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

Critic's Choice

Magneplanar® MG-III

MAGNEPAN
1645 9th Street
White Bear Lake, MN 55110
Almost 30 years ago, Columbia records issued a unique disc called The Art of Jonathan and Darlene Edwards. Darlene sang and Jonathan played piano, and the jacket notes rhapsodized about the depth of feeling they brought to their duos, despite some imperfections of technique.

Those imperfections, it turned out, amounted to spectacular technical incompetence. Darlene's voice swooped, broke, went falsetto during high passages, and was painfully off-pitch about 60 percent of the time. Jonathan, who had an impeccable sense of timing and phrasing, on occasion staying precisely in step with Darlene, was the original Mr. Stumblefingers at the keyboard. He played runs with hesitancy and disordered abandon, his chords presaged the coming of aleatoric music, and his arpeggios sounded like pebbles thrown at a set of concert chimes. Their performances may have run as deep with emotion as a Dostoyevsky novel, but no one who heard the record ever noticed anything but that Jonathan and Darlene couldn't get the bloody notes right.

That record did not become an indelible blot on Columbia's recording escutcheon. It was, rather, a historical document of sorts, a roundabout way for two very fine musicians—Paul Weston and Mary Ford (also known as Mr. & Mrs. Weston)—to thumb their noses at what they saw as a distressing trend in pop music: the growing popular appeal of musicians who could emote like crazy but couldn't play music worth a tinker's dam. Of course, the record sank like a lead feather in the marketplace, leaving nary a bubble to mark its watery grave; no one had ever heard of the Edwardses, and American record buyers never have understood anything about good or bad performances anyway. (Sure, I can play the piano. How well? Whaddya mean, how well? What's that got to do with anything?)

But the Art of Jonathan and Darlene Edwards became an immediate and lasting hit with cynics, who delighted in burying it amidst a pile of trendy ephemera on the record changer at a party, and waiting to see how long it took their guests to notice that something, anything, was wrong. (The fact that most guests never noticed at all only further fueled the fires of their cynicism.)

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blocks away, and the distress calls of local bats which can recognize aural trauma before people can. But can that super system reproduce music properly? Can it make a clarinet sound like a clarinet, a trumpet like a trumpet, an Amanda McBroom like Amanda McBroom? Can it get the notes right? Chances are, it can’t.

It seems, these days, that many of us audiophiles have become so preoccupied with the minutiae of sound reproduction that we haven’t even noticed that it doesn’t sound like music any more. We marvel at the soundstage presentation, lose our continence over the detail, and climax over our system’s ability to rattle the lighting fixtures and scramble our otoliths. But ask your average audiophile if his super system reproduces instrumental sounds realistically and he’ll give you a blank stare or, worse, tell you that it must because it’s so accurate.

I Otoliths are little bits of sand that float around in our inner ear, and sink to the bottom when gravity tells them we are standing on our feet rather than otherwise. Enough 20-Hz sound pressure can agitate them so that, like many other audiophiles, we find it hard to tell which side is up. It’s a real turn-on.

What makes it accurate? Well, listen to that spaciousness, that detail, that seismic bass! How can you doubt? (How realistic is it? Whaddya mean how realistic? What’s that got to do with anything?) Somewhere along the line we lost track of what audio is all about: the reproduction of music.

That this comes as a surprise to many audiophiles is suggested by the reactions of those with whom I have actually discussed this subject. I have played on this old saw in these pages for so many years that it has turned into a dead saw horse, but somehow the message never seems to get through. There should be no harm done by beating it into the ground a little farther.

Some years ago, Hi-Fi News & Record Review, England’s premier audio magazine, published a number of real-time spectrum analyzer curves showing the distribution of energy through the audio range during brief passages of actual recorded music. The thing that was so shocking about those curves was that they revealed, for all to see,
that music was comprised mainly of mid-range energy! Everything else took a back seat. That in itself should tell you something, but in case it doesn't, I shall spell it out. Since there is more middle range in live music than anything else, it would seem logical to assume that the accuracy of middle-range reproduction is the most important part of music reproduction.

Now I am aware that logic is anathema to the manic perfectionist who treats the more abstruse aspects of his "hobby" as revealed religious truth; this treatise is not addressed to him. I speak instead to the person who still approaches audio as a means for the realistic reproduction of music—the person who still has at least one and a half feet placed firmly on the ground.

The middle range is the home of perhaps 85% of the music we listen to. The bass in a musical composition is usually nothing more than a rhythmic or harmonic underpinning to the "melody," which—traditionally scored for a piano's right-hand, or treble, clef—lies in the range between A below middle C (220 Hz) and C⁴ (4186 Hz). Often, of course, the right hand plays bass and the left treble, but the major thematic material of most compositions stays between 220 and about 1500 Hz. (Few works call for more than an occasional excursion into the range above 1500 Hz).

It is this 220-to-1500-Hz part of the audio range wherein lie the most important notes in music. If a system can't reproduce this range properly—if it can't even get the notes right—then any other positive attributes that system may have are irrelevant. If it can't make the instruments that play in this range sound the way they're supposed to sound, then the fact that it has a beautiful soundstage, and a silky, airy high end, and deep, solid bass is mere embellishment of dross, like gold plating on a cigar butt. Sure, the system may "sound good," but so did the boomy, "mellow" old Magnavox consoles that were the last word in home music systems during the mid-'40s. If we take seriously our commitment to accuracy in music reproduction, we should not take
seriously the scads of high-priced loudspeakers out there in audioland which treat the essential midrange frequencies as obscenities, to be modestly hidden from innocent ears.

I am appalled at how often I hear cheap and unassuming systems—automobile radios and K-Mart Special (30% off!) table radios—produce the kind of startling, in-the-room realism from voice and small-ensemble music that hasn't been heard from "perfectionist" loudspeakers since Acoustic Research invented "Boston bland." Many people have told me, often with some embarrassment, that they get more sheer emotional excitement from their cheap car radio than they do from their kilobuck supersystem at home. What's the appeal of these cheap-crap audio "systems?" Because, while they may not do anything else well, they often do middles very well.

That so-called laid-back middle range (now known as the BBC dip, after their de-epidemic among high-end loudspeakers. Richness and unctiousness are in, realism is sign of the LS 3/5A) has become absolutely Out. Even JBL, long noted for the startling realism of their midrange reproduction (and for the awfulness of their high and low ends), has joined the bandwagon with a new line of audiophile speakers featuring—guess what?—superb highs, respectable bass, and a new, sucked-out, laid-back middle range.

Midrange accuracy should be the starting point of loudspeaker design, onto which our other prized audiophile attributes should then be appended in order to convert that musical midrange into a semblance of literal accuracy. Today it seems that, among the loudspeaker designers who lay claim to accuracy, the musical midrange gets tacked on as an afterthought, to fill the void between all those lovely things the system does at the low end and high end.

Just a few years ago, audiophiles used to ask each other "Sure, it's accurate, but does it sound good?" Today, we might well be saying "Sure, it sounds good, but is it accurate?" It often isn't.

—R.D.F.

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LETTERS

Crappy Obfuscation

Editor:

Thanks for sending the free sample magazine, but I can’t in good conscience sell it in my store next to TAS. J. Gordie Dolt’s editorial is the height of crappy obfuscation. “The Absolute Sound of What?” indeed! He wants to be the Stereo Review of the High End, right? When are Len Feldman and E.T. Canby coming to work for you?

Nice try, though. I’ll probably subscribe personally just for the yucks. (And maybe for AHC.)

Barry Jones
Tex-Gas
Waukegan, IL

JGH is pleased that Mr. Jones has such a good sense of humor, and apologizes profoundly for having frayed Mr. Jones’s security blanket with an abrasive truth. JGH also suggests that Mr. Jones just forget about subscribing to Stereophile, lest he be rendered bread and butter by even more outrageous assaults on his complacency.

Magnavox Reliability

Editor:

I was surprised and rather shocked to read Bob iyall’s letter describing the problems he has had with Magnavox. I am also the owner of a Magnavox CD player, and I think Stereophile’s readers deserve an alternative viewpoint, lest any potential Magnavox buyers run scared.

My first CD player was a Hitachi DA-800. While I was very impressed by the sound of my ever-growing disc collection, problems with that machine immediately became apparent. In fact, they were almost exactly the same problems which Mr. iyall encountered in his Magnavox(es): the cueing and tracking were erratic, discs frequently made clicks, the player would often mute, and so on.

I then purchased a Magnavox FD 1010, and the difference was like night and day! The cueing on my machine is super-reliable, albeit somewhat slow, and the error-correction is superior. In fact, my copy of Telarc’s Carmina Burana has a visible surface defect that gave the Hitachi fits. That machine would get stuck at the same point each time, repeating about a quarter-second of music, until I either whacked it or, in saner moments, advanced the laser pickup. Even this would still result in annoying clicks for about one full minute afterwards.

The day I brought my Magnavox home, it was “bombs away” with Carmina Burana. That sweet little machine played through the whole section as pretty as you please, with nary a click. I have close to 45 discs, and I have yet to hear one click from any of them on the Magnavox, nor has the player ever muted. Could this be the same brand of player Mr. iyall spoke of?

When you consider that, for the $250 purchase price, I got not only a terrific-sounding and -performing player, but also a rebate coupon for $50 worth of free discs, the advantages of lowly Magnavox become clear.

Chris Hussey
Columbus, OH

Readily Cured

Editor:

The Magnavox FD-2020 compact disc player that I own began, after a few months, to occasionally mute. On those (initially) infrequent occasions when the problem occurred, the machine would simply stop. A later problem, or later symptom of the same problem, was that the player would occasionally not start at the beginning of a disc. The disc would spin, the track lights would light, but play would never begin. With time, the frequency of these malfunctions increased. At this point, my and Mr. iyall’s
stories diverge.

A call to Philips in New York resulted in instructions to contact N.A.P. in Cornwall Heights, PA. After calling them, I sent the player along with a letter describing the malfunction symptoms as best I could. In approximately three weeks, the player was back in fine working order. In the several weeks since its return, it has yet to malfunction.

Having once had a similarly protracted experience with an expensive tuner, I well know Bob Iyall's frustration. I do feel that Philips' performance, in my case, is worthy of mention.

Cal Kaschub
Charlottesville, VA

We have had other letters suggesting that Mr. Iyall's frustrating experiences with Magnavox CD players were atypical.

Sticky Stuff
Editor:

There is a comment on page 14 of Vol. 8, No. 1, concerning spreading a "dense, sticky mastic" between the upper surface of a conventional cartridge and its head shell. Can you suggest a material of this type, and where I might purchase it?

J. Roy Guin, Jr.
Birmingham, AL

The most easily obtainable material for this purpose is the putty-like rope-shaped material sold in hardware stores as window caulking. (It used to be called Mortite.) Since it is usually sold in quantities several thousand times the amount you'll need, you might ask your friendly hardware dealer if he'll sell you half an inch of it for a few cents. Ingenuity should suggest an even cheaper approach. (We didn't really say that!)

Above And Beyond
Editor:

A short while ago I purchased a rather extensive (and expensive) audio system consisting of products from Infinity, SOTA, Krell and others. Unfortunately, problems developed in every component. In all fairness to the manufacturers, many of these problems were actually caused by the dealer who sold me the system, but that's another story.

To the point: When I informed the manufacturers directly of my problems, they all acted immediately. Infinity sent me new speakers (RS-1B's) by UPS Red Label (one-day service), and through the constant help of Dean and Heather at Infinity, the speaker problem was solved. Dan and Rondi D'Agostino at Krell gave me new KMA-100 amps, built before my eyes while I waited in their Connecticut factory, and tied up two technicians to do it! And last, but certainly not least, Mr. Rod Herman of SOTA replaced my SOTA Star with a new unit, actually flying to my home from California to set it up!

I realize that these malfunctions were unusual, but so were the manufacturers' reactions of care, concern, and speed. Everyone purchasing audio equipment should be aware of the way these people stand behind their products. I certainly feel a debt of gratitude toward all of them. As far as I'm concerned, Dean, Heather, Dan, Rondi, and Rodney all deserve a hand of applause. They've certainly made me very happy.

Dennis Miranda
Santa Fe, NM

That's what we call service above and beyond even common sense—and we applaud it! Makes us proud to be part of this industry.

A-B Testing
Editor:

I'd like to address two issues raised in Vol. 8, No. 5: double-blind testing and single-speaker demonstrations.

JGH's assertions that he knows what the ABX box does and no longer needs it seem a bit disingenuous. The double-blind comparator exists because of the experiences of people who, like JGH and other subjective reviewers, noticed differences in components and wanted a faster and more reliable way to identify them. When, after level and frequency response had been very carefully
equalized, many of those differences proved inaudible, it came as an unpleasant surprise. People need to trust their senses; that’s why arguments about the nature of reality are the fiercest kind.

As LA commented, 1 and others have done many experiments in which component differences were clearly audible despite any problems in experiment, system, room, or listeners—as long as we pushed only buttons A or B—effectively duplicating the subjective reviewer’s non-blind procedure (meaning you always know what you’re listening to). When we start pushing the button labeled X, which connects either component A or B (but only the comparator’s microprocessor knows which), the choice suddenly seems more difficult. Lo and behold, our guesses prove inaccurate from three to seven times out of ten, indicating that we couldn’t tell the difference after all.

I don’t mean to suggest that the ABX test isn’t sensitive. Under many circumstances, it does what was originally hoped; that is, demonstrates quickly and easily that a difference is audible. In an AES workshop last October we tested for the audibility of the Carver CD-fixing box, the so-called Digital Time Lens, using pink noise as a source, and 124 out of 124 responses were correct.

But subtler characteristics may be harder to identify with the comparator, especially given the habitual rapid switching that the device seems to encourage. While it’s true that it can be used for long-term blind testing, no one seems to have the patience. Yet another interpretation of the first story is that the anxiety produced by listening to the unknown decreases the sensitivity of the listeners. That anxiety can raise sensory thresholds is well-proven.

These or other mechanisms may, at any time, give a false negative result in a test for audibility. I can never disprove the existence of sonic characteristics that for some reason don’t show up in a double-blind test. But some differences, including many that seem quite subtle, do show up in such trials. The distinction between the two kinds of characteristics is a useful one: I think those that do show up in double-blinds are more important, and more worth spending money on, than those that don’t. Many people disagree; that’s what keeps high-end audio alive.

If some people would rather worry about whether there are telephones in the room, that’s their privilege. For your information, Ivor Tiefenbrun took part in a single-blind experiment designed to test the audibility of a third loudspeaker in the room; he failed to detect it. The speaker in question was behind his listening chair, and was not removed but simply turned either sideways or face downward (to decouple the drivers from the air in the room), a procedure Ivor approved in advance. Another experiment was done with a beeper-equipped watch (the beeper was the supposedly offensive transducer) held behind IT’s head and alternately enclosed tightly between the tester’s palms and exposed to the room. Same result: no detection.

An additional speaker does not reradiate acoustic energy into the room; rather, it absorbs at low and middle frequencies. The woofer cone moves, and the box is filled with fiberglass. At the woofer’s fundamental resonance, the box is a Helmholtz resonant absorber, and that’s where the effect is strongest. (’Unboxed drivers don’t act this way, which tends to confirm Mr. Gold’s experience.

A while back, while working in the listening room of a large speaker company, I had trouble getting the low bass response I had heard at home from the same speakers. There were about thirty other speakers in the room, so we installed shorting plugs in

---

1 Readers who would like to know, in depth, what the ABX comparator does are referred to JG’s review and editorial in Volume 5, Number 5. Briefly: the subject has the opportunity to choose either of two components to listen to, labeled A and B. There is a third button on the comparator, however, labeled X, which chooses A or B without the subject knowing which. The comparator keeps track of what was chosen. The subject, after choosing X a predetermined number of times (say, 10) and attempting to identify what X was, can then check the comparator’s memory to see how he or she did. It is still possible to choose A or B to verify one’s memory after commencing with X.

2 See Alvin Gold’s response under “Single Speaker Demon” in Volume 8, Number 5.
Finally someone has made a true bookshelf speaker. The Cabasse Galiote is small enough to fit on an ordinary bookshelf but its sound is big enough to fill your room. The unique honeycomb dome woofer and external active compensator are essential elements of this system and allow you to tailor the Galiote's bass response to match your room and your tastes without adding a subwoofer. With 93.5dB for one watt input efficiency, you won't need an enormous amplifier either. If you want a speaker that will be at home among your books but are unwilling to sacrifice dynamic range or wide frequency response, ask your local dealer to show you the Cabasse Galiotes. There is nothing else like it.
It has been said that the history of the progress of man is the ability to do more with less—Perreaux of New Zealand concurs wholeheartedly.

In the world of audio components, Perreaux does more than anyone else, with far less. In fact, Perreaux accomplishes more because it uses less. The “less” that comes between you and the original music signal, the more it sounds like the original music. In audio, this concept is known as “straight wire with gain”. The ideal amplifier would have no parts other than a wire between the source and the speakers. Perreaux comes closer to this ideal than any other audio component ever created. The renowned British magazine HI FI FOR PLEASURE says: "There is little more that I can add about the 'sound' of the Perreaux as it can't really be said to contribute any particular character of its own to the musical performance—it is as innocent a component as I have ever been privileged to hear.'

Perreaux circuits are so simple that a single integrated circuit chip usually contains more circuitry than a Perreaux component. No integrated chips or trick circuits are used by Perreaux. Each circuit has been refined over and over again until it accomplishes its task with the shortest circuit path and the fewest parts. Perreaux simply designs the most refined audio components in the world.

Other manufacturers use additional parts to correct for differences in transistors, Perreaux tests, calibrates and matches every transistor. Others use additional parts to block radio interference, Perreaux plates its circuit board with 24 karat gold, creating the most conductive ground plane possible to "absorb" and isolate interference. Others require complex protection circuits to prevent their amplifiers from self destructing, Perreaux power amplifiers require no protection circuitry whatsoever—the stability is inherent in
the design. While other manufacturers require additional circuitry to boost the gain of a low output moving coil phono cartridge, Perreaux preamplifiers accept moving coils without any additional preamplifier circuitry.

Perreaux has even created an amplifier capable of harnessing all the electricity your power company can supply to your home—the PMF5150B. Its brute strength is also derived from elegant simplicity. Perreaux can deliver more massive power than any other home amplifier with only five transistors in the driver stage and twelve transistors at the output. The filter capacitors and power transformer can deliver over 2,000 amps to the circuit, eliminating the need for dual transformers which cause severe phase shifts.

Every Perreaux component reflects its internal beauty and simplicity with its external design. Perreaux has no flashing lights or panels that glow in the dark. Perreaux has no need to shout its authority.
all the unused ones. (Try pushing the woofer cone of a disconnected speaker, then short the output or connect the power amp; feel how much stiffer it gets.) Bass response improved both audibly and measurably—by about 4 dB at +0 Hz! We then removed all the other speakers (most of which weren’t near the active ones) from the room; the effect was, at most, marginally audible; it could not be measured.

The business with the telephones and the digital watches is, in my opinion, silly but harmless. Meanwhile, as AG says, a showroom should be as much like a living room as possible; if dealers are setting up listening rooms with fewer speakers, or installing switchboxes that short out the unused ones, so much the better.

E. Brad Meyer
Lincoln, MA

P.S. My thanks to both halves of C.J. Huss’s brain for his entertaining letter. Those sharp-edged CD bubble packs are a drag!

In Defense of
The A-B Technique

Editor:

I enjoyed AHC’s thorough and extensive review of audio cables and connectors, but as an Experimental Psychologist and audiophile who deals frequently with such tasks, I feel I must respond to Mr. Cordesman’s misleading review of a critical experimental technique, the A-B comparison.

1. His condemnation of A-B testing begins with the assertion that such testing has no proven ecological validity for audiophiles. While it may be true that no major research institution has compared preamplifier Y with preamplifier Z, A-B testing has been shown time and time again to produce consistent, reliable results with major “real-world” application.

2. While his assertion that “short periods of exposure to subjective phenomena... can produce totally invalid results” is to some degree true, he has conveniently ignores the far more important factor of experimenter bias. It is well known among psychologists that experiments are biased (unconsciously, of course) by the expectations of the experimentors. If the subjects are also biased, then the problems are even worse. It appears that every listener knew exactly which cable he was listening to, and certainly each listener had his biases. Perhaps the best way of removing this problem is through the use of double-blind A-B comparisons. Give the listeners all the time they want to listen to a cable with their own system in their own living rooms. Just don’t tell them to which cable they are listening.

3. In the next paragraph, AHC likens word recognition research to the problems he faced. He quite correctly points out that, in his type of task, performance increases when the subject is given more exposure to the stimuli. This is true in almost all types of identification tasks. What he fails to mention is that, at least with word recognition, this performance increases occurs when time is increased by milliseconds, not by minutes or even seconds. Granted, perception of music is a more complex task than word recognition, but, even so, there should be no advantage for exposures greater than several minutes.

4. Mr. Cordesman rejects out of hand the results obtained in his double-blind A-B comparisons (yes, I too, read the infamous Stereo Review report!) as “silly.” I take great exception to this. In what was obviously the most scientifically controlled objective experiment of his wire survey he apparently got null results. He did not get “silly” results; he simply didn’t get what he expected. I am certain that Mr. Cordesman is aware of the problems involved in interpreting null results (an experiment showing that A was not found different from B does not show that A is the same as B); his conclusion therefore strikes me not only as bad science, but as unethical. What if every researcher who did not get the results he expected claimed that the results he did get were “silly”?

Finally, I do not want to give the impression that I am at odds with AHC’s overall report. Everyone admits that cable differences are minor and subtle, so it is quite possible that rapid A-B testing, in the traditional sense, may be inappropriate to the task. My greatest concern is that AHC and his fellow
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reviewers will get in the habit of selectively reporting their data, disclosing only those items which support their position.

Chuck Weaver
U. of Colorado
Boulder, CO

AHC responds:
I generally try to let the reader have the last word, but the whole “A-B testing” bit gets on my nerves. The letters columns in audio magazines steadily repeat the assertion that the method is “scientific,” without dealing with the complexities of managing even the simplest truly scientific test of one piece of audio gear in a complex system. Let me take Mr. Weaver’s points in order.

1. Either there is reputable scientific literature validating A-B testing of audio equipment, in which known variables are reliably identified, or there isn’t. Mr. Weaver doesn’t cite a single reference. In fact, there is a wide amount of such literature “proving” amplifiers are identical if equalized for amplitude and frequency response.

2. Mr. Weaver goes on to suggest that double-blind testing of an audiophile’s system in his own home, and presumably using known music is valid. It may be, but I don’t know of anyone who has tried it in a controlled experimental form and published the results. Most double-blind tests of audio gear specifically ignore the need for controlled variables, or control only a part of the error budget.

3. I did not mention “word research.” The problems in A-B testing and social psychology that I mentioned also affect visual images, the problem of human engineering in a vast range of military information systems, and sound perception in complex areas like ASW warfare. They affect tests of phenomena with very long durations. For example, the difficulty of determining why one sonar operator can perceive so much more accurately over time than others, and why others seem prone to suggestion or error, is typical of the difficulties in validating A-B testing of complex patterns.

4. The Stereo Review tests were absurd from the start because they did not test a sufficient range of cables and speaker-amplifier interfaces, with known controls, to be credible. The cables tested involve relatively small differences in type and measured performance; none were “state of the art.” Even had the experiment been better structured, the use of several variables with very limited differences would bare virtually ensured confusing results. “Silly” may not be the proper word, but “technically incompetent and experimentally absurd” seems all too valid. It is unfortunately typical that no one has tried to validate the Stereo Review test with a wider range of cables, or to improve the controls and tests of perception necessary to fully examine the results of the experiment.

My problem with the whole A-B debate is that it operates in direct contradiction to proper scientific methods. The experimenter must first validate his methodology and then start using it to test phenomena. Instead, we get random “one of a kind” efforts with fousy technical input and experimental controls. This kind of “operations research” would earn a fat “F” in any decent OR course. It may be fine for a hobby, but if A-B testing of audio components is to be proved valid, it is time that the psychologists who defend the method start acting like professionals.

Tiny Listening Room

Editor:

After reading your review of the Stax Esta-4U Extra speaker system, I was left with a few questions: 1) How did you get a pair of 15 ¾ " by 17¾ " speakers into that 14 " by 24 " room? 2) How did you get yourselves in there to listen? 3) What was the optimum listening position (I’ll bet there was no “hole in the middle” effect)?

Alan Rauchwerger
Rochelle Park, NJ

P.S. My wife is thinking of a career in proofreading. Maybe you’d like to get in touch with her?

We welcome reader’s wives contributions, not to mention reader’s contributions. Note the use of the word ‘contribution.’ Plus, it’s a big move from NJ to NM. The error came at a time when we were switching from one
The CARVER C-1 Sonic Holography Preamplifier: Appreciated for Musicality

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type-setting system to another, and the new codes for indicating feet and inches apparently got switched around. The "hole in the middle" effect you refer to was apparently afflicting the editor—yours truly.

**Balanced Loudspeakers**

Editor:

Since you are interested in comments from loudspeaker designers, I thought I would make some brief comments and control my usual compulsion to develop a doctoral dissertation.

In the ages-old literature, you can find the answer to why a small monitor loudspeaker with flat extended highs sounds much too bright. If you were to study the work done in the 1920s and 1930s, it might be disturbing to you to realize that so much has been forgotten and reinvented.

For a loudspeaker to sound balanced, the geometric center of its bandwidth must be somewhere between 500 and 1000 Hz. This varies somewhat for different people. We have a balance point to our hearing system: if the lows are cut off, the highs must also be cut off in order to sound balanced. The design principle for the loudspeaker is that high frequency rolloff times low frequency turnover must equal 500,000. I won't swear this is the right number, but it will serve for this example. If the low frequencies cut off at 50 Hz, the highs mustn't go above 10,000 Hz. If the lows go to 25 Hz, highs should go to 20,000. The product of these numbers is 500,000.

The perception of flat is related to our aural balance point, and varies with loudness. Variation with loudness is why music sounds more real when we play it at the level we would have heard it "live." The frequency response of our hearing matches the frequency response set by the musicians.

Instead of cutting off the highs to match the limited lows, I prefer to extend the highs and set the balance by ear, using pink noise. Once the trend of the frequency response is set by ear, the actual response can be refined to eliminate peaks and dips, relative to the trend. There are definite relationships regarding the bandwidth, the position of the bandwidth relative to our balance point, and the slope of the actual frequency response. Mathematically, it is something like setting the center of gravity, or perhaps the moment of inertia.

Some people forget that constant power input to a loudspeaker bears very little relationship to constant acoustic output. Most of the input power is not converted to acoustic output, and this varies drastically with frequency.

There's another interrelationship here. The signal processing of our hearing system discriminates between the bass output of the loudspeaker and the bass buildup in the room. We mentally adjust to our room acoustics. If we then adjust the loudspeaker for flat bass response in the room, it will sound weak.

In its steady-state response at low frequency, pressure leads the input signal by 90°, leading to the belief that pressure is proportional to the acceleration of the cone. From the transient response viewpoint, low frequency components cannot lead the high frequency components. What appears to be a 90° lead is actually a 270° lag.

David H. Blasetti
Upper Darby, PA

*We are well aware of the so-called "500,000 law," but it does not explain why a system that's essentially flat to 30 Hz still needs a gradual rolloff above approximately 3 kHz to sound "flat" (i.e., musically natural) at the high end. The exact amount of rolloff required seems to be related to the HF dispersion characteristics of the system, and can only be determined by listening to music through the system. Pink noise will not do, as the ear has no frame of reference for what sounds "right" in terms of HF balance using pink noise. —JGH*

**Dead State of Mind**

Editor:

In reference to Vol. 8, No. 4, Record Reviews:

Mr. Watkinson:
You sir, are in a dead state of mind. Your Linn and SOTAs are dead. As you will see in the
Never, in the history of audio, has response to a tuner equalled the acclaim received by the CARVER TX-11 FM Stereo Tuner with the Asymmetrical Charge Coupled FM Stereo Detector.

"Breakthrough in FM tuner performance: Carver TX-11."
"The significance of its design can only be fully appreciated by setting up the unit, tuning to the weakest, most unacceptable stereo signals you can find, then pushing those two magic buttons.
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"A tuner which long-suffering fringe area residents and those plagued by multi-path distortion and interference have probably been praying for," Leonard Feldman Audio (December, 1982)

"It is by a wide margin the best tuner we have tested to date."
"What distinguishes the TX-11 is its ability to pull clean noise-free sound out of weak or multi-path ridden signals that would have you lunging for the mono switch on any other tuner we know of." High Fidelity (January, 1983)

"...enjoy the music and forget about noise and distortion."
"under conditions of weak signal stereo reception the effectiveness is almost magical." Ovation (December, 1982)
"A major advance... "Its noise reduction for stereo reception ranged from appreciable to tremendous." "It makes the majority of stereo signals sound virtually as quiet as mono signals, yet it does not dilute the stereoeffect." Julian D. Hirsch, Stereo Review (December, 1982)

Audition this superlative instrument incorporating Bob Carver’s latest circuit refinements at your authorized CARVER dealer.

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If you have substantially invested in another stereo FM tuner—or perhaps in a receiver—you will appreciate the CARVER TX1-11.

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near future, they too will have CD players on the market. If they don't, they won't be around long. If you people want your publication to last, you better start opening your ears. Gentlemen, I can sit for eight hours and enjoy my music by just listening. How many times do you get up in eight hours and tinker and replace your cartridges to get the perfect sound? All I do is push a button.

1. Pink Floyd's *Dark Side* is horror at its best, try the Japanese import—100 times better. Mr. Watkinson, I'll put my Magnavox 2020 up against anything you have. Your record reviews are (excuse me) invalid. Sir, you don't like CDs, I can see that. So why are you reviewing them? You are not helping anyone by saying "but this" and "but that."

2. Mr. Jones's voice never had body. You're just used to the distortion of your cartridge and tonearm. And don't forget the wiggle in your vinyl. You're only making vinyl lovers feel better.

3. On Sade's *Diamond Life*, the music is great but the recording sucks like all Columbias. I would love to know what player and equipment you're using. Analog is dead. I was not born yesterday.

John Witkowski
Laurel, IN

*I must say it's refreshing to bear us criticized for our anti-CD stand on occasion. Better responses come in AHC's tonearm survey, and Alvin Gold's CD update.* —LA

**Why No NAD?**

Editor:

I noted with interest your remarks concerning reader Chet Price's desire for a NAD 3020 review. My question is in reference to whether or not the 3020 is still in production. Even if out of the current line, the review would nevertheless be of value to some readers. I agree with what I believe is being written between the lines—that the NAD 3020 is some sort of benchmark in decent sound and low cost. I must, however,

cede that my real reason for writing is to suggest that you obtain the NAD 2200 power amp for review. It is a viable upgrade for 3020 owners via the preamp-out jacks, and priced below an assembled Hafler DH-220 (which I own and will probably keep, pending a Precision Fidelity M-8). It drives Acoustats to satisfy volume levels with relative ease.

I must admit that I am somewhat confused by the apparent disdain, disregard, or lack of interest in sound value per dollar exhibited by *Stereophile* and other high class audio journals. I naturally have not read all the so-called underground audio publications, but while Hafler, B&K, Creek, and other "budget with decent sound" manufacturers' get applauded, NAD gets no reviews. Why? If I begin to sound like an NAD fanatic or employee, bear in mind that I own a Conrad-Johnson PV-4, Hafler DH-220K, and no speakers.

My next point which is that I find your reviews and editorials very useful. I am basically only considering speakers (to replace my Polks) that you have favorably reviewed: Thiel, Vandersteen, Fussell, Dayton-Wright, Fried, Acoustat, Magnepan, and others. Keep up the good work, and give NAD a break (not literally, since construction ain't one of their strong points).

Willis Evans
Louisville, KY

P.S. Did L.A. ever try the Precision Fidelity M-8 with the CS-3s?

NAD has been reluctant to part company with their products in the past, perhaps because they felt their budget equipment wouldn't stand up to our high-class scrutiny. Also, there may have been a simple breakdown in communication. The communication has been repaired, and we are promised a sample of the 2200—but not until every last tweak and production modification has been made. They don't want it criticized for things they're in the process of fixing. Strangely enough, they didn't seem to worry too much about the early production version they sent to Julian Hirsch.

*L.A. hasn't tried to M-8 with the CS-3s.*

1 The general attention to detail in this letter can be surmised from the reference to "Mr. Jones." Not only would it be obvious (even on CD) that Rickie Lee Jones is female, but it even says so in SWW's review! Oh, our inattentive letter-writers.

—LA

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"A major advance... its noise reduction for stereo reception ranged from appreciable to tremendous. It makes the majority of stereo signals sound virtually as quiet as mono signals; yet it does not dilute the stereo effect."

Julian D. Hirsch, STEREO REVIEW

"Separation was still there, only the background noise had been diminished, and with it much of the sibilance and hissy edginess so characteristic of multipath interference."

Leonard Feldman, AUDIO

"What distinguishes the TX-11 is its ability to pull clean, noise-free sound out of weak or multipath ridden signals that would have you lunging for the mono switch on any other tuner we know of."

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What Was Wrong With JGH’s XG-10s?

Editor:

I was surprised to discover in my mail box just yesterday the August edition of your magazine. I realize that your articles don’t get quickly out of date, but this is a little ridiculous. One review irked me terribly.

I was appalled to read JGH’s review of the Dayton Wright XG-10s. In my living room, which is quite large, (18’ by 36’) they are the closest thing to seeing God that I have experienced: deep, gutsy, accurate bass; clean, clear, quick highs, beautifully detailed in every respect; incredible depth of image, sounding as much as 20 feet in back of the speaker plane (or right in your lap, depending on the material)—in my opinion, the best speaker I have ever heard (I haven’t heard the WAMMs).

I was especially shocked to read that in your listening room, the XG-10s had some bass suck-out. One of the things that always bothered me about electrostatics was that they had no bottom end. My former speakers—the Koss 1As—had that liability. The XG-10s, on the other hand (in my audition in two locations), have always had seamless, tight, thunderous bass—the kind which you heard at Steve’s. Also, to explain away the difference because of room size doesn’t fit with my experience. The room I have my XG-10s are in a large room, and none of the problems of which you spoke are present there.

I have heard Steve’s pair, and believe me, his small room doesn’t do them justice. These speakers benefit greatly by being further apart in a wider room. Also, due to furniture constraints, his listening area is too close to the speakers; in my opinion, this cramps the sound.

I presently drive them with a pair of BEL 2002 pure class A amp. You are right in one respect: these speakers are very amp-sensitive. I’ve tried amps of lesser quality, but none have lived up to the BELs. 200 watts per channel, class A, does make a difference! Liabilities include the need for very careful adjustment in the room to maximize their impact, and the XG-10s showing up of any imperfections in your source material and electronics. Ah, but when you have those problems licked, what sound!!!

I hope that you will give these incredible speakers another chance. If you find yourselves in Phoenix again, come by and hear them for yourself.

Avrom Green
Phoenix, AZ

The review may have appalled you, as I’m sure it did the manufacturer, but it was nevertheless accurate for the speakers we had in our situation. We’re glad some XG-10s sound good in some environments, and sorry it didn’t happen to us; we couldn’t have tried harder to get them to sound good. It will be a pleasure to visit Mr. Green and hear his XG-10s, but I don’t predict a necessarily positive result, based on similar past experiences. It is somewhat instructive that SWW has put away his XG-10s in favor of DW’s XAM-4s, which is, in our opinion, a much more successful model. It also costs only $1250, or $2450 with the ICBM subwoofers.

Will We Ever Hear of McIntosh?

Editor:

As I am enclosing a change of address and a check for renewal of my subscription, I do not want you to think I am offering negative criticism. Actually, Stereophile has become my reference publication for hi-fi interests, with the possible exception of Richard Heyser’s loudspeaker reviews in Audio (to which I’ve subscribed for over 13 years).

I do, however, have a minor gripe which I’d like to see addressed. You’ve probably heard from others on this topic, but I still wonder at your disregard of McIntosh Laboratory’s products—I read continually of the woes involved in finding a power amplifier capable of driving 2-ohm loads, and yet own a five-year-old product (the MC-2200) which will easily drive down to 1 ohm in stereo form, or ½ ohm in bridged mono. Further, the 15-year-old amp (MC-2105) it replaced also handled low impedance loads with aplomb. I believe that McIntosh currently offers a line of power amps with this capability, from 50 to 500 watts per channel.
Further, I have some problem with your appraisal of loudspeaker abilities—my current "reference" set (McIntosh ML-48), though "ancient" at 12 years of age, is still quite pleasing to me. I have yet to experience a bottom end able to equal the four 12" woofers per side, and am still impressed with the excellent balance, even at very low volume levels. Perhaps I am cursed with the poor taste attributed to musicians (I first took up clarinet at age nine, and have continued the practice), but I became enamored of hi-fi at age eleven, when my father bought a system comprised of AR-3a speakers, Dynaco PAS-3 and ST-70, and an ELAC (Benjamin) changer.

Oh well—I guess I'm saying that I have some technological quibbles (which I truly would like a response to), but essentially agree with your published stance. At any rate, keep up the excellent standards (I would say work, but I know better), and I'll keep renewing.

Mark O. Hays
San Jose, CA

It seems your only problem is liking what you have! I can't think of a better state of affairs, or one more unlike that of an audio reviewer. I think you said it all in describing your speakers: "still quite pleasing to me." I'm sure they are, and nothing wrong with it, but there's every chance they are loaded with problems that would show up as soon as we booked them up and that, in fact, they wouldn't be pleasing to others.

The only reason we don't review Mac equipment is that they don't send it to us. We've been in touch several times in the last few years, and there have been a few promises of review samples, but they don't come. Since we suspect Mac's lack of eagerness stems from a certain lack of technological creativeness (why change something that ain't broke?), we don't pursue vigorously.

Why Spend Big Bucks For a SOTA Mat?

Editor:

I read with interest your review of the new SOTA Supermat (Vol. 8, No. 3). I believe I have found an easy and relatively inexpensive way to improve the sound of even this great mat system.

Originally, I had been using the Audioquest Sorbothane mat, and was quite satisfied with its performance. Since I own a SOTA, I felt more and more compelled to buy their mat, and finally succumbed. After listening to it for just a short time, I became a believer. All the claims were true: more detailing, more air around the instruments, more focus, less smearing. However, I felt I wasn't getting the bass response I had been used to, and that the high frequencies sounded a little too tizzy or bright (cymbal crashes seemed unnaturally shrill). Thus came the obvious experiment: How would the acrylic mat sound coupled with the Audioquest sorbothane mat instead of the SOTA intermat? Dramatically better! The bass was thunderous, tight, and deep; it rivalled the bass from CD. And high frequency transients sounded correct (i.e., more neutral). In other words, the sorbothane mat was a better job of damping vibration than the SOTA intermat.

I tried the same experiment on a friend's system (he had been using an unaccompanied AQ mat), and the difference between the two intermats was even more dramatic—he was beside himself with joy. Recordings he had earlier rejected earlier because of "poor sound," now sounded great.

While our experiments were not exactly scientific, I believe our findings are valid. I think it is possible to buy the acryl mat ($100) and the intermat ($35) separately. If you can swing that, take the $35 and buy an AQ mat (conveniently also priced at $35). By the way, the Audioquest record clamp seems to complement the SOTA/AQ mat system perfectly. Place a supplied felt washer under the record label, push the concave clamp over the record, and tighten a knurled knob, coupling the clamp tightly to the spindle. It really, really works! And, at $25, it's half the price of the SOTA reflex clamp? By the way, the SOTA/AQ mat—coupling works better if you leave the AQ mat's shiny side facing up; it bonds much better to the smooth underside of the acrylic mat.

Tom Bergman
Pleasantville, NY
One of the World’s Finest Moving Coil Cartridges, just Happens to be a Monster.

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You’ll be hearing things on your favorite recordings that you’ve never heard before. A natural instrument presentation, with extreme clarity and focus, placed across a soundstage with exacting precision…yet never harsh, bright or fatiguing.

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They’ll turn your sound system into a Monster.

The Monster Speaks:

Analog or Digital?
The latest generation of moving coil cartridges like the Alpha Series clearly demonstrates that the best sound comes from an analog disc. When comparing a compact disc to an analog record one needs to consider the cartridge used. You’ll find analog to be superior. We invite all music listeners to do the Alpha 2 vs. CD comparison. It’s an eye opening experience!

Tips on Getting the Best Possible Sound.
Pay careful attention to cartridge set up. Always load the cartridge as close to the manufacturers spec as possible (80-100 ohms for the Alphas), not 47K! Use a headamp of the best possible quality (our Alpha Plus is really excellent). And amazingly enough, we’ve found that most high gain preamplifiers sound better with a good headamp in front of them! I invite you to send me your comments. Good listening!

Noel Lee
Head Monster
This seems to be a particularly vintage year for high fidelity equipment, including some that's actually affordable. I recently had to help some impoverished "friends" put affordable systems together, and was horrified to find them quite good. Nothing, it seems, can be kept from the masses.

Here, to my consternation, is some truly high class equipment which is declasse only in price.

**PS Audio IVH Preamp and Two C Plus Power Amplifier: An Update**

I have previously recommended the PS Audio IVH Preamp and Two-C Plus Amplifier as excellent "affordable" high end gear. Admittedly, affordable is relative. The PS Audio IV Preamp sells for $725, and has long been excellent value for money. The Two-C Plus also sells for $725, and while its 70 watts do not make it a super power amp, it will produce 140 watts into 4 ohms, and does extremely well with most difficult loads. Both units have been quietly improved in significant ways over the last few months.

**The PS-IVH Preamp**

The most immediately obvious improvement in the PS-IV is the use of a discrete stepped attenuator with a silver contact rotary switch and 1% Resista resistors (retrofittable at $50). The PS-IVH also has more linear phono and line stages. There is 5 dB less noise, and the IVH now provides a great deal of transient life and dynamics without the faint noise common in many equally open or "live" transistor preamps.

Depth is improved, transient detail is cleaner, there's more low-level harmonic information, and the slight upper midrange transistor glare has been significantly reduced. Frequency extension is excellent in
both bass and treble, with tight powerful bass and naturally extended top octaves that I haven’t heard before in a transistor preamp under $1000, not to mention many of those well above $1000.

In fact, I know of no transistor preamp now available under $1000 that is superior to the latest version of the PS-1VH, and I’d strongly advise comparative listening to more expensive transistor units before you go in that direction. The PS-IVH is not a Krell or Klyne, but the sound through its moving coil gain stage rivals that of such expensive rivals as the Perreaux SM-2 and Threshold FET Two. You will need to pay careful attention to cartridge loading, but this is true of any preamp, and changing the loading is literally a snap (-in).

As for the sound through the PS-IVH’s high gain stages, you may be surprised to find how very little coloration they provide compared to even the most expensive preamps, and they are virtually passive when switched out. If you are heavily into tape, video, or CDs, you will find the PS-IVH to be exceptionally neutral.

The IIC-Plus Amplifier

The PS IIC-Plus has considerably more competition. It is up against the Adcom, Belles, Eagle, and New York Audio Laboratories Moscode 300. The Adcom has more power, and a more neutral bass and lower midrange. The Belles and Eagle have deeper bass and a more detailed highs and upper octaves (although less sweet), and the Moscode 300 is notably warmer and more romantic.

Choosing between these sonic flavors is a matter of taste. Nevertheless, the IIC-Plus is very musical for long listening into a very wide range of speakers. It is also now dual mono, adds another diode bridge, and has more capacitance in the power supply. PS Audio says this reduces IM distortion—and we all know how important this specification has proved in the past! The newer PS IIC-Plus creates an expanded soundstage, and the highs provide an exceptional combination of information and natural harmonics. It works superbly with the Quad ESL-63s.

The Superphon Revelation Basic Preamp and Hafler DH 120 Stereo Amplifier

If you are looking for rock bottom prices in the high end, I would strongly recommend the Superphon Revelation Basic Preamp ($349) and the DH-120 ($320 assembled, $260 kit). The Superphon is by far the better of the two, though; I would recommend you spring for a more expensive amplifier if possible.

Superphon Revelation Basic Preamp

I can’t add much to the previous praise the Superphon has gotten in Stereophile except to say that if this preamp was British and cost $2500 everyone would be be praising it to the skies. It is short on features and looks, but possesses a soundstage that virtually all the competition lacks, a natural sweetness without glare in the upper octaves, and a musicality that is sadly lacking in virtually every receiver or cheap transistor preamplifier I’ve heard.

The Superphon is more detailed and harmonic than the NADs, Haflers, Adcom, Carver, and is more musically natural in the critical midrange area than the PS Audio SR-1. If you’re willing to settle for the better high output moving coils, Grados, etc., you can count on excellent value for money, and sound that may be the envy of friends with far more expensive transistor preamps.

The Hafler DH-120 Stereo Power Amplifier

I generally feel that the entire Hafler range of products needs a massive sonic upgrading, the DH-120 included. Most of the line is no better than the standard Japanese units; the moving coil stages of the Hafler preamps are usually worse. The DH-120, however, is capable of better soundstaging, and has less upper midrange hardness, than most of its competition in the $300 price range. It is also a little more solid in controlling the bass than the cheaper NADs I’ve
heard, although the NADs have a more pleasant and musical midrange.  

**Despite a tendency toward mass riots that has left several of England's scenic manufacturing cities in smoldering ruins—British audiophiles do have a few small merits.**

The main point is that this is one amp you can combine with the Superphon to get decent, affordable sound until you can afford a very good amp like those mentioned earlier.

**Ortofon T-5 Transformers ($50 U.S.)**

I bought these two small moving coil step-up transformers as a lark in the UK—for all of $20. They fit at the end of your phono cables and plug into the phono RCA jacks. They provide 26 dB gain with moving coil cartridges of 3-40 ohm loads and are surprisingly flat from 20-30,000 Hz. Phase linearity is also a reasonable ±25°, and rise time isn’t bad. The T-5s ring or saturate with the higher output moving coils, are a bit hum sensitive, and collapse the soundstage and dynamics a bit, with some minor loss of harmonic detail. They are, however, a $100 way station equal to many step-up transformers costing $200 or more. Good value for money.

**Acoustic Research ES-1 Turntable With Fixed Headshell Arm**

Despite a tendency toward mass riots that has left several of England’s scenic manufacturing cities in smoldering ruins—and forced many innocent refugees to flee to the malaria-ridden neo-Georgian highrises and tidal swamps of London—British audiophiles do have a few small merits. Led by several beer-ridden reviewers, they once surrounded AR’s British director during a Polo scrum in the ninth inning of the West Indies test match at Wembley and forced him to re-open AR’s turntable production lines.

As has been mentioned previously in these pages, the initial result was a good turntable which rivaled many far more expensive British designs. (It should have; most were copied from the original AR.) The initial AR turntable did not, however, live up to its full promise: the arm had a mediocre detachable headshell attached to a mediocre arm; the main bearing was of uncertain quality; the motor was noisy and often far from smooth; and the motor produced a significant hum field with some cartridges, notably the Grado.  

Well, the arm is now a good-to-very-good Japanese OEM arm with a fixed headshell, the bearing is a tungsten carbide ball on a disc of sapphire, with a precision-honed sleeve, and the motor is quieter and much more smooth.

The end result is a bit of a shock. At $475 with arm, it is the rival of many far more expensive units; the AR is also readily available, and has a very attractive finish. I cannot say it is better than competitive Ariston, Heybrook, Michell, Systemdek, or Walker products, and I have not heard the new Sonographe. And the AR is definitely inferior in every respect to the Oracle, SOTA, and VPI, particularly in its failure to either couple the record to the platter or eliminate the midrange coloration and lack of deep bass that are all too common in lightweight three-point suspension designs.

The AR’s bass, however, is well controlled, and there is considerable air and soundstage space, with good dynamics. I have heard much more expensive British combinations sound no better, and many far more expensive Japanese direct drive turntables
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sound far worse. This new AR is definitely a high end turntable at a best-buy price.1

Fanfare Tempo Loudspeaker

The new Fanfare Tempo loudspeaker is a long-overdue entry in the high end marketplace. It is an exceptionally well-designed medium-sized box speaker. At $500/pair, it doesn't sound like the very best $1000 pair of speakers, but it is a remarkably affordable way to get a speaker with excellent imaging and soundstage data, very smooth and extended frequency response, and excellent transient and harmonic detail. In fact, it outperforms a number of good British speakers that do cost $1000, largely because its bass energy matches its treble balance — a consistent design failure in far too many British designs.

The Fanfare weighs 35 lbs, measures 12" by 11" by 24", and is covered in greyish-black knit cloth. It has two 6" drivers: one covers the midrange and upper bass, and the second one acts as a passive radiator in the low bass, with a nominal crossover between the two at 400 Hz. The midrange unit crosses over to the 1" dome tweeter at 3500 Hz, with relatively smooth and limited phase drift.

The Fanfare is relatively efficient at 90 dB one watt/one meter. The -3 dB points are 38 Hz and 20 kHz, and the frequency response is quite smooth. These are measured at one meter, however, meaning the Fanfare has considerable treble energy, rather than the slow downward roll of many East Coast designs. The system also narrows in dispersion above 2 kHz to reduce room reflection, and has a slight rise above 10 kHz to compensate for the high frequency loss at normal listening distances.

The end result is a speaker with excellent imaging and centerfill. The soundstage is a bit restricted in width, but depth is good. The placement of instruments is stable and timbre is very good for a speaker in this price range. Voice can be very good indeed. The detailing is excellent, perhaps just slightly exaggerated, although anyone who likes the treble balance in most of the better British speakers will like this one. The bass from 38-70 Hz will not play loud, but it's definitely there and well balanced. This is makes the Fanfare far more listenable on rock, jazz, and full orchestral music than the vast majority of small monitors, and allows it to rival the Spica TC-50 on a great deal of music, in spite of the Spica's superior detailing and air.

The Fanfare should be elevated about 16" above the floor, at least 2' away from the rear and side walls, and kept clear of any furniture. A slight toe-in toward the listening position is desirable. Almost any good speaker cable will do, and the impedance is sufficiently flat that the Fanfare will work with virtually any amplifier. Don't be put off by the size and slightly unusual styling (that grey fabric) — this is an exceptionally good buy.

I would, however, remind you that choosing the elements of your system should begin with your choice of speaker, where you make the most compromises at the low end of the high end. Listen carefully before you buy. The Dayton Wright LCM and Spica TC-50 are obvious contenders, possessing somewhat similar prices and sound characteristics. This is one area where the equipment must suit your taste above all.

An Apology to the Audio Cheapskate

Speaking of taste, let me close by apologizing to the Audio Cheapskate for invading his territory. While suitably patrician in origin, the dark secrets of his past drive him to review lower-priced equipment (he used to cover female mud wrestling as a sports reporter in Hamburg). I will try to avoid repeating this invasion, if only for the sake of my own class-consciousness. Affordable equipment is getting distressingly good, and, if money isn't sacred, what is?

1 If your sense of humor runs to such things, however, put a felt mat on the new AR and compare it with the Linn Sondack, using the same arm on both tables. Or if you'd like to hear a Pink Triangle (one that works, that is), try putting the Audioquest mat on your AR. No, they don't sound exactly the same, but unless your dealer is there to psyche you every moment of the way, your listening may persuade you to not spend a dime on the difference.
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Please write for reprint of complete review in Stereophile.
Whatever happened to the good old days of “Product of the Month”

Publisher’s Note:

The Audio Cheapskate took a break this month, seeing how AHIC stepped in with his two (cheap) cents worth. Actually, ST’s copy arrived on time but had to be accompanied by some material on a controversy (hint: it’s about the B&K amplifier) which wasn’t completely ready. But, one of our readers— who for some reason wanted to remain anonymous—wrote in to attack ST. ST, never one to turn down a challenge, responds.

Publisher:

In your direct mail advertising, you—Larry Archibald—say that “Stereophile can steer you right.” You talk about audiophiles who buy and sell equipment at six-month intervals: audio neurotics.

Then, lo and behold, Sam Tellig, in Vol. 8 No. 4, raves on about the Quad 541/405-2 combination only to say, in the same article, that the Superphon Revelation Basic is “the best preamp” he has ever heard with moving coil cartridges.
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are not created
equal . . .

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Is this “steering you right”? What’s Sam going to like next month?

Anonymous
Norwalk, CT

Sam Replies:
Next month—actually, this month—I am going to like the Audible Illusions Modulus 2 and the Nuance preamplifiers. The following month, I have two more preamplifiers scheduled to arrive, and they may be significantly better still.

Seriously, there are times when a reviewer is torn between different pieces of equipment. On some days, and with good source material, I think the Eagle 2 power amp is the best I have heard—to date. On other days, with other source material, I may prefer something like the B&K ST-140, the NYAL Moscode 600, or even the Quad 405-2. Progress being what it is, I may have a new favorite power amp next month. For instance, there’s a new 100 watts/ch Adcom on the way . . .

What am I to do, pretend that all amplifiers sound the same, that succeeding ones are not better than what I previously liked? It’s a necessary evil of the reviewing profession that products get better; when they do, I must report it.

About the Quad 34 and Superphon Revelation Basic. These are two very different preamps for different needs. The Quad 34 does add a “portiere” (to borrow DAS’s word) to the sound: it’s a smoothing-over effect that tends to smoother fine detail. But it’s musical; nothing ever sounds bad through the Quad 34, especially with those unique tonal balance controls. It’s also better-looking than the Superphon, and my experience has been that Quad equipment is built superbly, for the long run. Superphon has no track record. On Monday, I may like the greater clarity of the Superphon. But if, on Tuesday, I want to play Beecham’s 1938 Magic Flute, I’m glad to have the Quad 34; it could be pretty hard to take on the Superphon. So what do you want? Excellent sound quality and superb detail in an inconvenient-to-use preamp from a brand-new company, or tremendous user features in a musical-sounding product from one of the oldest of audiophile companies? For me, there aren’t easy answers in this area. For you—whoever you are—perhaps there are.

Part of my problem is that I get all this stuff to review—I don’t go out and buy it, it comes to me. If I were not a reviewer, I might be perfectly happy to stick with, say, a Superphon Revelation Basic Dual Mono or a Quad 34 or an Audible Illusions and not worry about whether another preamp sounds a little better.

But then again, I might not. As I once wrote, I started reviewing to avoid going broke buying all this stuff. So, I have to admit: I am an audio neurotic. Reviewing doesn’t cure my neurosis, it feeds it. “The Audio Cheapskate” could even be read as the chronicle of one man’s illness.

By the way, I don’t think anyone should run right out and buy anything just because I give it a favorable review. Audition it. Read other reviews. If you’re favorably impressed, arrange with your dealer to borrow the equipment and try it out—this is one way a
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Stereophile 39
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In any event, I don't think you have a legitimate complaint. LA annotated my Quad article to quite clearly indicate the nature of my neurosis, lest it be communicated to the Cheapskate faithful. You were warned, Mr. Anonymous.

LA annotates (yet again):
I won't address ST's illness lest some clever reader say, "Physician, heal thyself!" I would like to point out that "product of the month" is a real problem when every manufacturer who sends you stuff is trying to achieve just that. In the long run, the result is much better equipment for us all, and usually at lower prices than before. In the short run, it can be confusing and frustrating.

Readers do, however, have a right to expect from reviewers some constancy. And, in fact, this is just what Sam was demonstrating. He's been writing about the Quad for three years now, and still loves it. It may not do everything well, but it does some things wonderfully, particularly with his old, great performances. Most important is not that he pronounces which is the absolute best piece of equipment (there frequently is no 'one best'); most important is that he successfully characterize what he hears from each product, allowing you to decide.

**Accuphase E-204**

And still they come! The Accuphase E-204 is a 75 watt/ch integrated from Japan with MOSFETs in the output stage. The *Audio* magazine directory gives a list price of $1950. What? Nearly two kilobucks for a 75 watt/ch integrated? I was on the phone to Madrigal, Ltd., the Accuphase importer; surely you must mean $950. Well, almost—the price is actually $900.

Of course, $900 isn't cheap. Look at the Onkyo A-8067: 80 watts/ch for $399; less than half the price. And the British Fidelity Synthesis would also seem a better buy. It gives you 70 watts/ch of MOSFET power vs the Accuphase's 75 watts/ch for $350 less (the Synthesis went up to $550). And I can't tell you that the Accuphase sounds any better. (Unfortunately, I did not have the two at the same time for direct comparison.)

So what do you get with the Accuphase that you don't get with the Synthesis? Features. The Accuphase gives you defeatable tone controls with variable turnover points. A speaker selector switch. A balance control, of all things! Creature comforts, in other words.

I particularly like the looks of the Accuphase compared with the other Japanese integrateds in the survey. This unit sports a handsome gold-tone fascia that might not be out of place in one's living room. And the controls have the kind of solid feel that inspires confidence in the longevity of the product.

As for the sound, no apologies need be made. Too bad, though, that all the other integrateds had been sent back by the time the Accuphase arrived. I would say that the Marantz sounds a little sweeter (sometimes). The NEC's preamp is slightly more detailed. The NEC and the H/K have more in the way of balls (Archibald's going to censor that one). But the Accuphase produces a very pleasing overall sound—including good detail from the preamp and a silky, slightly smoothed-over MOSFET sound from the power amp that is quite forgiving with most source material. (I do not mean to suggest that the Accuphase compresses and smoothes the sound, as does the Onkyo.)

The difference between the Synthesis and the Accuphase (besides $350) is that the former is for died-in-the-wool audiophiles (no balance controls, shame!) while the latter is for normal folk. The Accuphase E-204 is for your basic non-tweak who is willing to spend for quality, likes creature-comfort features, and wants something that will probably last ten or fifteen years—maybe even longer. I liked it, but, as a Cheapskate—I would probably opt for the Synthesis.

---

1 For this, LA humbly accepts all blame. The Accuphase was actually on hand in plenty of time, but procrastination and a feeling it might be too expensive for the survey got in the way.

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**Screwdriver/socket wrench set**

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**Record Clamp**
Stabilizes disc, reduces acoustic feedback, prevents record slippage. Souther Clever Clamp, $10.00.

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tel. (0473) 719212 telex 967601 Morel G

Morel Acoustics Ltd.
Industrial Area B, P.O. Box 140, Ness Ziona
70451 Israel Telex 361951
Wowee!! The last three months I've just reviewed my second batch of 23 compact disc players. The feeling of release upon completion was much related to the pressures of conducting a large scale project in an inevitably limited time scale, but it was also a relief simply getting back to LPs.

Just so you know what direction I'm coming from: my feeling about CD is that it's pretty damn good, but, damn it, still not quite good enough. So far, despite all the advantages, any really good records-based analog system has CD beat for repertoire and sound quality alike. Defying all logic, black vinyl reigns supreme.

True, pontifications of this kind are, in the final analysis, irrelevant. No music storage medium can prosper without the support of the software publishers, and their investment inevitably goes where the money is. Increasingly, money is going into CD, and no amount of teeth-gnashing by the audiophile lobby can change that. Whether we like it or not, we have to learn to live and deal with CD.

Although CD is growing faster in the U.S. than in most other markets, its protagonists here in the UK are pretty smug, too. The record companies have just instituted substantial hikes in the price of compact discs, in some cases by nearly 25%, and this against the background of a relatively stable £ sterling. We even have "long play" CDs (ones that utilize the entire 72-minute potential of the format) that are charged at an additional premium—maybe you have these too. All this prompted Sony UK to comment publicly that "compact disc is being temporarily poisoned by its own success and it now seems clear that major record producers have sat down to make a concerted effort to slow down its successful introduction . . . Record companies have long been run by accountants and lawyers, so it's not surprising that they have little grasp of the mid and long term benefits to the music
business of compact disc." Quite right, too.

Amidst all the euphoria and sniping, things haven't been working out quite as expected with compact disc. I clearly remember attending one of the earliest press conferences on CD held by Sony in a demonstration room originally intended for their Esprit range at Shepperton, which is Britain's excuse for Hollywood. There we heard what, for many of us, was our first CD-derived music, using two or three discs (which was all even Sony could lay their hands on at the time). What I remember best of all was an aside from one of the Sony staff to the effect that, with the advent of a "perfect" sound carrier and player that required no tweaking, we reviewers would have nothing left to do, and would soon be out looking for proper jobs.

Of course he couldn't have been more wrong. Now that it has been confirmed that the main record/playback standard for digital audio tape will have a 48 kHz sampling frequency (44.1 kHz will be reserved for playback only—i.e., prerecorded material—as a sop to record companies worried about bit-to-bit copying), we are set for a new hierarchy of digital standards, just as we have right now with records, tapes, and FM radio. Anyway, CD does respond to many of the tweaks applied to record reproduction: appropriate player supports, disc mats, cables, and so on.

More to the point, the much-vaunted perfection of CD is beginning to look a bit threadbare, even to its most ardent acolytes. Why, even the "Polygram Newsletter" (aka Gramophone) has been critical of CD sound at times, and the latest missive on the subject in the American Express magazine was slightly guarded in its praises. Of course, neither is CD as bad as some people have been saying. It is certainly not fundamentally amusical, and there is a tendency for detractors to gloss over its advantages, which somewhat spoils the legitimate case for criticism.

The problems start with the discs themselves. I do not intend to say too much on the subject beyond noting that the Sony PCM1610 has become the de facto standard for disc mastering, almost by default. Many claims are made on behalf of the 1610 by people of my acquaintance, about the most positive of which is that it can be made to sound good—if you don't mind carrying out certain modifications and regularly lavishing it with tender, loving care. Confidence-inspiring, isn't it? A straw poll amongst concerned users suggests that the JVC mastering system, which has not been very effectively promoted, is the best mastering system available.

What interests me most, however, are the differences between players. If any one company invented CD, it was Philips. Sony joined up at a later stage, prompting various improvements to coding standards and error correction, and changes in the size and playing time of the disc itself. But the basic work was Philips's, who own most of the key patents and grant most of the licenses. With Philips's outstanding history of letting initiative slip through their fingers, most of us in the press expected first Sony, then other Japanese companies to quickly dominate the CD world. In Europe, at least, this hasn't happened.

It hasn't happened with the technology either, though Philips hasn't had it all its own way. From the start, Philips (and Magnavox, the North American subsidiary) adopted a pivoted laser carriage and an extremely elegant single-beam laser, which provided a good measure of tracking ability and shock protection without need for the expedient Sony had to resort to on the CDP-101: an anti-shock switch to alter the servo characteristics according to circumstances. One CD player I have visited swore by the use of Sony CDP101s to check the quality of their discs, because, in their words, they are more likely to crash when presented with manufacturing defects.

The 3-beam laser (often bragged about in manufacturer's literature) and non-pivoted trolley standard with most Japanese players have inherent geometric and other problems which prevent them from working optimally. As a result, we've had a stream of players of Japanese origin that have proved microphonic in the extreme, and poor trackers on all but the most immaculate discs. Perhaps the most important exception
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- Sundown One, Storrs
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- The Music Room, Shady Pk

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- Wilson Audio, New Orleans
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**MAINE**
- New England Music, Saco

**MARYLAND**
- The Listening Room, Hampshir
- MASSACHUSETTS
- Sound & Music, Waltham
- Q Audio, Cambridge
- MICAHAN
- The Sound Room, Grand Rapids, Kalamazoo

**MINNESOTA**
- Audio Perfection, Minneapolis
- Audio Doctor, Duluth

**MONTANA**
- The Logical Choice, Kalispell

**NEBRASKA**
- Sound Dimensions, Lincoln

**NEVADA**
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**NEW JERSEY**
- Hi-Fi Haven, New Brunswick
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- The Candyman, Santa Fe

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- Mr. Toads Stereo Video, Raleigh

**OHIO**
- Audio Center, Toledo
- Jamieson's Inc., Toledo
- Golden Gramophone, Jules

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**OREGON**
- The Audio Alternative, Portland

**PENNSYLVANIA**
- Better Sound Concepts, Pittsburgh
- Crystal Audio, Bryn Mawr
- Federal Audio, Jenkintown
- Montavilla, Montgomeryville
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**SOUTH CAROLINA**
- Read Brothers, Charleston
- Upstairs Audio, Columbia
- Wise Audio, Greenville

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- Dallas Audio Concepts, Dallas

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- Discriminatory Music, Salt Lake City

**VIRGINIA**
- Digital Sound Inc., Lorton
- Audiophile Mike's, Vienna

**WASHINGTON**
- Audiophile Mike's, Seattle
- Definitive Audio, Seattle

**WYOMING**
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(This list was accurate and up to date at the time of production, but is subject to change. For further information, please contact Acoustat.)

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here is Sony, whose latest players are definitely not microphonic and are extremely fine trackers. Only Philips has demonstrated greater technical prowess, which is perhaps one of the reasons why no love is lost between the companies.

None of these shortcomings would matter too much if the discs themselves were perfect. It is possible, under laboratory conditions, to make discs with very few defects, but in practice the majority come complete with quite high levels of data error, caused by pinholes and other problems. So far, Polygram, at their Hanover plant, appear to be the worst offenders, and the Japanese — especially Sony and Sanyo — amongst the best. Nimbus, whose discs at one time were quite poor, now rank somewhere in the middle.

Then there is the error correction system itself. Contrary to popular wisdom, CD error correction isn't a single, fixed system, but a hierarchy of systems. In its full implementation, a considerable amount of high-speed memory (16K, I believe) is needed to act, in effect, as a frame store. To date I have been unable to trace the existence of a single player with more than a paltry 4K of on-board memory.

Given a perfect player, and discs kept in perfect condition, correction systems don't matter; they can reconstitute the digital datastream using the redundancy that is built-in. But what happens when imperfect discs are played on imperfect players using simplified, incomplete error correction algorithms? Well, what do you think happens?

And we've only scratched the surface of the differences between players that cause audible problems. There are, for example, obvious shortcomings of the kind we're used to from the world of analog, notably poor audio (as opposed to digital) engineering in all its many guises. As a matter of general principle, running audio and RF bandwidth circuits in parallel inside the same box and from the same power supply is a recipe for disaster. Yet very few manufacturers do much about this apart from using separate regulators (usually between three and five) for the power lines to the various circuit elements. Then there are elementary

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examples of bad practice, such as running the output signal from back to front of the case to a volume pot, then back to the output terminals. Or, in the transport section, inadequate and often eccentric disc clamping.

There is a whole class of other problems caused by trying to stretch technology in inappropriate ways. Single chip sequential DACs with 16-bit linear decoding and analog filtering inevitably mean significant in-band group delay and phase lag between channels. The result tends to be a flattened, sterile, and non-dimensional sound. The good news, however, is that more players now use parallel decoding or sample and hold circuits to cure interchannel phase lag, and oversampling combined with digital filtering to reduce group delay and other undesirable filter characteristics.

There are more sophisticated examples of poor engineering practice. Revox, whose player is based on the Philips chip set and transport, cleverly "corrects" Philips's mistake in biasing the output stage with a 4V DC offset, which fortuitously allows the output stage to run in Class A, and correctly biases the output capacitors. In the Revox implementation, the output amp runs in Class AB, and the output cap is unbiased. Furthermore, to improve linearity, the DAC is run inside what is, in effect, a feedback loop. It's difficult to assess what this means in audio terms, but it is not impossible that it partly accounts for the rather dead sound this player produces—in common with many high-feedback amplifiers.

I'm also rather disturbed by the players brought out by smaller specialist companies, notably Meridian and Mission in the UK. I cannot comment on the Meridian case, as I've only, so far, heard their players in passing. The Mission player, however, is interesting. I was at Mission's factory when Peter Moncrieff was there, and actually heard the player he later described with the infamous corruption of Herbert von Karajan's stupid "gaslight" remark on CD: "All else is boat anchors." That player was indeed pretty good, but turns out to have been fitted with Wondercaps and the like. Nothing wrong with that, but production samples have not lived up to the standard, and I would suggest that at least some of these heavily output-filtered clones from specialist companies sound dull and uncommunicative. I don't think it works to use analog filters specially designed to make CD players sound like analog records.

No, if you're looking for the state of the art, I've just heard it in the form of a heavily modified early prototype of the Marantz CD65. There is an equivalent Philips model, and together these are the first players to use Philips's new two-channel, single package 16-bit chip with four-times oversampling. This is a real technological tour de force, and not to be confused with the Kyocera 16 x 4 chip set which uses much more primitive noise shaping.

In the Philips/Marantz case the technology is far from firm, and it is anyone's guess what production players will sound like. Based on early (and somewhat limited) listening, however, it appears we at last have a player with much of the tremendous resolving power promised—but not delivered—by CD from day one, a player that presents a soundstage with an integrity previously only associated with the best of analog.

At the present stage of the game, and contrary to the fond beliefs often expressed in the specialist press, it is the major electronics multinationals, not the small, caring specialists, who are making the running.

1 This exception should be taken note. Meridian and Mission seem to do quite different things in modifying the basic Philips design. According to AHC, who has heard both and spent a lot of time with the Meridian MCD, the results are significantly different. —LA

2 For those of you not up on all sectors of the underground press, one of the most recent issues (about a year ago) of Moncrieff's JA came out with a review of the original Mission CD player, claiming it the best of only three even half-way decent players (the others were the Meridian and the NAD); you might as well use any others you own as boat anchors, they sound so bad. Needless to say, Stereophile's point of view has seen a more incremental process of improvement in CD sound. —LA

3 Which might cause some reviewers to temperize their rave reviews based on pre-production prototypes. Stereophile's policy—and you can call us on it anytime we violate it—is to review finished products, preferably from a production run after the first. Even the best manufacturers usually learn a lot from the first run, and subsequent buyers are the better off for it. Otherwise, we carefully warn you if the product is pre-production, to hedge our bets. —LA
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Linn vs. Naim; Now It's Official

The unthinkable has happened: Linn and Naim are at loggerheads. Personnel from the respective companies hardly talk to each other in public anymore. Linn’s new amplifier hasn’t exactly oiled the wheels of friendship.

But it was all so predictable. For some time now, Julian Vereker of Naim Audio has been muttering that if Linn would only pull their fingers out and improve the turntable, Naim could make their amplifiers better.

I’ve heard few such complaints about Naim from Glasgow, but it has become abundantly clear that the two companies are going in completely different directions. For Naim, it has always been sufficient to make their products in relatively small quantities and to make them well. There are always new things on the boil (a cassette deck and, I believe, some loudspeakers are on the way), but Naim always left things to mature at their own speed, like a good West Country cider. For relaxation, Julian makes sailboats. It’s worth noting that Naim dealers invariably sell Linn as well, but the opposite doesn’t apply; only a proportion of Linn dealers are deemed good enough to sell Naim.

Linn is quite different. Although also very much involved with the esoteric, Ivor Tiefenbrun’s overriding ambition may be to take on the Japanese at their own game. And who knows, he might just succeed. To Naim, the Linn amplifier seems akin to treachery. At the very least they feel sold down the river, and are aggrieved they were not consulted earlier. It’s not long ago, after all, that Ivor categorically denied any interest in producing electronics, preferring to leave it to what he termed the experts, *viz.*, Naim Audio.

To Linn, however, the amplifier is an absolutely essential stepping stone to the future. For the first time, every Linn dealer will be able to sell a complete Linn record playing system. Before too long, we can look forward to a full range of Linn elec-
tronics, including an integrated amplifier, tuner, cassette deck, and, in the fullness of time, probably a compact disc player as well.

There is one intriguing thing about the Linn amplifier that I don’t believe has been voiced yet: Linn/Naim dealers have traditionally had it relatively easy. They’ve been told what to say, what to think, and generally how to carry on their affairs. Now, for the very first time in their careers, many Linn/Naim dealers are going to have to do something that comes foreign to them: decide for themselves between the two radically opposed philosophies embodied in the amplifiers from the (now) rival companies.

Shows and Politics

Politics seems to rear its ugly head in almost every aspect of the industry in this great antique shop of ours called Britain. This story concerns *Hi-Fi News & Record Review* and BADA, the British Audio Dealers Association.

The hi-fi show scene has been in a shambles for some years now, the demise of the Harrogate annual bonanza being about the last straw. So in 1984, *HFNRR* decided to sponsor a specialist hi-fi show at the Heathrow Penta Hotel, a venue well known to the public and within relatively easy road reach of London, the prosperous and heavily populated south-east of the country, and, via air, Europe. The show, held in September, wasn’t particularly large even by British standards, but was reasonably well supported by the trade. It also came at a psychologically important time: the industry was suffering the blues due to an almost complete cessation of sales. As it happened, the show was full of good feeling, and attendance was good. Not unnaturally, *Hi-Fi News* decided to renew their sponsorship for a second year, which is where BADA enters our story.

BADA, a self-help group of specialist dealers, was formed just three or four years ago. Rigorously promoted as being dedicated to improving standards of knowledge, and salesmanship, and all matters that come under the heading of service to the public, BADA was not to be an umbrella marketing organization or ginger group (except in the narrow sense already described) in any way, shape, or form.

But somehow things changed; the atmosphere between an ever more powerful BADA and the rest of the industry is rapidly turning sour. BADA decided to promote their own show, not in one location but three: in the Midlands, in London, and on the south coast. Although each show was to be under the aegis of a local member dealer, the shows were to be promoted strictly as industry-wide and national in scope.

The battle lines were drawn. You would think that where it is difficult enough, even at the best of times, to put on any kind of showpiece exhibition, competition of this kind among four different supposedly national shows is the last thing anyone needs. This is exactly what happened, however, and BADA used every trick in the book, including pressure on manufacturers who wanted to continue doing business with BADA dealers, to scupper the rival organization.

The predictable happened: none of the shows was adequately supported by manufacturers showing their wares. The *Hi-Fi News* show was well-attended by the public, most of whom left wondering why they’d come. The three BADA shows were conducted in a narrow parochial way, with the local dealers’ involvement pushed to the fore in each case. Attendance at the BADA shows varied between mediocre and poor. The manufacturers I have spoken to so far are dissatisfied, to put it mildly. And attendance at the BADA shows varied between mediocre and poor. Whether sense will prevail next year remains to be seen.

The Acoustic Research EB101 Turntable

Finally, let me introduce to you a UK-designed and built turntable that bears an American name—the Acoustic Research EB101.

Most readers will be familiar by now with the AR turntable. It is a fine, straightforward
product that answers the need for a mid-cost unit with the ability to take different arms and make constructive use of them. But it has not been without its problems. Early production was plagued by the kind of start up snags with bearings and the like that should have been anticipated by a manufacturer which had, understandably enough, forgotten how to make turntables.

The EB101 is a less expensive model. In the UK it sells complete with arm and Glanz OEM cartridge (it's not available without) for just under £190—say $250. It is also a test bed for improvements that will be built into the senior deck later this year. These include a much up-sped main bearing and a new and more solidly built arm with an excellent diecast headshell that clamps solidly around the arm tube — now a worthy competitor to the Linn LV-X. The rest of the deck is pretty much as before, except that the excellent but costly wood-finished plinth has given way to a lighter vinyl-wrap box, cheaper to build but rather anonymous in appearance.

I hope this anonymity doesn't work against the 101. AR have latched onto an important truth that seems to have evaded many turntable designers: weight can be, and often is, a severe handicap, and not the positive virtue it is often taken to be. The 101 is lightly built, but usefully so. It sounds taut and clean, without the low frequency overhang that plagues many decks. The midband is translucent and clear, the treble both energetic and lean. There is little muddle here, and the deck recreates a realistically vivid sense of soundstage, while the bass has attack and tunefulness. The cartridge supplied is no great shakes, but it's OK as a starter, and can be readily upgraded with an alternative stylus assembly, though I've not heard it yet. However, the arm is fully capable of making use of something altogether better — one of the low end moving coils, say, or a Grace or Supex moving magnet.

And it's cheap. I don't know what the U.S. marketing plans for this deck are, but if it's not on sale yet, it ruddy well ought to be.

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Stereophile

If analog disc is fading, it is a twilight of the gods. Tonearms, cartridges, and turntables get steadily better; the overall quality of the best analog disc systems today is far better than it was two years ago. Bruce Thigpen and Edison Price’s new Eminent Technology Two tonearm is a case in point. It has evolved from a highly specialized product for only the bravest of audiophiles to a reference quality arm that any dealer can install, and any audiophile can safely use. More importantly, it may have no sonic equal at any price.

The Technical Background

Bruce Thigpen was one of the original developers of the air-bearing arm; at the same time he developed an air-bearing turntable marketed by Colony and later taken up by Maplenoll. He sought to create a frictionless straightline, with nearly perfect geometry, requiring no servomechanisms, decoupled

Eminent Technology Two

A complete description (and cover drawing) of the Colony Air Bearing Turntable and Arm is found in Volume 5, Number 5.
from the turntable and its acoustic breakthrough problems, and inherently low in resonance.

Like many inventors, however, Bruce had serious problems getting the capital to put his ideas into the form of a product, particularly in a form with good ergonomics and low risk to the cartridge. The Eminent Technology One, his first tonearm, worked well sonically, but the arm was still not a finished consumer product. The tonearm lift was inadequate, and a minor mistake by the user could slam a cartridge down to its doom.

The Eminent Technology Two is quite different. A fully finished product which any consumer will find safe and easy to use, it has fully functional and easy-to-operate adjustments in each of the following important areas:

- A system for changing cartridges that quickly locks tonearm tubes in and out, with a separate, pluggable signal connection. The setup gives far more repeatable and exact results than even the best two-pin removable headshells, although changing the arm tube may require slight re-leveling of the arm.
- Arm tubes that are tapered and internally damped to minimize resonance.
- An excellent VTA/SRA setup, easy to adjust during record playing, with a precise vertical scale for repeatable VTA.
- A very good and completely reliable cueing lift, with adjustable range and height.
- Removable arm tubes on which azimuth and overhang remain set up; this makes the Eminent Technology Two one of the few tonearms I know of in which the audiophile can rapidly change cartridges while maintaining precise azimuth and overhang.
- Tonearm and tonearm pivot height are fully adjustable and can be measured precisely.
- Horizontal and vertical balance can be precisely adjusted.
- Tracking force and tonearm mass are adjustable using four separate lead weights: a master weight of 15 grams and three auxiliary weights of 5, 5, and 5 grams, providing a range of 15-40 grams in 5-gram steps. A heavy weight can be put near the fulcrum for high-compliance cartridges, and a light weight can be placed away from the fulcrum for low compliance cartridges. The whole system is designed to minimize resonance as felt by the cartridge.
- The counterweight system is decoupled on a damped leaf spring that permits horizontal but not vertical motion. The system has a graduated millimeter scale; various weight packs, for given cartridges, can be quickly returned to the proper tracking setting.
- Once mounted, the arm can be precisely leveled relative to the turntable. In fact, almost everything seems adjustable with a 3/32” allen wrench.

Set-up is not easy, but a precision jig is available for dealer use, and is available at a reasonable cost to audiophiles (around $50). This jig allows very easy set-up and ensures excellent alignment—in fact, probably more precise alignment than is possible with any other tonearm. The standard jig is suitable for the SOTA, VPI, Linn, Goldmund, and most other leading turntables. A special mounting bar is available for Oracle owners.

About all that I can add by way of tips to anyone using this alignment and set-up jig is that the arm base couples to the tonearm mounting board on tiptoes. It is easy to secure the base too tightly to a plastic mounting board, which will slightly deform the base under each tiptoe; at that point, it can no longer be moved to just the ideal position (if you don’t already have it). You should set up the arm very carefully with the tiptoes just touching the turntable’s tonearm board. When everything is correct, secure the arm so the tiptoes are firmly making contact. Do not overtighten the arm’s mounting post to the turntable; a good solid fit will work fine.

Leveling is critical, and necessary for both arm and turntable. The last thing a straight-line tonearm needs is sidethrust, particularly that provided by gravity. The tonearm wire must also be carefully dressed for free-

2 The others are the MHC Seliki and the Deenasen, this information graciously supplied by Eminent Technology (not, apparently, in the interests of vicious competition).
dom of movement, especially at the end of the record.

I'd also be careful about air pump and filter placement. They are relatively quiet, and free of the hiccups and burps that affect the pumps of other air-bearing designs, but the pump is still noisy enough to require placement in a cabinet (or in another room). You will have to ensure that the hose from pump to arm remains free of external or internal obstructions. Just as with the SOTA Star Sapphire, the tweaker who cuts off his air supply is likely to strangle his system.

Further, the pump has to be hooked up to some switchable outlet on your system since it lacks a switch; it should not be left running indefinitely. Otherwise you might try to track a record with the air bearing airless—not good for the health of your records.

**Technology and Sound**

The sound of the Eminent Technology Two is fully state-of-the-art. With soloists and small musical groups, the Two is better than the One, and better than any arm I've encountered, including the far more expensive Goldmund and Fletcher. I know of no tonearm at any price that provides more detail, and seems as free of coloration.

Tonearm evaluation is extraordinarily difficult. While Peter Moncrieff and Martin Colloms have made some progress in the area of measurements, I still find little positive correlation between their resonance graphs and the resulting sound of the tonearm—provided that the basic design is good to start with.

If anything, the tests that Martin Colloms has published in *Hi Fi News* and *Hi Fi Choice*, which are unquestionably state-of-the-art in this area, indicate why tonearms are so hard to review. The complex resonance differences revealed in arm after arm *must* color the sound, but in what ways? Compare the review of the new SME arm in *Hi Fi Choice* No. 40 to other reviews in the same issue—it is impossible to tell whether the result is good or bad on the basis of the data provided. Even the review seems ambiguous as to whether the SME is good because of the measurement, or in spite of it.

The same is true of trying to correlate tonearm sound to bearing design. Designers have shown during the last two years that it is possible to get excellent sound from a very wide range of designs.

One of the saddest comments on British manufacturing is that the reviewer's "cream-puff" sample of the more expensive British arms is often praised for its tight and expensive bearings. Unfortunately, the product that goes to audiophiles all too often has slightly sticky, or maladjusted, bearings, which makes me doubt whether the particular results achieved by reviewers will ever be duplicated in the homes of audiophiles. For some reason, the British tend toward overtightening, and the Japanese toward under tightening. I regret to say that the Alpha-son and Linns are the only British arms I have seen in recent years with consistent quality control, although I should note that the Syrinx has been improved and may now well prove a worthy competitor.

Tapping the tonearm with a screwdriver or pencil and listening for a hollow sound or resonance is a useful test. I agree that most pivoting arms that sound inert when tapped are better than those which do not. I cannot, however, get terribly excited about this test; a large number of arms that met this test still sounded mediocre, and some hollow-sounding arms reproduced music quite well.

As Martin Colloms has pointed out in his tonearm reviews, the situation is further complicated by the fact that no tonearm/turntable combination can provide fully accurate bass. From record cutting to final reproduction at the speaker, there are normally at least twelve mechanical and electrical filters affecting the bass, and arm performance here is remarkably sensitive to the way the arm is mounted to the turntable. Just as changing turntable mats can change the sound of turntables, changing mounting boards from wood to plastic to metal can lead to major variations in bass from tonearms.

As for low frequency resonance, I cannot quarrel with the idea that it should be kept at 9-12 Hz, and that cartridge compliance should be matched to tonearm mass. The
problem is that few tonearm and cartridge combinations produce major problems in this area, provided some attention is paid to the counterweights or other adjustments used. Further, I am uneasy about this criterion because it ignores the fact that cartridge/tonearm interaction is often very sensitive to vertical and horizontal mass: the right mass relationship affects the music far more than it affects low frequency resonance.

Most cartridges will not perform as well with any given competing tonearms as with the Eminent Technology.

It should be clear that reviewers are ultimately stuck with their own ears. Given this preamble, it should also be clear why I am not going to praise the Eminent Technology Two with long discussion of the merits of straightline tracking or air-bearing design.

My praise will instead focus on the fact that, after several months of comparative listening, the Eminent Technology has always provided enjoyable music with more natural detail than provided by any competing arm. It has an extraordinarily live and open soundstage, but doesn’t change the soundstage in ways I would not expect from a given cartridge, tonearm, electronics, and speaker. The Eminent Technology is consistent, convincing, natural, and musically pleasing.

If it has any sonic limitation, it may lie in the deep bass, which is provided by the very best pivoting arms more powerfully and accurately, and in the feeling they give of more powerful musical dynamics. This is the only area where the Eminent Technology Two has ever raised any serious questions regarding its ability to outperform or equal any arm I have heard, but this area is so controversial—as to what is right—that I can do little more than raise the issue.

My only other caveats lie in the fact that its general superiority over the best compe-

tition I’ve heard is less apparent in reproducing large orchestral music than solo and small musical groups. Other arms may also produce a better interface with a given cartridge. Nevertheless, most cartridges will not perform as well with any given competing tonearm as with the Eminent Technology.

The Usual Reviewer Complaints and Quibbles

Is the Eminent Technology Two technically and ergonomically perfect? Hell, no! Nothing is. The arm’s lateral mass is a potential problem under one rather weird circumstance. If you happen to be heavily into +5 rpm 12" singles, the combination of a grossly eccentric record (more than 1/8" off-center) and a high-compliance cartridge could cause more deflection in the groove than with competing tonearms. For most audiophiles, this will be about as serious a risk as the chance of the turntable being hit by a meteor, but the problem is there.

The arm does not flip back off the record like the Souther, to allow easy change of records. Bruce could also do a few things more to ensure that the audiophile will get the best from his arm. You really do need to buy the setup jig to get an ideal setup. And, despite how essential it is with an arm requiring such fine adjustment, there is no instruction manual as of this writing.

The arm’s effective mass may be a little too high for some high-compliance moving magnets. As for other cartridges, I would like to see very specific suggestions from the manufacturer as to the proper combination and location of weights for a given cartridge. The arm is now too adjustable for the consumer or dealer who does not measure low frequency resonance, and I still do not fully understand how the location of the counterweight package best interacts with a given type and compliance of cartridge.

The tonearm wiring termination may also need improvement. The present RCA jack mounting plate works, but you have to solder the tonearm wires to it, and mounting the plate can mean the equivalent of hard-
wiring the arm to a turntable. Finally, I suspect that Eminent Technology may ultimately have to manufacture a mounting board for some of the best turntables that provides precisely the right sonic interface between arm and board, or persuade the turntable manufacturers to do so. (Such an accessory would probably benefit any top quality arm.)

The Competition: A Status Report

All these quibbles aside, however, it is a superb audio product, and impressive enough to make me recap my impressions of other top arms in the light of the Eminent Technology Two.

Alphason HR-100S: $795

Steady minor improvements in manufacture, a marginal improvement in damping, internal damping of the tonearm tube (as suggested by Tom Miller of TAS), and one of the first monolithic crystal and/or silver cables I have really liked, make the Alphason HR-100S a truly excellent pivoting arm. The Alphason and the Linn are also the only British companies I know of with a proven track record of getting tonearms to the consumer in fully working order.

The sound is very neutral, though possibly lacking in the consistent fine detail provided by the best straightline arms. The high frequency response is now cleaner and more musically detailed than when I originally tested the arm. The soundstage is good, if just slightly forward.

The deep bass and dynamics may be a bit less accurate than the higher mass pivoting arms, and the effective mass may be a bit too low for a few of the truly low-compliance moving coils, though using different counterweights has helped in virtually all the problem cases I know of. The only serious drawbacks are that (a) VTA/SRA is a pain to adjust, and (b) azimuth cannot be adjusted, which is a problem. Otherwise, a really top grade product.
Alphason Xenon: $495

Those of you who remember your Greek mythology may remember that Xenon was condemned to spin endlessly above the cave of the muses. The name notwithstanding, this is an excellent buy. It is virtually the same arm as the Alphason HR-100S, but lacks the monolithic crystal silver cable and uses special stainless steel bearings instead of tungsten carbide. It also uses a different bias weight adjustment, which proves a bit awkward in using the tonearm lift.

Replace the stock cable with a good tonearm cable, and the Xenon is a damn close competitor to the 100HS. There is a slight loss of upper midrange clarity and soundstage detail, but very little indeed. You save $300 for no more than a 5 percent sound loss. A very good buy.

Dynavector DV-507: $850

The newest version of the Dynavector DV-50" is, by far, the best version yet of this complex arm design, and is unquestionably the new leader in pivoting tonearms with removable headshells. The sound is exceptionally solid and coherent, and many troublesome moving coils are cleaned up through reduction their resonance or "tizz" in the upper midrange. Very powerful bass and good dynamics. The DV-50" produces a remarkable amount of natural life from the best moving coils. It has a "big" soundstage and superb imaging. VTA/SRA adjustment is well worked out, and can be easily made while the record plays. It is not, however, calibrated for repeatability.

I do have a number of criticisms that indicate that Dynavector may have to turn the DV-50" into a DV-50"A for many users. The most important: VPI is the only suspended subchassis turntable I know of that can take both the shape and weight of this arm, for which even the VPI needs special rear springs. The Dynavector isn't suitable for...
the SOTA, and just too heavy for the Oracle. As for the Linn, Pink Triangle, etc.—not a prayer.

I also have a host of quibbles. Azimuth badly needs to be made adjustable at the headshell. The standard counterweight is too light for most moving coils. The cable that comes with the arm is mediocre and should be replaced by a high-quality interconnect. The headshell and its wiring are mediocre; substituting the Grado headshell and a top-quality tonearm cable vastly improves the arm. My praise is based on using it in this manner, or with the Audioquest-Orsonic headshells and some other good tonearm cable. The base plate is rather light, and is affixed with only a single screw.

Grado Signature: $485

This arm's peculiar shape, height, and special set-up instructions have deprived it of much of the recognition it deserves. The Dynavector 507 now outclasses it as a pivoting arm using standard removable headshells, and possesses more natural life and sweetness with moving coils; it also costs twice as much. The Grado is still very good indeed, and, as might be expected, is an excellent match with moving magnets and the higher compliance moving coils. One of the best soundstages around.

Goldmund T3-F and T-5 ($2800)

I have not had either of the latest Goldmund arms in for review, or been able to examine them in depth on my reference system. I have, however, listened to the T3-F on two other high-quality systems, and would advise you to very carefully compare the Eminent Technology Two to the Goldmund before buying the latter. You may well find that the Eminent Technology is at least as detailed, and possibly a bit better in resolving fine harmonics and transient information.

Koetsu SA-1100D Mark II: $700

I've had several Koetsus pass through my hands, and can do little more than issue a caution: the arm's bearings were slightly loose on three of the four samples, and the tonearm lift erratic on two.

The headshell is good, and VTA/SRA adjustment is better than most, though not competitive with the Dynavector or Grado. The sound is reasonable, but bass is not particularly tight, and there is a fair amount of coloration in the midrange and upper mid-range. This can give a slightly live sound, but is not particularly accurate.

All in all, this is a good $200 tonearm which sold for $700 with uncertain quality control. I am now told the arm is no longer in production, which is understandable. I would be cautious about buying a used one even at the $250 level; the improved Sumiko MMT, with its new headshell, is sonically superior at that price.

Linn Ittok LVII: $530

This arm seems to steadily improve in detail. It is excellent for low- to medium-mass moving coils with relatively live bodies, and very good for virtually all but the heaviest or highest-compliance cartridges.

My quibbles are that (a) it is just a little
bright and hard, and (b) its "life" is not matched by a feeling of solid, stable musical sound or natural deep bass. The soundstage is good, but slightly lacking in depth. There is no azimuth adjustment, and VTA/SRA is very time-consuming. Nevertheless, it still has to be rated as one of the top pivoting arms available.

**Souther Triquartz: $850**
Since my last review, the Souther has been steadily improved in detail, set-up instructions, and sound. A third quartz beam has been added; the result is a more solid sound, more detail, and more bass. A solid titanium tonearm rod and better instructions on using the weights also ensures far greater ease of proper setup for a given cartridge.

These improvements make the Souther competitive with the Eminent Technology Two, but there are subtle differences in the way each arm provides upper midrange and loss of detail in the highs.

**SAEC 407/23: $495**
Still very good value for money, but the Dynavector and a well-set-up Grado take the lead in the detachable headshell area. Not quite as smooth a midrange as the top competition, and some minor coloration or

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treble detail—and the Eminent Technology Two is a bit more convincing in terms of imaging and harmonic detail. I may get in deep trouble with my adjectives here, but the Souther is more “live” with many cartridges, while not as dynamic, harmonically natural, or convincing in timbre. The Souther may be somewhat better in terms of overall musicality with medium-to-high-compliance magnetic cartridges, but the Eminent Technology is consistently better with most moving coils.

Both the Eminent Technology Two and the Souther require very careful set-up, and close attention to the proper choice of tonearm mass (provided at the headshell on the Souther) to get proper tracking and good bass. The Eminent Technology, however, benefits from its setup jig, provides for rapid interchange of cartridges and easier azimuth adjust, and allows easy adjustment of VTA during play.

**Souther Junior: $550**

If you want many of the benefits of the Souther, with only a slight loss of detail and bass information, the Souther Junior is an excellent buy. ou give up gold plating on the RCA jacks, cosmetic covers on the end molding, and the magnetic end-of-record lift. None of these are great sacrifices. The $300 saving over the regular Souther Triquartz or Eminent Technology make the Souther Junior the “best buy” in straight-line arms.

**Sumiko “The Arm”**

The Fletcher arm is now a collector’s piece. It was, however, my reference for some years. It probably achieved the tightest bass of any pivoting arm I’ve heard. It also did a very good job of balancing out slightly live moving coil cartridges and cartridges with a rising high end. “The Arm” does not, however, have quite the resolution and detail of the best current competition. The upper midrange and highs are very good, but can appear slightly lacking in life.

“The Arm” also lacks any azimuth adjustment, and SRA/VTA adjustment is difficult and time-consuming. Still one of the best pivoting arms ever made, however.

**Syrinx PU-3: $700**

No other major tonearm manufacturer has shot itself in the foot with the foolish consistency of Syrinx. Poor quality manufacture and a delicate and vulnerable design have badly hurt the PU-3, making it a legend in its time. Syrinx has, however, been reorganized, the PU-3 has been improved in detail, and Assemblage has taken over responsibility for ensuring that legitimate imports into the U.S. actually work.

The latest version of the PU-3 incorporates major improvements to its once-low-quality bearings. The base of the arm has been redesigned to stop the internal snagging of wires during VTA adjustment that killed so many samples of the previous design. Cartridge pins are now crimped and soldered, where previous versions built up serious resistance problems because of poor oxidation between the pins and tonearm wires. The tonearm lift has been redesigned, making the arm rest rounded and rubberized; the arm no longer drifts so much during raising and lowering.

A re-test of this most recent version of the Syrinx PU-3 shows it has excellent treble, with unusually good harmonic detail in the highs, and a lack of harshness or unnatural life with the better moving coils. The midrange was not quite as clean, but was very good. My only serious question is the smoothness and naturalness of voice; other arms seem to give voice slightly less chest or character.

Soundstaging was good, with a slight tendency towards better depth than height and width. Much depends on the interface with a particular moving coil cartridge, since the Syrinx sounds only good to very good with some cartridges, but “locks in” to sound excellent with others. The larger and lower compliance moving coils with a slight upper octave rise seem to do the best.

The PU-3 retains its outstanding ease of overhang and azimuth adjustment. A choice of terminations now permits the use of top-quality interconnects. VTA/SRA adjustment, however, is still the laborious task of raising and lowering the arm in the tonearm base and trying to set the screw at just the right point.

66
The bearings seem tight and friction low. However, when I used an 8" by 3" piece of bond typing paper to push the Syrinx, fully balanced, up or down, the paper deflected more than with other top pivoting arms. This normally indicates slight friction, although most designers seem to feel that a bearing friction of less than 1/10th of the tracking weight is completely acceptable, and the friction of the Syrinx was well below this level.

All in all, the PU-3 "II" seems to live up to its original design promise: it's now a very good tonearm. But, before you buy, call Assemblage to make sure you have the latest model with proper quality control. I would be very hesitant to buy an earlier version PU-3, or any sample of the PU-2 at any price. These two arms were some of the products that helped give the British tonearm industry a terrible reputation for quality.

Zeta: $875

I think this arm deserves the importer's comment on the current status of its availability and quality control. Long-standing bearing adjustment problems remain unsolved, and azimuth alignment has been erratic.

Incidentally, if you want to make a quick test of bearing friction in any arm, Joe Grado suggests one of two tests. If the arm is designed, as many are, with some slight bias compensation in the arm, carefully level the tonearm (not the turntable, since mounting boards, etc. often ensure that the table has a slightly different level), get the arm perfectly balanced so that it floats just slightly above the record, put it in the middle of the record and see if it slowly coasts outward. If it does, friction is all right.

If the arm can totally cancel all bias so that it will float just above the outer edge of the record without moving to the outside when the tonearm is level, blow gently until the arm moves towards the inside of the record. It should continue easily all the way to the inside of the record. If you have to blow hard, or if the arm sticks anywhere once it moves, you have a bearing or cable binding problem.

Do not buy any arm that has a permanent azimuth error or any sign of bearing problems, and insist on a check of both before buying. There is no real way to repair most tonearms except at the factory. The history of such repairs by dealers or importers is filled with repeatedly unsuccessful service attempts; that, or the bearings were merely loosened, or the arm tube twisted, to give the appearance of proper repair and adjustment. If a tonearm is not perfectly aligned, and does not work perfectly right out of the box, consumer and dealer should insist on a totally new product.
Well Tempered Arm: $550

A surprisingly neutral arm with great flexibility in coping with different cartridges, the WTA is ideal for Deccas and moving coils. Generally lacking in resonance and coloration. Dynamic, and with a slightly larger-than-life soundstage. Good detail, but not equal to the top super-rigid pivoting arms, or the Eminent Technology in resolving fine musical detail or harmonics.

Set-up is a bit complicated, but scarcely a problem for anyone who is literate and has half an hour. Very good value for money for the Decca or moving coil lover who does not want to change cartridges often.

Summing Up

I should stress that in using the Eminent Technology Two to recalibrate my perceptions of past arms, I am not recommending that you should rush out and sell your existing top-quality arm. Nor would I say that the Eminent Technology Two lacks competition. I will be using the Eminent Technology Two as a reference because I think it is that good, and because I feel it is that neutral in terms of turntable and cartridge compatibility. I have not heard every top arm, however, and hope the above mini-reviews indicate that the competition is still very close.

In fact, today’s best tonearms are so good, and offer so much variety, that any given audiophile or reviewer could easily prefer several of the above arms to the Eminent Technology Two. Further, I’d put money into a better cartridge, turntable, etc., long before I rushed out to exchange a top-quality competing arm for the Eminent Technology. That said, Bruce Thigpen and Edison Price have done a damn good job! The Eminent Technology Two is certain to be a highly popular product with even the most demanding audiophiles.
REVOX B-215 CASSETTE RECORDER

J. Gordon Holt


The audio cassette in the year 1985 is a triumph of technology over impracticality. Twenty years ago, it was considered impossible to get HF response to much beyond 15,000 Hz from an open-reel tape running at 7½ inches per second, and that upper limit diminished to 7,500 Hz at the “secondary” speed of 3 ¾ ips. The 1 ¾ ips speed, with its 3,250-Hz upper limit, was deemed adequate only for dictation. Even today, the best open-reel recorders can claim only a 15 kHz upper limit at 3 ¾ ips. By contrast, a cassette recorder that can’t deliver flat response out to 20 kHz—at 1 ¾ ips!—is considered to be strictly mediocre by modern standards.

The Revox B-215 is one of a relatively new breed of cassette machines that combine state-of-the-art performance with a high degree of functional automation. The B-215 is similar in many ways to the B-710, which it supersedes in Revox’s line. Reviewed in Vol. 7, No. 1, the B-710 got very high marks for its sound-quality, but a lower grade on versatility.

Although the B-710 had switching to select the “standard” bias and EQ combinations (for Tape Types I, II and IV), these were factory pre-set—via internal potentiometers—for TDK’s top line of tapes, which means the settings were incorrect for any other brands of tapes. (Because of the cassette’s exceedingly slow speed and thin oxide coating, bias and EQ must be precisely adjusted for a specific tape to avoid HF losses or peaking.) This adjustment specificity was no problem as long as you always used one or another of the appropriate TDK cassettes, but it meant that you couldn’t use any other
brand of tape without incurring errors in HF response and record/playback signal level. Thus, most of your old tapes could not be satisfactorily re-used for new recordings.

Of course, it was always possible to open up the B-710 and readjust the pots for a different tape—assuming you had the necessary test equipment and know-how. But then that particular setting on the Tape Type switch would, again, be suitable only for the tape it had been readjusted for. This was an inconvenience, albeit a minor one.

With the new B-215, Revox has addressed itself to, and pretty much solved that problem. The new 215 has a button on it marked Align. Before making a recording on an "alien" cassette, you first press the Align button to select a memory location (A1 or A2) for the alignment parameters. Then, with the tape loaded, you press the Align button again to initiate the alignment procedure. This causes the machine to do a test recording with that tape, checking output level and treble response. If there is a discrepancy with either, the record bias and treble equalization are automatically adjusted, and the settings stored in the memory location you chose. You may then go ahead and make a recording on that cassette. The next time you wish to use that particular kind of tape, just call out its Type and memory location, and the machine is ready to go again.

There are six such alignment memories in the B-215: Two for tape Type I (regular iron oxide coating), three for Type II (chromium dioxide coating), and one for Type IV (metal coating, which is pretty much standardized from brand to brand). Any one of the stored setups can be called up by pressing the Type and then the Align buttons to select A1, A2, etc. (Type is selected automatically with the modern coded cassette shells.) The only possible hitch is that you must remember which memory was used for which tape. I recommend writing them down. Failure to remember the proper memory location is hardly a disaster, though, because, if in doubt, you can always repeat the Align procedure before recording. The worst circumstance would be if you are certain you know which is the correct memory for a particular tape, and are subsequently proven wrong.

There are no rotary controls on the B-215 at all. Everything is controlled by pushbutton, including record volume, record channel balance, and headphone volume. Each of these functions is assigned an Up and a Down button, and changes are effected in barely audible incremental steps, rather than continuously.

Although practically everything in the B55 is automated, overrides are available for every function. For example, prior to actual recording, the B-215 stays switched to Source, but Tape (play) mode can be selected by hitting the Tape button. Conversely, as soon as recording starts, the machine switches itself to Play, but Source can be selected with the same Tape button.

Record level can be set in two ways: Manually, according to the LCD display, or automatically. For auto setting, play the loudest section of the music to recorded while holding down a button marked Set Level. When that button is released, the record level will be set according to the loudest passage that was encountered during the Set procedure.

Incidentally, the record level is not supposed to set to a Meter-Zero reading, but rather to reflect the headroom capability of the tape. Suitable settings (ranging from metered +4 to +6) are listed in the manual. These are the settings the automatic Level Set procedure goes for.

Another new (for Revox) innovation in the B-215 is automatic fade-in/fade-out. The fades, which are moderately fast in both directions, can be toggled in at the beginning or end of any recording (while recording) by pressing the Fade switch and then using the Pause control. If you do this from Record, the fadeout occurs before the machine pauses the tape. If you do it from Stop (or Pause), tape motion begins before the fadeup.

The B-710 had a four-digit tape counter which, while quite accurate as a means for locating a desired place on the tape, did not

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1 A toggle function is one that alternates between On and Off by means of the same switch or button.
tell you anything about elapsed or remaining tape time. The 215's counter reads real time, in minutes and seconds, and is accurate to within a second or so—at least if you wind to the beginning of the tape before using the high-speed shuttle functions. (If you don't, the indication may be off by several seconds in either direction.)

The counter's high accuracy is utilized to permit automatic high-speed searches for specific places on a tape. Searches can be made manually, by callout in minutes and seconds, or automatically by addressing either of two previously-programmed memory locations (Loc 1 or Loc 2). Loc 1 is automatically logged into memory at the start of a recording, regardless of where on the tape it starts; Loc 2 must be put into memory manually. If you're searching from the middle of a tape, the deck unerringly shuttles in the proper direction to find Loc 1 or Loc 2, depending on which you specify. Both locator addresses can be used to delimit the beginning and end of a recorded segment for indefinite repeat playing. Repetition is started and stopped with the Loop button.

The B-215 can be used with an optional infrared remote control unit, which can also be toggled to control a second B-215 without interactions between them. Most recorder functions can be performed from the remote, as can a number of others involving other components in an all-Revox system. (You cannot, however, change a cassette from the remote location.) The B-215 also has what they call a Serial Link socket, at whose wondrous purposes the manual but tantalizingly hints. This appears to be for a computer hookup, but no details were mentioned as to what computer control might do.

The 215 lacks three features that were included in the 710: output-level adjustments, microphone inputs, and a self-contained timer-controlled play/record function, for unattended operation. I don't feel any of these constitutes a serious omission.

The B-215's 0.77 volt output is standard line level, and so few audiophiles ever do "live" recording without a mixer that built-in mike preamps on the 215 would rarely be used anyway. For unattended recording or playback—another rarely used function—Revox simply advises adding an external timer. For this purpose, the B-215 has a useful feature which the 710 lacked: the Save Status mode. Depressing the Save Status button puts all of the current settings—for Level, Tape Type and Alignment parameters, record status, etc.—into a non-volatile holding buffer using EAROMs (Erasable Read-Only Memory). Programming the 215 for record, then hitting Save Status, will cause the machine to start recording as soon as it is turned on. It will only do this once in the record mode so as to avoid recording over what you just recorded. (Programmed in the playback mode—to fool burglars, for instance—the 215 will save the parameters indefinitely, and keep playing back whenever it is turned on.)

As you can see, this is a pretty sophisticated piece of equipment—so much so that you will probably have to read the instruction manual before you can get the thing to work at all. You can't just load the tape, punch Record, and go. How does it work? Superbly!

I was immensely impressed with the sound of the earlier B-710 at its best. The new B-215 sounds at least as good, and, because of the automatic Align provision, it is at its best more often. Sonically, the B-215 is a little on the warm side, very liquidly transparent (no harshness or graininess at all), and very detailed. HF clarity and openness will of course depend on the tape you use. Metal tapes, for example, gave the crispest, most detailed high end, but with a very subtle edginess which I did not much care for. Chrome tapes gave what I felt to be the best sound overall, but not everyone will prefer their slightly softer, sweeter high end. Iron oxide tapes proved to be a little unpredictable in performance, apparently.

2 EAROMs, according to a fascinating conversation with Revox, consist of thousands of microchip diodes, which are oriented once (on or off) when settings are saved, and subsequently destroyed when you create new settings (using the next set of diodes, obviously). In spite of this profligate destruction, Revox estimates you could reprogram the settings every hour and the EAROMs in the B-215 would still last 10 years! Even then the cost for the new part would be only $5.00.

—LA

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because some of the cheap ones I had on hand had such low coercivity (resistance to erasure and magnetic pole reversal) that they required bias settings below what the Revox could provide. These cassettes produced reduced signal level and a dull high end, despite prior alignment. Better grades of ferrous oxide tapes were pulled perfectly into alignment by the B-215, but, at best, they still had somewhat less HF range than the chrome tapes. This, of course, is all what one would expect in any comparison between tapes. It's why some cost more than others; they have better HF response and lower noise than the cheaper varieties.

Tape hiss was more related to the cassettes and the noise-reduction system used than to the recorder, which indicates that the B-215's hiss is as low as the cassette medium permits. Even with the cheapest tapes and no noise reduction, the rather obtrusive hiss was smooth and dull, like gentle rain on a paved street. (Peaky loudspeakers could make this quite obnoxious, but anyone who would pair a $1400 cassette deck with lousy speakers deserves what he gets.)

Only in the playback of previously recorded tapes is the B-215 bettered: by Nakamichi's 1000ZXL ($3800) and Dragon ($1600). Both of these feature automatic head azimuth alignment in playback, as well as bias and EQ adjustment in play. (The latter is manual in the Dragon, automatic in the 1000ZXL.) The play alignment on those machines makes a perceptible difference in HF openness and detail from some old tapes and a dramatic difference in others. (It does not have any effect on tapes recorded on the same machine.) Whether or not this feature is worth an additional $540 to you depends on the extent your collection of previously-recorded cassettes. Some of you will prefer the cooler, somewhat drier sound of the Nakamichis, but I prefer the Revox.

The maximum headphone output level from the B-215 is high enough to produce a satisfactorily loud level from phones of below-average sensitivity, or very loud (but probably not damagingly loud) sounds from highly efficient phones. The phone output level is high enough to drive any headset I can imagine.

The B-215 handles tape with a solidity reminiscent of professional open-reel machines. Never once did I hear speed variation, even from some old cassettes which, because of wow problems on other machines, I know to have worn slip sheets. In fact, wow from the B-215 was lower than that from most analog discs, few of which are perfectly concentric. Flutter, too, was as low as I have heard from tape. I could detect none, except in comparison with digital tapes (from which I copied some piano music and some reedy pipe-organ material.) Only then was it evident that the PCM material had more of a feeling of stability to it. The high-speed shuttle functions are gratifyingly fast, stops and starts are almost instantaneous, and built-in logic prevents damage from user stupidity. The cassette even locks into place while in Play or Record, preventing accidental removal while the tape is running.

My only serious criticism of the D-215 has nothing to do with its performance, but rather with one aspect of its ergonomics. The LCD readouts are hard to see, compared with LEDs, particularly if the recorder is installed low in a rack or cabinet. The display "illumination" does not illuminate the LCD display at all; it only shows when the recorder is On. The recorder should be placed at or near eye level: below this, some of the data readouts are hidden under the upper edge of the display recess, making them even harder to see.

All in all, though, I found little about the B-215 to criticize. Its slight sonic imperfections, such as they are, appear to be related more to the shortcomings of the cassette medium itself than to this recorder, which means that no other recorder is likely to do significantly better.

A superb cassette recorder, for the person who wants and is willing to pay for the best quality cassettes have to offer.

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3 Slip sheets are thin sheets of lubricant-coated plastic which serve as stationary hub "flanges" inside the cassette shell. After extensive use, the shiny, lubricated surface wears off, causing friction against the rotating packs. Worn sheets can be replaced if the cassette is put together with screws, as most are.
Sometime in the last few months I reviewed my 100th high end cartridge. I am also now in my “forties” in reviewing high end tonearms and turntables, although some of the products reviewed died before the reviews could be published. The combinations of various phono front ends, even excluding electronics, number in the hundreds.

**Reviewing and Buying Your Own Cartridge**

I mention this not as proof that I am now endowed with divine wisdom, or as preamble to my claim for *Stereophile’s* famous pension benefits, but rather as an introduction to several broad observations.

The more I listen to any given cartridge in a wide range of tonearms and turntables, the more reluctant I am to say that any review or demonstration can predict the subtleties of how well a given cartridge will do in your system. It is frighteningly easy to over-review cartridges based on a specific reference system on the assumption that the qualities noted are repeatable in other systems. Not to mention that reviewers often get hand-selected models, of which few buyers will ever hear the likes. Further, some of the most expensive hand-built cartridges are tuned by ear, vary from sample to sample, and quite legitimately shift in sound quality as the builder improves technique. The only valid test of a cartridge is to hear it in your system.

The more cartridges I listen to, the more convinced I am that the cartridge/speaker interface is the most important single factor in determining the natural musicality and pleasure available from recorded music—which further compounds reviewing problems. Though my broad results are reasonably consistent in shifting from the Quad ESL-63 to an Apogee to an Infinity RS-1b, the *ultimate* cartridge is different with each speaker system. Some nuance of cartridge performance best matches the particular speaker: speed, frequency response, imaging performance, etc.

After speaker match-up, I rank tonearm, interconnects, and preamp as the most important factors in choosing a cartridge. Assuming you own a turntable as good as the AR, Ariston, Rega, or Systemdek II, and possess intelligence regarding turntable mats and placement, the upgrade to a VPI, Oracle, or SOTA—or even Linn or Pink Triangle if you don’t mind a little masochistic tweaking—is less important than finding the tonearm that really suits a given cartridge. The particular results with a given cartridge will then be extraordinarily sensitive to wires, azimuth, sidethrust, mass, headshell, counterweight, etc. Different headshells or very slight changes in effective mass often change details of imaging and transient resolution as much as changing the cartridge, and there is no question that given cartridges lock-in best with given tonearms. The precise ranking of Zeta, Alphason, Syrinx, Eminent Technology, Grado, Souther, Goldmund, or WTA is highly cartridge-dependent.

Cartridge loading and electronics are also critical. Higher loadings tend to compensate for speakers that have trouble “floating” an image to a wide range of listening positions. Lower loadings stabilize the soundstage and reduce dual mono effects.

But such generalizations are dangerous. Bass response, for example, is sometimes
sensitive to loading; the best treble loading may not produce the best bass. Most tube preamps sound better with high loadings than do transistor preamps. A ‘warm’-sounding or ‘slow’ cartridge obviously makes a poor combination with most tube preamps, just as a moving coil with a peak or rising high end works poorly with transistor mid-fi equipment.

Tracking force is also critical. Let me repeat a piece of advice that I regard as absolutely critical to buying an expensive cartridge and system set-up: Never buy a cartridge incapable of cleanly tracking at least 70 microns, and preferably 80, at a dealer demo of the cartridge with your tonearm and turntable. Insist on hearing the result from a test record; avoid substitutes like those cartridge clinic machines using scopes or musical tracks. I also recommend seeing the stylus and cantilever assembly under a microscope. You don’t need to be an expert to recognize poor alignment, irregular stylus shape, or an off-center cantilever.

For cartridges costing $500 or more, check with the importer or manufacturer to make sure the cartridge is not outdated or gray market, and determine the exchange or repair policy. I’m appalled that many high-priced Japanese cartridges don’t have their model name and serial number stamped on both box and cartridge, and exert terrible quality control over the products they should know will enter the U.S. as gray-market products. Far too often, the result is a dealer or discounter taking advantage of unlabeled boxes or cartridge bodies to sell outdated or gray-market models. Most dealers are honest about this, but such a call is still an essential part of buying any true high-end cartridge.

While on such themes, let me strongly recommend against the re-tipping of any cartridge by anyone other than the manufacturer. Much as I like the Garrot Decca, and as good as a few of the van Den Hul re-tippings have been, far too many re-tipped cartridges have cantilever and damping problems, or degraded high frequency and transient performance. If you want a van Den Hul, buy a van Den Hul. If you want a Koetsu, keep it a Koetsu.

Buy an Ortofon test disc, or something similar; regularly conduct your own tracking tests, checking the downforce necessary to maintain good tracking. Slowly raise the tracking force to the maximum recommended, or slightly above, to find the point at which no further increase in tracking capability is possible. In terms of both sound and record life, it is far better to track a little high than have the stylus begin to lose contact with the groove (which sounds like a “shattering” of the sound).

These observations put the burden firmly on the reader to do his/her own listening.2 I fully admit that they limit the guiding role of reviewer or dealer. I even admit to making some of these points before; but, judging from mail and phone calls, such advice is still critical.

More unhappy audiophiles emerge out of poorly planned efforts to buy a phono cartridge than any other single audio experience. These problems are compounded by inadequate dealer set-up and poor quality control—regardless of price. (In fairness to dealers, I have also seen too many audiophiles try to return mishandled cartridges, or purchase on the gray market after listening privileges were extended by the dealer.)

The Cartridges at Issue

This cheery preamble may be enough to drive anyone to the nearest compact disc store, but things now improve. All of the cartridges to be discussed are good, and a few are outstanding.

The Audioquest B-100 M: $595

The B-100M is a medium-output version of the Audioquest B-100L (tested in Volume 8, No. 4); its 1.1 mV output was designed to eliminate the need for a headamp. It is generally similar in sound character to the B-100L, and is a very good cartridge. I have to say, however, that its merits are overshadowed by two competitors.

The first is the B-100L. The 100M seems

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2 We are still searching for non-sexist humanoid pronouns for use in reviewing. LA has promised to draw on the collective wisdom of the old town in Santa Fe, which is famous for its asxuals.

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to get its added gain at the cost of a slightly more apparent rise in the upper octaves, less smoothness in the upper bass/lower midrange area, slightly less coherent upper octave imaging and soundstage data, and a limited but still noticeable loss of speed and transient detail. The “master tape” sound of the B-100L made it outstanding; the B-100M is only good to very good.

The second competitor is the Shinon Red Boron (Vol. 8, No. 4), which sounds similar to the B-100M, but is slightly superior in virtually every respect. The only exception is tenor or female voice with a dark tonality (Tina Turner, etc.); the B-100L keeps the vocalist forward, and the Shinon Red recesses her/him.

The ClearAudio/Veritas: $800

I hope you will forgive my returning to this cartridge, but prolonged listening indicates that it’s good enough to justify another few words. As I mentioned in my initial review, this cartridge provides imaging, soundstage data, and transient information that equal or exceed that of any other cartridge I have heard—at any price. It is undoubtedly of reference quality, though many of its competitors have a somewhat more musically natural (if not necessarily more accurate) timbre in the midbass, and mid- and lower midrange.

I have now clocked many listening hours with the ClearAudio/Veritas, and I strongly recommend it for your audition list. It is strikingly different in sound from the $1500-3500 Koetsus and Kisekis, but firmly competitive with them. It is the ultimate moving coil in imaging life and soundstage detail; only the Argent Diamond and Monster Alpha 2 are serious rivals.

I am still concerned with the issue of proper loading. The manufacturer now recommends 50-200 ohm loads for transistor preamps, and 2,000-47,000 ohms for tube preamps. Detailed technical tests of my universal tonearm-mount sample indicated better performance at the manufacturer’s recommended 50 ohms; bass and lower midrange are slightly more solid and natural with such loading.

I nevertheless prefer the dynamics and soundstage I get with loadings of 100 ohms and up, in spite of the fact such loading produces the rise in high frequency response revealed in the attached chart. (The rise in the chart, measured at 47,000 ohms, is exaggerated. It is much less notable in the 100-200 ohm range I find best with a variety
of tube and transistor preamps.)

Two additional caveats: though it does very nicely in the new Dynavector DV-507 and improved Alphason pivoting arms, the ClearAudio/Veritas does best, in terms of consistent fine detail in harmonics and imaging, in a straightline arm. The improved Souther is highly recommended.

Second, it is very sensitive to side thrust and tracking force in pivoting arms. I suggest experimenting with a side thrust range of 1.0-2.2 grams; listen carefully for the point at which you get best imaging detail. Tracking force is also very important: a 2-gram tracking force results in clean tracking of 80 microns; 1.5 grams yields clean tracking at only 60-70 microns.

**Koetsu Rosewood Signature: $1500**

I love high end products like this: They appeal to my sense of anarchy and to my general belief that the "science" of audio testing is an art form in which the art is often missing. This cartridge tracks terribly! It only reaches 60 microns, and inadequate downforce will push it down to 50 microns. The frequency and separation sweeps are mediocre. There is a clear "resonance" glitch at 6-10 kHz, and a relatively steep rise above 10 kHz. Channel balance separation is merely good, with some rough spots from 100-300 Hz. Discontinuities in the separation at 6.8, 8, and 9.8 kHz may explain why imaging in the top octave is not quite up to the rest of the frequency spectrum.

The 0.4 mV output is certainly high enough to eliminate the need for a headamp, but is achieved at a loss of speed and transient detail. The rise in upper octave performance may be a deliberate attempt to restore "life" and "speed" to the cartridge.

So much for the technical results; the Koetsu Rosewood Signature is a definite sonic competitor for top reference cartridge in spite of all these problems. It outperformed the now discontinued $2500 Koetsu Diamond, and the $3500 Kiseki Lapis Lazuli (at least the sample I heard a year ago). The Koetsu excels in making most music natural
The Shure Ultra 500 Cartridge

and enjoyable in the midrange area, where the music really counts.

In fact, the full merits of this cartridge become clear only if you listen for hours to a wide range of music. It has good imaging, transient performance, depth, overall timbre, and bass in spite of its technical limits. These characteristics are immediately apparent. They are not, however, more outstanding than on many under-$500 cartridges. The better Adcom and Argent medium/high output cartridges are generally as good or better in these areas—at prices around $385. But, if you give the Koetsu Rosewood Signature time, you will find it extracts pleasure out of record after record after record.

I cannot more clearly tell you why. It’s a matter of a particular sonic balance and nuance—the designer/manufacturer’s personal taste. For some reason, the Koetsu simply sounds right in the midrange in ways unrivalled by any but the better samples of the Kiseki Purple Heart Sapphire. On ordinary pop records, for example, even the best competing cartridges have trouble with the relationship between instruments and voice. They’ll do superbly on some records, then lose the voice or the instrumentation on others. The Koetsu does less of this than any competing cartridge. The Rosewood Signature also draws you into the music, and makes you forget your system.

This may sound terribly neo-Luddite, and Hi Fi News may well give me their annual Golden Turkey award for the “review in which the reviewer most thoroughly trashed his own technical results in the course of falling in love with his own subjective impressions.” I can only suggest you listen for yourself, with sufficient patience to consider whether $1500 is justified in light of much less expensive, sonically excellent, and technically superior competition. The only thing I can say in its defense is that a number of manufacturers and importers use this Koetsu for their own listening.

The Shure Ultra 500 Cartridge: $400

This is the same Shure Ultra 500 reviewed by JGH (Vol. 8, No. 4—the Spring 1989 edition, according to the original publication schedule). Given Shure’s past history, I need hardly say it tested superbly. It cleanly tracks 90 microns at 2 grams, has perfect channel balance at 1 kHz (as did all of the cartridges tested in this installment, except the Veritas, which had a minor 0.5 dB imbalance), and has a 2.7 mV output in both channels. The frequency response curve is dead flat, with only minor glitches in response and separa-

3 See AHC’s review of the Meridian MCD for his anticipatory reply to the HFNRR “award.”
tion below 150 Hz, and in the left channel at 8-11 kHz.

I find myself in general agreement with Gordon's detailed comments on the cartridge. He made its strengths and weaknesses quite clear, and specified his preference for accuracy in timbre over the life and detail common to moving coils. My preferences are almost the reverse of Gordon's in these areas, but I have to agree that the Ultra 500 is an excellent cartridge, remarkably free of any special emphasis or coloration.

I concur that this Shure has good soundstage detail, realistically mixing image and depth. It never has quite the harmonic detail or transient speed of either the best moving coils or even the newest "audiophile" CD players, but is fully realistic in terms of a mid- to rear-hall sound. As Gordon said in his review, "its extreme high end and its entire upper range (from lower mids on up) are just not quite as good as those of the best moving coils."

I would add only one significant criticism. The bass is powerful, but not tight enough to be realistic on a number of drum and bass viol records. It's a bit warm and loose in comparison not only with the same performance on CD, but open-reel tape as well. The bass defects, however, err on the side of impact rather than dullness.

Further, I don't see the lack of detail and upper octave transient life described by JGH as making the Ultra 500 in any way unmusical. This is unquestionably the best Shure yet; if you've liked past Shures, you'll definitely like this one. It is also the most musically accurate moving magnet cartridge I have ever heard, with none of the rising high end of the Grace, or the imbalances in imaging and upper octave response I find in other moving magnets.

I cannot, however, go so far as to rank the Ultra 500 cartridge over all the competition in its price range, as Gordon did. Even if you exclude all low-output moving coils, the Grado Signature moving iron—and the Adcom, Argent, Audioquest, and Talisman higher-output moving coils—are worthy and possibly superior rivals. The Shure Ultra 500 is an important cartridge, one even the most dedicated moving coil fanatic should hear in order to understand the trade-offs he/she makes in selecting a moving coil. It raises the level of progress Shure made with the V-15 Type V MR to the point where Shure can again be taken seriously by the High End.

Updates and Concluding Technical Comments

In looking over past installments of what I am tempted to call "Cartridges: The Never-ending Story," I am surprised by how little I would now change or update. The cartridges I liked at the start, I still like. The state-of-the-art is improving, but not fast or far enough to make me regard any initial favorite as outdated. In fact, I still go back to the Argent Diamond—a design now three years old—as competitive with the best of the current crop. Accordingly, I will delay any major retrospective or re-ranking; I suggest instead that you consult your back issues of Stereophile.

Tiptoes for Cartridges?

Let me conclude this installment with a technical tip and a technical comment on the response curves we have been publishing. The tip relates to the Mod Squad equivalent of their Tiptoes. This $15 accessory is a small flat plate with raised plastic bumps, and goes between headshell and cartridge. Not intended or suitable for cartridges with plastic threads or unusual bodies, it gives the most dramatic results with tonearms that have relatively poor cartridge mounting plates or detachable headshells, and with cartridges that need a lot of damping
help from the tonearm. It can, however, make a useful difference with many metal bodied cartridges, and with the Koetsus, Kisekis, etc. The result is often a smoother and more detailed upper midrange and lower treble. I suggest you call the Mod Squad (619-436-7666) to see if it will help your cartridge.

The CBX vs the JVC Test Record

Several cartridge manufacturers have suggested that the rising high end in many of my cartridge response curves is the result of using CBS test records, and that their cartridges would be flat if I used the JVC record. Sorry, Charlie, but that explanation simply isn’t star-kissed. The attached chart compares the sweeps from the two test records using the same cartridge in the same arm under carefully controlled conditions. As you can see, the practical differences are zip.

I’m afraid that the rise I measure in many moving coils really is there. It is certainly sonically apparent (in many cases) when I compare a record with a CD made from the same tape. I also find that equalizing a cartridge’s rising high end often makes the record’s timbre sound like that of the CD. While more tolerant of moving-coil rising high end than JGH, I have to say that I normally prefer the resulting timbre when I equalize a slightly bright cartridge, at least with the better cone tweeters, ribbons, and electrostats. I still can’t stand the major information loss inherent in equalizer electronics.

I suggest that manufacturers use slower and more exacting sweeps, and make greater efforts to get flat upper octaves. I realize that a little upper octave emphasis gives “punch” and “life,” but I’m not always sure how much of my “life” I want to have “punched” around.

To Be Continued.
CONRAD JOHNSON PREMIER FIVE
POWER AMPLIFIER

J. Gordon Holt


Many audiophiles who have only recently subscribed to Stereophile will be surprised to find that those clunky, heat-producing, short-lived tubes that reigned up through the mid-'60s are still Executive Monarchs in the mid-'80s. Why, for Heaven's sake? Because, despite everything, people like them.

That 'everything' includes the aforementioned liabilities, very high product cost (because of the massive output transformers and high-voltage B+ storage capacitors required), and gut-busting weight in high-powered versions.

Then there's the terrible emotional price one must pay for owning a tubed component. One is constantly thinking, whenever listening, that all those warmly glowing glass bottles are in phase two of a gradual self-destructive countdown. (Phase one is the break-in period.) Eventually, they wear out and need replacement; will anyone still be selling tubes in the U.S. when that happens, or will you have to special order them from Vladivostok? But that's not the worst of it—there's the suspicion that those aging tubes may start sounding a little 'off' before they become obviously bad. Will you hear it when it starts happening? When will you hear it? Early on, so you can tell your audio friends "It doesn't sound quite as good as it did. I guess the old output bottles will need replacing soon"? Or (more likely) will it creep up on you like senility, so slowly you won't notice it at first, while all your friends whisper among themselves about how awful your system sounds? It could be worse than... body odor!!

Why, then, would anyone like tubes? For the best of all possible reasons, as far as I'm concerned: because they sound good. We haven't discussed the special sound of tubes in Stereophile for well over a year, so a recap won't be out of order.

Ten years ago, even the best tubed amplifier had a uniquely characteristic sound which immediately identified it to experienced listeners. The first impression of that sound was one of warmth and forwardness. Comparing it with the sound of a good solid-state amplifier of that time, we would note that the midbass was fat and rich rather than taut, deep bass was often noticeably weak, the entire middle range and middle highs were somewhat prominent, and extreme highs tended to be soft or dull, depending on how you felt about it—but with a superbly musical delicacy, sweetness, and naturalness.

There was more: for reasons no one has satisfactorily explained to this day, tubes always seem to reproduce magnificent depth perspective in simply miked recordings. Thus, "the tube sound" was an interesting mixture of strengths and weaknesses, and how you felt about tubes depended entirely on how you felt about each of those aspects of reproduced sound quality. Like digital sound, tubed equipment has traditionally been adored or despised, with no neutral camp.

During the past 10 years, however, tubed components and solid-state components have been edging ever closer in sound. Sol-
id state is losing its high-end bite, sizzle, and grit, along with the middle-range suckout; tubed components have been grown more neutral through the middle range (though this has been their strongest suit, anyway) and more extended and detailed at both ends of the spectrum, but without losing any of the marvelous depth presentation or high-end euphony. It is probably safe to say that the perfect amplifier, if there ever is one, will sound almost exactly midway between the best tubed and the best solid-state amplifiers. Or, to put it a little more cogently, that it will embody the strengths of both, with the weaknesses of neither.

The Conrad Johnson Premier Five is a perfect example of how these differences have dwindled in recent years. I have, in fact, encountered—although not all in the same sample—instances where solid-state amplifiers have actually done solid-state-type things less well than the Premier Five. They have exhibited poorer low-bass performance, more forward middle range, and less open-sounding high end than the Fives. But none was a paragon of solid-state performance. It's when the Premier Five is stacked up against state-of-the-art solid state amps that it begins to show its mettle.

We have mentioned many times in these pages that certain loudspeakers seem to do better with tubes than with transistor electronics, or vice versa. That is still true. The most recent example we found was the Infinity RS-1B, which did not begin to sound right until we tried the Premier Fives on the midrange and tweeter sections (the low end of the RS-1Bs sounded good with a variety of amplifiers). And electrostatic speakers, notably the Quad ESL-63, have generally sounded much better with tubes than with transistors, though the reverse is not all that true. Unlike most previous tubed amplifiers, which were just too fat and dull to sound right with most dynamic speakers, the Premier Fives are almost—but not quite—a universal amplifier: an amp for all speakers!

There have been a number of dynamic systems with which we've used the Fives that sounded as good overall with them as with any in-house solid-state amp. The big JBL 250-Tis, for instance, sounded more natural through the whole middle range and superb at the high end. Although the high end of the Fives is slightly softer than a very good solid-state amp, and the high end of the 250-Tis more extended and natural than most any other dynamic tweeter, the combination did superbly. The Fives didn't do as much as some solid-state amps at compensating for the overly loose and ill-defined low end of the JBLs, but it's hardly a problem to be laid at C-J's doorstep. The ESB 7106s, which received a both good and bad report (they do some things superbly—dynamics and tonality!), delivered a smoother-sounding high end and even greater depth and presence (realism) through the midrange, with little loss of bass performance. Some of the inexpensive speakers I've tested recently also did well with the Fives, but detailed recommendation of a $6000 amp for $400 speakers hardly seems justifiable.

However... As nearly perfect as the Five seems to be, there is still some of that tube sound. In terms of deep-bass impact and midbass control, the Five is bettered by several much less costly solid-state amplifiers. Its high end is equalled—almost duplicated, in fact—by only one solid-state amplifier I know of: The Rowland Model Seven, which, at $5500 a mono pair, is in the Five's price class but has a completely different sound. Both have as nice an extreme top as I've heard anywhere.

It's through the middle range, however—where most of the music is—that the Premier Five just shines. On any speaker, that midrange just comes to life! It is forward, detailed and alive without being hard, and has a beautiful sense of depth and spaciousness. Imaging is as stable and specific as I've heard (if the speakers can match that capability). The only solid-state amplifier I've encountered that competes with that middle range is the Electron Kinetics Eagle 2, which has better bass, but not as suavely musical a high end as the Five. (On the other hand, it's

2 We join our colleagues at TAS in refusing to spell 'Conrad Johnson' in all lower case letters, despite the manufacturer's pleas.
a bit less than 1/6 the price.)

One of the best arrangements I came up with while working with the Fives involved using them to drive the upper-range electrostatic panels of the Martin Logan Monoliths, while biamping the low end with the Eagle 2 and a Cottage Industries electronic crossover.\(^3\) Full-range, the Fives did not do as good a job of controlling the Monoliths' low end.

The Premier Five has already earned a reputation for excellence shared only by some of Audio Research's tubed units (which I have not heard). Unlike its predecessor, the gargantuan, 140-pound Premier One (two channels at 200 watts per, on a single chassis), I did not find the Five to be "best suited for electrostatics." It can hold its own with the better solid-state amps in some areas and beat them in others, and with a wide variety of speakers.

I must now admit the undeniable. These mono amplifiers are no bargain in terms of dollars per watt, or of convenience. You can buy more power for much less money in any one of a number of solid-state power amps. Most of those amps can be moved around without using a handcart. (Try dragging a loaded handcart upstairs sometime!) And none of them contain devices which will ultimately wear out—not within a short lifetime, anyway.

There is a genuine risk in handling amplifiers this heavy (not to mention the Premier One!). Unlike heavy loudspeakers, which usually end up sitting right on the floor, amplifiers are often installed off the floor—in a rack, or on shelves. Frequently, this is not done just for appearance's sake; those solid, square corners can give your ankle one hell of a bruise! But stashing the amps out of ankle's way has its risks, too.

Each Premier Five has a large pair of handles at the front, which make it deceptively easy to lift the unit an inch or so off the floor. But hoisting it a foot or so above the floor involves the kind of lifting effort to which few of us flabby souls are accustomed, and the result is very likely to be a pulled back muscle or something worse. A word to the wise: Do NOT try lifting these amps above knee height without some fairly brawny help. Or, better, pay a couple of stevedores to stow the things on their shelves. Better still, let them stay on the floor, underneath something so you can't bark your shin on them.

You really have to admire what a superb amplifier like this can do, sonically, in order to to put up with the hassle of owning one. But, oh, what this does do well! This is the kind of sound that critical listeners have in mind when they use the term "musical" in a positive sense. The Premier Five is, simply, a gorgeous-sounding amp, and if you can't get this kind of sound for less money, at less weight, then so be it.

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\(^3\) Cottage Industries is the name of Threshold's kitchen-table division, where are manufactured very small quantities of low-demand specialty items.

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KYOCERA DA-910 COMPACT DISC PLAYER

J. Gordon Holt


Those of our readers who are still anti-CD are going to be offended by what I am about to say. Partly because they do not want it to be true, but mainly because it is. I shall utter the heresy anyway: the Compact Disc is, right now, doing more for the cause of high-end audio than anything that has ever come along before!

There, I've said it. Now I shall explain it. Prior to CD, the world's major audio equipment manufacturers—and face it, that means the big Japanese manufacturers—generally scorned high end audio as impractical, fanatical tweakery. They loaded their products with features of all kinds—
flashing colored lights, sophisticated
switching, and fancy signal processing
 circuitry—everything but high-calibre
sound quality. If you wanted a "purist"
 design, you did not buy Japanese. (It must be
 said that Sony, Yamaha, and Kenwood did
try to enter the high-end field with some
superb, albeit overpriced, products, but
were scuttled because of their mainstream
image among consumers. Only one Japa-
nese firm ever earned a positive image with
perfectionists, but Nakamichi is hardly a
major Japanese manufacturer.) The CD is
changing all that.

A major contributing factor was the unre-
strained ebullience of the hype which ac-
companied CD's release: "perfect sound
forever." The mainstream audio press—
Stereo Review, High Fidelity and Audio—
even reported initially that the first players
were perfect.1 But the so-called under-
ground audio magazines, and a lot of per-
fec tionist recording companies, soon made
themselves heard as having strong misgiv-
ings about CD, and it is a tribute to our pres-
ent influence in the field that the big maga-
zines listened and, before too long, actu-
ally reported that maybe, just maybe, they too
heard differences between CD players.

As soon as it was suggested that all CD
players might not sound alike, the race was
on to design a player that sounded "better."2
Now these designers, mind you, were
working pretty much in the dark, and in
directions counter to much of the conve-
tional wisdom in audio engineering, which
declares that most of those measurable
differences are not audible. Yet the design
people soon found that when one of those
measurements was improved, so was the
sound of the player! Suddenly, conven-
tional wisdom went by the board. Those major
manufacturers started studying perfec-
tionist audio practices and taking them seri-
ously, for exactly the same reasons high-
end manufacturers have been using them all
these years: they improve the sound. Don't
ask why; they just do. And so, we have the
kyocera DA-910.

The DA-910 is the first CD player we have
tested whose designers evidently took the
view "So what if we don't know why it
works, if it works, do it!" Instead of two-
times oversampling of the playback pulses,
this one samples four times, at 176.4 Hz.3
Instead of one, or even two, power supplies
for circuit isolation, it has three. It has sepa-
rate D/A converters, one for each channel.
It (of course) uses digital output filtering
with a gentle, final-stage analog filter (Look,
Ma, no ringing!). It has a completely DC-
coupled analog section, neatly sidestepping
the issue of capacitor audibility (of course,
no one can hear capacitors!) by getting rid
of them entirely. And, perhaps most contro-
versially of all, it uses extensive shock iso-
lation for its disc drive and optical system,
to minimize the "possibility" that structure-
borne vibration of those elements increases
the incidence of uncorrectable disc-read er-
ors. In short, the DA-910 is designed in
much the same fashion as a Mark Levinson,
Nelson Pass, or Lew Johnson might design
a product.

Included in the overkill—perhaps—bur-
maybe—category is a heavy ceramic base
(for added mass) and screw-adjustable level-
ing feet to allow "firm placement of the
player onto fairly uneven surfaces, ensuring
a stable, high-quality compact disc sound
reproduction," to quote from the unusu-
ally well written and comprehensive instruc-
tion manual.

This isn't the way the major Japanese
firms do things. It is the way minor Ameri-
can or British high-enders go about it, mak-
ing everything as perfect as possible,
whether or not they are convinced that ev-
ery refinement is going to improve the
sound. In this way, CD has been the best

---LA

---LA

1 There are undoubtedly those who will claim that yours
truly said the same thing. A search of our back issues will
prove this.

2 Remember "planned obsolescence?" It doesn't take too
much cynicism to conclude that the race was already on
when the conglomerates marketed the first players, and
that they already knew—while claiming "perfect sound
forever"—that there would be major improvements.

How better to fuel future sales? —LA

Stereophile
thing to come along. It has shown the ma-
jor manufacturers, at last, that perfectionist
attention to design detail really does pay off
in terms of sound quality. Home audio will
never be the same again!

The DA-910 offers the full complement
of features available from CD: programm-
bility (up to 24 selections), three fast-
forward and reverse speeds with two offer-
ing audible, reduced-level cueing as you
shuttle, wireless remote control, automatic
seek by track or index number, and so on.
The only thing I found lacking was a nu-
meric keypad on the remote unit. You can't
call anything out by number from the re-
 mote control; it has to be done at the player.
The loading drawer opens and closes
"sluggishly" or "deliberately," depending
on how you feel about it. In fact, the drawer
takes so long to respond to an Open com-
mand that the onboard computer seems to
deliberate for a moment before deciding to
obey. That aside, the unit is no slouch when
it comes to seek times. It took 6 seconds to
advance from the beginning of track 1 to the
start of track 99, on a disc with 60 minutes
and 47 seconds of recorded time. But the
fast shuttle modes take a bit of getting used
to.

Pressing either Fast button causes the
unit to skip ahead or back in one-second
increments, with a speeded-up version of
the sound audible at the correct pitch, but
at increased tempo and reduced level. After
one second, the scanning speed increases
to approximate 20-second increments. Af-
after 5 seconds, the scan speed goes to one-
minute intervals and the sound drops out.
From then on, you just kinda guess where
you are on the basis of the front-panel
elapsed-time readout. You can stay indefin-
 itely in the first or second-speed mode by
simply holding in the fast button and re-
leasing it momentarily every few seconds to
keep it from advancing to the next scan
speed.

I encountered one pattern of mysterious
behavior partway through my tests. One
evening, every time I got up from the sofa
to put a just-removed disc back on the
shelf, the still-open loading drawer would
close, all by itself. Ah, that's clever, I thought;
there's a timer on it, even though the in-
structions made no mention of it. An over-
sight, no doubt. Nope. It seems the remote
control was sitting on the couch next to me,
with an analog record album covering most
of it. Every time I sat down, I sat on one
e edge of the album, lifting it off the remote
unit. When I stood up, the album stood
down, depressing the remote's Play button.
Oh well, a timed withdrawal might not have
been such a good idea anyway . . .

Okay, now to the nitty gritty. How good
is this perfectionist-designed CD player?
Well, there's bad news here, and then there's
more bad news. The first is that the DA-910
costs so much you probably won't be able
to afford it. That was not a misprint at
the head of this report. The price is $1600,
making the DA-910 the most expensive CD
player money can buy at the time of this
writing.4 The other bad news is that this is
the best damned CD player I have ever
heard. I hate to say it, but it's worth the out-
ragious price tag.

It does everything better than any player
I have used until now. It images better, gives
a deeper, broader soundstage, and has tight-
er, deeper low end (although only by a very
small margin over that of the Sony
CDP-520ES reviewed in Volume 8, Number
2). It has a noticeably sweeter, easier, and
more open high end than either the Sony or
the other prior contender for best high end,
the Nakamichi OMS-5. (By comparison, the
Sony sounds a bit brittle, the Nakamichi a
little dry.)

In short, the DA-910 is now the CD player
to beat. It raises CD sound quality to the
point where even CD's most resolute oppo-
nents are going to have to take a long, hard
listen and reconsider their feelings about
this fledgling medium. This is the first time
I have heard any player whose high-end
quality is comparable to the best I have
ever heard from an analog disc. (My basis
for comparison is analog reproduction

4 Not a chance. The Cambridge CD player weighs in at
$2,300, and Meitner has a no-doubt-expensive player in
the wings, with Spectral and Krell breathing hard on its
heels.

—LA

84 Stereophile
whose spectral balance is as nearly as possibly identical to that of a disc's CD equivalent. I do not feel that any other comparison is valid.)

This is an incredible player. I can't afford it either, but if Kyocera wants it back, they may have to sue me!

**JGH Addends:**

Since this report was written, I have auditioned two other contenders for Best CD Player.

The Meridian MCD Pro and the NEC CD-705 both provide slightly better (wider, deeper) soundstage presentation than does the Kyocera. Both are a little more laid-back (less forward) than the Kyocera, the difference being great enough that personal preference is likely to be a strong factor in determining which to buy. (If you feel that CDs generally sound steely, you will prefer the NEC or the Meridian; if you prefer a more forward sound, as I frequently do, the Kyocera will appeal.) The Meridian has, by a small margin, the sweetest-sounding extreme high end of the three, but it also has the least neutral low end. Lows are slightly accentuated, slightly loose, and not as deep or solid as those from the NEC or Kyocera. The NEC is a veritable steal at less than half the price of the other two.

The Meridian MCD Pro was reviewed by AHC in Vol. 8, No. 6; DO's report on the NEC is in the works. I would say that personal audition of all three is advisable prior to purchase of any one, and this is one case where the differences between the players is not subtle.

—JGH

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**THE ACCUPHASE**

Don Scott


Dimensions: 171/2" W by 13" D by 43/8" H. Weight: 12.8 lbs. Price: $700. MANUFACTURER: Accuphase, Japan. DISTRIBUTOR: Madrigal, Ltd., P.O. Box 781, Middletown, CT 06457.

The Accuphase T-107 may not be the world's best tuner, but it ranks among the top four of 35 candidates tested. Although there are differences among these top four, they all stand head and shoulders above the
rest. To qualify in this elite category, a tuner has to do most things very well, and nothing poorly. If I stick my neck out to say a product is good, it should work superbly for the largest number of potential buyers. Given these stringent requirements, the Accuphase qualifies.

With its 43/8" vertical height, the T-107 is not a small tuner, but the space is well utilized by large, easy-to-use controls, frequency display meters, and signal level meters. There is no mysterious, hard-to-operate gadgetry. In operation, the T-107 is the digital equivalent of an analog tuner.

Of course—and to my neverending dismay—the muting and mono-stereo switching are combined as one function. (Scott, Magnum, and H-K are the only tuner manufacturers to sensibly separate these functions.) The only other operating annoyance is found in backwards Seek mode, where the tuner does not go directly from 88.1 to 107.9 MHz (it scans all the way back across the dial). The short way around is much easier when looking for stations, rather than having to hold the tuning bar forever to get to the other end of the dial. But 12 presets are provided, which diminish this problem's significance.

The Accuphase is very professional in appearance, and available with silver or black faceplate. Interior construction is first-class; in fact, it's more spacious than actually needed. The extra interior air space helps disperse heat from the voltage regulators, which seem to run very hot.

Circuit Features

The tuner uses an individual noise filter in each channel to lessen noise in stereo, rather than the conventional high-blend. It does its job well, softening weak station hiss without undue loss of separation of high frequencies. Three ceramic filters are used in the wide-band mode, five in the narrow; ceramic filters have good flat-top response and little phase delay. The result is a tuner that, on many stations, sounds surprisingly better in narrow mode than in wide. Overall, you're likely to get good sound on almost any desired station, even ones whose signal strength (at your anten-

na) is quite low; you get more music and less noise or grumble.

Specifications

A glance at the T-107's measured specs reveals its excellence. The tuner actually bettered its already-impressive specs by 10%, with two exceptions. Capture ratio is spec'd at 1.5 dB, but came through with an impressive 1 dB or better. One station, unlistenable on my reference Magnum T-101 (see Vol. 8, No. 4) because of an interfering station on the same frequency, sounded acceptable on the T-107. In this respect, only the Technics ST-G7 does as well.

In selectivity, the T-107 ranges from above average to "you don't get any better," depending on the frequency selected and whether the interfering station is on the high or low side of the desired station. Adjacent channel selectivity is claimed as 20 dB. If the undesired station is lower in frequency than the desired station, selectivity measured 18 dB at low and middle frequencies on the dial, and a worse 15 dB at the high end of the dial. If the undesired station was on the high side of the desired station, the manufacturer's spec of 20 dB was met across the dial. Between 91 and 94 MHz, adjacent channel selectivity reached an outstanding 40 dB under these conditions.

These variations in selectivity may seem strange. The fact is that nearly all tuners do not exhibit uniform selectivity across the dial. However, the T-107 has a wider quality range of selectivity than normal. There was no indication that the tuner was even slightly out of alignment; otherwise, other measured parameters would have suffered.

Although many tuners do well in alternate channel selectivity, which is much easier to achieve (and, interestingly, the only figure given in "glossy magazine" reviews), the Accuphase achieved 100 dB—the best we've ever seen. Interference from a channel 200 kHz away from the one you want is almost inconceivable.

SCA rejection was claimed and measured as an excellent 80 dB; no trace of birdies or squeaks were heard on stations with SCAs. The T-107 equals the Luxman TX-101 and the Carver TX-11 in this increasingly impor-
Sound Quality

I compared 10 tuners, switching in three tuners at a time on the same station. The McIntosh MR-80 was included as a reference in all groupings. In this trial, the T-107 stood out as very exact in midrange and treble ranges, slightly blah and lean-sounding in bass reproduction, and lacking fullness on heavily processed stations. On the other hand, when listening to several classical stations with better signals the low end sounded fine. Possible explanation: Most popular music radio stations use very fast limiters to control high frequency response, which more easily overmodulates the transmitter due to high frequency pre-emphasis. The fast attack time of the limiters, geared to the short time constants of high frequencies, catches bass notes at a half-cycle or less, and distorts them. The T-107 doesn't reproduce this distorted bass as well as other tuners (it's the choice for listening to disco). Fixed-level, rather than the adjustable outputs, produced the best bass response and sonics. More solid bass is available from the Quad FM-4, Denon TU-767, MR 78 and 80, Magnum T-101, and Creek CAS-3040.

Stereo separation is very good, but not up to the superb performance of the NEC T-6E, Denon TU-767, or McIntosh MR-80. Imaging is excellent, indicating low phase error throughout the circuitry. 50-dB-quieted stereo can be received with a 30-µV signal, and fairly quiet stereo is still present with as little as 8-10 µV signals. Sensitivity is excellent. At about 5-6 µV, the tuner switches back and forth between mono and stereo with a sharp, audible pulse caused by a mechanical relay. A "soft" transistor switch would have been a better engineering choice, in my opinion. This problem occurs, however, only at signal levels where the tuner is not useful in stereo.

In terms of absolute audio quality, the T-107 will do as well as any tuner I know of on stations suitting its inherent audio qualities. On other stations, any of the tuners receiving favorable reviews in Stereophile might be superior or at least as good. A current favorite of mine at a low price is the Dual CT 1260-1 ($250).

Conclusion

In some situations, the $700 Accuphase T-107 works as well as the much more expensive McIntosh tuners; in others, it works no better than the Class B or even C tuners (see "Recommended Components" in Vol. 8, No. 6). Do not neglect consideration of the Magnum T-101 (Vol. 8, No. 4) or the Onkyo T-9090 (Vol. 7, No. 7) if you're looking for a supertuner. I'd have to give the T-107 very high marks in specifications, with only a slight downgrading for not perfectly neutral audio quality. It ranks right up there with the other reference products, but I feel it's a "try it before you buy it" item; if it fits your particular audio situation, the T-107 can work very well.

MARANTZ ST-74

Don Scott


Stereophile 87
Two of my reference amplifiers are 24-year-old Marantz Model 7s. They have given me long-term respect for the company, and kept me from joining the “component of the month” club. Marantz has been asleep over the past years as a major high-end contender. Except for the renowned Model 9 amplifiers, some very good tuners (the 10B and a few others), and perhaps the finest receiver ever built (the 2285), the company hasn’t done much—especially recently.

While making the rounds at summer CES, however, I came across one of the best-styled tuners I have ever seen (though I think the Accuphase T-106 is even better). Never one to overlook appearance, I requested one for review. The ST-74 is designed to be a cosmetic match with the other components of Marantz’s “black 74” series, but also looks good with other manufacturers’ offerings. The front panel is a two-tier design, the top portion protruding slightly. This permits access to all controls with no fumbling. The greenish-blue frequency display is on the lower level, shadowed somewhat by the overhanging “second story;” but this presents no visual problem as long as the tuner is placed near eye-level. If you put the tuner on a lower shelf, you might have to stand on your head to read the frequency display. All other functions are clearly visible, indicated by green or red LEDs. A useful, five-step tuning-level indicator is included.

Features
Besides having dual bandwidths (wide and narrow modes), the ST-74 offers an outstanding memory system. IF bandwidth and exact tuning (even offset -40 to +50 kHz from the normal 100 kHz steps) can be stored in memory. Mono/stereo switching, however, can not be recalled for each entry. Eight AM and eight FM presets are provided, and an additional six stations can be put in a “record memory” for use with an external timer. Each time the tuner is powered up, it selects the next pre-set station. Thus, several radio programs, from six different stations (or even the same station if you set the presets to the same station), could be recorded while one is away. I’d guess there are at least two people in the world who consider this a worthwhile feature. Since the ST-74 only costs $259 retail, and is probably discounted heavily, you’re obviously not paying too much for it.

The unit also has provisions for cable connections to automatically switch on the matching PM-74 amplifier when the tuner is powered up. The other way around seems more practical to me. (Sam Tellig found the PM-74 to have a dynamite power amplifier section.)

Performance and Specifications
What I expected from the dual-bandwidth mode was a choice of wide or narrow; what I got was not-too-wide or very wide. The so-called “narrow” mode gives you annoying distortion not present in the Denon TU-767, Magnum T-101, or Onkyo T-9090 narrow modes. In the very wide mode, distortion drops, as expected, to a reasonable level: 0.5% vs. an astonishingly high 3.0% in not-too-wide. You can therefore expect fairly clean sound on strong or medium-strength stations. An unusually high 85 dB of image rejection, plus the fine tuning feature, should yield good FM cable rejection.

I feel this is an unnecessary jibe; as pointed out, it can’t be costing much, and some people may find it useful.

—JGH
(you’ll recall that FM cable stations “shift” their broadcast frequencies so that the best reception on digital tuners is only possible with such fine-tuning setups as the Marantz’s), but I have no cable FM to verify this. On the negative side, SCA rejection is a rather poor 38 dB, and some annoying birdies could be heard on stations using SCAs.

Usable sensitivity is 1.9 uV in mono and 10 uV in stereo, with no noise reduction provided. 35-37 uV is needed for 50-dB quieting in stereo. Separation is -48 dB, which is okay, but imaging is not great. Frequency response is slightly down at both ends of the spectrum, but the midrange is clear and detailed, especially in wide mode. Vocals sounded only good (not excellent) and quite detailed. Overall, the sound from the ST-74 is mediocre—neither good nor poor.

**AM Section**

The AM section has an effective RF amplifier that increases the usefulness of the tuner. At night, I was able to pick up some station every 10 kHz on the dial, distortion was quite low, and no birdies or whistles were present. The AGC works well, holding stations without fading or changing volume. Audio bandwidth, though restricted and with drooping response above 3 kHz, is not excessively dull or muddy. All in all, the AM takes about third prize out of 40 tuners tested. Better audio quality, and slightly greater sensitivity, is available in AM from two tuners whose reviews were never completed: the Carver TX-2 and SAE T2-6. I didn’t review the Carver because of its poor FM (not half as good as the excellent TX-11); the SAE is an excellent tuner, but was dropped from production because a good analog tuner is too expensive to manufacture. (Also delivering respectable AM are the Denon TU-76, SCA-T-6E, and the Scott 559-T.)

**Conclusion**

The ST-74 has butter-and-marmalade appearance and AM performance, but dry-toast FM. Considering that Marantz items are usually discounted, the ST-74, despite its flaws, will fill the bill for the person who wants a basic tuner for casual FM listening, and something to deliver sports and news on AM. Marantz has just announced a better, $600-class, receiver that may come closer to the fabled 10B. Time will tell if this company can live up to its past reputation.

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**PIONEER TX-V1160 AND MONO AM STEREO TV/FM DIGITAL TUNER**

Don Scott


Many of the tuners reviewed previously (Vol. 7, No. 7; Vol. 8, No. 1) were in the $350 price range and included FM only. In their TX-V1160, Pioneer has included a first-rate FM tuner, a fair AM tuner, and a complete TV audio receiver, all contained in one black, slimline enclosure for a meager list price of $329. Much to my delight, the unit is very good in all respects: it’s an appropriate means of getting better TV sound and picture quality, or good FM reception, without replacing your present TV.

The TX-V1160 includes a total of 36 presets (12 each for FM, AM, and VHF/UHF
channels), separate audio outputs for AM/FM and TV audio (very handy for simulcast listening), and separate UHF, VHF, AM, and FM antenna inputs. Video outputs include standard NTSC and a separately modulated output on channels 3 or 4. Stereo TV and FM audio are available separately, via standard RCA jacks.

A remote control model is available for an additional $49, and the unit can be purchased as part of a complete entertainment center for $1695 upward, depending on options.

**FM Tuner Section**

Were I to rate the TX-V1160 as a $329 tuner without the TV or AM, it would receive high marks. The specifications leave little to find fault with, though none are actually knockouts. Usable sensitivity was slightly better than claimed: 1.8 uV/10.3 dBf vs. 2 uV/11.2 dBf. The 50-dB stereo quieting is specified at 44.4 uV/38.2 dBf (very poor), but turned out to be a rather good 30 uV/35 dBf. The tuner maintains fairly quiet stereo with signals as low as 10 uV, making it a good fringe area performer.

No noise reduction circuit is provided, no muting (except between stations), and no mono-stereo switch. The lack of so many features is annoying, but fortunately the tuner switches between mono and stereo at 7-10 uV, the exact point where reception becomes excessively noisy. Also, my preamp has a mono-stereo switch; the combined channels blend exceedingly well, indicating low interchannel phase error. If your preamplifier lacks a mono switch you will have problems with borderline-noisy signals.

Because of the low phase error between channels, stereo imaging is very good, with separation of 52 dB at 1 kHz. Frequency response is very wide and flat. The only real problem with sound quality is noticeable distortion, especially compared with the best-sounding tuners tested: the Denon TU-767, NEC T-6E, Amber Model 7, Quad FM-4, Magnum, and Creek CAS-3040. Alternate channel selectivity is fine, though distortion is increased by the somewhat narrow bandwidth that allows this good selectivity. Adjacent channel selectivity is 10-12 dB, making the tuner useful only for the reception of weak- and moderate-strength stations one channel apart. Strong stations will splatter into a moderate or weak adjacent station. Nevertheless, using a good antenna and rotor I was able to receive clearly 70 of the 100+ stations available from my references: the Sansui TU-9600 and Magnum FT 101.

**AM Tuner Section**

The AM section is useful only for strong local stations. There is no 10 kHz whistle filter, so night reception is filled with birdies and whistles. However, the Pioneer does sound very undistorted and does not lack for high frequency response (given that it's AM) on the few stations received.
TV Tuner Section

The TV tuner's picture quality is entirely dependent on the input signal and the video monitoring equipment used; the video input will produce the highest resolution possible! The audio quality, though still superior to that of any self-contained set, does not have the startling clarity and extended low-frequency response of the Sharp 20J580 TV and AN1000U outboard stereo adapter. The audio quality is equal to that available from the line-level outputs of the Toshiba CZ2094 digital TV. Realize, however, that I am nitpicking; 95% percent of my objections can be overcome with the use of a very good graphic equalizer. As much as you might quail at the thought of tone controls, good TV audio is a whole new ball game: no two programs have the same tonal balance, and some are loaded with hum or hiss that needs to be filtered out.

Pioneer deserves an "excellence" award for the AFC (Automatic Frequency Control) system in this tuner. Whether used with cable or a direct air-transmitted signal, there was no mistuning smear or color loss; a manual fine-tuner would receive no better. Accurate tuning is needed as much for good TV stereo as for FM. The TX-V1160 was able to extract good stereo from my local cable hookup. This is very unusual—the stereo subcarrier is always attenuated due to cable bandwidth restrictions, and is a problem with most cable companies. Accurate tuning obtains the most from the least. In all cases, the separation was 45 dB and the stereo effect was quite pleasing.

Objections

The SAP (Separate Audio Programming) audio was clean and free of any annoying beats or birdies. The problem lies in the selection of audio available: mono, stereo, SAP, or SAP and mono mixed. You can't get SAP separately while the TX-V1160 is receiving either mono or stereo. This contradicts the intent: "Separate Audio Program-

1 All video evaluation was done using a high resolution Setchell Carlson 104915 monitor and a conventional Samsung C3103A set

ming" should remain separate at all times for listening or taping, without disturbance of the main program. Though Pioneer's choice here is the same as most manufacturers, Sharp makes SAP available separately; I see no reason why Pioneer and the others should not.

My other gripe comes from the non-dedefeatable weak-signal muting on the TV section. Extremely weak signals cause a mute/unmute condition, which is annoying to say the least. As soon as I get an answer from Pioneer on how to defeat the muting, I will pass it along.

Conclusion

For FM, the Pioneer TX-V1160 is about 90 percent as good as can be found. Since FM seems to worsen every day, it will be an unusual station that demonstrates the extra 10 percent available.² The V1160 performs adequately in all respects, provided you don't buy one that merely meets the 50-dB quieting spec, which is quite poor. As a TV audio receiver, the Pioneer performs similarly: of the Hartford area's five stereo TV stations, only one broadcasts audio good enough to justify a more perfect tuner. And the picture received by my review sample is of studio monitor quality. As mentioned above, the AM section is useful only for strong stations, and night-time AM listening is not recommended. My rating of this product as an all-around receiver is very high, particularly at the price; I think you'll be delighted with how much your $329 buys. There are products that do better at any one of the V1160's functions, but they generally cost quite a bit more and certainly don't include everything available here.

² I have to disagree with this conclusion, though not with the finding that FM is getting worse. One of the convincing lessons from the Stereophile tuner reviews is that tuners vary dramatically in their sound quality, and that distortion from the tuner is added to whatever the signal quality is. Thus, distorted signals become even more distorted through a tuner of lesser sound quality; only really horrible signals will mask the difference in sound quality between tuners. And we're not talking a difference of 0.001 and 0.01 here; 2% distortion is significant, and clearly worse than 0.5%, which is typical of the best tuners.

—LA
CREEK CAS-3040 FM TUNER

Don Scott


In response to a request for a Creek 3040 FM tuner, to be included in my ongoing examination of several British tuners (see Vol. 8, No. 4 for the Quad FM-4 review), I received a very untweaked unit in need of general alignment. Rather than return it, I decided to very carefully align the tuner myself, to see what it would do, and then complain loudly to the manufacturer. My screams were heard across the Atlantic: I received phone calls from design engineer Tom Woodford and a concerned Mike Creek. Unlike many manufacturers, who won't listen to legitimate criticism, the fellows from Creek admitted their alignment procedure was incorrect. Proper steps have been taken to assure customers of receiving a consistent, correctly aligned product, as confirmed by the importer.

The 3040 is an analog tuner with a green digital-frequency display. It features switchable AFC, mute, mono-stereo, and high-blend controls. Both DIN and RCA outputs are included. The tuner was designed to reject the 56 kHz subcarrier of the German VWH/ARI traffic information system used in many European countries. The stereo decoder's oscillator operates at 76 kHz to phase-lock to the 19 kHz pilot tone. This feature makes the 3040 immune to birdie-like interference, or the gritty high-frequency distortion caused by 67- and 51-kHz subcarriers in the U.S. The usual practice is to decode using multiples of 19 kHz or divisors of 38 kHz. (I've not yet seen the Creek stereo decoder circuit used by anyone else, though perhaps some European tuners use it for rejection of the traffic information system.) In any case, the end result is very smooth, clean high-frequency response on all stations, with or without SCAs. Good SCA rejection has become increasingly important: 30% of the stations in medium-to-large metro areas have SCAs for additional revenue.

The tuner also has a nicely-functioning automatic high-blend; it maintains optimum S/N with decreasing signal strength. Separation is 46 dB at 100 uV input; 40 dB at 20 uV; and 0 dB at 5 uV. 46 dB separation is the maximum available from the Creek, even with the blend switched out. This is enough for fairly good stereo, but not up to the 50+ dB from the NEC, Amber, Scott 559-T, and Quad. However, ultimate separation isn't everything, and offsetting this slight defi-
ciency is the Creek's extended, smooth response on both ends of the audio spectrum. Midrange response is accurate.

The Creek, therefore, can be recommended for two types of receiving situations: medium-to-strong stations of very good or flawless quality, which are received with a soft sweetness usually associated only with the best tube tuners (e.g., the Mac MR-65B); and stations with piggy-backed SCAs. As indicated in the specs, the 3040 does poorly in adjacent channel reception. 6 dB of selectivity yields not even listenable sound if the adjacent channel is moderate in strength. Also, the tuner can be overloaded by very strong signals. Fringe-area reception in mono is only fair, on a par with the bargain-basement Onkyo T-22 ($129 list).

**Conclusion**

Obviously, this tuner isn't for everyone. But, under the circumstances I've described, a properly aligned 3040 can sound almost as good as any tuner going. Mike Creek tells me a new Philips chip is being used in late production units, and that this will give the tuner better sensitivity, selectivity, overload rejection, and frequency stability. I hope to receive one of these later units for a "Followup." While I am quite at ease going out on a limb to recommend the Creek for specific receiving situations, until I receive the latest version this review is guaranteed only by Floyd's of London.
Where to Buy Stereophile

The following loyal & beloved high fidelity dealers sell Stereophile over their counters, thereby qualifying for this list of saints! They also suffer slings and arrows in the form of unfavorable reviews of products they sell—but somehow survive nevertheless.

Dealers interested in selling Stereophile should telephone Gail Anderson at 505 982-2366.

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**MANUFACTURERS' COMMENTS**

Kyocera

Editor:

Thank you for your favorable comment regarding Kyocera's no-compromise compact disc player, DA-910. It is reassuring that in this era of price engineering someone is still paying attention to what is best, price-no-object.

Thank you Stereophile.

Lowell Yamaura
Warren, NJ

Athena Audio

Editor:

In regards to your portion of the editorial "The Case Against Show Reports" ("As We See It," Stereophile, Vol. 8, No. 5), I would like to say right on!

I feel that your attitude toward audio reporting and the realities of the trade shows as expressed in the editorial is mature and responsible. It is in marked contrast to that displayed by many of the audio reporters and the editors from the "underground" magazines.

The pioneers on the frontiers of audio reproduction such as Bruce Brisson and our electronic designer, Michael Yee, have invested long hours of rigorous work investigating, analyzing, calculating, and quantifying the physical phenomena that underlie the finer points of music reproduction. At Athena we have spent long hours and hard-earned money translating the theories and designs of these men into products for the marketplace.

It is somewhat annoying to have judgment passed (for better or worse) on the fruits of many tens of thousands of man-hours of work based upon three minutes of conversation and three minutes of listening in a hotel room.

We at Athena appreciate reviewers with Anthony Cordesman's sense of responsibility. We hope to see him at future shows to discuss audio, knowing that if he sees or hears something interesting, judgment will be passed in a responsible manner, after careful study and evaluation.

Joseph J. Facer
San Francisco, CA

New York Audio Labs, Inc.

Editor:

I wanted to bring the following to your attention. In the original review submitted to me for comment, Mr. Cordesman made some comments to the effect that Prokofiev should have been eliminated by Stalin. I rebutted this with item (3) of my response ("Manufacturers' Comments," Vol. 8, No. 5). My response was delicately humorous, though I thought the sentiment about Prokofiev was tasteless. You apparently agreed because you deleted that portion of the review. My problem is that you never deleted section (3) of my comments. Your readers have absolutely no idea what I am talking about—it appears to be some mad ranting.

The other point is that the price of the Moscode 600 is, and has always been, $1599, rather than the $1295 reported.

Harvey
Elmsford, NY

AHC's original line read "You are warned not to jump out of the window when you play Prokofiev, on the totally incredible grounds that you will like it. (If Stalin had to murder several million of his most talented
countrymen, why couldn't he have iced Prokofiev?) This was apparently edited out in the interests of detente, or to avoid offending the several million of our readers who love Prokofiev.

Teledyne Acoustic Research
Editor:
I would like to thank Anthony H. Cordesman for his thoughtful and comprehensive review of our MGC-1 loudspeakers. Acoustic Research indeed has a serious commitment to sound quality and to improving our products.

Any reader interested in obtaining a copy of the AES preprint mentioned by Mr. Cordesman should drop me a line.

Kenneth L. Kantor
Acoustic Research

330 Turnpike St.
Canton, MA 02021

The Mod Squad
Editor:
First of all, let me thank you and Tony Cordesman for helping sort out the complicated questions concerning cartridge choice, as well as thoughtfully evaluating the cartridges themselves.

I also appreciate your comments on our Tiptoes Cartridge Coupler. Mr. Cordesman based his comments on a prototype given him at the June CES, and his comments are appropriate for that prototype. Since June we have made a number of changes in the product.

The coupler is now a 2-part system that works with all types of cartridges, offering substantial improvement in all applications. It is still true, as Mr. Cordesman points out, that using the Tiptoes Cartridge Coupler gives the best result with cartridges and headshells that have large mounting surfaces. We have heard from many happy owners who love the improvements it effects. One said it was “like putting the cherry on top of the sundae.”

We, of course, agree!

Steven McCormack
Leucadia, CA
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STEREOPHILE MAGAZINE P.O. BOX 364 MOUNT MORRIS, IL 61054
Meridian MCD Pro CD Player

Received just before press time, but too late for alteration to our last issue, were AHC's significant reservations about bass quality on the MCD Pro: "After prolonged listening, I've concluded that there is simply too much bass on the MCD Pro. This is a problem that's not immediately evident, and will affect you differently depending on your system. For systems with true low bass response, such as the RS-1Bs or Quads with Janis subwoofers, there will be a definite problem. Not only that, the quality of that bass is somewhat loose, though not nearly as uncontrolled as the bass on the original Meridian MCD. In spite of its other virtues, I must modify my almost-wholehearted endorsement of the MCD Pro. You may wish to try the PS Audio CD player or the Mod Squad modification of the MCD Pro, neither of which I've heard, but both of which are attempts at providing true low bass, according to the manufacturers.'

—AHC

The Adcom GFA-55 Power Amplifier vs. The Electron Kinetics Eagle 2: A Failed Faceoff

After reading AHC's very positive review of the Adcom amplifier (Vol. 8, No. 5), I just had to audition it. Not just any old GFA-55, but the GFA-55 reviewed by AHC.

I was initially impressed, but not terribly. A half hour's listening, however, revealed a significantly better sound (by now I should know better than to listen to any amp during the first half hour), so I left it to cook overnight. (The Eagle 2 cooked too, just to make things fair; since then, I've found this to be crucial for the Eagle.)

After cooking, the GFA-55 sounded like the first real competition for the Eagle 2 that I'd heard. Two hours listening on several speakers revealed the following differences: the Adcom was somewhat sweeter and more open at the extreme high end, comparable in detail throughout the middle range, and, for all intents and purposes, identical to the Eagle in low-end heft and tautness (control). This last finding was surprising: in low-end control, the Eagle 2 had surpassed every amplifier that's passed through here for a year, including its larger and much more expensive brother, the Eagle 7A.

The Adcom had a shade less mid- and upper-mid forwardness than the Eagle, putting it about halfway in this respect between the Eagle and the Rowland Research 7, BEL 202, and B&K ST-140, all of which sound a little laid back. Since the Eagle is a bit forward-sounding (some think even more than a bit), the Adcom has possibly the most neutral middle range of any amp—at any price. But apparent listening distance (forwardness) depends more on the speakers than the amplifier, and the setup of your listening room is also crucial; the amplifier should be chosen to complement your situation, and your tastes, rather than on an absolute basis. For a reviewer, though, neutrality is extremely important.

The Adcom's soundstaging is a little deeper and wider than that of the Eagle 2, but front-to-back perspectives are rendered a bit better by the Eagle.

There may be further subtleties of difference between the two amps, but my comparison was foreshortened when one channel of the Adcom died. Further observations await a replacement GFA-555, and will be reported in a future "Followup." It's already clear, however, that the two amplifiers are directly comparable, though somewhat different, in sound quality. Which to buy? You could choose based on the differences in sound quality, which are relatively minor, but could be important in a particular setup. Or you could choose on the basis of price: the Eagle is $995, the Adcom only $595. The Adcom is also much more widely available, though I've heard that AHC's review has put it in short supply—that's why we don't have a replacement yet! —JGH

The Ortofon MC-2000 Cartridge

Still the best-sounding—and most
accurate—cartridge I've found, the Ortofon MC-2000 has demonstrated durability that belies a reputation Ortofon cartridges had earned some years ago for going sour after a few months. A year of constant use has my sample sounding as good as the day it was installed. And my concern about the very compliant cantilever folding up (you'll recall from my original review in Vol. 8 No. 2 that the distance from the cartridge body to the record surface dropped in half after six hours of use) was apparently unjustified. No further collapse has occurred; aside from gunk buildup on the stylus, the MC-2000 has performed flawlessly.

Paired with its own step-up transformer, this is the cartridge to use if you want the spectral balance of your phono front end to sound as much as possible like your CDs. The only problem is hum (because of the MC-2000's exceedingly low output); the lowest I've gotten is barely audible, and you may be unable to do that well, depending on your other components. At $2000 for the cartridge and transformer, this is horribly expensive—but worth it. —JGH

Infinity RS-1B

In my review of the RS-1B (Vol. 8, No. 4), I commented on that speaker's tendency to exaggerate grunge in the program material by adding what sounded like extremely narrow response spikes in the mid to upper treble. Since then, Infinity provided us with a modification kit for the passive crossover network feeding the mid-tweeter. The modification involves changing a potentiometer, and adding a resistor, capacitor, and choke to the crossover. It's more difficult than the instructions imply because the leads on the cap and coil were too short to enable the parts to go where they have to go! To simplify things, add 2 inches of insulated wire to both ends of each part before you try to install them.

The modification eliminated virtually all the roughness noted in the original review, and didn't seem to do anything detrimental. The nature of the modification confirmed that my earlier guess had been correct: the crossover from mid-tweeter to high tweeter has been moved from 8 to 6 kHz, rolling off the mid-tweeter before it gets into those frequencies where it starts to sound rough. (All tweeters except essentially massless ones, like the Plasmatronics) develop a series of peaks through the range where their high end rolls off.)

The RS-1B is still one of the most awesome—stentorian speakers I have heard, with an unsurpassed (in my experience) ability to reproduce both rock and big, dramatic works, extraordinary low-end range and detail, and as realistic reproduction of soundstage depth and width as any system I've heard. It now does those same things, but without the slight roughness I heard before.

I commented in my original report that this system does not do as well on small-scale music—chamber works, instrumental solos—as on massive material. That is no longer the case. Neither is the RS-1B as amplifier-sensitive as it was. In its original form, we found that only tubed electronics could be used for the midrange and tweeter panels; otherwise the sound was quite dry and almost gritty. The modified version works fine with any really good amp, though I unhesitatingly confess my preference for the way the RS-1Bs sound with tubes. In my opinion, this system is now close to being the best loudspeaker available—without going completely overboard in price (the WAAMs at $45,000 or Infinity's own IRS-III at $32,000).

The RS-1B still doesn't sound as alive, nor as delicate at the extreme top, as some electrostatic systems, but that does not alter the fact it's one helluva speaker system!

Incidentally, AHC's independent report on the RS-1B made no mention of the roughness I heard. Was he deaf? Nope. His sample came off the production line later than mine, and included the change which I later added (it's now standard). And Infinity had the effrontery to label my mod kit the "J. Gordon Holt Electrostatic Mod," as if I required speakers tailored to my finicky taste—when they already knew about the problem and had been shipping modified speakers for some months!

—JGH
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When Pearson learned that the recording had been made, he decided—without having heard it—that this would be the one to get TAS’s funding. He had heard RR’s Symphonie Fantastique, and was very fond of Church Windows, so why not? It was a wise choice.

I heard a short excerpt from the Church Windows master tape in Reference Recordings’ room at CES two years ago, and was bowled over by the sound. At the time, I was told it was slated for release but that no target date had been set. That was the last I heard of it until my review copy arrived.

Shortly thereafter I got a phone call from HP, asking if I’d like to review Church Windows for The Absolute Sound. After I got up off the floor, I asked him why he didn’t have one of his own reviewers do it. “Conflict of interest,” was the reply. I would supposedly be impartial. After all those nice things HP has said about me in print? Heh, heh, heh, I thought, rubbing my hands with glee—Gotcha!

I agreed. And I like the recording. Like it? No, I think it’s the best symphonic record-
ing I have heard, bar none.

I have in my collection an antique Capitol 4-track prerecorded tape of Grofe's "Mississippi Suite," which I often play for people as an example of the kind of symphonic recording everyone should be doing. Setting it apart from the competition is the kind of orchestral weight and solidity usually heard only at a live concert. The cellos, trombones, and tuba sound as if they are actually playing with the orchestra rather than out in the foyer. Outside of that, unfortunately, "Mississippi Suite" is veiled, flat, and closed-in. RR's new "Church Windows" isn't.

Forget, for the moment, that this is some of Respighi's most sumptuously glorious music. Forget that the performance is superb. Just listen to the sound of the recording! The number of available symphonic recordings which have either the power or the heft of a live orchestra can be counted on the fingers of a damaged hand. This has both! The lower and lower-middle-range instruments are there, where they belong in the scale of things, and the foundation they lay for the rest of the instruments makes for some of the most full-bodied sound I have heard from any commercial recording. A full crescendo on this Reference Recording sounds absolutely monumental!

This is, quite simply, a stupendous recording of a probably-definitive performance. It makes RR's last symphonic effort (the Berlioz Symphonie Fantastique) sound almost pallid by comparison. (Well, no one could call it pallid; "brash" might be a better word.)

Bravo, Keith J and Tam H and, of course, HP, who didn't exactly make this happen, but helped make it easier to pay for. This you gotta buy. No ifs, ands, or buts. —JGH

Tchaikovsky

Symphony No. 5;
the march from Tsar Sultan.
London Symphony Orchestra, Andre Previn conducting.
Telarc CD 80107

This has been one of my favorite symphonic works since I was a kid. Having heard just about every recorded perfor-

mance since electric recording, I consider myself somewhat of an authority. What I've heard over the years is an ongoing loss of understanding of Tchaikovsky's music, with not one superlative recorded performance of Tchaikovsky's 5th or 6th symphonies in over 25 years? Why? Because modern conductors don't understand Tchaikovsky.

Tchaikovsky's last two symphonies are all about zoofering. Not anxiety, neurosis, or angst, but wholehearted, unbridled, self-indulgent zoofering that can only be enjoyed in the context of the blackest, deepest self-pity. Dostoevsky wrote about it. Marx railed at it. Previn, however, doesn't understand it.

In order to hold a recording contract, today's conductor must be a jet-setter with smooth cheeks, a black lamb's-wool greatcoat, and a limousine at every airport. Vot does he know from zoofering? Add to that handicap thirty years' commitment to the "cool," unemotional musical schools—those of Vincent Persichetti, Arnold Schoenberg, and Hans Werner Henze, all of whom contributed to the currently fashionable view that flamboyant emotion has no place in the concert hall. (I am convinced that is why Baroque and Classical composers are currently in vogue, while the Romanticists are scorned; the former's appeal is almost entirely to the intellect.)

Unfortunately, Tchaikovsky's 5th symphony without unbridled emotion is merely empty drama. Andre Previn tries hard, God knows! But a lush, silky sound or a frenzied tempo can't take the place of plain, old-fashioned schmaltz and palms-in-the-eyesocket outbursts of anguish. This is a good performance; it is even, in places, an exciting performance. But it is Previn who speaks through this music, not Tchaikovsky.

There are parts of this symphony which, done properly, can bring a lump to the throat of any terminal romantic like myself.

1 There was one who came pretty close just a few years ago. Carlos Pavez did a 6th on Lodyra records in 1980 that almost made the grade. My choices for definitive recorded interpretations of the 5th: Sir Thomas Beecham and the London Philharmonic orchestra (with Dennis Brain, French horn). For the 6th: Wilhelm Furtwangler conducting the Berlin Philharmonic. Unfortunately, both were on 78-rpm album sets, and are currently unavailable, so you will probably never understand what I mean when I say no one knows how to conduct these any more.
Previn's interpretation sometimes stood my hair on end from sheer excitement, but it never made me feel suitably sorry for myself. What this music needs is bathos, and Previn just isn't up to that. His reading of the Fifth is mannered, idiosyncratic, perverse, and, ultimately, perfunctory. To me, this is music in the service of audio, not the other way around. (By far the best performance on this CD is the March from Tsar Sultan, which is delightful!)

I wasn't all that enamored of the recording. The sound is a little too brilliant, with a not-so-subtle sizzling quality to all the loudest passages—something I have noticed on a few recent Telarc, and attributed to either microphones (I don't know about those Schoeps mikes) or Soundstream's digital recording system. These orchestras may actually sound like that, but I doubt it. Or it may be that my suddenly heightened intolerance for this kind of sound stems from hearing Reference Recordings' Church Windows, which is how a symphonic recording ought to sound!

All in all, this CD disappointed me. Tchaikovsky's 5th has been recorded so often; there is no need for yet another indifferent performance, unless the sound is considerably better than on this recording. —JGH

Stravinsky
Symphony of Psalms
Poulenc
Gloria for Soprano Solo, Chorus, and Orchestra
Atlanta Symphony Orchestra and Chorus, Robert Shaw conducting,
Telarc CD 80105

At last! Telarc is breaking free from the tyranny of the hackneyed blockbuster. Here are two significant works of which there are few recordings (and mediocre ones, at that).

Stravinsky's Symphony of Psalms was written in 1930, ten years after the Rite of Spring, his last major ballet. With Latin texts drawn from the Psalms, the "Symphony" is scored for voices and a full orchestra without violins, violas, or clarinets, in order to obtain a stark, somber quality. This is unusual music from the composer we know for his angular, brilliantly scored ballets—it is quietly reverent, melodic, gentle despite moments of great power, and the performance is inspired! Add to that the fact that there are no massed (or solo, even) violins to go steely, and you have a recorded performance that should be in every collection.

Francis Poulenc, a member of "Le Six" —an informal conversation-and-carousing association of young Parisian composers during the early 1900s—has been unfairly treated by history. Because his music is, perhaps, not as "great" as the best of Beethoven and Mozart, it is deemed by many to be superficial, unworthy of consideration. Those who pass it by are missing some of the small joys of life: Poulenc's unique style of jaunty, syncopated rhythms and unconventional harmonies, alternating with passages of melting lyricism, are highly accessible and immensely enjoyable.

The text of the Gloria is drawn from the Catholic mass, and the work is divided into six contrasting sections. Shaw has again turned in a superb performance, achieving the almost impossible feat of making an American chorus, with its naturally flat vowels, sound tres Francaise. The recording, though, isn't quite as impressive-sounding as in the Stravinsky. In several sections in which the chorus sings out in full voice the sound takes on a subtle roughness that suggests transient clipping somewhere in the recording system. On the other hand, it could be something inherent in the live sound of a large chorus that is being exaggerated by the recording or reproducing chain. (It was barely perceptible with a pair of Rowland Research amplifiers replacing my Eagle 2.) At least the violins don't screech.

This is a must-have disc for anyone whose musical interests go beyond the banal and merely spectacular. Both performance and the recording are good enough that it is unlikely they will bettered in the foreseeable future. 2 It's so nice to have some fresh repertoire appearing on Telarc. —JGH

2 Please, JGH, don't foreclose on the future. Just because a performance is good, and makes the record as a whole well worth buying, doesn't mean that the performance is unlikely to be bettered in the foreseeable future. It could be bettered tomorrow! —LA
**Lars Erstrand and the Four Brothers.**
Opus 3 CD 8402.

As Stereophile ex-music editor Margaret Graham said in these pages some years ago, jazz isn’t dead, it’s alive and well in Scandinavia. Here’s more evidence.

This is mainstream jazz, suavely played by a quintet consisting of vibes, sax, piano, bass, and drum kit. There’s no point in listing the artists on this delightful album because you’ve never heard of them unless you already have the analog disc—in which case you probably don’t remember their names anyway. But I should make one thing perfectly clear: the “Four Brothers” are not relatives, just the first number on the record.

The recording is very good, but more pleasant than spectacular. Compared with Sheffield’s small-ensemble recordings, this one sounds a little veiled and closed-in at both ends of the spectrum. The cymbals lack their brassy (or steely) sheen, the plucked bass lacks the gutsy thud of the real thing, and there is never a feeling that the instruments are right there in the room. Having picked my nits, I must conclude by saying that the recording never intrudes on the music; it’s simply an inconspicuous conveyance. Recommended. —JGH

**Ravel**

*Ma Mere l’Oye* [Mother Goose] *Ballet,* complete; *Valses Nobles et Sentimentales; La Valse.*

Dallas Symphony Orchestra, Eduardo Mata conducting.

RCA CD RD81415.

Eduardo Mata must be counted as one of the best contemporary interpreters of Maurice Ravel’s orchestral music. Unfortunately, his fine performances have been consistently sabotaged by mediocre recordings. This one is by no means RCA’s worst, but neither is it one of their better efforts.

(Ever since RCA abandoned minimal miking in the late ’50s, their recordings have varied from okay to execrable. This one is about ¾ okay.)

Before I get started on its shortcomings, a few positive observations. First, the recording has very wide dynamic range, enhanced by the CD’s completely noiseless background. Second, there’s a nice feeling of depth and warmth, much like the sound one hears from a row-M seat in a concert hall—at least, during quiet passages. (I’ll discuss fortissimo passages later.) Third, the sound has a marvellous feeling of weight to it, and the low end is simply gorgeous, with real power and throb to the basses and cellos. Massed *forte* violins are a shade steely, but no more so than on most Telarc recordings. And that’s about it for positives.

Despite the evident depth, their is virtually no feeling of perspective, of receding ranks of instruments. There is also little sense of lateral spread to the ambience, and the imaging is positively weird! Most instruments sound bunched towards the sides, and those in the center sound rather more distant than those on the side. Not only that, but instrumental placements change noticeably from time to time for no apparent reason, with brasses and woodwinds moving much closer and, oddly, more to the right during *fortissimos.* Someone was daddling!

The recording was undoubtedly multimiked, but it is less blatantly done here than on some of RCA’s previous symphonic recordings. During quiet passages, it sounds as if most of the orchestra was picked up via two widely-spaced omnidirectional mikes (which would explain the receding middle) placed a fair distance from the orchestra (20 feet back and high in the air?). But when the music gets loud, producer Jay David Saks apparently couldn’t keep his mitts off the spot mike controls. At least there’s none of that zooming back and forth that has characterized RCA and CBS orchestral recordings for the past twenty years. Small consolation! It’s a shame, for although this “La Valse” is a little noncommittal, the other two works are given truly magical performances.

Unless you’re acutely critical of imaging, the sound isn’t really bad enough to spoil one’s enjoyment of the music, and two of the performances are worth owning despite the recording. I recommend this, but with strong reservations.

—JGH

Stereophile
Canteloube  
Chants D'Auvergne, Series 1-3  
TeKanawa, Tate, English Chamber Orchestra  
London CD 410 004-2

Canteloube  
Chants D'Auvergne, Series 4 & 5  
Villa-Lobos  
Bachianas Brasileiras No. 5  
TeKanawa, English Chamber Orchestra, Tate conducting.  
(Lynn Harrell and Instrumental ensemble in Villa-Lobos)  
London CD 411 730-2

Marie-Joseph Canteloube de Malaret (1879-1957) studied at the Schola Cantorum of Vincent d'Indy, and went on to compose two operas and some incidental instrumental music. The "Chants D'Auvergne" are clearly his masterwork; if you haven't heard them, you're in for a beautiful experience. Written between 1923 and 1955, the chants draw their melodies from folk songs of the Auvergne section of France, but the delicate, intricate arrangements are the composer's.

One of the early Chants, the "Bailero," is one of the most beautiful pieces ever written for voice and orchestra. The vocal line glides across a silky, glistening orchestral accompaniment with a grace seldom heard from any composer's work.

The melodies are catchy enough to have been passed down through the generations and remembered by all, and the orchestrations have the feel of Puccini's quieter love songs. The orchestra is mostly strings and wind instruments. Though the dynamic range for pastoral music is typically narrow, there is no limiting going on here and the result is very dynamic-sounding.

The majority of the lyrics are of the carnal love genre so favored in folk music. Shepherds and shepherdesses call each other to "come across the valley and tend their flock." TeKanawa and Tate bring these works magnificently to life in performances that, in my estimation, can not be bettered. TeKanawa makes these songs her own.

In the Villa-Lobos, TeKanawa has some very tough competition, but she and Harrell acquit themselves nicely.

The sound is some of the best yet provided by London. Although not up to the incredible "you are there" quality of the Lyritas reviewed below, it is still mostly natural. Canteloube's thick, muted orchestral textures (much like hazy mornings in the Auvergne) are very well resolved in the recording. There is a slight treble peakiness, but CD players more up to date than my Magnavox FD 1000 may well ameliorate this slight treble lift. Overall, I consider these CDs required listening.  

—WM

Finzi  
A Severn Rhapsody, Introit, New Year Music, Prelude, Soliloquies, Romance, The Fall of the Leaf  
Boult, London Philharmonic Orchestra  
Lyrita SRCS.84

Finzi  
Concerto for Clarinet and Strings, Grand Fantasia and Toccata for Piano and Orchestra, Ecologue for Piano and Strings  
John Denman (clarinet), Peter Katin (piano), New Philharmonia Orchestra, Vernon Handley conducting.  
Lyrita SRCS.92

Finzi  
Cello Concerto  
Yo Yo Ma, Royal Philharmonic Orchestra, Vernon Handley conducting.  
Lyrita CD, SRCS.112

British composer Gerald Finzi (1901-1956), while best known for his vocal pieces, also wrote many concisely beautiful orchestral works. Luckily, Lyrita has seen fit to work with the Finzi Trust to bring many of these unknown pieces to record.

Let me begin by saying the levels of sonic fidelity and pressing quality in all Lyrita records are superb, and these three are no exceptions. Moreover, one of the records contains simply sublime pastoral music, and another preserves one of the most beautiful concertos I have heard.

The Boult disc presents the finest overall representation of Finzi's work. "A Severn Rhapsody," which is very gentle and quite lovely, typifies the music on this disc; only in the "Nocturne" does Finzi get close to brooding. Overall, this is a most pleasing
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disc—not one to show off your system's power, but one that will brilliantly demonstrate imaging capabilities.

The "Concerto for Cello and Orchestra" is completely different: virtuoso music for the cello. Yo Yo Ma acquires himself beautifully and the sound is remarkable. When was the last time you heard a record presenting a natural balance between a cello and a symphony orchestra? But, though it may have simply been the shock of hearing this record sandwiched by the other two, the Cello Concerto struck me as awfully cold and unemotional. It would be like hearing Vaughan-Williams's Fourth Symphony preceded by his "Lark" and followed by "Greensleeves"—a glacial centerpiece. If you like some of the Russian concertos (particularly those of Shostakovich), however, this should please you. The recording, made in 1979, is full-bodied, dynamic, and very natural-sounding.

The real find among these discs is the "Grand Fantasia for Piano and Orchestra" and its companion piece, the "Ecologue." These works belong not only in the standard repertoire but in your collection. Not since I first heard Barber's "Adagio for Strings" have I been so struck by the first hearing of a work as I was by the "Fantasia." It opens with a long piano solo which, besides being perfectly recorded, is extraordinarily beautiful. When the orchestra enters, you will not believe the sheer power captured in these grooves! The work is tuneful and eccentric at the same time. This completely individual work is one I would not part with.

The "Ecologue" is similarly beautiful, if not as inspired. It was originally intended as one movement of a concerto, but Finzi was satisfied with it on its own. The "Concerto for Clarinet and String Orchestra," written toward the end of Finzi's life, reveals a burnished, aging mood. In the Allegro, you hear a man feeling his power, a composer who knows he is good. It is confident. The Adagio then reveals the sound of someone who's had to work very hard to achieve what he has. The concluding Rondo, with the clarinet floating melodically, reminds us of Finzi's songwriting background.

Overall, this is a record you should not be without. The sound is completely natural; I know of no higher compliment.

Lyrita is not widely distributed, but Allegro Imports, a distributing company owned and operated by music lovers, will sell to you direct if no store near you carries Lyritas. Contact Allegro Imports, 2317 N.E. 15th Portland, Oregon, 97212. (503) 287-0098.

-WM

Electronic Movie Music

Vangelis

Antarctica

Japanese Polydor 28MM 0290

Peter Gabriel

Birdy

Geffen GHS 24070

Film Music

Mark Isham

Mrs. Soffel, The Times of Harvey Milk,
Never Cry Wolf

Windham Hill Records WH-1041

The first movie I remember with an electronic score was Forbidden Planet. It was perfectly appropriate music for a lark with the human id, but had little redeeming value separate from the film. Since that hallmark release, electronic music has become quite common in films, and is growing more so all the time.

The records under review here create a dark and sensuous, occasionally violent sound world that successfully exists apart from the films. And they all share one thing: magnificent sonics. The sheer loveliness of sound produced by these recordings is entirely addictive.

Antarctica is another of those nature films Vangelis is so fond of (his soundtrack to the nature film L'Apocalypse des Animaux is one of my desert island records). Thematically, the music is not so much impressionistic as inferential. The music establishes moods that evoke Antarctica without stooping to imitation of wind and walrus (swoosh and blat). As in the other two records, phase
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— Stereophile, Vol. 8, No. 3

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relationships are manipulated to make the music swirl between and outside the boundaries of your speakers. The lush synthesizers provide sounds as soft as clouds, and the frequency range is as broad as my Thiel CS-3s will go! The dynamics range from soft to overpowering. In addition, there is an almost startlingly clarity. This is compelling and beautiful music; highly recommended.

Birdy's soundtrack makes me believe I may have missed a wonderful movie. This is dark, intense stuff that will raise the hairs on the back of your neck. If you have never heard Peter Gabriel's music, this is an ideal introduction to his curious and unique juxtapositions of electronic, Javanese, and Hasselian Fourth World sources. Some of the music here is recycled from his other albums, but is so twisted and processed you'd have to be a fan to unravel the sources. Gabriel enlists the help of Brian Eno's partner Daniel Lanois on this recording, as well as Jon Hassel and Synergy's Lerry Fast. Birdy has an almost experimental sound, however, and may strike you as pretty strange. Sonically, it's incredible: the low bass is among the most profound I have ever heard on record; the drum transients jump out of the speakers; the synths have a mellow, burnished sound; and the dynamic range, especially on "The Heat," will have you running for your volume control. This is very heady music, and in many ways more rewarding than the other two records. Beware, however, its weirdness quotient.

Mark Isham is a name to remember. Just 34 years old, he has already left his distinctive imprint on some very influential projects: Rubisa Patrol, Group 87, Pink Floyd, and Van Morrison. He has now scored three films, and their quality belies his small film experience. The soundtrack for Mrs. Soffel features the most lovely melody of all these records. It opens with a synthesized, distant clap of thunder followed by a beautiful wash of strings doubled by synth. Just as you luxuriate in the beautiful sounds, pianist Lyle Mays (When, oh when will he finally have a solo album?) introduces an achingly gorgeous melody line. While it shares the usual quiet beauty of most Windham Hill records, there is also an atypically cerebral component which rewards careful listening.

The Times of Harvey Milk is performed completely by Isham on synth and trumpet. Phase relationships are manipulated so that sounds seem to come from all over the room. The music comes in washes, with a trumpet sound reminiscent of Miles Davis firmly rooted in the center. It is a fascinating effect, and one I'm sure was difficult to perfect.

Never Cry Wolf, the only one of these films I've seen, is magnificent and moving, beautifully shot and well told, and the music supported it perfectly. The record's sound is clean, very well extended at both ends, and beautifully "spaced" (imaging is hardly the correct term to use for electronic music). All in all, this record provides a new direction for Windham Hill Records, one I hope they pursue.

—WM

Holst
Suite de Ballet in E Flat, Opus 10

Warlock
An Old Song For Small Orchestra, Serenade For Strings, Capriol, Suite For Full Orchestra

London Philharmonic Orchestra, Nicholas Braithwaite and Sir Adrian Boult conducting.

Lyrita SRCS.120

Lyrita has earned an enviable reputation for not only the boldness of their recorded repertoire, but the natural and lifelike sound they reproduce. Their catalog is comprised mostly of orchestral works by British composers of the twentieth century. For those unfamiliar with British music during this century, just imagine that Schoenberg and Webern never existed, and that Elgar constituted the strongest immediate influence. The music is typically tonal, broad, emotional, and accessible. Of the 125 records released on Lyrita, probably 100 contain works available on this label. For me, a release on Lyrita is almost self-recommending.

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Stereophile
The first movement, a spirited dance, utilizes the full orchestra and demonstrates a masterful palette of colors. The second movement, a waltz, moves through a series of keys that gives the work a slightly dizzying quality. The third movement is for strings alone. The combination of muted and non-muted strings, with occasional pizzicato effects, provides an outstanding overall test of your system's accuracy. The final movement, "Carnival," is fast, raucous, and introduces a very realistic-sounding bass drum. It can be felt more than heard, and consequently serves as another good system evaluator. The performance is excellent; this work should be better-known.

Peter Warlock, who in 1930 at age 36, is well-known in England for his songs. The works reviewed here are, unfortunately, the only non-vocal pieces he ever composed. "An Old Song," very reminiscent of Delius, is deceptively simple, yet quite beautiful. Its frail, wistful sound is nicely matched by the delicacy of the recording. The "Serenade for Strings," meant as part of a triptych that was never completed, stands very nicely on its own. It is more dancelike than the previous work, but maintains the deftness of touch. Warlock's most famous work is his "Capriol Suite." Completed when he was 54, the piece was inspired by his collaboration on a book about the history of ballet. All six movements are dance-based, ranging from sword dances to slow dances. The music shows more dimension than the previous works; there is a far greater range of mood and sound. The recording, again, is demonstrative; quality; not in the boom and bombast sense, but in terms of the sound's fidelity to live music. Highly recommended.

—WM

Rachmaninoff
Symphony No. 2
Royal Philharmonic Orchestra,
Andre Previn conducting.
Telarc CD 80113

There is no shortage of good recordings of Rachmaninoff's Second Symphony; other than the Simon Rattle recording on EMI Angel, it's hard to go wrong. For me, this new Previn recording on Telarc is the best yet—better even than his previous recording of the work for EMI Angel. This one reminds me of Previn's recent recording of the Tchaikovsky Fourth Symphony for Philips. The first three movements are taken at a leisurely, expansive tempo. Previn and the RPO linger over the richly orchestrated score, bringing out details I hadn't noticed or appreciated before.

There is something very Russian about this type of performance, as if the orchestra were playing for a ballet, where the forward momentum of the score is sometimes held back cf. Fedoseyev's recent recording of Stravinsky's The Rite of Spring). The effect here, as in the aforementioned Previn Tchaikovsky Fourth, is to give the fourth-movement climax greater impact. The overall emotional impact is enhanced by the performance not being overdone.

The ensemble playing of the RPO is not quite in the same league as the Berlin Philharmonic or the Concertgebouw. But the sound is warm, appealing, and very appropriate for the work. Curiously, though (for Telarc), this recording sometimes takes on a fuzzy quality; strings, in particular, lose definition on louder passages. This must be a first for Telarc: a recommendation more for the performance than for quality of recording. A memo to Telarc: have Previn record Rachmaninoff's Symphonic Dances. Better yet, have Previn record Alexander Glazunov's second, fourth, or fifth symphonies. That type of unusual repertoire will prove that Telarc is a major label, not a company that records only warhorses and show-off works for audiophiles. —TG

Schubert
Symphony No. 9 The Great
Cleveland Orchestra,
Dohnanyi conducting.
Telarc CD 80110

Like the Berlioz Symphonie Fantastique, Schubert's Ninth shows up again and again on compact disc. Telarc, do you have to concentrate so much on symphonic warhorses? Does the world need yet another Schubert Ninth? Not really—but if you want one on

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Stereophile
Once upon a time the enjoyment of music in the home was limited to the privileged few.
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The Cleveland Orchestra plays very well in places, bringing out many details of the score with a luminescent, chamber-music-like quality; the woodwind playing is particularly fine. Unfortunately, after many listens I hear shaky ensemble playing, as if the orchestra simply hadn't rehearsed enough.

At the same time, the performance itself is briskly paced. Which is a good thing, considering the length of this piece and its tendency to sound, under some conductors, like it's running on automatic pilot. Not so here. This performance is much like Sir Adrian Boult's Ninth on EMI: Angel; it gets where it's going. I would have liked it even better had it picked up the grace and charm of Josef Krips's version on London Treasury (which truly is a treasure).

This Dohnanyi version is beautifully played in places and well-recorded, but, in spite of the enjoyable sound, I would wait for some future CD of this work; there's sure to be plenty. In the meantime I'll listen to the LP versions with pleasure. —TG

Taneyev
Piano Quintet, Op. 30
Jerome Lowenthal, piano; Paul Rosenthal, violin; Yukiki Kamei, violin; Marcus Thompson, viola; Stephen Kates, cello
Arabesque CD Z6539

Ah, Taneyev—along with Glazunov, my favorite Russian composer of chamber music! His dates by the way, are 1856-1915; Rachmaninoff and Scriabin were among his students. This is said to be the first recording of the Op. 30 anywhere in the world. The third movement (a Largo in C), with its ten-note theme of descending eights, is one of the most beautiful in all of chamber music. How to explain its neglect?

Well, let's hope someone else decides to record it, and soon: this recording can only be described as abominable. The string tone is as harsh, wiry, and shrill as I have ever heard on CD. What a disservice to the music and the players, who seem to be quite good. I say "seem" because the recording has robbed the string tones of their beauty, removing any pleasure that might be had from the performance. A bitter disappointment! —TG

Brahms
Hungarian Dances
Leipzig Gewandhaus Orchestra, Masur conducting.
Philips CD 411 426-2

Buy this disc! If you think of Brahms as heavy, serious, and Germanic (though that is one side of Brahms), you are in for a surprise. The Hungarian Dances are joyous, earthy, soulful, and altogether delightful.

Only three of the 21 dances presented here were orchestrated by Brahms; five are orchestrated by Dvorak, and the remainder by five other composers. The same fondness for Hungarian gypsy music can be found in other Brahms compositions, most notably the A major Serenade. But that is a long, more introspective, and less exuberant work than these peasant dances, few of which run more than three minutes.

Serious music? No—but a lot of fun, and a great late-afternoon pick-me-up. The performances by Kurt Masur and the Leipzig Gewandhaus Orchestra (East Germany) are just right: light, breezy, and played with gusto and pleasure. The musicians are having fun. The recording, too, is quite good—just a trace of digital hardness on top but nothing to give one serious pause. —TG

Haydn
Symphonies No. 44 and 77
Orpheus Chamber Orchestra, no conductor.
DG 415 365-2

This is a delightful disc, and a refreshing change. We have a small, 26-member chamber orchestra (from New York) playing Haydn symphonies with modern instruments. No steely, scrawny, scruffy, authentic original instruments. Hallelujah! (Musicians had good reasons to give up their "original" instruments.)

These are two very nice performances of two fine, but not often heard, Haydn symphonies. The second movement (andante sostenuto) of the Symphony No. 77 in B flat major is particularly well done. The string tone is lovely, the ensemble playing excellent. Best of all, the textures are light and airy—a lot like chamber music (which it is, after a fashion). The recording is decent,

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though the strings turn just a bit hard at times. DG apparently did not run amok multi-miking, which is a relief. Recommended. —TG

Rimsky-Korsakov, Dukas, Weinberger, Saint-Saëns, Liszt

Orchestral Spectaculars
Cincinnati Pops Orchestra, Erich Kunzel, conducting.
Telarc CD 80115

Telarc’s problem is that very few of their recordings contain truly great performances. Aside from the Beethoven Piano Concertos with Serkin and Ozawa, and some recent Previn recordings of Tchaikovsky and Rachmaninoff, Telarc simply has not enriched the catalog. The time has come for the company to grow up: stop concentrating on sound for sound’s sake, and issue fewer Barnum and Bailey recordings like this.

Maybe once in a while; after all, this recording is actually fun. Erich Kunzel is the conductor who should be leading the Boston Pops, but isn’t (reportedly he was Fiedler’s choice as Boston Pops successor). And Kunzel is perfect for pops—I should know, he was my music prof at Brown University twenty-five years ago. They called him Crazy Erich then, and he doesn’t seem to have changed!

There is one orchestral gem in this recording, in which Kunzel shows himself a conductor of great talent: the “Polka & Fugue” from Janamir Weinberger’s Schuanda the Bagpiper—we even studied this piece in Music D-1. It’s wonderful music—lyrical, inventive, exciting—and beautifully played and recorded here.

The rest of the disc? Standard Telarc pops trivia: Rimsky-Korsakov’s “Procession of the Nobles” from Alada; “The Sorcerer’s Apprentice,” by Paul Dukas (Mickey Mouse music if I ever heard it); the “Bacchanale” from Saint-Saëns’ Samson and Delilah; Les Preludes, by Liszt; and “Dance of the Tumblers” from Rimsky-Korsakov’s The Snow Maiden.

As it turns out, I’d buy this disc for the Weinberger selections alone. Meanwhile, Erich (and Telarc), how about something that enriches the catalog? —TG

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Yamaha NS-200 Speaker System

Given the clearly demonstrated critical nature of our speaker reviews, I wonder why Yamaha chose the NS-200s to send us. They have very good imaging—stable and quite specific—but their soundstaging is amazingly poor: shallow and narrow, with very little sense of depth. In fact, the NS-200s have the worst soundstage of any speaker I've reviewed since moving to New Mexico in 1978.

The "Flat" settings on the driver-level controls produced very aggressive, forward, snarly sound. The most natural balance I could obtain came with the mid control at -3 and the high control at -2. Even so, the spectral balance seemed awry. The low end on the 200s is quite sparse. If you buy a pair in spite of this review, or already own a pair, they will work best when driven by an amplifier with rather warm, underdamped bass. Otherwise, the NS-200s should be placed close to the rear wall, on 18-inch stands, not too far out of corners. Out in the room on a stand, the bass is very thin; on the floor, it's boomy.

Detail is only fair; the system never sounds palpably real, regardless of conditions. The speakers did demonstrate lots of punch on rock music, but I suspect they sound best if the listener is stoned. Not competitive.

—JGH

The Marantz Nine Revisited

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I was amazed! Though noticeably shy of the ultimate in detail and high-end openness, the sound was remarkably real and lifelike, with a wide soundstage and impressive depth. Individual choral voices were clearly distinguishable, and "backup" performers on simply-miked recordings were just that: behind the lead players.

Highs were soft, but very nearly as smooth and clean as from any current top-line amplifier—well suited for electrostatic speakers, but less so for dynamics. The bass was perhaps the Nine's weakest point, being deficient in range, impact, and control.

Marantz Nines can occasionally still be found on the used-equipment shelves of some audio stores, and often at ridiculously low prices: $200 in one case I know of, but don't count on that! Used full-range, a Marantz Nine is a cheap way to almost-state-of-the-art sound from a modestly priced system. Driving the electrostatic section of a biamplified hybrid system (with a solid-state amp on the bass), the Nine approaches the best amps available for this purpose (Conrad Johnson's, Audio Research)—but it doesn't quite equal them. For $200, you were expecting maybe perfection?
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HIGH PERFORMANCE. Designed to maximize the performance of your audio and video equipment, all CWD modular component cabinets are handcrafted and lovingly hand-finished from select natural hardwoods.

TOTAL FLEXIBILITY. Add as your system grows; arrange and rearrange our cabinets to almost any configuration.

REMARKABLE QUALITY. From the precision hardware to the natural oiled finish, all CWD cabinets are fine furniture with a look and style you'll cherish for years to come.

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The cabinet system shown above in Dark Oak features solid wood, glass and roll wood doors and interior lights. Also in Natural Oak and Natural American Walnut.

High performance modular furniture that keeps pace with your electronic system.
The ONKYO M-510
the M stands for Magic.

The Onkyo Grand Integra M-510 was created for the ultimate reproduction of music. It combines transparency, natural imaging and musicality with sufficient power to drive any loudspeaker system, regardless of impedance or efficiency. Onkyo’s Real Phase Technology is employed to eliminate phase shift between charging voltage and current that occurs with reactive loudspeaker systems, maintaining phase accuracy for precise stereo imaging.

Conservatively rated at 300 watts per channel, the M-510 offers tremendous power reserves—stable down to six tenths of 1 ohm, with a maximum IHF dynamic power output per channel of 2.1 kilowatts!

State of the art amplification redefined.
The Onkyo Grand Integra M-510.