I am reconciled to C major!"

Tilson Thomas still has that boyish quality, caught in the Hirschfeld cartoon on the cover of the famous Gershwin record, where the composer's own 1925 piano roll of *Rhapsody in Blue* is synchronized with accompaniment from the Columbia Jazz Band. (In one of a series of Gershwin discs, polished and urbane, Tilson Thomas went on to record the solo part himself, directing the LAPO from the keyboard.) But the new photographic portraits by Carol Friedman also convey a new, more mature and responsible artist. In the studio, where there is no audience, the rostrum manner is conservative. I watched the LSO recording Mahler's Third Symphony, with a demanding sequence of takes required to perfect the distant posthorn solo in the third movement. To catch every nuance, Michael asked for a headphone feed from the trumpeter's mic. You might think he would have taken the easier option of dubbing in, but no.

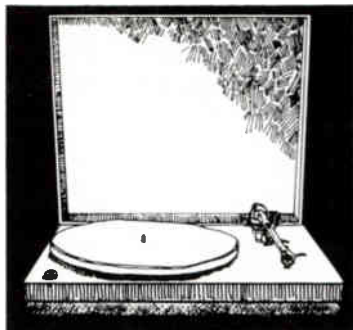
Even more striking than the Third was a concert performance of the Ninth, where the conventional grim view of the first movement was replaced by a novel concept akin to a hymn to life challenged by dark, tragic forces. The rapid final movement must have been a high point



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in the musical experience of anyone present there: I hope they capture some of that freshness on records.

What he says he admires in the LSO is "a very distinct, virtuoso rhythmic-drive approach to music. They can do anything, and the more to the point you can be, the greater the precision with which they'll follow." Coming after a Principal Conductor with a more austere, distant reputation (Claudio Abbado), Tilson Thomas may recreate something of the warmth felt toward this orchestra when Previn directed them. Like Previn, Tilson Thomas has considerable television experience, especially in presenting music to children. From '71-'77 he directed the NYPO *Young People's Concerts*, with what Bernstein called "a blinding but lovable brilliance." For BBC Television he has made a virtuoso film with the LSO, presenting an analysis and complete performance of Strauss's *Till Eulenspiegel*, with keyboard and orchestral illustrations.

Inevitably there are comparisons with Bernstein: there were parallels in their academic studies; both profited from the sudden indisposition of an older maestro (respectively Bruno Walter and William Steinberg), taking over concerts at short notice; both revel in modern American music, and in the symphonies of Mahler. And both conductors have balletic rostrum styles that please the public. Michael has a graceful clutch of gestures (especially with the feet!) which, over the months, have grown in relevance to what the music is doing. I am not the only one to observe that, a year ago, there seemed times when the mannerisms didn't really connect with anything.

Tilson Thomas will record the Mahler works slowly, as he builds his interpretations with the Orchestra. He does feel an affinity with all the completed symphonies. Interestingly, he cites Jascha Horenstein's LSO Mahler 3 as influential. That version has just been transferred to two midpriced CDs on Unicorn-Kanchana. (But you shouldn't replace analog LP originals, if you have quiet copies.) To be frank, the new CBS version (M2K 44553, with the *Ruckert Lieder*) is overshadowed by Maazel's VPO Third. And I don't think the reading is at all helped by producer David Mottley's (long-standing) tendency to highlight brass entries, to pull the textures apart so. In concert, the mezzo-soprano was Jard van Nes; presumably because she hasn't yet got a "name," Janet

Baker replaces her in the CBS recording. And while stretches of the Nietzsche setting are movingly done, at one point the take is edited (it must be) to a sequence of gravely-toned singing with an unwelcome wide beat in the voice.

It is, like the Beethoven, all rather lightweight: clean, intelligent, musical, and transparently balanced as always with this conductor. But something is missing here, too.

Tilson Thomas can make you listen anew to composers and works you might have thought second-rate. In concert he conducted Rimsky-Korsakov's *Russian Easter Festival Overture*: a performance as colorful, as precision-formed as a Faberge egg. He will be turning to more Russian music—few conductors have been as enjoyable in Tchaikovsky's sweeter music, the Suites, or the *Nutcracker*, for instance.

His immediate projects with the LSO and CBS are the Richard Strauss tone poems, Ravel's orchestral pieces, and Copland ballets. The Russian emigre pianist Vladimir Feltsman—canceling his London public debut—nevertheless was able to attend sessions for Prokofiev's Concertos 1 and 2. The concert stand-in, Mikhail Rudy, was outstanding in the Brahms-scaled Prokofiev G-minor; I am told Feltsman was even more powerful. There is also a Weill disc, with Migenes and others, of *The Seven Deadly Sins* and *Little Threepenny Music*. From an excerpt track I have heard, this promises something excitingly different.

At the time of writing, the LSO is without a permanent leader: the pressures of the job have driven Michael Davies to the saner pastures of Manchester and the Halle. Will Tilson Thomas inspire a new loyalty by working closely with the Orchestra (where Abbado disappointed them by taking his more prestigious recording work to Chicago and Vienna)? And if the London Philharmonic secures Zubin Mehta, as widely forecast, will the two Orchestras again vie for patronage? There's no substitute for a proper working partnership, where a conductor minimizes guest appearances and rejects simultaneous directorships.

Michael Tilson Thomas is intelligent, astute; he's no longer giving the slick-mannered, showy readings of a decade or so back. Given his special interests—contemporary and early 20th-century American works, 19th-century Russian music—a base in London could enrich all our lives.

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RECORD REVIEWS



A CHILD IS BORN: Christmas at the National Shrine
The Choir of the National Shrine of the Immaculate Con-
ception; Leo Nestor, music director; Robert Grogan,
organ

VQR Digital VQR 2021 (CD only). Robert A. Vogt, prod.
& eng. DDD. TT: 70:41

This is the least hackneyed, best produced selection for Christmas I have come across. That is not, however, to say that it will be to everyone's taste. The program is a bit too unfamiliar, the music and arrangements a bit too sophisticated for people who are usually satisfied with the Mormon Tabernacle Choir's rendition of "God rest ye merry gentlemen."

Herein the listener will find Christmas music from around the world, 500 years' worth, very little of it routine, in a variety of languages, some of it arranged in a very modern idiom. Many of the selections are ancient but few are performed harmonically as written (the Palestrina Antiphon and Charpentier carol are exceptions); most have been arranged by the Choir's music director, Leo Nestor, and others. The results are occasionally jarring, but invariably interesting. This is a musical experience rather than a let's-put-it-on-the-old-player-and-hum-along experience, and it's very welcome. (And just when you think they've modernized you out, comes a perfectly lush "The First Noel.") My recommendation is that this disc *not* be listened to in one sitting—it's too much sheer music for that.

The performances and recording are near-perfect: the choir is topnotch (although a tenor or two more would be welcomed), and so is

the organ playing, which is far more than mere accompaniment. A full, unidentified brass section joins the forces for the final Trilogy, and they, too, are splendid. The recording is dazzling—full, rich, and clear at all dynamic levels, with all the voices (and inner voices in some of these complicated settings) distinguishable, and the organ precisely prominent. Highly recommended for discerning, adventurous tastes.

—Robert Levine

GERMAN CHRISTMAS MUSIC OF THE HIGH RENAISSANCE

Works of Praetorius, Gesius, Eccard, Walter, Reussner, Gumpelzhaimer, Schlick
Elly Ameling, soprano; Hans-Martin Linde, baritone;
Walter Gerwig, lute; others
Musical Heritage OR 320 (LP, nla). AAA. TT: 43:48

It's an unconscionable tease, I know, to write rave reviews of out-of-print recordings, but I do so here in hopes that the Musical Heritage Society will re-release this superb collection of German Christmas music from the late 15th through early 17th centuries. Michael Praetorius, the most familiar name here, also wrote the most familiar tunes: "In dulci jubilo," whose melody we still sing as "Good Christian men, rejoice," and "Es ist ein Ros entsprungen" ("There is a rose, e'er blooming"). But every setting is a delight: Johann Walter, Martin Luther's friend and collaborator, in "Gelobet seist du, Jesu Christ," shows the same gift for simple, inevitable, foursquare chorales as in his more famous "Ein feste Burg," and Arnolt Schlick's "Maria zart" closes the album with almost unbearable poignancy. (There's also a

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solo lute setting of Adam Gumpelzhaimer's "Vom Himmel hoch da komm ich her," tenderly rendered by Walter Gerwig, that comes at just the right moment in this primarily vocal collection.) The five voices blend impeccably, and on "Maria zart" Elly Ameling gives a selfless, soulful performance of such spirituality and purity that all of her other recordings pale before it. The sound is rich, cozily warm, befitting the season, the lute solo a remarkable blend of intimacy and natural reverberance.

This has been my favorite Christmas album for many years, but it wasn't until recently, when asked to name my favorite single recording of *any* kind, that I realized that I listen to this record more than any other of the thousands I own. What more can I say, except to badger you into badgering MHS into re-releasing this magnificent music as a Christmas present to us all.

—Richard Lehnert

MAKE WE JOY: Christmas Music by Holst and Walton

Christ Church Cathedral Choir, Stephen Dartington, dir.; Simon Lawford, organ
Nimbus NI 5098 (CD only). DDD. TT: 49:31

This is a fascinating release. Neither Gustav Holst nor William Walton was a stranger to choral music—the former was leading choirs and choral societies by the time he reached his 18th birthday, and the latter had composed his first choral work by the age of 12. To my ears, Holst is the more imaginative and accessible (an odd combination, I realize) composer of Christmas music, but Walton's work is not to be sneered at.

All of the selections on this not-very-generous CD (or perhaps this is the entire output of each composer) are worth hearing—many of them often. "In the bleak midwinter," Holst's setting of Christina Rossetti's poem, is lovely and direct—it stays with the listener long after it's over. The "Antiphon" (to words by George Herbert) is a complicated but rewarding work, with anti-rhythmic organ interruptions breaking into the difficult harmonic choral fabric. (Though attributed to Holst in the contents listing, I believe the work is Walton's.) I wish the organ had been recorded a bit more prominently here (it is elsewhere)—it would have jarred even more dramatically and the final, consonant, E-major chord would have been all the more welcome. Holst's "Nunc dimittis" sounds, at times, like pure 14th century; at

others we are strongly reminded that it is by a 20th-century composer. The voices are a bit closely miked in this selection, giving us more sibilants than we need, but this is a minor quibble.

Other highlights are Walton's "Jubilare Deo," with its bobbing rhythms, ebullient opening, and introspective middle section, and his "All this time," which makes excellent use of the three types of voices at his disposal.

The performances are first-rate, with the 29 singers well-disciplined and full of the right combination of reverence and verve. The sound is bright and forward, and, the two criticisms mentioned above aside, just about ideal. A classical, modern Christmas, this—and recommended in any season.

—Robert Levine

THYS YOOL: A Medieval Christmas

Martin Best Medieval Ensemble
Nimbus NI 5137 (CD only). DDD. TT: 64:07

Ordinarily, as is right and proper, I do my review listening alone, asking opinions of others only after my own conclusions are more or less fully decided. This was something of an exception: because of the need to finish this piece in time for it to be published before Christmas, I did some listening with a friend and fellow medievalist. I don't know whether recordings (unlike bulky equipment) have a Significant Other Acceptance Factor, but this one certainly seemed to. "Isn't it beautiful?" commented the lady. I had perforce to agree. This is not the usual collection of familiar carols and catches, but a carefully chosen program of music appropriate to the season. You may recognize one or two of the selections, but most of them will have the virtue of freshness. Martin Best has wisely decided to bring in three additional voices to supplement his own pleasant but limited tenor; the result is as fine a presentation in this vein as we are likely to get.

The notes to this CD state, "Recorded at Wyastone Leys, Monmouth." This is Nimbus's corporate headquarters, and it appears to contain a marvelous reverberant hall which is perfectly captured here, without overly blurring instrumental timbre. I would still like to hear some of these recordings in a true Ambisonic system (for which all Nimbus releases are encoded), but even in plain old stereo, this will do quite nicely for a winter evening. Several evenings, in fact.

—Les Berkley

Classical

J.S. BACH: *Mattbauss-Passion*

Hans Peter Blochwitz, Evangelist; Olaf Bar, Christus; Kiri

Te Kanawa, Anne Sofie von Otter, Anthony Rolfe Johnson, Tom Krause, soloists; Chicago Symphony Orchestra & Chorus, Georg Solti



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I must admit to having approached this release with the same *joie de vivre* I would approach getting into an elevator which has a history of getting stuck. It isn't only that I genuinely have come to like—and prefer—the reduced forces and “original” instruments performances of Baroque music. I had also recently heard Philippe Herreweghe's reading of this great work on Harmonia Mundi (HMC 90.1155/57), and the absolute drama and beauty of it had knocked me for a loop, reduced forces or no. I had no idea what Solti, never known for his daintiness, would do with such a work. As it turned out, although this will not become my favorite *St. Matthew Passion* on discs, it makes quite a case for itself and presents the work with great understanding.

Solti uses between 30 and 40 instrumentalists playing on modern instruments, and a chorus of 80. I would argue only with the size of the chorus—not the quality. In fact, their ability to sing at a whisper for long stretches, their absolute conviction and unity of purpose, is something to marvel at. It's just that their sheer bulk occasionally makes me feel that I'm being yelled at. True, in the solo with chorus, “So ist mein Jesus nun gefangen,” their interjections are properly off-putting; and the ensuing “lightning and thunder” chorus is very fast and filled with rage, but Herreweghe gets quite the same results without the sense of having bloated the proceedings. (The music on the page is frightening; performed, it never fails.) And speaking of that number (33, to be exact), Solti chooses some very odd accenting for the woodwinds and solo soprano and alto; this is something I'd expect more from Harnoncourt than from the great Hungarian maestro. And it's very effective to boot.

Almost all the soloists are topnotch. Dame Kiri is just as involved as usual, which is to say not at all, but it isn't as harmful here as it is, say, in Verdi. The purity of her tone and her musicality make up for much. Von Otter is a fine mezzo, Anthony Rolfe Johnson seems to get better with each recording (just listen to his “Ich will bei meinem Jesu wachen”), Tom Krause is handsome of tone and involved in what he is singing: both he and the solo violinist in No. 51 are remarkable. Hans Peter Blochwitz is the most human of Evangelists, telling the story with great sympathy and lovely tone. Olaf Bar stresses the human, rather than otherworldly, side of Jesus, but he never fails to impress. The two handmaidens are nothing to rave about.

As suggested above, the choral work is on a very high level, with the Glen Ellyn Children's Chorus holding up their end of the show with pride. The members of the CSO we get to hear are all virtuosi, and I don't just mean the obligato players. This is, in short, an excellent *St. Matthew Passion*; I was moved by it and taken in by its beauty, despite what I hear as too many voices. And it is not a middle-of-the-road reading (another fear I had); Solti and his forces tell a story well, allowing it to unfold with their own strong inflections.

The recorded sound, in both versions reviewed, is superlative. There is great presence (Orchestra Hall in Chicago, where this was made, is an acoustical joy), and I never had a problem with dynamic levels. I just set the controls and was neither blown out of my seat nor made to fear for my hearing. Surfaces are clean, and not in that antiseptic way of which all digital is sometimes guilty. It's a full-blooded performance, and the sound backs up the interpretation. My recommendation: It would be wrong to do without the Herreweghe; the Solti makes a superb complement.

—Robert Levine

BEETHOVEN: Symphony 9

Gundula Janowitz, soprano; Grace Bumbry, mezzo; Jess Thomas, tenor; George London, bass; Karl Bohm, 1963 Bayreuth Festival Orchestra & Chorus Melodram MEL 18004 (CD only). AAD. TT: 73:18

The Milan-based Melodram company specializes in historic recordings, so perhaps it should not be a surprise that this Ninth from the 1963 (July 23) Bayreuth Festival is in mono; but that fact, important or not, is nowhere mentioned on the package itself. Nor is it mentioned anywhere that what begins this CD are not the quietly portentous bare fifths of the symphony's opening, but several blaring brass peals of the last movement's main tune, which serve to indicate that the concert is about to commence. Anyone used to the broadcast concerts of such festivals as Salzburg or Bayreuth will recognize this fanfare custom, but is it really needed on CD? After *that* shock, followed by some 21 seconds of applause, the Beethoven finally starts. The listener, even one used to the severest limitations inherent in historic material, cannot help but wince: thin, scrawny upper strings; raucous brass; amorously muddy and emaciated bass noises; a distant orchestra without a bottom, no real top, and not much middle either. So what's left? What one *can* take in, with a good deal of initial patience (after some 20 minutes the ear starts to adjust, and the sonic deficiencies attenuate themselves), is quite a grand central-European



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Ninth, not in any way the philosophic monument that Furtwangler made of the score but nonetheless a monument of the immediately post-Furtwangler school; a traditional, very solid, very powerful Ninth that builds its own mountains most impressively. If the orchestral playing is neither ideally precise nor instrumental subtleties particularly apparent, the shaping of the symphony in the larger sense—the overall view—is most beautifully, and often movingly, accomplished. The chorus delivers its lines with fervor and exemplary diction, and the impressive cast of soloists seems almost rhetorically old-fashioned in its inspiration and excitement. There are no annotations, no written appreciation (the audience, stomping its feet at the end, was obviously overwhelmed), only some wretchedly reproduced photos of the conductor and the four vocal soloists.

—Igor Kipnis

BRAHMS: Piano Quintet in f; Piano Music
Piano Quintet in f; Ballade in B, Op.10 No.4; Capriccio in g, Op.116 No.3; Intermezzo in e, Op.116 No.4; Capriccio in d, Op.116 No.7

Barry Douglas, piano; Tokyo String Quartet
RCA Victor Red Seal, 6673-2-RC (CD), 6673-1-RC (LP).
Paul Goodman,* Tony Faulkner, engs.; Jay David Saks, prod. TT: 61:21

The Barry Douglas discography seems to be growing at an exponential rate. RCA Victor Red Seal is apparently resting its resurgent fortunes largely on these Tchaikovsky-Competition-winning fingers, much as was the case with Van Cliburn 30 years ago. RCA's solo Douglas recordings show that the confidence is well placed, but here, with the Tokyo String Quartet, we have the most satisfying Douglas disc yet.

The Brahms F-Minor Quintet is a full, rich, and dramatic entry in the sparse literature for piano quintet. That literature would have been smaller still had Brahms not revised this work's original instrumentation of string quartet plus second cello.

The Budapest Quartet recorded the work with both Curzon and Rudolph Serkin, and those performances, though worlds apart in some aspects, rank at the top of the list of recorded interpretations. The Douglas/Tokyo effort makes a serious run at those readings. Though the first two movements are less than convincing, there is a startling change in the final two.

Movement one has an almost operatic fullness about it, with boldly contrasting moods but rather matter-of-fact articulation and phrasing. The second movement sounds vaguely detached, and lacks the "angels" that surround the Budapest's playing.

But when movement three starts, you feel

the heat of the fire. If we heard talented instrumentalists before, we hear inspired musicians now. Here is rhythmic sizzle and buoyant, cocksure jauntiness—the amazing energy of young players who sound as though they have just unearthed the motherlode of motherlodes.

The opening of the finale falters just a bit, with a slight sense of self-consciousness, but then all is well again, and the playing is from the heart. For perhaps the first time, we hear the true sense of vehement denial in the false ending, as though the musicians cry, "Hell no, it's not over! There's urgent beauty in the few notes we have left, and *you better listen!*" This is stunning music.

In the four pieces for solo piano that complete this recording, we hear Barry Douglas much as we have heard him before: a brilliant technician capable of flaming intensity but a bit short on expressiveness. The Intermezzo is the big exception. Douglas brews a bitter-sweet mixture of stillness and inexorable compulsion to press onward. It is five minutes of the best Douglas yet recorded.

At the risk of appearing to slug in boilerplate copy, the difference in sound quality between CD and LP is again one of depth and ambience. The CD sound is sharp, lean, and clean; the LP is rounded, smooth, and distant—more like a large hall. There is an interesting comparison to be made between Tony Faulkner's solo piano recording, done in a concert hall on this release, and Mark Vigers's solo recording of Douglas's "Hammerklavier" (Red Seal 7720-2-RC, reviewed in Vol.11 No.8), done in EMI Studios. The resulting sound makes it seem as though the locations were just the opposite: Faulkner's concert hall sounds more like a studio, and Vigers's studio sounds more like a concert hall. Neither one, though, sounds enough like a *real* concert hall.

It's a shame that no one yet has captured the warmth of tone and textural shadings that Douglas exhibits live. His recordings so far have all had a cold, percussive quality that do the Irishman an injustice.

Quibbles notwithstanding, this Brahms is exciting. It offers up life, and you'll buy it if you know what's good for you. —Robert Hession

HARRIS: Symphony 1933; Concerto for Violin and Orchestra

Gregory Fulkerson, violin; Jorge Mester (Symphony); Lawrence Leighton Smith (Concerto), Louisville Orchestra

First Edition Records LS 786 (LP). Wayne S. Brown, Exec. Dir.; Andrew Kazdin, prod. TT: 50:58

Symphony 1933 was the work which placed Roy Harris in the public mind when Serge Koussevitzky and the BSO premiered the work in January of 1934. Victor Records, which

enjoyed an exclusive contract with Koussevitzky/BSO, was so skeptical about American music that they permitted Columbia Records to release a phone-line-recorded Carnegie Hall performance given shortly after the premiere. This recording was destined to remain the only non-Victor (or RCA) recording by the Boston Symphony until the 1970s. The success of this work with radio audiences and record collectors of the period brought recognition and gave great importance to Harris as a force to be reckoned with. By 1938, Victor had the good sense to record the legendary Koussevitzky/BSO account of Harris's 3rd, and the rest was history until Harris's strange decline from popularity, from which he is now beginning to emerge.

The Columbia recording was re-released on LP in 1957 as the flip side of the then-new recording of Harris's Seventh Symphony by Ormandy and the Philadelphia Orchestra. The sound seemed below par even by 1934 standards, and clearly, a modern recording of Symphony 1933 has been called for. Well, here it is, and sonically it does every justice imaginable to the piece.

I wish I could say the same for the performance. This recording was made in 1978 during the Musical Directorship of Jorge Mester, and I am inclined to lay the blame for this sorry affair at his doorstep. I wouldn't expect any self-respecting conductor to attempt to clone a recorded precedent, but didn't he at least listen to the Koussevitzky? If so, couldn't he have been just a little bit influenced or even moved by it? Mester doesn't appear to have been moved by anything beyond the immediate necessity of fulfilling his assignment. His tempi are all too fast, and he displays no sense of timing or agogics in which to allow the orchestra to breathe. A work which Koussevitzky made so vitally dramatic comes off sounding clumsy, awkward, and trivial under Mester. In the second movement there is a loud tam-tam stroke, in place of what Harris intended to be an ominously quiet one—a genuine touch of vulgarity adding insult to injury.

Even so, the very sound of the recording reveals details in the writing which were obscured in the Koussevitzky recording. Those who have the Koussevitzky may return to it to just barely pick out these felicities, frustrated that the sonics cannot match the performance.

They nearly could have. If only the Symphony could have been recorded in 1985 under the Louisville Orchestra's current Musical Director, Lawrence Leighton Smith, who conducts the Violin Concerto. This would not have been a clone of the Koussevitzky either, but at the very least, it may well have been a

powerful and polished statement in its own right.

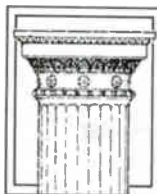
Harris composed the Violin Concerto for George Szell and the Cleveland Orchestra in 1949. The soloist was to have been the CO's celebrated concertmaster, Josef Gingold, but the meticulous Szell lost patience with ill-prepared, mistake-ridden orchestral parts and cancelled the work. The Concerto remained unplayed until Gregory Fulkerson, fortified by corrected orchestral materials, gave the premiere in March 1984 in North Carolina, a subsequent performance in Louisville, and this recording in April, 1985.

Harris's music is considered uneven and awkward even by those who admire his works. He is sometimes referred to as an American Mussorgsky, and his revisionist mania rivaled that of Bruckner. Just as Mussorgsky and Bruckner were capable of powerful musical statements in spite of technical deficiencies, so with Harris. The Violin Concerto is formally one of his best-conceived works, and turns out to be one of the 20th century's outstanding violin concertos as well.

Beginning with a single-line theme of deceptive simplicity, the challenges to the player mount with each new entrance of the violin, until nearly every type of playing has been thoroughly explored in depth. What a contest piece this would make! Paganini, Sarasate, Tchaikovsky, move over.

Gregory Fulkerson is not a household name. He has only two other recordings (LPs) listed in the *Schwann Catalog*, each involving 20th-century solo and chamber music. We might be more aware of him were he to concentrate on further reiterations of Mendelssohn, Bruch, Tchaikovsky, and Brahms. He has to be one of the finest violinists in the profession today in order to come across as he does in the Harris Concerto, with polish, confidence, and an incredible sense of ease.

This work is as much a concerto for orchestra as well, and this is where Lawrence Leighton Smith shows his stuff. He is already known to us through his participation in Sheffield Labs' *Moscow Sessions*. Though Smith's performances of Russian repertoire with a Soviet orchestra are as thoroughly unremarkable as they are utterly professional, on the basis of the present recording it would seem that his real strength is that of an orchestra builder, a rare gift these days. The very difficult string parts in the Concerto have, in addition to accuracy, an overall unanimity and character which had been rare in Louisville recordings prior to Smith's appointment as Music Director. One may not be fooled into thinking that one of the certified world-class orchestras is playing, but the differences do not invite invidious comparisons. It



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is largely a matter of power in reserve. Chicago or Cleveland, for example, could appear to toss this off as if it were no big deal. The Louisville players appear to be working with extreme concentration at the very limits of their powers, but they have every reason to take pride in having done full justice to a hitherto unknown major item of American repertoire. The record comes with in-depth liner notes by Dan Stehman, author of *Roy Harris: An American Musical Pioneer*.

What a pity that few listeners will be aware of this recording—Louisville First Edition Records have rarely been carried by retail stores. Recently, Classical Distributors¹ took on distribution of a number of Louisville titles, including this one, but only full-line classical stores which continue to provide vinyl are likely to have it. In addition to its musical values, this is an excellent new recording for the vinyl minority. Production and engineering are first-rate, the vinyl is high-quality, the pressing quiet, and it is entirely analog.

The easiest way for most readers to obtain this recording would be to phone the Louisville Orchestra at (502) 587-8681; a courteous receptionist will take care of everything.

—Richard Schneider

HINDEMITH: *Matthis der Maler; Trauermusik; Symphonic Metamorphoses*

Herbert Blomstedt, San Francisco Symphony
London 421 523-2 (CD only). James Lock, John Pellowe,
engs.; Andrew Cornall, prod. DDD. TT: 56:08

Herbert Blomstedt has led an unglamorous though highly professional career in Europe for many years. Until his appointment as Musical Director of the San Francisco Symphony in 1984, his best post had been with the Dresden Staatskapelle. London Records has taken a calculated risk in choosing for their Blomstedt/SFSO debut two non-standard releases: a pairing of Nielsen's Symphonies 4 and 5,² and the Hindemith recording under review here.

Hindemith enjoyed a favorable position for a contemporary composer in concert programming and recording through the 1940s and '50s, but since his death in 1963 there has been a steady decline in the number of performances of his works. There appears to be a revival afoot. It's about time.

For viable *Matthis* rivals, one must go to the cut-out bin for Telefunken's 1934 recording, with Hindemith himself conducting the Berlin

Philharmonic. The one other rival is the RCA recording from 1950 by Guido Cantelli and the NBC Symphony. The von Karajan recording with the BPO, on the EMI Studio Series CD with its listless, lackluster performance and its smudgy glare, is *not* a rival. The Hindemith and Cantelli performances, in state-of-the-art sound for their times, are prime candidates for reissue. Blomstedt lacks Cantelli's dramatic intensity, but his performance resembles Hindemith's own broader, more introspective view. He meets his rivals head-on and more than holds his own.

There's no current competition for *Symphonic Metamorphoses* either. Certainly not the full-priced EMI Ormandy/Philadelphia CD, much too prettified for this tongue-in-cheek music. One out-of-print rival—the 1952 Mercury single-mike mono by the CSO under Rafael Kubelik—may never be beaten, it's so bold, ballsy, and *right*. But Blomstedt and his band are so close. They lose it in the March Finale; where Kubelik and the CSO practically crack the plaster with their energy, Blomstedt and his orchestra seem just too tame. If, for lack of the Kubelik, you are unable to make the comparison for yourself, you're likely to be impressed.

One assumes that the viola soloist in *Trauermusik* is principal violist with the SFSO. Lack of any material on her other than her name is a serious discourtesy: Geraldine Walther gives a restrained, sensitive rendition of this quiet, brooding piece, which complements the high dramatics and virtuosity of the two big works. I hope her check is in the mail.

The detailed and spacious sound from the Davies Symphony Hall is first-rate, except for my suspicion that the engineers have assisted the horns by miking them from the rear in the big tuttis in *Symphonic Metamorphoses*.

Blomstedt has the SFSO playing at what may be their highest standard ever. My reservations on the *Metamorphoses* Finale notwithstanding, this is World Class. Could this be the next World's Greatest Orchestra?

Be that as it may, I should like to think that this recording is merely Vol. I of a complete Hindemith Orchestral Cycle, which will include the composer's most neglected and greatest masterpiece of all, the Symphony "Die Harmonie der Welt." —Richard Schneider

HINDEMITH: Complete Viola Sonatas

Kim Kashkashian, viola; Robert Levin, piano
ECM New Series 1330/32 (833 309-1, 3 LPs; 833 309-2, 2 CDs). Stephan Schellmann (solo works), Peter Laenger (duo works), engs.; Manfred Eicher, prod. DDD. TT: 127:50

Except for his symphony *Matthis der Maler*, Paul Hindemith has the misfortune of being known primarily for *Gebrauchsmusik*, the

¹ Box 355, Albany, NY 12201, Tel: (518) 449-5286. The performance of Symphony 1933 under review has just been released on CD (AR011) with Harris's Symphony 5, recorded in 1965 under Robert Whitney.

² A brief listen to the Nielsen 4 at Lewis Lipnick's leads me to suggest that it is worth avoiding. —JA

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"functional," "everyday" music for amateurs with which his name seems perpetually linked. With any luck, this collection of sonatas will reopen the book on Hindemith to give the composer the credit he is due. This is superbly rewarding music, compassionately played by Kim Kashkashian and Robert Levin.

Hindemith's music, though indisputably "modern," is rooted firmly in the German tradition. That Brahms was his musical antecedent is evident, especially in the earlier compositions. Stretching from 1919 to 1939, these works tend only slightly toward Expressionism, neither abandoning tonality nor setting up camp with the serialists. At their most extreme, there is still the feeling of a bedrock tonal foundation—and of sincere communication.

The four sonatas for unaccompanied viola and three for viola with piano are made up of three, four, and five movements, each typically lasting from three to seven minutes. They have the power to grow on you, exhibiting charm, wit, grace, and fervor, totally devoid of cliché or sentimentality. They beg to be heard repeatedly, and offer compounded returns on close listenings. If you've always wanted to enter the musical life of your own century but were never at home with the dodecaphonic junta, this may be your ticket of admission.

Along with the music itself, Kashkashian deserves to be celebrated for her impressive playing. Through all demands, from lyrical singing to brazen athleticism, she maintains a clear, poignant fluidity. Her tone is amazing in both its range and richness. This is a stunning display of consummate musicianship.

The fourth movement of Op.25 No.1, a solo piece, is marked "Raging tempo. Wild. Beauty of tone is of secondary importance." Kashkashian is wild, but never out of control and never without the power to enthrall the listener. All these sonatas are closely unified, though not in a pristinely Classical sense, and Kashkashian renders that unity as well as the particular quality of the moment without losing the essence of either. The fourth movement of Op.11 No.5 is a *passacaglia*, and her masterly articulation of form and expressivity is never more evident.

Although Kashkashian emerges as the star, Robert Levin makes much more than a casual contribution. His playing is always articulate and informed of spirit, especially so in the complex rhythms and counterpoint of Op.25 No.4, movement three, where the interplay between musicians is like the urgent, unified action of a single organism. Both Kashkashian and Levin have the rare ability to take modern music off the printed page and render it from the heart.

Although recorded by two different en-

gineers, Stephan Schellmann for the solo works and Peter Laenger for the duos, the sound is uniformly good. It does seem a bit close-up, though, and Kashkashian's loud breathing is disturbing until you stop noticing it because of her virtuosity. The image of the viola seems bigger than life, but its tone color is rivetingly faithful. On my system, the CD gives the viola a pinched quality in the upper registers. On the LP, both instruments sound more clearly etched in space, yet more naturally mellow. There is a superior dimensionality, as well, on LP—more presence, though not in the sense of artificially elevated midrange levels.

With performances like these, Hindemith's works may yet find their way into the standard repertoire; they certainly deserve it. But other recordings are almost nonexistent. The complete cycle has probably never been recorded before, although one RCA issue of Op.11 No.4 and the Op.25 duo by Walter Trampler, Kashkashian's teacher, and Ronald Turini is notable for its cooler, more quaintly Romantic approach. This record is out of print but may be available in libraries.

Gebrauchsmusik or no, Hindemith was always extremely concerned with communication between composer and audience. Perhaps that is responsible for the success of these sonatas. They unfailingly have a singing, human quality that is apparent if you do your part as listener. Kim Kashkashian and Robert Levin have certainly poured their hearts into the translations.

—Robert Hession

MOZART: *Idomeneo*

Luciano Pavarotti, *Idomeneo*; Agnes Baltsa, *Idamante*; Lucia Popp, *Ilia*; Edita Gruberova, *Elletra*; Leo Nucci, *Arbace*; Timothy Jenkins, *High Priest*; Nikita Storozhev, *Voice of Neptune*; Vienna State Opera Concert Choir, Vienna Philharmonic Orchestra; Sir John Pritchard
London 411 805-2 LH3 (3 CDs). James Lock, John Peel-
lowe, engs.; Christopher Raeburn, Peter Wadland,
prods. DDD. TT: 183:59

Generally considered by music savants to be a highlight of Mozart's prolific compositional output, performances of *Idomeneo* have, nevertheless, been notably sparse since the opera first graced the boards at Munich in 1781. It was 1934 before British audiences were afforded the chance to sample its many felicities, and the US premiere didn't take place until the 1947 Berkshire Festival; then, only in concert form. Why this neglect? One possible reason is the ineptness of a fusty libretto. In addition, public interest in the anachronistic conventions of *opera seria* was fading even way back in 1781. The most inventive stage directors invariably fail to lessen its inherent longueurs and infuse diverting theatrical creativity. With this static, formal type of opera

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HI-FI NEWS & RECORD REVIEW

it's only the music that matters, and *Idomeneo*'s artistic complexities mandate an ensemble of virtuoso singers qualified to communicate Mozartean elegance plus dramatic characterization without let-up. It is, therefore, difficult to cast.

On paper, this cast, orchestra, etc. appear to meet most of the requirements. Disappointingly, the artistic totality is shy of the anticipated sum of the constituent parts. This is largely due to the interpretive philosophy of conductor Pritchard, who fails to fully integrate those parts into an inspired, and inspiring, reading. He extracts rich sonorities from the Vienna Philharmonic, but his conceptual execution appears to be motivated by a deferential approach to Mozart. As a result, we get prim competence instead of a fully dimensional illumination of the master's genius. He also restores traditional cuts—including those made by the composer in the interest of plausible theatricality—resulting in a too expansive performance.

The reputations of virtually every member of the cast inspire great expectations. While this anticipation is occasionally fulfilled, on the whole it fails to completely satisfy. Even the accomplished Lucia Popp, who produces poignant, crystalline tones, doesn't quite succeed in penetrating the skin of her character. Similarly, Agnes Baltsa's very feminine *Idamante* (originally a castrato role but nowadays sung by either a mezzo or a tenor; Pavarotti appeared in the part in 1964), while sung with lush voice, is insufficiently fleshed out. I believe that Pritchard's overly respectful direction may have diluted the ladies' normal theatrical instincts. Edita Gruberova manages to overcome this histrionic malaise, but hers is not the most suitable voice to communicate *Elletra*'s fury. Recent *Elletras* have included those two Brunnhildes, Birgit Nilsson and Hildegard Behrens. Gruberova merits good marks, especially in the more virtuosic passages, but the voice's weight and color are decidedly light and inappropriate.

It will surprise some, but the most integrated and outstanding performance is Pavarotti's deeply felt, sensitive, and committed depiction of the protagonist. Most Italianate super tenors leave the unpretentious refinement of Mozart's writing well alone. Beneath the large bulk of *numero uno*, though, lies the heart and brain of a true, sensitive artist. Unfortunately, he, and particularly his management, only allow this side of his talents to be heard on sporadic occasions: this, happily, is one of them. The honed, lyrical singing of yesteryear has now given way to a vibrant, occasionally tight spinto which provides an effective aura of majesty to

this kingdom of Crete. The famous aria "Fuor del mar," sung here in the shorter, less demanding version, is projected with apposite conviction and in suitably bronzed tones.

According to the score, Arbace is a tenor role; the tessitura virtually mandates it. Here, though, it is given to a baritone, the vigorous Verdian Metropolitan baritone, Leo Nucci. Although better known for vocal elan than for elegant artistry, Nucci outdoes himself and fashions a convincing, even subtle Mozartean character. Despite some understandable effort in his arias when the line ascends to A, he provides well-modulated tone and artistic acuity. In the exchanges with *Idomeneo*, the baritone-tenor dialogs make more musical and dramatic sense, particularly for a non-visual medium. One wonders the reason for this unusual, if effective, casting: Perhaps Pavarotti insisted on being the only tenor in this opera which often fields three?

Why this recording, which was taped in 1983, took five years to release, is anyone's guess. The engineering, though not up to London's finest standards, is acceptable. A rather reverberant studio ambience, instead of the more desirable spatial atmosphere of the theater, should have been avoided. Some instrumental balances, particularly those resulting in undernourished woodwinds, are suspect; yet the Vienna Philharmonic's silken strings are captured with the magical transparency so essential for Mozart.

Notwithstanding these qualifications, this latest entry in the *Idomeneo* stakes is preferable, though not by much, to the Philips analog recording conducted by Sir Colin Davis (now on CD). Davis also subscribes to the reverential, slow tempo philosophy, and his singers, although accomplished, are generally less gifted than the London crew. I have not yet heard the Teldec release conducted by Nikolaus Harnoncourt, but for the most theatrical, dynamic (maybe excessively so) performance one needs a stereo VCR for the Met's 1983 production. Conducted by the rather overwrought James Levine, it also features Pavarotti in the title role but with a different set of vocal colleagues.

—Bernard Soll

NYMAN: *The Man Who Mistook His Wife For A Hat*
Emile Belcourt, Dr. S; The Neurologist; Sarah Leonard, Mrs. P; Frederick Westcott, Dr. P; instrumentalists; Michael Nyman, cond.
CBS MK 44669 (CD only). David Cunningham, Michael Nyman, prods.; Mark Chamberlain, eng. DDD. TT: 57:03

The title of this chamber opera is, of course, the same as the title piece in Oliver Sacks's best-selling collection of neurological observations. It concerns an interesting case: A man who

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happens to be a musicologist becomes increasingly unable to interpret the things he sees. He mistakes his shoe for his foot, speaks to things, and does, in fact, mistake his wife's head for his hat. He continues, however, to sing and recognize voices; he is only visually impaired. The stuff of opera? There have been worse. Unfortunately, on disc at least, this one doesn't work.

Lest I be wrongly accused of having musical tastes that ended with Monteverdi, I would point out that I am and have been a great champion of Philip Glass's work, finding each new composition for the stage more successful. At this opera's core is the Schumann song "Ich grolle nicht," which, like the Minimalist composers, uses repeated notes and harmonies. It would appear that Nyman thought that he could carry through in an hour-long work what Schumann, probably a better composer, used to great effect in a three-minute song. He was wrong. Perhaps if the work had been 40 minutes long the boredom wouldn't have set in as deeply; the intellect wouldn't have been called upon to do *all* the work for the emotions.

The cast works hard. Sarah Leonard does what she can with the ungrateful role of a wife who talks too much, and Emile Belcourt, as the neurologist, is authoritative and curious. Frederick Westcott uses his baritone well as the disturbed (though content) Dr. P. He is given some nice little tunes, but the engineers have done him in—he is close to inaudible for most of the opera. The seven-piece instrumental ensemble plays the music well.

I am not offended by this work; I simply find it neither enlightening nor moving. I want to use the phrase "incidental music," but I won't. I may be proven wrong, but I doubt it, all the while conceding that on stage this might be another story. I wanted to like or respect this work—it just didn't work out that way.

—Robert Levine

SCHUBERT: Symphonies 1, 4, & 6; Rosamunde: Overture, Entr'acte No.3, Ballet Music No.9

Daniel Barenboim, Berlin Philharmonic
CBS M2K 42489 (2 CDs only). Tony Faulkner, eng.; James Mallinson, prod. DDD. TT: 127:26

When we think of musical prodigies, the names that usually spring to mind are Mozart and Mendelssohn. Yet Schubert was almost as precocious, as is attested by the three symphonies featured here. All were completed before he was 21, the First composed at the age of 16, the Second at 19.

I raise this issue because it is this youthful element that Daniel Barenboim's often admirable performances sometimes skim over. Adolescence, after all (as any parent knows), is a time

of intense feelings and wide emotional swings. Granted, the young Schubert had a command of his material that belies youth. Still, many listeners, like myself, may feel that there is an intensity in his early music that demands greater sweep, passion, and verve than Barenboim manages to muster. He is, to be sure, a far more tasteful and masterful conductor in these performances than he was at the outset of his podium career, avoiding the prevalent stodginess and awkward phrasings that once marred his conducting. As a result, nothing here is really ponderous, and many of Schubert's melodies soar with apt, unaffected simplicity. (The second subject in the opening movement of the First symphony is a prime case in point.) But the contrasts of lyricism, exuberance, and (in the Fourth Symphony) *Sturm und Drang Angst* that yield drama are not as sharply drawn as they might be. The agitated, almost defiant ethos growing from the syncopations in the Fourth Symphony's Minuet, for example, sounds tame here, in part because of restrained pacing that does not honor Schubert's *Allegro vivace* specification. (To hear how wonderfully brash this movement can be, one has only to listen to the recent EMI recording of the work by Gunther Wand.) Similarly, Barenboim's failure to draw sharp accents in the finale of that work neutralizes the eerie, almost menacing tension so well conveyed in the Wand version. And the one instance in which Barenboim proves clearly wayward is in the finale of the Sixth Symphony, a rambling movement at best and, arguably, one of the weakest in Schubert's symphonic output. Here a tauter, fleetier approach such as those offered by Neville Marriner (for Philips) or Wand seems far more appropriate.

Ultimately, a response to these performances may be a matter of taste. Many may find Barenboim's generally *gemutlich* style more attractive than the impassioned direction of Marriner and Wand. Certainly the BPO plays beautifully, winds, in particular, boasting gorgeous tone and richly nuanced phrasing, and neither Wand's nor Marriner's ensemble can match the virtuosity of Barenboim's Berliners. And there are differences, too, in the technical aspects of each conductor's recordings. In general, CBS has given Barenboim a relatively distant perspective, free of spotlighting and boasting refreshingly musical string tone (yes, it is possible to achieve such realism in a digital recording). In contrast, Philips and EMI have produced closer sounds with flatter perspectives. Considering that these are not heavily scored works, the greater intimacy suggested by such an approach may well be preferable.

Barenboim observes all exposition repeats,



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and in the familiar excerpts from *Rosamunde* follows the style that typifies his work with the symphonies. This is well-suited to the Entr'acte and Ballet Music, but denies the overture some of its inherent buoyancy. This release completes Barenboim's cycle of Schubert symphonies; for those who think of Schubert primarily as a lyricist, these discs may have appeal.

—Mortimer H. Frank

WAGNER: *Die Meistersinger von Nürnberg*

Theo Adam, Sachs; Rene Kollo, Walther; Helen Donath, Eva; Peter Schreier, David; Ruth Hesse, Magdalena; Karl Ridderbusch, Pogner; Eberhard Buchner, Vogelgesang; Horst Lunow, Nachtigall; Geraint Evans, Beckmesser; Zoltan Kelemen, Kothner; Hans-Joachim Rotzsch, Zorn; Peter Bindzus, Eisslinger; Horst Hiestermann, Moser; Hermann Christian Polster, Orel; Heinz Reeh, Schwarz; Siegfried Vogel, Foltz; Kurt Moll, Nachtwächter; Dresden State Opera & Leipzig Rundfunk Chorus; Staatskapelle Dresden, Herbert von Karajan EMI CDCD 49683 (4 CDs only). Klaus Struben, Christopher Parker, engs.; Dieter Gerhardt, Worm, Ronald Kinloch Anderson, prods. ADD. TT: 265:26

Clarity, balance, control—Karajan's signature virtues, emphasized all too often at the expense of vitality, are perfectly counterpoised with compassion, grace, and fun in this CD reissue of his 1970 *Meistersinger*, the first studio, first stereo recording of the work and still, I think, the best.

Karajan's Wagneriad, uneven at best, reached a surprising peak in this recording of Wagner's most psychologically mature work. A light, airy elegance pervades the entire 4½ hours, and nowhere are the first three words of this review better embodied than in the Act I Prelude, the Act II choral finale, and the Act III quintet: in the first two, the *strettos* of these gloriously false fugues, half a dozen themes intertwined and superimposed, are in perfect musical and dramatic proportion—a rarity in Karajan's Wagner, to these ears too often refined to the point of enervation. The choral work in Act II takes on the thrilling qualities of Beethoven's Ninth, each vocal and orchestral line chiseled in adamantine frolic, while Karajan's balance and control in the quintet make this ensemble a liquid delight. Goosebumps galore.

The Staatskapelle Dresden's lean, clean sound is captured clearly. Karajan opted for a smaller than usual chorus—as Wagner scored for an orchestra more along the lines of *Tristan* than the *Ring*, this suits very well (this from someone who generally prefers a richer, mellower, *bigger*, VPO-like orchestral sound for his Wagner). The resultant Beethovenish asperity and crisp, precise choral work sounds even fresher than it did in '71, when I first heard it.

Rene Kollo had not been singing Wagner for very long when he recorded this, his first Walther on disc, and the freshness and inno-

cence of his voice come through much more clearly here than in later, coarser performances. Always a dependable vocal actor, his voice rings heroically in the Prize Song (though he does tend to swallow the first phrase of each stanza), and his rage and *angst* in Acts I & II are entirely convincing. Helen Donath, whose voice has grown a bit heavier over the years, is here poignantly light and girlish as Eva, without lacking strength, and Ruth Hesse's rich, liquid mezzo gives Magdalena more nobility and stature than usual. Geraint Evans's Beckmesser is darkertoned than many, though just as agile, and comes across as much less the buffoon than an unhappy, desperate, self-deluded man. Wagner has often been taken to task for his shabby treatment of this character, but I've always found Beckmesser's tail-between-legs exit far more believable than the usual let's-all-get-married close of the typical romantic comedy. Beckmesser may not get the—or any—girl, but then neither does Sachs, the warmest, most sympathetic and accessible of all operatic characters. The balance is apt.

David's "Meisterton" narrative, in which he demonstrates a score of different vocal techniques to a bewildered Walther, is a tour de force for singer and conductor alike, and both are magnificent; Wagner's infinitely flexible, playful music is effortlessly rendered by Schreier and Karajan.

There's a gaping hole in the center of this reissue, however. It's the odd *Meistersinger* in which Pogner is more sympathetic than Sachs, but I'm afraid that's the case here. Theo Adam was in fine voice for this recording (though with some back-throat bobble), but I still find him cool, diffident, remote; always musical, however, and perfectly acceptable—until Ridderbusch's Pogner has something to say. Then, everything missing in Adam's Sachs—warmth, compassion, tenderness, and effortless, bottomless strength—comes pouring out of the speakers like the smell and heat of fresh-baked bread on a winter morning, in a voice as dark and rich as Bamberger *Rauchbier* (now there's a mixed metaphor).³ But Adam has his moments, as in Act II's "Was duftet doch der Flieder. . .": his achingly fluid *legato* over paired horns playing as one—well, it doesn't get much better than that, even in the Fischer-Dieskau/Jochum version (DG).

I count at least 10 mikes in the session photos (from the sumptuous original 1971 LP edition (nla), with the gold-foil slipcase and embossed libretto—*sic transit gloria vinyl*), but that was

³ The underrated Ridderbusch is my favorite Sachs anyway—find, if you can, Silvio Varviso's 1974 Bayreuth *Meistersinger* to hear what I mean (Philips 6747 167, nla).

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—Oscar Wilde

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a full-session photo with full chorus, first- and second-string soloists, and orchestra. Regardless, the soundstage is entirely convincing on CD, and of wonderful clarity and depth (though with more hiss than I expected), the sonic and spatial dimensions of Dresden's Lukas Kirche precisely outlined. (Though the entirely undramatic miking makes theatrical hash of Walther and Eva's eavesdropping on Beckmesser's Act II serenade—his caterwauling seems to come from *between* the lovers here, rather than center stage to their stage left.) It's instructive to compare this ADD reissue with Decca/London's of Solti's 1974 recording of the same work. The latter, though a performance equal to Karajan's, makes all too clear just what a multi-mono muddle London's post-Culshaw engineers made of it: try as I might, I can make neither head nor tails of the soundstaging, the instrument placement arbitrary enough to sound as if the orchestra had been turned inside out. But with the EMI, the opposite is the case: a masterful analog recording is presented in full digital dignity. For once, recording considerations seem important enough to this non-audiophile that, all things being equal, I definitely recommend the Karajan over the Solti.

But as entirely satisfying and unfatiguing as listening to the CD reissue was (my experience has been that ADDs are the most exhausting listening around, particularly Decca/London's ADRMs), double-checking against my LP set (it had been a few years) was a revelation that brought me to the same old reluctant, predictable conclusions. Just a few examples: the high, *f* violin overtones in the descending figure that starts in bar 39 of the Act I Prelude, just before the first entrance of the "Banner" leitmotif, are much more present, sculpted in space, sound far woodier, and one hears more of the Lukas Kirche's dimensions on LP—altogether a darker, deeper, rounder sound. And, as fascinating a sonic schematic as the CD presents, Walther's Act III *Preislied* is simply much more *alive* on LP, like a living, breathing human being, warts

and all, to the CD's perfectly functioning, anatomically correct android. 'sFunny—I very much *want* CD to work, but keep getting dragged, kicking and screaming, back to Analogland. Guess there's no place like home.

All things considered, an excellent reissue.

—Richard Lehnert

WALTON: Symphony 1, Portsmouth Point Overture
 Leonard Slatkin, London Philharmonic Orchestra
 Virgin VC 7 90715-2 (CD only). Mike Clements, eng.;
 Andrew Keener, prod. DDD. TT: 49:55

Leonard Slatkin admits to being pleased with this recording of Walton 1, as it has captured the energy and intensity that he generates in live performance; and the fact that he has caught the "diabolical nature" of the *con malizia* scherzo more than compensates for the odd lost detail, he feels. Admittedly, if the LPO hasn't played this work for 17 years, it is to their credit, and Slatkin's, that they perform here with such zest and assuredness.

There has been much debate as to whether this recording is a "real challenge to Previn's 1966 RCA performance," as Virgin stated it would be. I would say that Previn's is still the classic performance; his is the more biting in its rhythms, the more relentless in the threatening momentum of the first movement, the more mysterious and serene in the slow movement. And why so much fuss about the "blistering" speed of Slatkin's scherzo? It is only 14 seconds faster than Previn's, and does that really count for anything anyway? But I must admit to finding Slatkin's *Finale* convincing, with its last devastating chords ringing on menacingly in the resonant acoustic of St. Augustine's—and all so deftly handled by Andrew Keener. CD, with its sharper definition and particularly apt hard edge, shows the producer's skills better than LP—it would be nice to think that, if and when RCA makes a CD transfer of Previn's account, it will sound as good.

—Barbara Jahn

Classical Collections

THE QUEEN'S MINSTREL: Therese Schroeder-Sheker

Therese Schroeder-Sheker, harp, recorders, psaltery, vocals, percussion

Windham Hill WD-1074 (CD), WH-1074 (LP). Scott Alan Smith, Dawn Atkinson, prods. Kevin Clock, *et al.*, engs.
 ADA/ADD. TT: 53:53

New Age music has the ability, like a character on the old Dick Van Dyke Show, "to make statements that appear vague, but are, in reality, meaningless." One aspect of the New Age

movement is something called "World Music," which consists of extracting melodic and tonal themes and colors from various ethnic musical traditions, and making them all sound as though they had been written and performed by Will Ackerman. Now this homogenizing technique has been applied to medieval and traditional music, with lamentable results.

The truth is, I wanted very much to like this recording. Therese Schroeder-Sheker is a talented multi-instrumentalist who seems

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genuinely moved by what she has encountered in early musical traditions, and the connection she draws between medieval/Celtic mysticism and modern feminism is a valid and interesting one. Unfortunately, the result of her labors is nothing more than a series of Windhamized improvisations on medieval and folk themes, for the most part indistinguishable from other New Age compositions. There are also two TSS originals, the quality of which can be charitably described as egregious (as, alas, applies to the performer's singing skills). I suppose I ought to applaud Windham Hill's decision to move in this new direction, except that they haven't done any such thing—they have simply squashed early music into the mold of their "corporate sound."

Fortunately for the reader, there are recordings that accomplish the task TSS has set for herself. Any performance by Esther Lamandier will reveal more about the early music/feminist connection than this, and one of my all-time favorites, *Cansos des Trobairitz*, a recording of the women Troubadours by Montserrat Figueras and Hesperion XX, is perhaps exactly what the present album should have been.

Windham Hill recordings have a very definite "corporate sound," as I implied above

(what bottom octave—you mean there are notes down there?). This one is no exception. The harps are close-miked and percussive, recorders are a bit shrill, and percussion has no weight to speak of. In addition, this should have been a digital recording. The use of extensive overdubbing has made tape hiss extremely obtrusive, especially on headphones. In several cases, the original session tapes are clearly at fault, with the hiss entering and leaving with specific instruments, and pumping up and down with the level of the music. Whatever its faults, digital would have obviated this problem. There is one good point, however—in spite of all the overdubs, we are presented with a surprisingly realistic soundstage, with good instrumental focus and a sense of a real performing space. The CD contains a bonus track: there is no reason for this (the music is not very dynamic, and long LP sides would not be a problem), and given the quality of the music, it does not constitute a recommendation for that format. Otherwise, the LP seems a touch sweeter and less processed than the CD, with the harp sound more like what I usually hear from a live harpist.

Need I say, "not recommended"?

—Les Berkley

Show Music

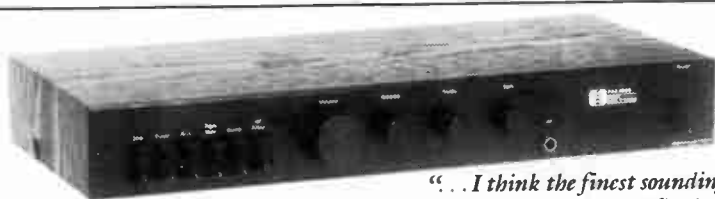
GOSPEL AT COLONUS: Original Cast Recording
Music by Bob Telson, Lyrics by Bob Telson & Lee Breuer
Elektra/Nonesuch 9 79191 (LP). David Hewitt, Daniel Lazerus, engs.; Bob Telson, Donald Fagen, Gary Katz, Daniel Lazerus, prods. DDA/AAA. TT: 52:22

Since the 1930s, many musicals have included a "gospel number" (one of my favorites is "The Great Come-and-Get-It Day," from *Finian's Rainbow*), but "gospel musicals" have been only occasional visitors to Broadway. When presented, the style was likely to owe more to New York than to the Deep South. This criticism cannot be made of *Gospel at Colonus*.

Although I must preface my remarks by noting that gospel music does not form a significant part of my regular listening diet, this work seems to me to be as close to the real thing as we are likely to hear in a musical theater context. The performers are, in fact, *real* gospel singers (including Clarence Fountain and the Five Blind Boys of Alabama, Jevetta Steele and the J.D. Steele Singers, and J.J. Farley and the Soul Stirrers); the music, while not by a black composer, nevertheless captures the style of the genre. Not having seen the show—which has toured Europe, played in a number of US cities, and had a brief run on Broadway in the spring of 1988—I cannot comment on how it

works on stage, but, on record, it comes across as a sort of gospel concert rather than a "musical."

In formal terms, this is an adaptation of Sophocles' *Oedipus at Colonus* (incorporating passages from *Oedipus Rex* and *Antigone*), set in a black Pentecostal church. I don't know what Sophocles would make of all this, but the concept is nothing if not original, and the large cast performs the songs with undeniable style, great energy, and a sense of real commitment. Having said this (and, remember, speaking as a non-gospeleer), I must also report that I found most of the music to be pleasant but unmemorable. The best tunes ("Eternal Sleep," "Lift Him Up," and "Now Let the Weeping Cease") are saved until the end of the show; one of these ("Lift Him Up") features Carolyn Johnson-White, a singer with a very special talent. As soon as she starts singing, there is a sense that here is a person with no ordinary vocal ability; after what seems like a brief warm-up, she lets loose, and holds on to, a high note (E natural above high C) of such power and purity that one is left breathless. She tosses off several such notes during the number, which becomes, with her contribution, the most effective one in the show. If you love the sound



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of a glorious human voice, you may want to get the record for this one number alone. If you're a fan of gospel music, performed by people who know what it's all about, you'll probably enjoy the whole record.

Gospel at Colonus was recorded partly at a live performance and partly in a studio, most of it via digital but some via analog tape, so the final result is, predictably, quite variable. The sound is never really bad, but the voices are sometimes clear and close-up, at other times distant and rather muffled.—Robert Deutsch

HAIR: Original Broadway Cast

Galt MacDermot, cond. Music by Galt MacDermot, lyrics by James Rado & Gerome Ragni

RCA 1150-2-RC (CD). Mike Moran, eng.; Andy Wiswell, prod. Digital restoration by Rick Rowe, prod. and eng. ADD. TT: 66:33

The American Tribal Love-Rock Musical—what powerful images are evoked by this appellation: the New World *vs* the Old, Us *vs* Them, Love *vs* Hate, Our Music *vs* Theirs. When *Hair* was first produced on Broadway (was it really 20 years ago?), it was hailed by some as a landmark musical, signaling the beginning of a new age, a break from the traditions of Rodgers and Hammerstein. Others viewed it as a crass attempt to commercialize (*ie*, rip off) counter-culture ideas. The production did enjoy great commercial success, but Tony Awards voters ignored it in favor of the now-almost-forgotten *1776*. A Broadway revival in 1977 closed after 43 performances. As far as I know, it has not received a major revival since then; my guess is that a musical about draft dodgers, psychedelic trips, and sexual liberation would not go over well in this era of Rambo, the War on Drugs, and AIDS.

Although I must admit that I was not among those who thought of *Hair* as the musical theater's salvation, I have enjoyed much of the music, and was quite excited by RCA's announcement that they were going to issue a CD based on the original multi-track master rather than the mixdown. The LP was one of the worst examples of '60s Dynagroove technology: no highs or lows, a very restricted

dynamic range, and lots of distortion. Would they be able to clean up the sound, and, if so, what does the recording of the show really sound like?

The answers to the above questions are "Yes" and "Pretty Good." I would still not want to use this recording as the best exemplar of what recording engineers were capable of achieving in the late '60s, but at least now it can be enjoyed without thinking that you have somehow tuned into one of the AM stations on a crowded part of the dial. The CD has much detail that I cannot hear on my (admittedly somewhat worn) copy of the original LP, the dynamic range is greater, and the sound generally has more immediacy.

Galt MacDermot's score contains a number of good tunes, but, on re-listening, my initial impression was that the music sounds rather relentless. I then realized that the pauses between selections are about one second, not even allowing one to take a breath. Listening with the CD player in the Copy Pause mode (there is a use for this feature, after all) solved this problem. The songs that impress most are still the well-known ones: "Aquarius," "Let the Sunshine In," "Hair," "Where Do I Go," "Good Morning Starshine," and "Frank Mills." This recording contains four numbers not on the original LP; only one of them ("Electric Dreams") seems to have been a significant omission.

If the show has dated—and I'm afraid it has—this is largely a function of the lyrics. The references to environmental pollution ("Air"), mindless patriotism ("Don't Put It Down"), and intergenerational conflicts ("I Got Life") are in a sense no less timely today than they were in 1968, but the approach seems just too heavy-handed. In terms of pure craftsmanship, none of the lyrics is the sort that would give Stephen Sondheim sleepless nights, but, at their best, they have some of the artlessness and innocence of flower children. And, simple-minded or not, it would take a cynic of utmost conviction not to be at least partly swayed by the exhortation to "Let the Sunshine In."

—Robert Deutsch

Jazz

BOBBIE ENRIQUEZ: *Wild Piano*

Bobbie Enriquez, piano; Eddie Gomez, bass; Al Foster, drums

CBS/Portrait 44160 (LP). Harvey Goldberg, eng.; Bob Thiele, prod. DDA. TT: 43:15

If by any chance you've reached a state of torpor from overexposure to New Age music, take heart: there's a powerful antidote now on the

market called *Wild Piano*. Rather than denoting an obscure type of keyboard instrument that grows uncultured by the roadside, the title actually refers to a wild pianist named Bobbie Enriquez.

Enriquez was born in a remote mountain hamlet in the Philippines, and is said to have developed his own technique for realizing the

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sounds swirling around in his head. As given life on this LP, these sounds are alternately tumultuous, supple, brash, impassioned, and always, but always, urgently propulsive and bristling with the unexpected. Indeed, listening to Enriquez probe this fare by Miles Davis, Monk, Mason Williams, and others is very much like riding a roller coaster—and fully as exhilarating.

So many influences are evident in his playing: after coming down from the Philippine hills, he apparently soaked up everything from Tatum, Garner, Monk, and Meade Lux Lewis to Bird, Trane, and Dolphy. Moreover, he exhibits a decided penchant for sliding into the funky, down-home, blues clichés that virtually any aspiring jazz pianist can rattle off at the drop of a leadsheet.

Amazingly, however, the mix almost always works, and Enriquez has developed an eclectic, intensely swinging style very much his own design—a particularly welcome occurrence given the number of clones who regularly frequent recording studios.

Equally gratifying are the presences of bassist Eddie Gomez and drummer Al Foster on six of the selections. Former Bill Evans sideman Gomez not only lays down bass lines solid enough to support Trump Tower, but, unlike many of his peers, he is an original and expressive soloist as well (here most evident on Monk's "Round Midnight" and Miles Davis's "All Blues"). Foster's contribution is a bit laid-back, his solos rather uneventful, but he stirs things up at just the right times and underscores Enriquez's sudden changes of pace like a third arm.

In addition to the trio collaborations, Enriquez offers ivory-searing solo examinations of Monk's "Pannonica," Williams's "Classical Gas," and the evergreen, "Cherokee." The results are typically flamboyant and sometimes border on the garrulous. At their best, they are also strikingly inventive and consistently absorbing.

Insofar as recorded sound is concerned, close miking provides a sense of immediacy. But you won't feel that the trio has paid a visit to your listening room, primarily due to a lack of soundstage depth and skewed spatial relationships. While the perception that Enriquez is playing with his back to the listener—bass to (very tinny) treble spanning left to right—is not particularly disconcerting, the unrealistic width of that span is. Sometimes, in fact (as during moments in "Classical Gas"), a duo-piano team could well be at work. Similarly, Foster's drum set often spreads out to a size where cymbal crashes and tom-tom figures occur at a dis-

tance well outside a single player's reach.

Despite such shortcomings, however, *Wild Piano* is strongly recommended, particularly to those who may have forgotten that jazz can be both modern—and fun.—Gordon Emerson

CHARLIE PARKER: *Bird (Original Soundtrack)*

Charlie Parker, Charles McPherson, alto saxes; Red Rodney, trumpet; Monty Alexander, piano; Ray Brown, Ron Carter, basses; Charlie Shoemaker, vibes; John Guerin, drums; others

Columbia SC 44299 (LP), CK 44299 (CD). Bobby Fernandez, Neal Spritz, engs.; Clint Eastwood, Lennie Niehaus, prods. ADA/ADD. TT: 41:21

Unlike *Round Midnight*, which encased Dexter Gordon's Bud Powell character in a soft-focus, romanticized, soundstagily mythic NY/Paris jazz juncture that never quite was (Herbie Hancock's music direction was deliberately inauthentic for that or any time or place other than the film studio), producer/director Clint Eastwood's labor-of-love *Bird* attempts to place Charles Christopher Parker Jr. squarely in the bebop world he created. The modern musicians he "plays" with here blow strictly in that tradition, accompanying Parker's solos, as peeled off the original Savoy, Verve, and home recordings with audio wizardry (massive EQing, dynamic noise filters, etc.). Although Leonard Feather's liner notes state that "the vital problem was that of providing music that would be at once authentic and recorded with state-of-the-art technique," producers Niehaus and Eastwood, and engineers Fernandez and Spritz, have come up with a sound authentic—in all the *worst* ways—to the late '40s and early '50s: dry, flat, boxy, no top, no bottom, and compressed midrange. It makes my PS Audio CD-1 sound like my old Sony CDP-101.

But it works, as far as it goes, and even works a little bit better on CD. (Though I think that's because the CD's relative lack of depth jams everything together more, obscuring the disparate source tracks and leveling the entire mix. The result is a more cohesive, if false, "ensemble" sound at the expense of depth and roundness.) At the worst, Parker sounds as if he's playing at right angles to the rest of the band, facing stage right to their straight ahead. Let's just say that Bird sounds as much a part of the "soundstage" as any of the others—that is, not at all. I don't mean this *entirely* negatively: don't listen with those golden, stethoscopic ears and it's entirely convincing—another multi-mono acoustic jazz album, and not a bad one.

Comparing the original Savoy recordings with these audio-rotoscoped cut-and-paste jobs, it's clear where alto player Charles McPherson (who plays in the ensemble heads—only Bird's solos are transcribed) leaves

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off and the real McCoy steps in. "Parker's Mood," the new string arrangement adding 1½ minutes to Parker's original, sounds as chopped up as it actually is, with an entirely unbelievable ending (no way would Bird *not* have played over the closing chords), but otherwise, though the patient died 30 years ago, the operation was a success.

The "live" cuts (most of the rest of the album) are a lot more convincing. These are mostly Parker choruses from a gig at Harlem's Rockland Palace, spliced onto a concert staged for the film—how's that for a sonic hall of mirrors? A lot can be fudged by filling in with audience noise, and, given the context of the film, it works well enough.

The "Parker & Strings" cuts—"Laura" and "April in Paris"—sound like early-stereo recordings listened to on one of those gawdawful "console" systems from the late '50s/early '60s: screechy, slushy string arrangements, violins extreme left, cello extreme right, no center-fill. And "All of Me" is a rhythmic shambles—it's hard to guess how they let this one get by, unless it accompanies a scene in which The

Band Has A Bad Night (haven't seen the flick).

Parker addicts must, of course, buy this album for "All of Me" and "I Can't Believe That You're In Love With Me," two previously unreleased cuts originally recorded on Lennie Tristano's home tape recorder. They're not great Parker—he sounds slack, tired, far from brilliant—but that won't stop the completists.

But it's easy to get so caught up in the techno/timewarp glitz of this project that we overlook the fact that, beyond the grave or no, some entirely convincing jazz is happening here. Bassists Brown (the only musician in these sessions to have actually played with the living Parker) and Carter are their impeccable selves, and Monty Alexander's piano is a witty delight throughout. Session drummer John Guerin (LA Express, Frank Zappa, many Joni Mitchell albums, etc.) wears the bebop mask effortlessly, and Red Rodney's trumpet approximates a blend of Davis and Gillespie—appropriately. Jon Faddis credibly impersonates Dizzy on "Ornithology." Really, as a jazz album, it works. Incredulously recommended, sort of.

—Richard Lehnert

Rock/Pop: Three Wise Guys

LEONARD COHEN: *I'm Your Man*

Columbia C 44191 (LP), CK 44191 (CD). Many engineers; Leonard Cohen, prod. AAA/AAD. TT: 40:59

TOM WAITS: *Big Time*

Island 91987-1 (LP), 91987-2 (CD*). Biff Dawes, eng.; Toms Waits, Kathleen Brennan, prods. AAA/AAD. TTs: 45:14, 67:46*

RANDY NEWMAN: *Land of Dreams*

Reprise 25773-1 (LP), 25773-2 (CD). Lots of engineers; Mark Knopfler, James Newton Howard, Tommy Lipuma, Jeff Lynn, prods. AAA/AAD. TT: 40:18

More songs about beautiful losers? Well, losers anyway. Cohen, Newman, and Waits have always written about the lost corners of American culture, the carnies, the freaks, the eccentrics. You could hardly even call the subjects of their songs *anti*-heroes, so pathetically, lumpishly lost are most of them. Which is why their songs are so valuable: here you'll find little to aspire to, much to avoid; song after song is an object lesson on exactly how *not* to live your life. No chance of romance when writing about drunks puking in gutters, not going home with your hard-on, or a fat boy's best and only friend charging money to exhibit him "dancing." But Newman's statement that the people in his songs "are sometimes liars and braggarts. . . but I wouldn't sing about them unless I cared about them" holds true for Waits and Cohen as well.

Like Bob Dylan's, none of these voices could

be called beautiful instruments. All three singers are vocal method actors, rule-breaking dramatists, sometimes-reluctant media for their own compositions. In a word, songwriters.

Unlike the recent Dylan, however, Cohen, Newman, and Waits have all been savvy enough to sing *only* their own songs. The purchase of an album by one of them is the purchase of a complete package: a verbal, musical, and sonic recasting of the world in the image of the singer/songwriter. In a word, art.

As the years go on, the vision becomes more personal, the musical language ever less predictably traditional. Early in their careers, Cohen, Newman, and Waits all wrote songs that *begged* to be recorded by other artists, and were. Not so anymore. From their new albums, Cohen's "First We Take Manhattan" was previewed by Jennifer Warnes on her breakthrough *Famous Blue Raincoat* album of Cohen songs, but only Newman's "Follow the Flag" and Waits's "Time" are even thinkable as sung by anyone else (anyway, "Time" is from two albums ago).

All of which is to say that we enter these albums as we go to see a film star (as opposed to a film actor): not so much for the songs as exemplars of the songwriter's craft, or the singers as paragons of vocal art, or even the recordings as the ultimate state of *that* art. Rather, we buy these discs because we *like*



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these guys as guys; because their records invite us to see the world as they see it for 40 minutes to an hour. Lord knows I'd hate to live in the world as *any* of them seem to experience it for more time than it takes to hear an album or two. But they're intriguing, we seem to know them well enough to be comfortable with their idiosyncratic ramblings, they're as oddly comforting as the Sunday morning blues. A little weird, maybe, but basically decent guys.

Tom Waits seems to cultivate that vocal weirdness as carefully as Seymour nurtured Audrey (the plant) in *Little Shop of Horrors*; in *Big Time*, it's taken over his voice to the point where even I, a dedicated Waits fan, could understand next to nothing of his garglings. It's all very atmospheric, every drop of sentimental spittle in place, but I can't help thinking it merely high-tech kitsch; Waits's committedly lugubrious impersonations are as close as his audience wants to get to a *true* stumblebum.

Big Time, the soundtrack of the concert film of the same name, sums up his last three critically acclaimed albums, *Swordfishtrombones*, *Rain Dogs*, and *Franks Wild Years*. Only three of the CD's 18 songs originate elsewhere, but virtually nothing here improves on the originals. One of the most rewarding things about those LPs was the amazing variety of instrumentation—a cross between the virtuosic playing of a plumbing-supply shop and a Salvation Army meeting—and recording techniques from song to song. Here, the arrangements for the basic quintet include such exotica as brake drums, clarinets, basstarda, banjo, sitar, and accordian, but the recording is so god-awful (the liner notes say "recorded live to 24 track," but it sounds like bad mono to me) that the mix just sits there between your speakers like an undigestible lump of cold, congealed oatmeal. Most of those instruments are barely audible. Soundstaging? Ha. And the six songs originally recorded on cassette have more hiss *on CD* than any prerecorded tape I've ever heard. (Virtually no difference between LP and CD, by the way.)

There has been no attempt to approximate the feel of a live concert—each song is faded in and out, the whole sounding like a series of blackouts. Nor are there any of the Professional Irishman intros and stories that made 1975's *Nighthawks at the Diner* such a raconteur's delight. *Big Time* is just a random bag o'songs we've heard before (except for the new, bitter "Strange Weather," one of his better Brecht-Weill imitations) in better versions, without the spark that makes a concert worth going to in the first place. The first unnecessary Tom Waits album.

Speaking of Brecht-Weill, Leonard Cohen's

songs continue to conjure up cigarettes and rain, dark cities, mysterious, powerful women who vacillate between virgin and virago, and a rotten, post-apocalyptic Continentalism. Cohen's raspy *basso ironico* is that of a man waking up after the holocaust (pick one) with a hangover and a whore. "Everybody knows that the boat is leaking. Everybody knows the captain lied . . . Everybody knows that you live forever when you've done a line or two. . . . Everybody knows that the Plague is coming. Everybody knows that it's moving fast." You can't tell him anything, he can't tell you anything; Becket-like, he can't go on/he goes on. As he says in his Muse's Bio, "Tower of Song," "I was born like this, I had no choice. I was born with the gift of a golden voice. And twenty-seven angels from the Great Beyond, they tied me to this table right here in the Tower of Song."

If his lines are as strong as ever ("You loved me as a loser but now you're worried that I just might win."), the slow melodies are as weak as always. But there are a few. . . the true waltz of "Take this Waltz," another love affair with dying Vienna ("it's been dying for years"); and the inexplicable poignancy of "I Can't Forget." The title song is the anthem of a menacingly easygoing amoral gunslinger's love-song: hell, he'll be *anything* for love.

Cohen continually posits the bleakest of desert futures ("Jazz Police"), then manages to find one perfect rose growing from the rubble. A trick, but a good one, and priceless when it's true. Here, it usually is. Cohen's been around.

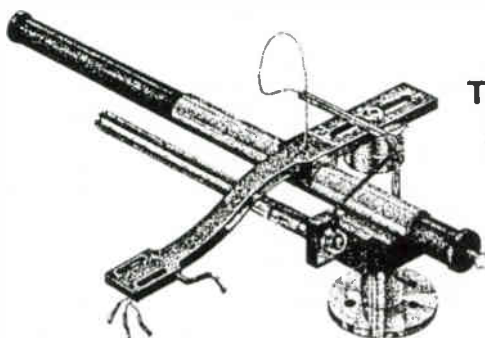
The unimaginative arrangements are primarily of synthesizers (god, I'm sick of 'em), with here and there a drum or violin thrown in, and a wonderfully breathy Jennifer Warnes (her *Famous Blue Raincoat* is actually more impressive as a Leonard Cohen album) floating behind "Tower of Song." But for all the urban synth, the album is quiet at heart, Cohen's voice louder than all other tracks combined. This pillow-talk ambience is appropriate for such febrile dream-settings. The LP's dispersion is more vertical, and the synthesized strings are more convincing; on the CD there is little ambience, false or otherwise; background vocals are dead, and Cohen's voice is mixed higher. Get the LP.

Land of Dreams is the best thing Randy Newman's done since 1974's *Good Old Boys*, and only the fourth album since then. He's returned to the Louisiana of his earliest childhood for some of these songs, and a lot of the freshness of *Good Old Boys*' "Birmingham" can be heard in "Dixie Flyer," "New Orleans Wins the War," and "Falling in Love."

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dented is that Newman sings directly of his own life, not those of the often grotesque boors, freaks, swindlers, pinheads, and down-trodden that have always populated his songs. The first three songs are straight autobiography, "Dixie Flyer" and "New Orleans" starting right off with his birth and recounting RN's mother's instructions in race relations, and his Jewish aunts and uncles riding around drinking rye whiskey and trying to act like gentiles. Even the love songs that follow, simple without being simpliminded, seem, for almost the first time on a Randy Newman album, without a trace of irony.

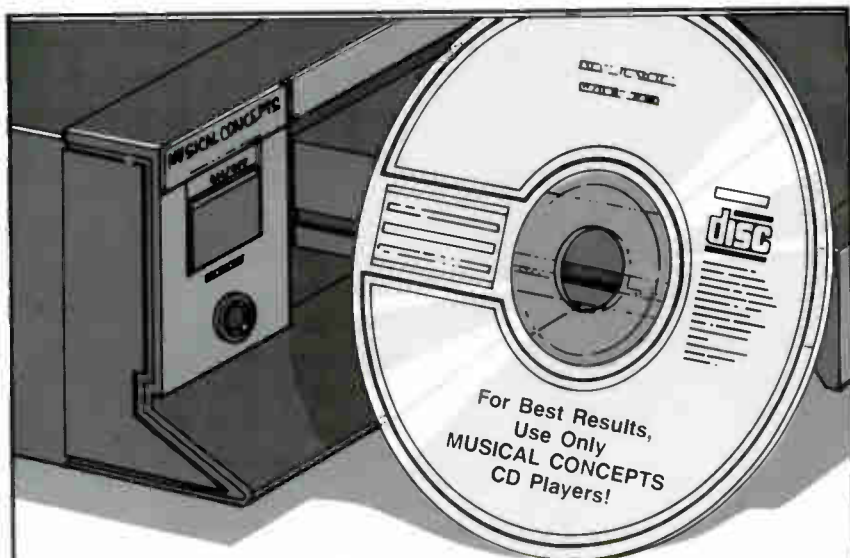
Side 2 is back to (ab)normal. As Newman says, "you learn much more about people when you know what they lie about"; I'd only add that you never learn so much as when they lie to themselves. In "Roll with the Punches," Uncle Bob and his midnight blues are resurrected from *Twelve Songs* to rail in Reaganesque smugness about the homeless, the underclass, and other welfare chiselers. In "Masterman and Baby J" (produced by Mark Knofler), a rapmeister rhapsodizes about how, when he looks in the street, he sees no hookers, drunks, junkies, or garbage—just him and his partner on stage at the LA Coliseum.

But in "Follow the Flag," Newman becomes his own mask. It's a gorgeous, pastoral patriotic ballad in RN's best neo-Copland style (find his underrated *The Natural* soundtrack for more of this; some of his best work). Seductively convincing, it's a bittersweet tribute to the innocence that can, with the best intentions, uncritically embrace mindless jingoism. Newman's—and my own—aching nostalgia for the no-longer-possible ease of such pure belief is frightening. I'm sure the Hitler Youth felt the same way.

"I Want You to Hurt Like I Do" is not a morose lover sulking to his girl, but a father talking to his son just before Dad deserts the family. The title/chorus of the song is the subtext of 95% of the arguments we all have all the time. I've never before heard it addressed, let alone so directly, in a popular song.

Much of what I enjoy most in Randy Newman records—his tastefully lean arrangements for strings, horns, and chamber rock ensemble—are gone, replaced by a Synclavier sounding just like . . . a Synclavier. So much for progress. But his verbal craft is as sharp as ever; I'm a sucker for such implied rhymes as: "I can hear the church bells ring / I can hear the choir." There's barely any difference between LP and CD, the latter just a hair harsher and flatter. But so what? This is wonderful songwriting, and Newman sounds more alive than he has in years. Buy it.

—Richard Lehnert

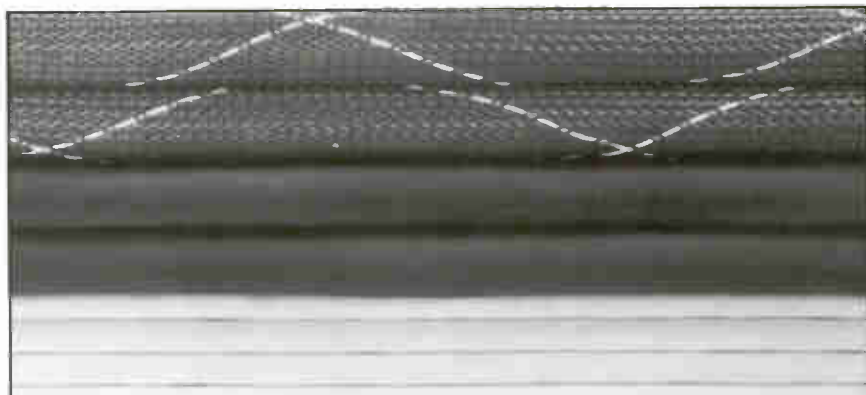


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MANUFACTURERS' COMMENTS

QED PCC passive preamplifier

Editor:

Thank you for your very favorable review of the QED PCC Full Function Passive Preamplifier. There probably isn't space to go into too much detail, but suffice it to say that if the PCC is viewed to be "more than competitive with a preamp of considerably higher cost," then we have indeed succeeded with our aim of producing a very desirable piece of "budget esoterica." Thank you once again for the opportunity of a reply.

Bob Abraham

QED Audio Products, Ltd.

Martin-Logan Sequel loudspeaker

Editor:

Thank you for an informative and thorough review. So many of Lewis Lipnick's observations of the Sequel were well-founded that I find we concur on most issues, from room placement to image size, transparency, and musicality.

LL accurately places our design goals for the Sequel when he mentions that it was created as a practical, minimum-compromise product. However, in some ways, listening to the Sequel can be deceptive; its performance achieves new realms in some areas, yet its electrical interaction is different from traditional speaker products in others.

The acoustic distortion of the Sequel measures less than 0.08% throughout most of the audio spectrum (*ie*, from 200Hz to 30kHz). You can literally measure distortion variances between different amplifiers by measuring them via its acoustic output. Additionally, since it is an electrostat, the Sequel interacts with speaker cable in a way much different from electromagnetic products. That, combined with the 30k bandwidth, forms a different listening experience (with the exception of other Martin-Logan speakers). Yet, as Mr. Lipnick noted, it establishes clarity and transparency as well.

When listening to cable differences, you are listening to system interaction and not just the cable. With less component interaction it can appear that less change occurs. However, the low-distortion aspects of the Sequel allow you

to "look" into the cable performance itself, rather than the reflected component interaction.

Thanks, also, to Mr. Lipnick for comparing our ESL to other products costing twice as much. We feel the same way. In order to talk about what the Sequel does, you almost have to talk about products twice its price to get a relative understanding of its virtues.

Gayle Sanders, President
Martin-Logan, Ltd.

Koss PRO/450 headphones

Editor:

I am pleased that Peter Mitchell "fell in love" with the sound of the Koss PRO/450, but feel that I must take issue with some of the comments made regarding the performance of the stereophone.

It is important to note that the PRO/450 tested was a pre-production unit (as PM indicated). The small air leak he described was caused by the use of a prototype tool for production of the bellows. We determined the seal was inadequate, and the production tool was built to completely seal the cup to the earplate, eliminating the leakage.

We agree with PM's determination that the hard-tempered clock-spring steel headband in the pre-production 'phone applied too much tension to the ear; therefore, all current production headbands have been changed to 1075-grade special-tempered spring steel. The reduction in tension provides for a more balanced frequency response and exceptional comfort. Note: the earcushions on the PRO/450 are not liquid-filled as PM indicates—they are Koss Pneumalite (air-filled) cushions which provide just as good a seal as liquid and are preferred by customers.

The frequency-response readings as detailed are very different from the response curve for the PRO/450 plotted using state-of-the-art test equipment in the Koss lab. I would need more specific information of the test procedures PM used to evaluate the PRO/450 to determine if the problems he found were in the test procedures or in the pre-production headphone.

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Michael J. Koss, President
Koss Corporation

Cambridge CD2 CD player

Editor:

Cambridge owner and designer Stan Curtis is well-known for his novel approach to component design, and the CD2 is no exception. His introduction of 16x oversampling on this machine is not a question of playing a numbers game; it does bring benefits in terms of overall resolution and presentation. I am sure that we will see more companies following this road in the future.

We appreciate George Graves taking the time to look at our new player. As well as answering some questions about the CD2, his review raises several to which I would like to respond:

There is no on/off switch for precisely the reason indicated. The machine sounds better when it is warm—so it is on all the time, eliminating any waiting period and ensuring consistency of performance. The machine also allows you to turn off the distracting display, if so desired, by using the "Standby" button in "Play" mode. The tray will not open until the display is restored.

George's comments and experiments with error correction on different machines are very interesting. The reason for the CD2's ability to play severely flawed discs is its 64k of error-correction capability. As far as we know, the CD2 is the most powerful machine available in this area.

Finally, George can peg those eyebrows back in place! The IC op-amps he describes are used to control the DC operating conditions within the DACs—they are not in the signal path. There are no analog sections in the player. The signal passes through the D/A converters, through four pairs of metal-film summing resistors, and finally a polypropylene coupling capacitor to the output terminals. As to the top-end "strangeness" that is described: it would be useful to know what other equipment and cables were used for the listening sessions. Without all the facts to hand, it is very difficult to make a valid comment on this. Needless to

say, we have not felt this a problem area on the CD2 thus far.

Thanks once again to *Stereophile* for a well-considered and thorough review.

Barry Fox, Marketing Manager
Celestion Industries, Inc.

Rotel RC-850 preamplifier

Editor:

John Atkinson should be commended for the considerable expertise and analysis evidenced by his review of budget preamps including the Rotel RC-850. Given the fact that the RC-850 was asked to compete with four excellent and far more expensive preamps, JA's conclusions were both well considered and fair.

Chris Browder
Rotel of America

Parasound P/FET-900 preamplifier

Editor:

Thank you for JA's thorough review and enthusiastic recommendation of the Parasound P/FET-900.

I'm pleased that he reported that the Parasound is the only unit among those compared to use discrete devices exclusively. He is quite correct that its FET design makes its 100-kHz bandwidth quite immune to RF fields. That is a very real consideration here in San Francisco, where our products are created and tested.

The fact that he found the P/FET-900 even more satisfying with its tone-control circuits engaged testifies to the care with which they were designed and built.

I conceived the P/FET-900 for maximum value and utility, where each and every function would actually be used and enjoyed. For years to come. That is why I elected to spend the extra money to use four separate CMOS switching brains. If he were to repeat this review in five or six years, he'd find that the P/FET-900 would be the only unit to sound the same as today, without suffering the gradual loss of transparency caused by corrosion of switch contacts.

My choice to omit an MC input was made after interviewing many serious listeners. The conclusion was clear: people who buy low-output MC cartridges are rarely satisfied by the MC inputs of preamps and want to make their own selection of a step-up device. This choice is as personal as the cartridge/turntable,

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speakers, or any other part of the system. I think it was a prudent decision to take the cost of an MC stage that might not be utilized and apply it to superior parts like the Wima capacitors, gold-plated jacks, heavily regulated power supply, and substantial construction (the P/FET-900 weighs 15-25% more than the others).

One last thing. We are not a "large company," as his summary suggests. In fact, we are quite a bit smaller than our competitors, no matter how polished our products are! We have been reducing the number of Parasound dealers to concentrate on those whose competence can properly address the needs of serious listeners, including those who are on a budget.

Richard Schram, President
Parasound Products, Inc.

PS Audio 200cx power amplifier & 4.6 preamplifier

Editor:

What a great review! I guess I'll take back what I told Larry Archibald, at the *TAS* dinner, about *Stereophile's* "non-rave" policy.

Just one brief caveat about the information in the review is all I have to contribute, but first I too would like to follow up on the 4.6 review.

After a great deal of deliberation subsequent to your review, we have decided to make a larger power supply as standard equipment on the 4.6. The power supply TJN reviewed was a 50W supply; we will now go to a 250W supply.

So many of your readers have contacted us after the review, wanting to know if there is an alternative to adding the \$450 M-500 supply (heavily discussed in the review), that we have now provided one.

The good news is that the price will only go up \$80! Furthermore, any owner of our 4.5 or 4.6 can upgrade for \$150. It is not even necessary to send their units in. Just contact your dealer or us for details.

With respect to the 200cx review, Tom mentioned that the 'cx was not rated to drive low-impedance loads. Yet it is rated for 2-ohm operation and will drive 1-ohm loads to boot. Are we talking about lower than that? In my experience, I haven't run into a load the 200cx couldn't handle yet.

May I respectfully submit that while there may be a few amplifiers that are able to drive lower-impedance loads, I don't think it was

entirely accurate to say the 200cx was not rated for low impedances. I would think that 1 to 2 ohms would fit anyone's definition of a "low impedance."

Thanks, again, for a great review.

Paul McGowan, President
PS Audio

Philips FT-565 tuner

Editor:

Thank you for the opportunity to comment on Donald Scott's review of the Philips FT-565 tuner. While we are quite comfortable with the review itself, the conclusion that follows begs comment.

DS is obviously disappointed that Philips has not yet introduced a tuner that aspires to a higher level of performance. While it is nearly impossible to engineer an entire line of components that will satisfy every buyer in a short period of time, we are planning to expand our tuner offerings in the near future. Stay tuned.

DS also seems to have a problem with the "Made in Japan" label. While we are indeed a Europe-based company, Philips operates a number of audio component factories around the world. For example, we produce CD players at facilities in Belgium, Japan, and recently, North America. Tuners are sourced from Philips factories in Japan and Germany. In fact, there are more than a dozen different Philips factories producing audio products around the world. The important point to note here is that these are Philips factories; none of the components in our new audio line are OEM'd. For the record, all design and engineering is coordinated through out headquarters in Eindhoven, the Netherlands, regardless of where the end product is produced.

David Birch-Jones, Marketing Manager
Philips Audio Separates, CD, CDV

AVA Super PAS Three

Editor:

To summarize John Atkinson's follow-up on the Super PAS Three phono section, it appears that Stanley Lipshitz suggested the Super PAS Three was "liked" for its non-linearities, rather than for any virtues. Mr. Atkinson has further investigated and confirmed that the preamp is not overloading under any reasonable set of conditions, and thus Lipshitz's worries are unfounded—the preamplifier is respected because it treats the musical signal well.

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We appreciate that even someone making as careful an objective and subjective evaluation as Atkinson did of our Super PAS Three was willing to go back and further test when doubts were raised about the validity of his subjective judgment. We are pleased (but not surprised) when his further objective testing confirmed that his original subjective evaluation was indeed correct.

Finally, we should reassure *Stereophile* readers that many of our clients use Grado cartridges (we sell them), and we have never had any feedback from our clients about warp wow problems with the Super PAS Three.

Frank Van Alstine
Audio by Van Alstine, Inc.

Audio-Technica MC cartridges

Editor:

In regard to Alvin Gold's October review of the Audio Technica MC cartridges, we would like you to mention that Lyle Cartridges will be importing these models as well. I'm certain that this information will be of use to your readers.

Eric Le Warter, VP
Lyle Cartridges

Audio Concepts MSB CD player

Editor:

I just wanted to make a few comments regarding our CD player, the MSB unit that Tom Norton reviewed earlier in the year [Vol.11 No.3].

The on-off switch was disabled many months ago, eliminating the "humongous" pulse referred to in the "Recommended Components" section of Vol.11 No.10. Leaving the unit permanently on also does away with the need for a lengthy warmup period. Tom has known about this fact for a long time (I'm sure his unit is set up this way).

In the same issue, Tom refers to the MSB player both in the Marantz CD-94 and CAL Tempest reviews. In both cases he makes very favorable comments about the MSB. Unless I read it wrong, it sure looks like Tom favors the sonics of the MSB over the Marantz unit. Considering the difference in price, the MSB has a real advantage. In a previous issue, it looked like the MSB was considered different, but equal to the Mod Squad Prism. Even the comments in "Recommended Components" indicate that.

Yet . . .

Especially considering price/value, it just

doesn't seem that the MSB deserves to be in Class C with these other units in Class B or A. I know it must be extremely difficult to balance out all the factors regarding rankings. But I feel that Tom's comments on the MSB should rank it higher than it is, or that you might possibly have another reviewer take a serious listen to validate a higher ranking.

Thanks for taking the time to look this over. Continued success with your magazine!

Mike Dzurko
President, Audio Concepts, Inc.

Versa Dynamics turntable

Editor:

Please note that the noise reduction enclosure for our air pump is, and has been since November 1987, provided as standard equipment with all Model 2.0 systems. This housing is not a \$600 option, as noted in your listing in "Recommended Components," but an integral part of the unit. We have notified our dealers of a price rise to take effect on November 15, 1988. Please be advised that after that date, the Model 2.0 will retail for \$12,500. The only option will remain the rosewood enclosure at \$750.

Additionally, we note that we have apparently been negligent in informing everyone of our address. All contacts with us should be made at: Versa Dynamics, Orchard House, Cedar Grove Road, Media, PA 19063. Tel: (215) 356-6915.

John Bicht
Versa Dynamics

Lazarus Cascade Basic preamplifier

Editor:

I am writing in reference to the comment in the October 1988 issue of *Stereophile*, stating that the Cascade Basic is being deleted from the "Recommended Components" list "due to reported reliability problems."

While I do not contest your right to remove my product from "Recommended Components," I would like to advise you of the actual return rate of these preamplifiers.

I have broken down, by serial number, how many units have been returned for correction, and find 3.4% of those units sold in 1988 developed some sort of difficulty. Of these, *all* have been properly serviced and returned to the customer with no further problem whatsoever. Evidence to substantiate these figures can be supplied upon request.



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Upon survey of my dealers, the Cascade Basic, at 3.4%, comes out to be one of the more reliable products available in the high-end as well as mid-fi markets.

Based upon our relatively low return rate, we request that you reconsider your deletion of the Cascade Basic Preamplifier from "Recommended Components."

Greg Miller, President
Lazarus Electronics

Sony CDP-R1/DAS-R1 CD player

Editor:

We would like to thank J. Gordon Holt and *Stereophile* for reviewing the Sony CDP-R1/DAS-

R1 Compact Disc reference playback system. We were particularly pleased that Gordon took the time to note the many detailed steps that have been undertaken by our ES engineers in order to insure the most musically accurate sound reproduction possible from the CD format.

As always, your readers should find the continuing evolution of CD-player technology most interesting, as many important refinements have been made over the years in CD-player design. In fact, by introducing such concepts as outboard D/A conversion, 18-bit linear processing, single master clock architecture, and diecast linear motor transports, Sony is proud to have played a leading role in raising

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the standards for CD-player performance.

While some of these technologies may have seemed superfluous at first, their worth was eventually proven in the creation of true state-of-the-art products that stood the test of time. Therefore we were not surprised that, amid the many accolades given the R1, Gordon described its low-end response as "heavier" compared to other CD players (including previous Sony models which he has repeatedly cited as being "unsurpassed" in this area). We suspect that what Gordon calls "not boomy or soggy, just more" is, in fact, simply more accurate bass reproduction, primarily due to the R1's unique jitter-free circuitry design.

Ultimately, as previous technological breakthroughs have shown, we at Sony feel confident that this latest development will once again set the direction for the rest of the industry to follow. But for now, Gordon's appreciation of the CDP-R1/DAS-R1 as "the best CD player I have heard" is more than a satisfying footnote to our accomplishment.

Once again, thanks for an honest and objective review.

Michael Lyons, Manager
Sony High Fidelity Products



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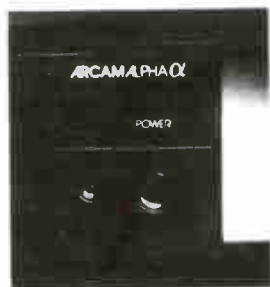
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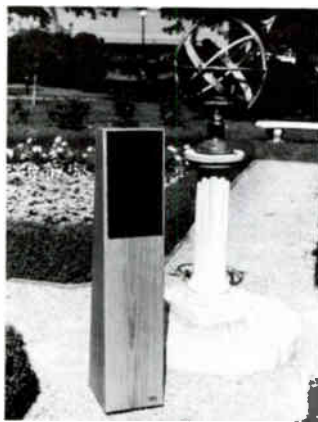
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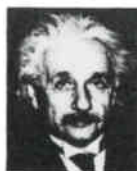
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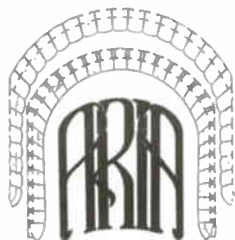
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THE FINAL WORD

Three Minds

I was of two minds on what to write about this month. On the one mind, I felt some extra notice should be given to TAS's 15th anniversary awards banquet (see p.43 for details), and Harry Pearson's hospitality so effusively bestowed on us all. On the second mind, I thought to point out and discuss the extremity of difference, in "As We See It," between JGH in October and JA in November—but then, you would already have noticed that, and besides, other than comparisons with the little conflict that Martin Luther and Pope Leo X had back aways, I didn't really have anything to say.

Two minds... until this weekend when, coincident with a most pleasant visit from Joyce Dudley Fleming and Steve McCormack of The Mod Squad, yet a third mind came up. (You must think me very odd-looking with all these minds sprouting out all over. Well, let me tell you, it *takes* a lot of minds to keep this enterprise running with some kind of balance.)

You see, it was just yesterday evening that I had this breakthrough realization about relative values in sound reproduction that had just been hovering beyond the horizon for quite some time. JA, JGH, Joyce, Steve, and I had all gathered at JGH's listening room for an audition of the latest Prism, The Mod Squad's modification of the Magnavox 473. (The version reviewed by TJN in Vol. II No. 5 was based on the 650). Now I would like to say that I immediately noted that the new Prism lifted several thousands veils (or points of light), or even that I noticed the difference between it and the old Prism. But I was focused on something else.

JGH has recently been extolling the excellent sound of his system, now equipped with the VTL 300s driving the Sound Lab A-3s, the Mod Squad CD player, Audioquest and Monster Cable interconnects, and the Versa Dynamics turntable with an Ortofon MC-3000, all this running through his Threshold FET-10 and Vendetta Research preamps. This is familiar stuff for all who attend to his reviews, but for Gordon in recent weeks the system has been particularly resplendent, because now he has reoriented the speakers to run along the long wall of the room, resulting in a dramatically smoother low end and much-improved sound-staging.

That's all according to JGH. The revelation for me was that this was one of the most off-putting of setups that JGH has had, while at the same time I could recognize exactly what it was that JGH found so wonderful. It's not unusual for me to be unswept away by reproduced sound—anyone's version! After all, all our attempts are quite poor compared to even a solo violin live. (The most shocking event at the TAS banquet was the playing of a solo violin by Arturo Delmoni—all present could not but 'fess up that their equipment wasn't even close.)

What struck me was that for me the sound in Gordon's room wasn't even close to the best I'd heard in that room and with essentially those components. The good parts were that the sound of instruments, their timbre, definition, and sonic realism, were almost ethereally delivered, and that the soundstage information was likewise totally available for observation, almost as on a dissecting table. This record had no hall information, this other one had just such and such a hall, which went back so many feet and with the instruments positioned just so, this third record was way too multi-miked, and so on.

The problem was that at no time was there a sensation that I was in the hall with the instruments, that the musical event was actually happening there with me in it. My realization was that JGH, so frequently at odds with many of the other reporters in this industry—and so frequently right—has all along been seeking the most accurate *reporting* of information from a sound system: exactly these violins, exactly this amount of back-hall ambience, exactly the reality of this trombone, what choices the recording engineer made.

I wouldn't dare to offer my version of reproduced sound, where I try to actually recreate a semblance of the live event *in* my room, as a recommendable alternate to JGH's. But it's important for all to realize that sound reproduction is an intensely personal experience, where the goals of one expert, even fabulously realized, will not please another even 'umble enthusiast.

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