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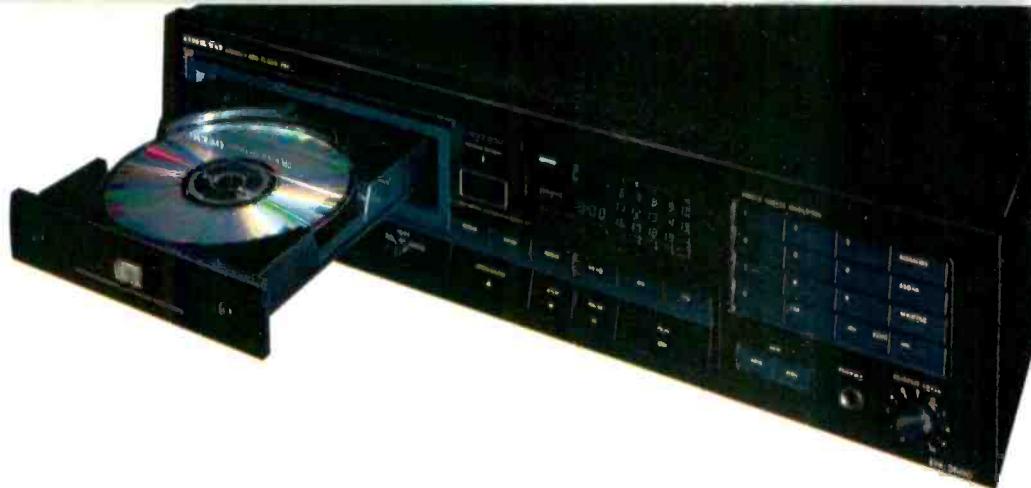


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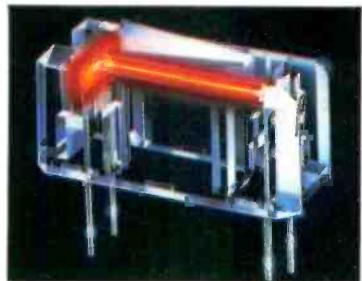
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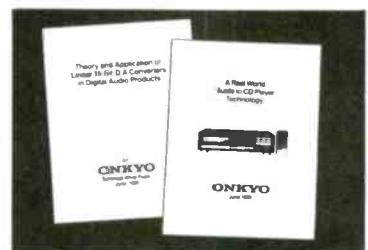


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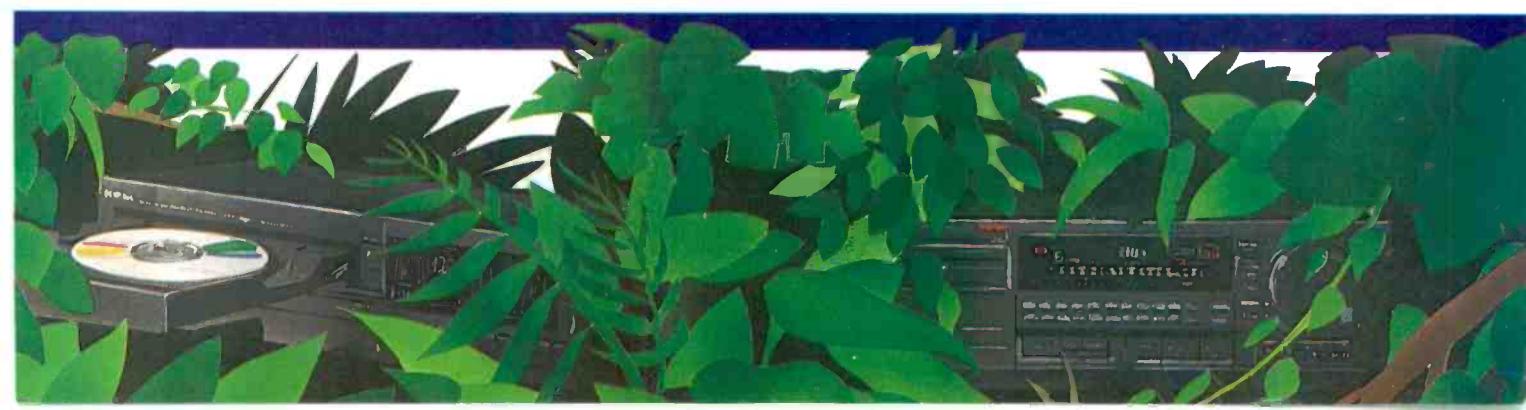
The first is an in-depth explanation of digital bit structures and how they affect musical performance. The second is a down-to-earth journey through all the claims you're likely to run into, as well as the hard facts you'll need to master the CD jungle. And they're available at your Onkyo dealer now.



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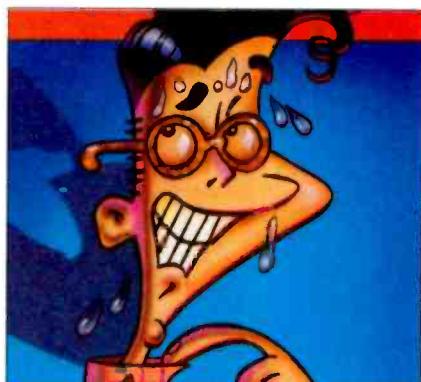
VOL. 39 NO. 7



Tested: Philips CD-V player, four more



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AUDIO & VIDEO

SPECIAL TEST REPORT Shure HTS Theater Reference System.

A multicomponent system for decoding and playing movie soundtracks.

DAVID RANADA

The Basics of Concert Hall Acoustics. *Why some halls sound great and others are acoustical failures./JEFFREY BORISH*

MUSIC

CLASSICAL Rooted, But Not in the Past. *John Eliot Gardiner, the Francophile English farmer who started the Monteverdi Choir, has irons in more than one fire./SCOTT CANTRELL*

POPULAR/BACKBEAT Guilty Pleasures. *Black Sabbath, Olivia Newton-John, Barry White, Eddie Money, Queen, Marillion, Gordon Lightfoot, Neil Diamond, and the Classics IV—all endorsed by critics. The horror! The horror!*

On the cover: the Philips CDV-488 CD Video player (center, at top); the Rotel RTC-850 tuner/preamplifier (center, second from top); and most of the Shure HTS Theater Reference System, including the HTS-5300 surround decoder, three HTS-50SPA amplifiers, and HTS-50LRS loudspeakers.



Cover design: Joanne Goodfellow
Cover photo: David A. Wagner

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Almost 40 years ago, in the hills of Western Massachusetts, Milton B. Sleeper assembled the first issue of *High Fidelity*, or "High Fidelity, Devoted to the Interests of Audio-philes," as the cover said. During the intervening years, *High Fidelity* has maintained the highest standards of quality, insisting on the top reviewers, writers, and editors.

What we've covered across the decades has changed — changed as your interests have. From the screwdriver and soldering gun days we moved into the heady '70's, when hi-fi was king and the U.S. discovered high-quality, low-cost Japanese gear. The '80's has seen increased coverage of video, the emergence of the revolutionary Compact Disc, the as yet unfulfilled promise of digital audio tape (DAT).

For the past 17 years it has been my pleasure to be associated with *High Fidelity* in one way or another. As the consumer electronics market continually changes, so it is a time of change for *High Fidelity*.

This is the last issue "*High Fidelity*" will publish and you will now receive STEREO REVIEW magazine in its place. Although an interruption in service may occur, all issues due to you will be delivered.

To all of you loyal subscribers and readers, thank you for your support.

William Tynan
Vice President
Publisher/Editorial Director

LETTERS

REFERENCE VIDEODISC

David Ranada's column on Reference Recording's LD-101 calibration and demonstration Laserdisc ("Scan Lines," April) got me all worked up, and I started craving a copy. The problem is: Where do I find one?

Richard A. Lanzit
Moraga, Calif.

If you can't find the LD-101 at your local Laserdisc emporium, write Reference

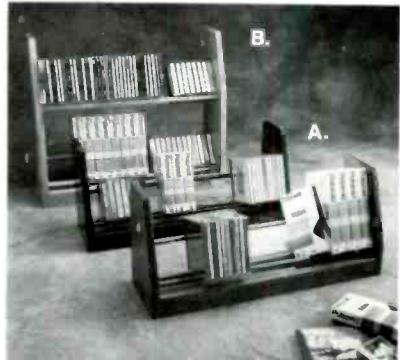
Recordings, Box 77225X, San Francisco, Calif. 94107. — Ed.

SHOEHORNING HDTV

There is an error in your discussion of how many HDTV stations can fit into the current VHF TV bands ("Aspects of HDTV: The Bandwidth/Interference Problem," April). The VHF region is, in fact, divided into three (not two) separate parts: the low band, 54-72 MHz (18 MHz total); the

(Continued on Page 8)

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LETTERS

(Continued from page 5)

middle band, 76–88 MHz (12 MHz total); and the high band, 174–216 MHz (42 MHz total). Channels 2 through 4 are in the low band, 5 and 6 in the middle band, and 7 through 13 are in the high band. If the bandwidth required for HDTV is 9 MHz, there would be room for two channels in the low band, one in the middle, and four in the high, or seven in all—not nine, as you state. And if the bandwidth required is 12 MHz, then there would be room for one channel each in the low and middle bands and three in the high, or five in all (not six).

Walter A. Sutton
Beaumont, Tex.

PARALYZING HDTV

It is certainly fitting in this day and age that HIGH FIDELITY should publish an article contributed by a lawyer ["HDTV: Keeping the Rabbit Ears Alive," April]. After all, we are a society paralyzed by litigation and bewildered by legal parlance.

Imagine, for a moment, that the airplane had not been invented until just recently. Imagine, as well, that the Japanese are ready—now—to introduce an airplane to the market. U.S. companies are years behind, thanks to the weight of their legal departments, the shortsightedness of their MBA management, and the burden of miles of government red tape. National fortunes are at stake.

Somehow it has come to pass that the important point to consider is not whether there should be airplanes but whether there should be airports! Many participants in the controversy argue that airplanes must be capable of taking off and landing on city streets and highways without interfering with auto and truck traffic. "Compatibility" is what they call it. One congressman is quoted as saying, "Airports would prevent the underprivileged from hitchhiking on airplanes, and by God, that won't happen in my district until pigs fly!"

Oh, well. Rumor has it that someone has invented something called a helicopter. My lawyer thinks a controversy can be created over it, which will make him and his partners rich, if they start muddying the waters right now.

David W. Young
Bernalillo, N.M.

A NEW FURTWÄNGLER SOCIETY

It is with the greatest enthusiasm that I announce the formation of a society devoted to the art of Wilhelm Furtwängler. A previous society dedicated to the same pur-

pose dissolved some years ago when its founder died. This newly formed organization shall endeavor not only to continue the concept of the defunct Southern California group, but also to unify those of us in America who deeply revere Furtwängler's art.

It is also our intention to work with existing societies in Great Britain, France, Germany, and Japan in a concerted, worldwide effort to publish important recorded material from live concerts (much of which still remains in private archives) as well as written documents. Only products of the highest artistic and technical quality will be allowed to carry this society's name. Since Compact Discs have superseded other forms of recordings, the society intends to publish most of its recordings on CD.

The Wilhelm Furtwängler Society of America has been organized as a nonprofit institution that will provide the general public with informal educational services about Furtwängler's unique contribution to culture. However, to those who join the society as supporting members, all its recordings, books, and other pertinent publications will be made available at special discount prices. Dues in the amount of \$15 per year will be payable annually in January. Newsletters will be mailed out quarterly; they will contain reviews of new recordings, discussions of potential new releases, articles and selections from upcoming or recently published books, etc. Suggestions from members or letters of general interest will always be welcome.

The Wilhelm Furtwängler Society of America is fully supported and endorsed by the conductor's widow, Elisabeth, who has been very encouraging. She is pleased that a group is being formed to pick up where the former American society left off. Looking forward to hearing from you, I cordially invite you to join our organization!

Dade Thieriot
P.O. Box 620702
Woodside, Calif. 94062

RETOUCHED RACHMANINOFF

Paul Moor's review of Rachmaninoff's Second Symphony under Mariss Jansons' direction on Chandos [March] is, like so many of Mr. Moor's critiques, an eloquent plea for fidelity to the composer's wishes. To that end he takes a swipe at James DePreist's Delos recording of the same work for making use of some of Rachmaninoff's sanctioned cuts—excisions that account for an astronomical 2'39" difference in playing time. ▶

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However, in praising Jansons' giving us "the unadulterated score," no mention is made of two of Jansons' indulgences that considerably change Rachmaninoff's intentions. One is the addition of a timpani stroke to the first movement's final note, scored for cellos and basses alone. The addition makes an assertive gesture out of a characteristically pessimistic one. The other amendment is a cymbal crash heralding the last statement of the finale's great soaring theme—which undermines the shattering impact Rachmaninoff must have desired by saving his percussion for the brass chorale moments later.

According to the implied logic, the employment of a composer's own cuts is a far more flagitious sin than making additions to the orchestration that the composer never even dreamed of. Were these standards applied to the cinema, would Mr. Moor approve *Citizen Kane*'s colorization so long as all of its footage remained intact?

Adam Stern
Delos International
Hollywood, Calif.

Classical Music Editor Ted Libbey replies:
I happen to agree with you completely on the question of rescore. No sooner had I dismissed Jansons as a serious interpreter on account of his violations than I ran across the new recording of the Second by Gennady Rozhdestvensky with the same timpani thwack at the end of the first movement. It seems to be something the Russian school likes to do.

Paul Moor's reply to your letter to the editor of MUSICAL AMERICA/OPUS, in which you took him to task for his review of the DePreist recording—which you yourself produced—appeared along with your letter in the May issue of that publication. Readers interested in his defense can pick up a copy and see for themselves.

WHO CD-V: YOU BETTER SLOW DOWN

Right on, Ken Richardson! In his April article "See 'em, Hear 'em," he is quite correct in noticing that some of the tracks on Polygram Music Video's Laserdisc—oops, 12-inch CD-V—of *Who's Better, Who's Best* are running quite fast. "Happy Jack," "I Can See for Miles," "Baba

O'Riley," "Won't Get Fooled Again," and "Who Are You" have a blatantly manipulated sound that reeks of both time compression and a subsequent attempt at re-expansion. You see, in the program's earlier 60-minute incarnations—the U.S. videocassette, the Japanese videocassette, and the Japanese CD-V—the songs in question run *even faster*, unlistenable so. (Polygram's 75-minute CD-V, as Mr. Richardson explains, adds four songs.) I suspect that the program's original compilers were trying to squeeze the material to fit the 60-minute time slot.

As for the idea of buying the Who documentary *The Kids Are Alright* in order to get "Baba O'Riley," "Won't Get Fooled Again," and "Who Are You" at their correct pitch, forget it. All videocassette versions are both speeded up and edited (most of "A Quick One While He's Away" is chopped out), and the film is not yet available on videodisc. Your best bet is to find someone who taped the film when it was shown on pay TV in the early '80s and get a copy made: These screenings were uncut and at correct pitch.

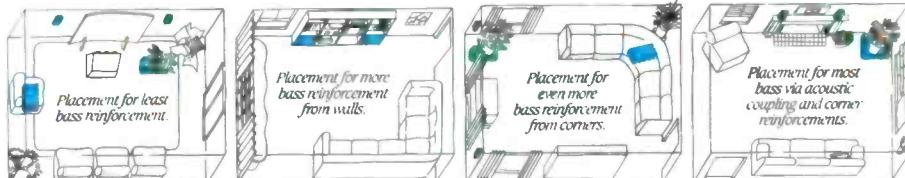
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Julian Hirsch
Stereo Review, Sept. '88

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No matter how well a speaker performs, at home the listening room takes over. If you put a conventional speaker where the room can help

the low bass, it may hinder the upper ranges, or vice-versa.

Ensemble, on the other hand, takes advantage of your room's acoustics. The ear can't tell where bass comes from, which is why Ensemble's

What Henry Kloss tells his friends:

Every time I came out with a new speaker at AR, KLH, or Advent, my friends would ask me, "Henry, is it worth the extra money for me to trade up?" And every time I would answer, "No, what you've already got is still good enough."

But today, with the introduction of Ensemble, I tell them, "Perhaps now is the time to give your old speakers to the children!"

Video companies are insulting the public's intelligence by speeding up material. Do they think we're pitch deaf? Another example of this odious practice can be found on three songs from A&M Video's tape of the Police's *Every Breath You Take: The Videos*. "Every Little Thing She Does Is Magic," "Spirits in the Material World," and "Invisible Sun" are so ridiculously fast that, in "Magic," Sting jerks around like a speedfreak marionette. And speaking of magic, the Cars song of that name, listed on the box for Vestron Music Video's *The Cars Live: 1984-85*, isn't even on the tape (though it's present on the Japanese videodisc).

To these miserly video companies, I say we won't get fooled again!

Phil Cohen
Bay Harbor, Fla.

Popular Music Editor Ken Richardson replies: Right on, Mr. Cohen! When I was reviewing *Every Breath You Take: The Videos* for our September 1987 issue, I did notice that the songs you mention seemed to run fast. However, I didn't have the LP ver-

sions handy for checking, and because this was the first time I had come across this kind of problem, I decided not to trust my memory and therefore did not mention the situation in my review. So I thank you, Mr. Cohen, for confirming my suspicions and helping us alert the public.

By the way, in my April comments on Who's Better, Who's Best, I had only enough space to say that "half of the 20 performances . . . appear here noticeably speeded up." Now that Mr. Cohen has mentioned five of the affected songs, here, for the record, are the rest: "Substitute," "Pinball Wizard," "See Me, Feel Me," "5:15," and "You Better, You Bet."

Video releases with incorrect pitch are indeed odious. We promise to keep an ear on the problem and report any future occurrences we find to our readers.

AND NOW, SOME ACTUAL BEATLE LETTERS

I knew there was something I didn't like about "She Loves You." After I read the March letter about all the edits in the performance, I realized why. This is one of the few Beatle songs where Ringo's cym-

bal is not consistent. "She Loves You" has always been one of my least favorite Beatle tunes; I never knew the reason until now.

Michael Devich
Lake Isabella, Calif.

Concerning the reader in your April "Letters" who is looking for Beatle books and booklets: I have a copy of the *Magical Mystery Tour* LP booklet, which I kept from an old copy of the album that I sold. I would be more than happy to sell or trade the booklet for a price or a CD. I am not a dealer, just a fan of good, quality music.

Chris Pletka
582 Holiday Dr.
Somonauk, Ill. 60522

I have a copy of the *Get Back* book from *Let It Be*. It is the 160-page original, not the 46-page bootleg, and it's for sale.

H. Cummings
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Bose and Audi

The latest addition to the Bose fleet of customized automobile sound systems is Audi of America. The factory-installed Audi/Bose audio system is standard on the 1989 Audi 200 series and a \$600 upgrade option on the Audi 100. Bose has developed other custom sound systems with General Motors, Nissan, Honda, and Acura.

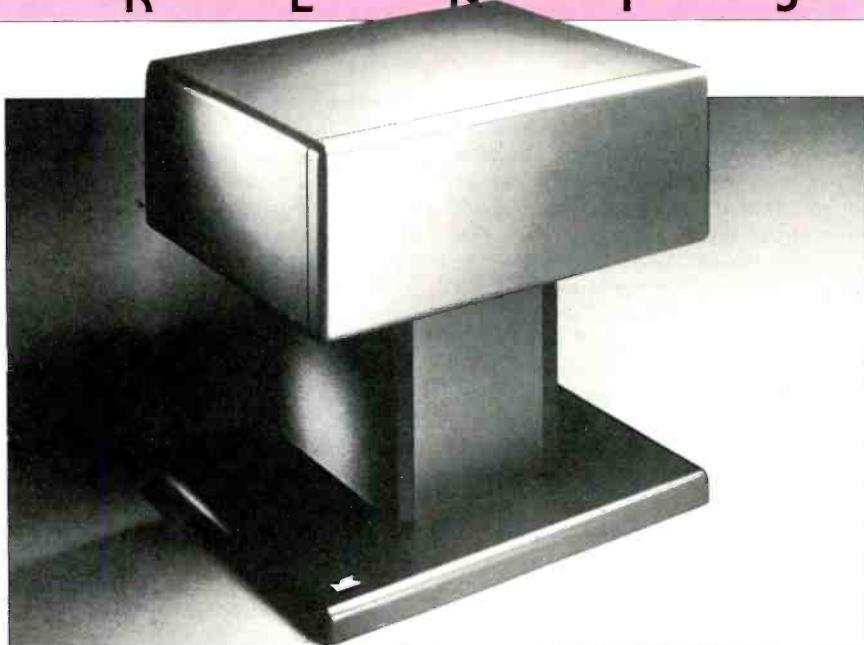
Bose's system features a special Bose-modified Blaupunkt AM/FM receiver/cassette deck named Delta. The Delta is a dual-diversity FM receiver. It constantly switches to the best FM signal between the antenna in the front windshield and the antenna in the back windshield (there is no external mast antenna). The diversity system helps cut down on certain reception problems, such as multipath distortion. The receiver also includes the Automatic Radio Information (ARI) system, a standby automatic broadcast system for traffic and emergency-information bulletins. ARI automatically interrupts the tape program or increases the volume of the radio for a broadcast of an ARI message.

Bose's speaker package includes two 3-liter tuned, ported front-door enclosures holding 4½-inch full-range drivers, each with its own separate amplifier/equalizer module. In the rear of the car interior are two 6-by-9-inch full-range speakers, each also having its own amplifier/equalizer module. The big advantage of a system of this type is that Bose and Audi engineers worked together developing it, tailoring it for the Audi environment. For example, the Audi's door trim panels were redesigned and retooled to meet Bose criteria.

Components for the system will be built in Bose facilities in Framingham and Hopkinton, Mass., and Carrickmacross, Ireland. Completed systems will be installed in Audi's assembly plant in Neckarsulm, West Germany. Initially, the Bose-equipped Audis will be for export to the United States only. *Bose Corp., The Mountain, Framingham, Mass. 01701*

Form, Function, and Bass

M&K Sound's MX-1000 (\$1,495) isn't just a powered subwoofer—its pedestal shape enables it to work as a free-standing table or support for a monitor or TV set as well. Weighing in at 115 pounds, the black-graphite cabinet measures 16 inches high by 28 wide and is 2½ inches deep. The pedestal has been designed so that the driver magnets inside won't interfere with your TV's picture. The drivers are two



M&K's MX-1000: a powered subwoofer in a functional pedestal shape.

newly designed 12-inch subwoofers, mounted back-to-back in a horizontal position. The company claims that the dual-driver design doubles the total radiating area of the subwoofer, providing more radiating area than a single 15-inch unit.

Other benefits reportedly include lower distortion, greater maximum output, improved transient performance, and flat frequency response with pressure wavefronts that create, in the company's words, a "tremendous visceral impact." M&K says its subwoofer can be driven by any amplifier, crossover, or preamp output; it can even be driven by a TV's built-in amp. One control enables you to set the bass level, and another lets you set the upper roll-off frequency between 50 and 125 Hz. The Powered Pedestal's frequency response is specified as 20 to 125 Hz, ±3 dB. *Miller & Kreisel Sound Corp., 10391 Jefferson Blvd., Culver City, Calif. 90230.*

Power Belles

The Belles 150 (\$595) is a stereo power amp rated at 100 continuous watts per channel from 20 Hz to 20 kHz, with no more than 0.09-percent total harmonic distortion (THD) into 8 ohms (150 continuous watts per channel into 4 ohms). Maximum power before clipping is 120 watts per channel into 8 ohms and 185 watts per channel into 4 ohms. Maximum peak current is said to be 75 amperes. The solid-state unit uses complementary Class AB circuitry, power MOS FET output transistors, a 500-VA toroidal transformer, polypropylene capacitors, and 1-percent metal-film resistors. Internal components, such as Tiffany input connectors, gold-plated binding posts, and power supply, are mounted on a single circuit board. The company says this design nearly elimi-

(Continued on page 80)



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Answers to Readers' Questions

By Larry Klein

HQ Query

Most of the new VCRs are advertised as having HQ circuitry, but I've never seen an explanation of what HQ is supposed to accomplish. Can you supply one?

R. Atkinson
Cerritos, Calif.

HQ stands for High Quality, and its technology was developed by the Victor Company of Japan (JVC) for VHS-system VCRs. Essentially, it is a collection of video-signal enhancement systems that includes circuits operating separately on various aspects of the signal. The HQ circuits are designed to reduce luminance- and chrominance-signal noise and, thereby, reduce snow or graininess and color patching or streaking, respectively. White-clip level inadequacies are also reduced, with a resulting improvement in the edge sharpness of images.

Since different HQ circuits operate during recording and playback, some of the improved quality of HQ-recorded tapes will come through during playback of an HQ tape on a non-HQ machine. An older tape played on an HQ deck will also benefit, but to a lesser degree. The improvements are most obvious at the slower tape speeds, where it is claimed that tapes HQ-recorded in the slow-speed EP mode will have the visual quality of conventional standard-speed tapes. This claim isn't always lived up to, however.

One caveat: The HQ logo on a VCR does not necessarily mean that it has all of the different circuits included in the HQ array. Read the spec sheet or check with the manufacturer to find out which ones are used.

Concert Sound Levels

Judging from some recent live concerts I've been at, the people who control the sound systems seem to be involved in a game of acoustic one-upmanship. Is there no legal limit as to how loud they can turn up the sound, and can't excessive volume damage a listener's ears? Incidentally, how much amplifier power do those loud systems have?

Scott Robbins
Chillicothe, Ohio

No, yes, and a lot! Although several other nations do have laws regulating the maximum decibel levels at musical events, American ears are not so protected. I understand that various states, cities, and municipalities are considering restrictions based on the Federal Occupational Safety and Health Administration (OSHA) regulations that establish maximum legal sound levels in factories, but I don't know of any such laws presently on the books.

Yes, there is no doubt that long-term exposure to high sound-pressure levels can cause temporary or permanent hearing loss—but because of individual variations and sen-

sitivities, it is not clear as to how extended and high concert levels must be before permanent damage results. At the 1986 Audio Engineering Society convention in Los Angeles, more than of its 200 members were given audiometric tests. The study revealed a small, but consistent, hearing loss among those tested. At least 10 percent showed a significant hearing loss in the critical 4-kHz midband area that could not be attributed to normal aging. It seems paradoxical that, for many of us, prolonged listening at high sound levels can ultimately disqualify us as critical listeners. It was the frightening implications of the AES study that prompted HIGH FIDELITY's July 1988 special section on hearing damage and protection.

To answer your third question: According to a recent editorial in the pro-audio magazine *Recording Engineer/Producer*, some of the larger touring sound systems are capable of sustained levels at or near 120 dB, the threshold of discomfort and above the level causing hearing damage with prolonged exposure. *RE/P* also noted that the latest heavy-metal concert held at Castle Donington in the English Midlands used the biggest sound-reinforcement system ever assembled. Its rating of 500,000 watts (!) made this year's *Guinness Book of Records*.

Dubbing Dolby

I've never been sure about which technique to follow when dubbing Dolby-encoded tapes. Should the Dolby play and record circuits be on or off if I want to end up with a Dolby-encoded tape? When making my copies, how can I convert between Dolby B and C encoding?

Roberta Deerfield
Canoga Park, Calif.

Although it may seem like redundant processing, the correct way to dub Dolby tapes is to fully decode the tape during playback and re-encode it during recording. If you want to switch between Dolby B and Dolby C encoding, the time to do it would be during the dubbing process: Set the playback machine to the required decoding and the recording machine to the desired encoding.

This decode/encode process is necessary because proper Dolby decoding can take place only when a machine's decoding circuits "track" the encoded tape's signal levels. If you were to attempt to copy Dolby-encoded material without decoding it first, the odds are that it would be rerecorded at a higher or lower level than on the original tape. In playback of such a copy, there would be shifts in frequency balance or increased noise. Recording studios and professional duplicators avoid these problems by recording standard Dolby-level test tones on their tapes and adjusting their recorders and duplicators according to them. □

We regret that the volume of mail is too great for us to answer all questions.



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Are You Ready For Dolby S?

By Robert Long

Just when you thought the noise-reduction wars were over, there's a new combatant to tell you about: Dolby S. This time, however, the integration of the new system into our way of life promises to be less of a rough-and-tumble than it was in the days when DBX and Dolby C were first fighting for the hearts and minds of home recordists. In fact, I wouldn't be surprised if, in a very few years, Dolby S became the clear winner for all but the lowest-tech, most penny-pinching of applications.

Three years ago, Dolby Laboratories announced its Spectral Recording noise-reduction process, a.k.a. Dolby SR. A system strictly for pro use, like Dolby A, it purported to deliver analog recordings with nearly all the sonic benefits of digital media. SR involves special pre-emphasis; dynamic processing of high levels in four bands (with fixed and sliding passband frequencies for both highs and lows); a medium-level processor working in the same four bands; a low-level section affecting the two high-frequency bands only; and a stage of antisaturation processing at each end of the spectrum. And that's just for recording: In playback, each of these 13 elements must be undone. It didn't occur to me at the time that so complex a system could have any consumer applications. I should have thought again. The four-band Dolby A system yielded the one-band Dolby B, so why not a home version of SR?

Well, it's in the works. David Ranada broke the basic technical details of the system in last February's "Currents," and this spring Dolby Laboratories began discussing its plans for Dolby S with its consumer-equipment licensees. Preparations are underway for the first Dolby S integrated circuit, and decks incorporating it could appear as early as next year.

Why do we need them? There are a number of reasons. First, there's the question of effectiveness. Dolby B claims 10 dB of noise reduction, which it achieves only in the treble range, where the average human ear is most sensitive to noise. Dolby C claims 20 dB and spreads its advantages out over a broader spectrum. Dolby S is rated at 24 dB at high frequencies and 10 dB at low. That comes closer to closing the gap with DBX's 30 dB, though Dolby and DBX take such a radically different approach that comparing their noise-reduction figures can easily be misleading.

More important, I think, is that Dolby S is the first noise-reduction system to be engineered from the ground up specifically for the cassette. Dolby B and DBX were originally devised for open-reel decks; Dolby C began with the premise of adding another processing "layer" onto Dolby B. Dolby Laboratories says that S will be less sensitive than its predecessors to the errors in level matching and frequency response that are common in the cassette record/playback cycle. This is, of course, an area where the single broad and fixed band of DBX has an ad-

vantage over the level-dependent sliding band in Dolby B and C. At present, a Dolby B/C recorder that has behaved beautifully can too easily be compromised by the "latest and greatest" tape, which may be too sensitive and require too much bias current to deliver, respectively, the standard output level and flat frequency response required for best Dolby C tracking.

At the same time, Dolby Labs has announced that it will be tightening the performance specs required of decks incorporating Dolby S. In particular, it will be checking head azimuth on the samples submitted for license approval. Such is the marketing power of the Dolby name that when Dolby Labs withholds approval, the offending design vanishes rapidly. That fact has been the single most effective guardian of tape-deck quality.

Initially, at least, Dolby S will have its own dedicated IC chips that will not process Dolby B or C; deck manufacturers will have to use separate ICs for S and for B. I can't imagine an S home deck that won't include B; the countless millions of Dolby B cassettes, prerecorded and homegrown, that are out there will demand it for the predictable future. Dolby C is another matter. If Dolby S is a success, it could eventually preempt the place now occupied by C (and HX Pro, if Dolby S also contains antisaturation measures).

In a recent column, I touched on the make-do approach that Dolby permitted in the first year of Dolby C production: the use of dual Dolby B ICs instead of proper Dolby C chips until the latter were available. Perhaps competition from DBX—which at that time was making inroads into the home-deck field—induced Dolby Laboratories to push the C format with more energy than was really prudent. But once inclusion of a C model became the hallmark of leadership among the deck manufacturers, nothing could have stopped the tide. At any rate, a more circumspect approach might have produced more satisfactory results.

Since there will be—from the beginning—dedicated Dolby S chips, the only cause for misgivings of that sort this time around may be the status of DAT by the time Dolby S analog decks appear. DAT supplies could be ample and prices significantly reduced by next year. If Dolby Labs sees DAT as a competitor to Dolby S, it could feel the need to rush S through in the way it did C.

But I don't think it will work out that way. There are price floors below which DAT decks cannot drop because of their inherent complexity. Unlike analog tape, which can run the gamut from shirtpocket cheapie to sybarite special, DAT will, I believe, always be a relatively high-end, specialist-oriented product. Dolby S has the opportunity of doing yeoman service in the very broad middle ground. And that means us—you and me, as home recordists who may be reluctant to splurge on DAT, for all its glitter. □

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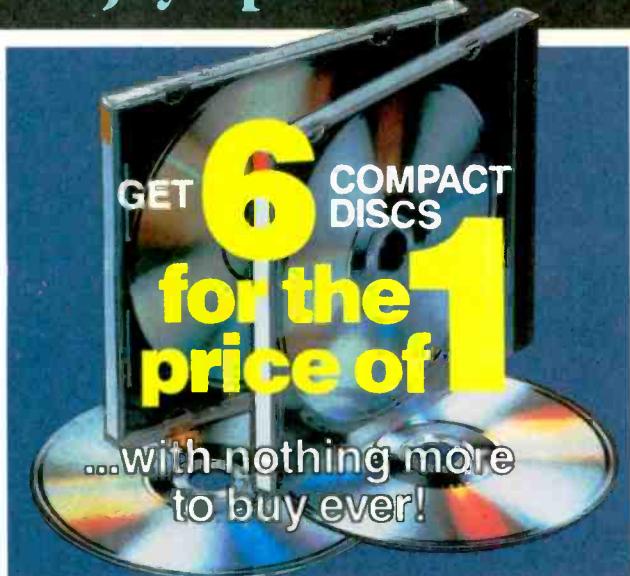
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Jethro Tull: Aqualung • Locomotive Breath, title song, etc. Chrysalis 124705

Cinderella: Long Cold Winter • Gypsy Road, more. Mercury 114780

John Williams & The Boston Pops: Digital Jukebox • More, more. Philips 125059

An Evening With Louis Armstrong GNP Crescendo 271006

Bobby Brown: Don't Be Cruel • My Perogative, Roni, etc. MCA 100621

Huey Lewis: Small World • Perfect World, etc. Chrysalis 134347

R.E.M.: Eponymous • Fall On Me, The One I Love, etc. IRS 100701

Dwight Yoakam: Buenas Noches From A Lonely Room • Reprise 100009

Jimmy Page: Outrider • Led Zeppelin guitarist solo Geffen 123721

Robert Plant: Now All Zen • Heaven Knows, etc. Es Paranza 134392

Led Zeppelin: Houses Of The Holy Dyer Maker, etc. Atlantic 134321

20 Great Love Songs Of The 50s & 60s Vol. 1 • Only You, more. Laurie 120768

Viennese Bonbons • Vienna Phil. Orch./Lorin Maazel. DG 115287

INXS: Kick • Need You Tonight, Devil Inside, title song, etc. Atlantic 153606

David Sanborn: Close-Up • Slam, You Are Everything, J.T., etc. Reprise 134408

Rubinstein: Brahms, Piano Concerto No. 2 & Solo Piano Works • RCA 114760

Al Jarreau: Heart's Horizon • Killer Love, One Way, etc. Warner Bros. 100716

Willie Nelson: All-Time Greatest Hits Vol. 1 • 20 greats! RCA 100705



Tiffany: Hold An Old Friend's Hand 100707

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The Relapse of Chroma Phobia

By David Ranada

Precisely one year ago in this column I ran "The Story of S, or Chroma Phobia," in which I stated that videodiscs would not benefit from the separated luminance (Y) and chrominance (C) signals carried by the Y/C, or S, connectors first encountered on Super VHS machines. However, I've been proven wrong on this point by the Philips CDV-488 (see test report, p. 19). The benefits of its Y/C output are not always visible, but they do exist and can be quite striking at times.

A Y/C connection prevents the interference between luminance and chrominance that can result in "dot crawl" (color being decoded as fine detail) and moiré effects (fine detail being decoded as color). Because a videodisc carries a composite-video signal—one in which the luminance and chrominance spectra have been overlapped—I had thought that a Y/C connector would not confer any image-quality improvements, since the cross-interference caused by the spectral overlap could not be completely undone. VCRs, on the other hand, record luminance and chrominance in different spectra, and S-connector hookup maintains that separation.

However, in direct comparisons between the CDV-488's composite and Y/C outputs, the latter was often distinctly better. Even though dot crawl did not seem to be reduced, on the well-known color-bar test pattern the Y/C output provided much sharper and cleaner boundaries between colors. Moiré effects were reduced in the resolution-wedge and multiburst patterns. Images with a lot of color detail (such as a multicolored field of flowers) seemed clearer with the CDV-488's Y/C output.

A Philips white paper says that the player's comb filter—which separates the chrominance and luminance out of a composite-video signal—is of higher quality than that normally found in home video monitors. Since the player's comb-filter operation is locked to the same crystal oscillator as the disc-rotation rate, it can provide more accurate color decoding than a monitor's filter. The Y/C connection "avoids the vagaries" of a monitor's other composite-video circuitry as well as its comb filter.

Philips's paper also restates the important but little-appreciated point that the videodisc is the only consumer video medium that is capable of storing a full-bandwidth chrominance signal. A standard NTSC chrominance signal takes up about 1.5 MHz in bandwidth, which is equivalent to about 120 lines of horizontal resolution. Only the videodisc and some professional video formats are capable of storing this much color detail. All three high-luminance-resolution video formats (S-VHS, ED-Beta, and Hi8) have color resolutions unchanged from their original, low-resolution formats: 50 lines. Moreover, this is a theoretical maximum; because of noise problems, color resolution is typically only 30 to 40 lines.

Back when standard Beta, VHS, and 8mm were the only systems available, their limited luminance resolu-

tions formed a close visual match to their limited color resolutions. While the recordings made on these systems have always been inferior to videodisc reproduction, their pictures were nonetheless visually "balanced." Noise levels and resolution for both luminance and chrominance were cannily gauged so that deficiencies in one area covered up faults in others. The low-luminance bandwidth typical of standard VCR formats (at best around 160 lines) helps disguise their high video-noise levels. The color bandwidth of a standard-format VCR is proportionately as inferior to a full-bandwidth NTSC signal as its luminance bandwidth. Both are less than half of what the videodisc is capable of delivering.

The three high-luminance-resolution home VCR formats do not embody such an elegant series of visual trade-offs. Obsessed with horizontal-resolution performance, VCR-format standardizers have gone overboard in obtaining improved *luminance* resolution specs for their new systems. The color performance remains basically unchanged and, in some ways, has become worse.

To me, the most important visual artifact made more obvious by the high-luminance-resolution VCR systems is what I call color fringing. This manifests itself as a tinted aura around a brightly colored object, especially when seen against a white or gray background. It's as if the color in that object somehow leaked outside its area on the image—the so-called "paint by the numbers" effect. Fringing has been exacerbated by the improvement in luminance resolution without a corresponding increase in chrominance resolution. With the new VCR systems, the edge of an object can be positioned with a horizontal luminance resolution of more than 300 lines. The color, however, still has a 40-line resolution; it can be positioned with ten times less precision than the luminance detail (it used to be only about three times less).

The situation is made worse by the use of certain types of processing in the decoding of videotapes. On top of the fringing effect, the use of unequal-length delay lines for luminance and chrominance causes the fringing to start "late" (a scan line or two beneath where the object starts), thus smearing the color even more. Just try to tape disco lights or a Christmas tree and not get these effects! Even Y/C connections won't help.

Now, don't get me wrong; I'm not going to recommend that any videophile stick with standard VHS, Beta, or 8mm. S-VHS, ED-Beta, and Hi8 all give image reproduction far superior to that of the standard formats. But in their race to improve luminance-resolution figures—because this is the one spec that seems to sell products—VCR manufacturers have again exposed their phobias about dealing squarely with chrominance. As seems to happen regularly in video, technical decisions made long ago are now coming back to haunt us. For high-quality playback of a movie, I'll take the videodisc any day!



Ask Before You Buy

By Beth C. Fishkind

There is more to buying, living with, and enjoying home-entertainment equipment than charts and graphs. So HIGH FIDELITY now brings you "Practicalities," a column devoted to subjects that don't necessarily have specs. The new column will appear every other month, alternating with "The Autophile."

A good example of what "Practicalities" is about came up in a recent conversation with a reader. He was looking for a new receiver and mentioned that he was going to buy it from whoever gave him the lowest price for cash. This is one way of getting the best price—but not always the best value.

Sometimes the products you buy at deep-discount retail or mail-order outlets are "gray goods": units that were intended for sale in other countries, *not* in the United States. That bargain-price unit you pick up may not have UL safety approval or be designed to run on standard 110-volt U.S. current. (Note, however, that it's possible for non-gray goods to lack UL approval, if they are not sold in locales that require it.) Furthermore, you get zip as far as a valid manufacturer's warranty is concerned—the warranty doesn't count in this country.

Gray goods are not "hot" merchandise, but buying and selling them is a gray area: There are court cases pending. Gray goods are legitimate merchandise procured through unauthorized channels. Usually, foreign audio companies have a separate American division that sells products built to this country's specifications through authorized dealers. But equipment can be bought outside this authorized network—it's still the real thing from the manufacturer whose name is on the unit, but not necessarily built to U.S. specifications and warranted here.

Manufacturers such as Yamaha, Denon, and Nakamichi are trying to create awareness of the gray-goods problem by advertising in magazines like HIGH FIDELITY. In the classified section at the back of this magazine, you'll find their notices.

My advice is: Ask questions before you buy—and don't be intimidated! Write a list so that you don't get sidetracked. Ask the retailer whether the store is an authorized dealer for the brand you are buying. (You can call the manufacturer to confirm the names of authorized dealers.) Another thing to look out for is: Does the equipment have a valid U.S. warranty from the manufacturer? (Be careful here. Some retailers may use an outside warranty firm, such as the U.S.A. Warranty Co., so that they can tell you, "Yeah, it's got a U.S.A. Warranty." There may be nothing wrong with such a warranty, but it's not from the manufacturer.) You should also ask whether the instruction manual is in English. And pay attention to model numbers, especially prefixes and suffixes, comparing them with the manufacturer's advertisements. In addition, be wary of serial-number tampering, which voids

the warranty—even on American-designed equipment. If you're suspicious, check with the manufacturer. Last, ask whether there is a "repacking fee" if you should decide to return the merchandise.

In fairness, not all equipment from deep-discount retailers is gray goods. There are other ways to offer equipment at lower than specialty audio-retailer prices. And even some retailers who deal in gray goods now offer their own store warranty to make up for the voided original one.

I guess the moral is: There's no free lunch. To get the lowest price, you might have to make some compromises—the least of which may turn out to be the attention and service from a specialty shop. Sometimes it may be worth the extra money to buy from an authorized dealer. It's your option. But once again, ask questions and stick to your guns!

Believe it or not, I encounter many of the same hurdles as you do when I set out to buy new equipment. First, there's no magic way that I know exactly the right receiver, tape deck, or whatever to buy; I read up and ask around. However, I do have the advantage of talking with people inside the industry and getting to see and play around with a lot of new products. Still, we may bump elbows at the retail counter.

Surprised? It works like this: Most mainstream consumer-electronics products are so heavily discounted that I can often get a comparable deal or better at retail than through the manufacturer (if the manufacturer will sell direct at all). The industry accommodation price from a manufacturer is based on a single-unit quantity; some dealers buy in such large quantities—and usually the higher the volume, the lower the wholesale cost—that they can offer a retail price that beats my industry discount. What's more, when I buy direct from a manufacturer, I must usually write a check for the full amount, whereas at many retail stores I can use a credit card.

Have you run into any of the problems described above? Or is there a particular topic appropriate to "Practicalities" that you would like to see covered? You can write me about the troubles you've seen, or pass along some advice you feel might be helpful to other audio and music aficionados. For instance, if you've bought a product we have reviewed recently, have you discovered anything that we missed?

Address your mail to: Beth C. Fishkind, HIGH FIDELITY, 825 Seventh Ave., New York, N.Y. 10019. (Please, no phone calls.) In certain instances, I may wish to contact you for more information; if you're agreeable to that, please include a daytime phone number in your letter.

This summer, while you're relaxing and listening to some tunes, jot down your thoughts and tell me what's going on in your corner of home entertainment. Meet you back here in September! □

Report preparation supervised by Michael Riggs, David Ranada, Beth C. Fishkind, Robert Long, and Edward J. Foster. Laboratory data (unless otherwise indicated) is supplied by Diversified Science Laboratories.

Test Reports

Those who have been Laserdisc fans from Day One, as I have, will remember that one of the format's main claims to fame was its supposed ability to produce a perfect freeze frame. Indeed, that has always been true with CAV (Constant Angular Velocity) discs because these record one video frame on

ies with the track radius—it's fastest at the innermost diameter and slowest at the outermost—to keep the *linear* speed constant. This affords a longer playing time, but the one-to-one relationship between frame rate and revolution rate is lost, and still frame and special effects are not so easy to come by.

Philips CDV-488 CD Video Player



DAVID A. WAGNER

each revolution of the disc. Simply freezing the laser pickup stops the picture in its tracks. But CAV discs "waste room," since the long-circumference outer tracks carry no more picture information than the short inner tracks. As a result, CAV discs provide a maximum of about 30 minutes playing time per side and, except for special purposes, have never been as popular as the "long-play" CLV (Constant Linear Velocity) discs, which have one hour of playing time per side. With CLV discs, angular speed var-

Enter the Philips CDV-488, a CD Video player that handles six different types of discs: 3-inch and 5-inch audio CDs, 5-inch CD-Vs, 8-inch and 12-inch Laserdiscs, and the new 8-inch LD singles. (The last are a thinner version of the conventional 8-inch Laserdisc and provide 20 minutes of audio and video.) Thanks to its extensive use of digital video memory circuits (similar to those used in some "digital" VCRs), the CDV-488 provides a full range of video special effects—even with CLV discs. ▶

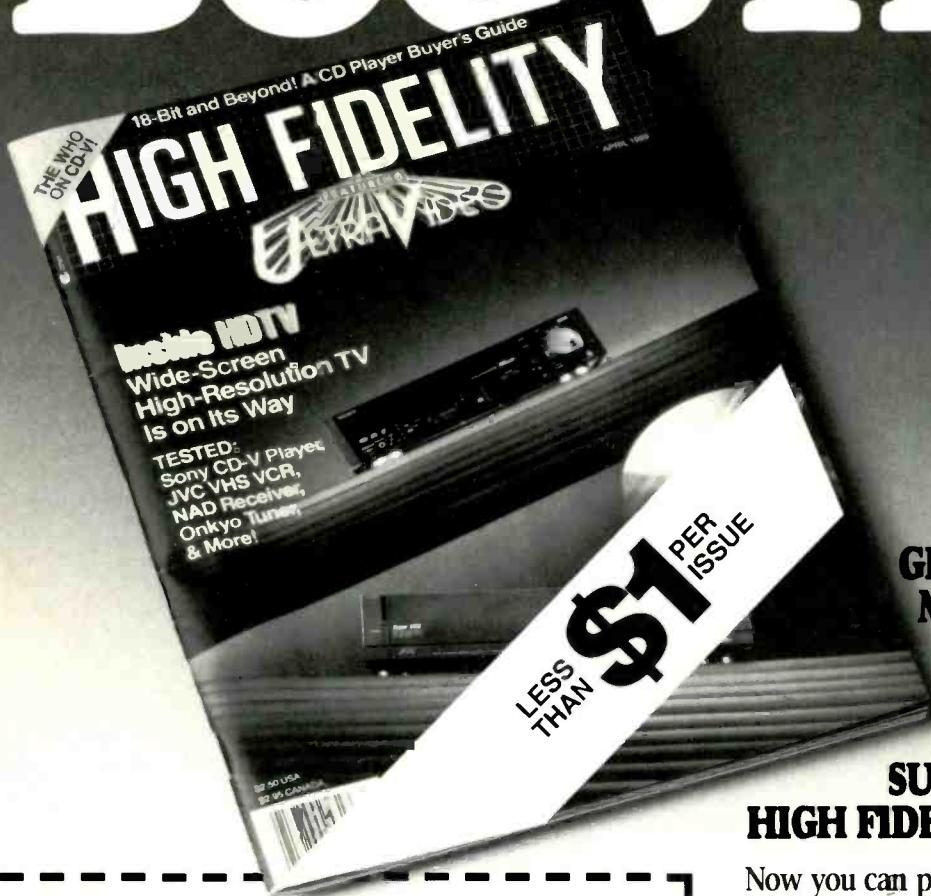
Dimensions: 16½ by 4¾ inches (front), 16¾ inches deep plus clearance for connections.

Price: \$1,300.

Warranty: Two years parts and labor.

Manufacturer: Made in Japan for Philips Consumer Electronics Co., One Philips Dr., Knoxville, Tenn. 37914-1810

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In addition to "mosaic" effects, the CDV-488 provides freeze frame, forward and reverse, slow and strobe motion, and bidirectional accelerated motion at up to ten times normal speed via a quasi-professional "jog" dial and a shuttle ring that lie on the RC-488CDV Universal Remote Commander. The RC-488CDV itself is an unusually competent control center and can learn the codes of as many as ten different audio and video components—including those of other than Philips origin.

Philips claims that its finest digital audio chips are used in the CDV-488, and the tests performed at Diversified Science Laboratories would certainly give one no cause to doubt the statement. As a CD player (or when it is reproducing the digital audio track of a Laserdisc), the CDV-488 is on a par with the best "straight" CD players I have experienced and is better than any other combination CD/Laserdisc player I've come across to date. Response is flat within 0.1 dB across the board, D/A linearity is equally perfect down to the -70-dB level and off by only about $\frac{1}{2}$ dB at -80 dB.

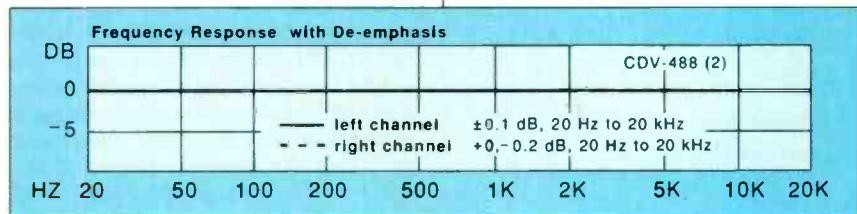
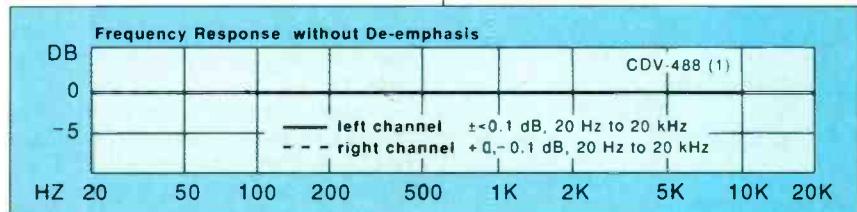
As one might expect, given the converter's excellent linearity and its mono-

sary, but it is impressive nonetheless.

The Philips CDV-488 tracked all bands of the Philips "defect" test disc with nary a hang-up and, on the Pierre Vérany test disc, stumbled only when the

Compact Disc Playback

All data were obtained using the CBS CD-1, Sony YEDS-7, Philips 410 055-2, and Philips 410 056-2 test discs.



dropouts reached 1 millimeter (0.770 milliseconds) in length. Output level and impedance present no problems whatsoever, and S/N (signal-to-noise ratio) is excellent.

The digital audio tracks on available



The RC-488CDV Universal Remote Commander works with other manufacturers' components.

tonicity down to the lowest level, distortion is better than average too: less than 0.1 percent down through -40 dB, 0.5 percent at -60 dB, and about 2 percent at -70 dB. And while I wouldn't want to demonstrate that I can hear the difference between 100 dB channel separation at 10 kHz and half that amount (or even much less!), as an engineer I can't help but be impressed by a design and layout that produce the excellent results that Philips has obtained in the CDV-488. Similarly, the near-perfect channel balance (within 0.02 dB) may be overkill from the point of view of what's neces-

Laserdisc test records are not nearly so complete as those available on CD. Still, those bench tests validate what one would expect: i.e., the CDV-488's digital audio performance on Laserdisc is essentially identical to its performance on CD.

On old-style "analog" Laserdiscs (in which the audio channels frequency-modulate a pair of carriers), the sound quality is no match for that of a CD, but in the case of the Philips CDV-488, it's a good bit better than par for the course. A-weighted S/N is 61 dB with the CX noise-reduction system off and more than 10 dB better with it on. Midband

Channel Separation (at 1 kHz)	105 dB
Channel Balance (at 1 kHz)	± 0 dB
S/N Ratio (re 0 dB; A-weighted)	
without de-emphasis	113 dB
with de-emphasis	114 dB
Harmonic Distortion (THD+N; 40 Hz to 20 kHz)	
at 0 dB	< 0.01%
at -24 dB	$\leq 0.04\%$
IM Distortion (70-Hz difference; 300 Hz to 20 kHz)	
0 to -10 dB	< 0.01%
at -20 dB	0.011%
at -30 dB	0.026%
Linearity (at 1 kHz; dithered below -60 dB)	
0 to -70 dB	no measurable error
at -80 dB	-0.6 dB
at -90 dB	-3.4 dB
at -100 dB	-3 dB
Tracking & Error Correction	
maximum signal-layer gap	> 900 μ m
maximum surface obstruction	> 800 μ m
simulated-fingerprint test	pass
Maximum Output Level	
line output	1.98 volts
headphone output	3.91 volts
Output Impedance	
line output	220 ohms
headphone output	38 ohms

Videodisc Playback

All data were obtained using the Pioneer M-1 and F-2 test discs.

Audio Frequency Response	
digital	$\pm < 0.1$ dB, 20 Hz to 20 kHz
AFM (CX off)	+0, -3 dB, 20 Hz to ≈ 19 kHz
Channel Separation (at 1 kHz)	
digital	105 dB
AFM	> 75 dB
Channel Balance (at 1 kHz)	
digital	± 0 dB
AFM	$\pm < 0.1$ dB
Audio S/N Ratio (re 0 dB; A-weighted)	
digital (without de-emphasis)	112 1/4 dB
digital (with de-emphasis)	113 1/4 dB
AFM (CX off)	61 dB
AFM (CX on)	71 1/2 dB
Harmonic Distortion (THD at 1 kHz, 0 dB)	
digital	< 0.01%
AFM	0.16%

Test Reports

Linearity (digital; at 1 kHz)	
0 to -50 dB	no measurable error
Audio Output Level (at 0 dB)	
digital	1.94 volts
AFM	0.48 volt
Video Frequency Response	
at 500 kHz	+ 1/4 dB
at 1.25 MHz	- 1/2 dB
at 2.0 MHz	- 1 1/2 dB
at 3.0 MHz	- 2 3/4 dB
at 3.58 MHz	- 3 1/4 dB
at 4.1 MHz	- 4 3/4 dB
Luminance Level	standard
Gray-Scale Nonlinearity (worst case)	
	< 10%
Chroma Level	≈ 3 dB low
Chroma Differential Gain	≈ 25%
Chroma Differential Phase	≈ ±3°
Median Chroma Phase Error	0°

distortion is quite low (0.16 percent at 1 kHz); midband crosstalk is an impressive 75 dB. Moreover, frequency response is flatter than I've seen on some other Laserdisc players: +0, -2 dB from 20 Hz to about 17 kHz with the CX system off (to about 10 kHz with it on) and down only 3 1/2 dB at 20 kHz (without CX).

Video performance is stellar too. Response is down less than 5 dB at 4.1 MHz (the highest frequency on the test disc), which suggests a horizontal resolution in excess of the 330-line limit of the NTSC system. Luminance level is right on the mark, and the gray-scale linearity is excellent. Chroma level (color saturation) is 3 dB low—quite typical, and automatically corrected by the auto-chroma-gain circuitry in every consumer video monitor—and the average chroma phase (tint) error is zero. Chroma differential phase error (tint change with brightness level) is negligible, and the differential gain error (color washout with changes in brightness level), although certainly measurable, was not readily apparent in my viewing tests.

The Philips CDV-488 is made for

today with thought for the future. Although its D/A audio converters are representative of today's state of the art, there are both optical and electrical (phono-jack) digital audio outputs to drive tomorrow's converters and digital amplifiers. For the videophile, there's both a composite (phono-jack) output and an "S" output for monitors that handle luminance and chrominance separately. (There is also an RF output on Channel 3 or 4 for those who might not yet have upgraded to monitor status.)

In its programming ability—including an FTS (Favorite Track Selection) feature capable of learning your favorite programs on as many as 218 discs and storing them in memory for future recall—it's display system, and its remote control, the Philips CDV-488 is exemplary. Combine this with a level of performance that cannot be bested in any significant regard by any competitive product and a complement of features too numerous to cover with any measure of thoroughness here, and you have a product that can be considered to establish the current "state of the art."

Edward J. Foster

Rockford Fosgate RF-2000 Power Amplifier

All data measured in the normal (stereo, unbridged) mode, with gain controls set to maximum.

Rated Power (8 ohms)	
8-ohm load	23.0 dBW (200 watts)/channel
4-ohm load	24.8 dBW (300 watts)/channel
Output at Clipping (at 1 kHz; both channels driven)	
8-ohm load	24.6 dBW (290 watts)/channel
4-ohm load	see text
Dynamic Power (at 1 kHz)	
8-ohm load	25.3 dBW
4-ohm load	28.5 dBW
2-ohm load	29.2 dBW
Dynamic Headroom (re rated power)	
8-ohm load	+2.3 dB
4-ohm load	+3.7 dB
Harmonic Distortion (THD; 20 Hz to 20 kHz)	
at 23 dBW (200 watts)	≤ 0.054%
at 0 dBW (1 watt)	≤ 0.014%
Frequency Response	
	+0, -1/4 dB, 17 Hz to 43 kHz
	+0, -3 dB, < 10 Hz to 265 kHz
S/N Ratio (re 0 dBW; A-weighted)	87 1/2 dB
Sensitivity (re 0 dBW)	46 mV
Input Impedance	18k ohms
Damping factor (at 50 Hz; re 8 ohms)	1,000
Channel Separation (at 1 kHz)	95 dB

As its name implies, Rockford Fosgate (not to be confused with the Fosgate, Incorporated, of ambience-recovery fame) is part of the Rockford group. So is the David Hafler Company, though Fosgate tells me there is no other connection between the two. Evidently Rockford Fosgate is jealously guarding its identity—which is all to the good if its products are to continue the individuality that marks this one.

And certainly the RF-2000 couldn't readily be confused with any Hafler power amp. Despite its billing as "the first in a series of high-performance home audio components," it is more in the tradition of commercial sound amps (many of which have been the darlings of home audio in their day) than are the Hafler designs: It is fitted with a cooling fan; the AC cord has a grounded plug; each channel has its own level control; the bridging options are built-in; and it even can be bought—as the PRF-2000—in a "professional" version with both balanced XLR and unbalanced phone-jack inputs.

The home version has pin jacks for the input. The configuration can be switched, at the back panel, to engage any of three options. The input switch directs the same signal through both channels—which might be useful for biamping systems where the crossovers are

placed between amps and the speakers. The output switch bridges the two channels for maximum power into a single load. The ground switch couples the output ground to chassis ground. Floating output ground and stereo operation at both input and output are the normal modes, however, and our tests focused squarely on stereo use.

The hefty power supply is designed around a toroidal transformer rated at 1,000 volt-amps. Output is through 16 MOS FETs per channel. Their heat sinks are monitored by thermistors that control the fan, turning it on progressively as temperature rises. Additionally, the output devices are protected by a circuit that, in effect, calculates safe operating area, cuts back on the drive power when that area is exceeded, and turns the problem channel's front-panel LED red. A third (power) LED turns red if, despite the fan, the thermistors shut down the amp because of overheating. And both channels are fitted with speaker-protection fuses.

But don't let all this talk of protection intimidate you. The mere mention of a cooling fan conjures up, in the minds of many audiophiles, the sonic image of a room air conditioner endlessly whirring away—or, worse, doing so intermittently and at the least welcome moments. Not only is this fan quiet, as such devices

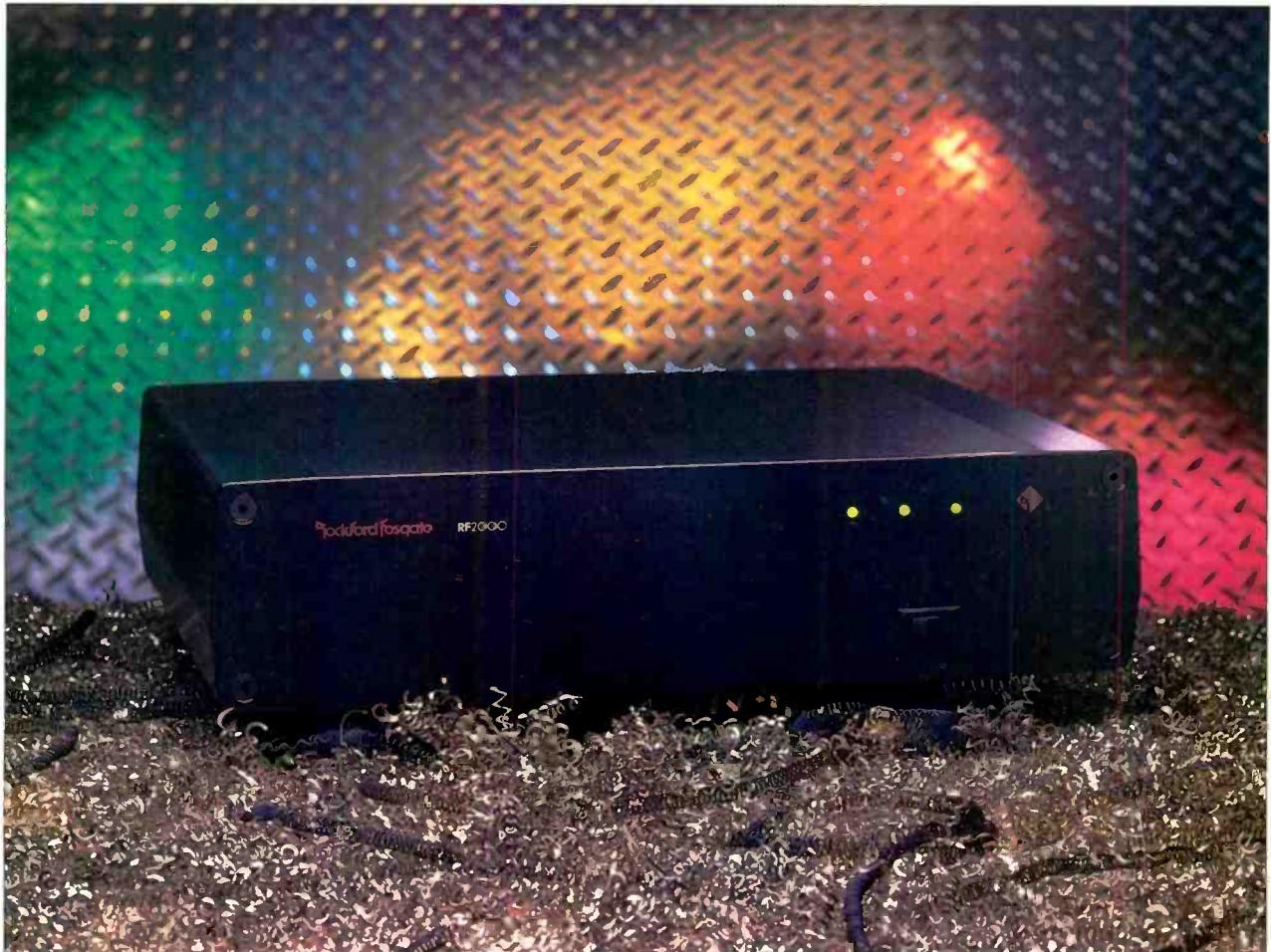
go, but what amounts to a servo mechanism controls it so that it never suddenly fires up. Moreover, it never came on at all during our listening tests—only during high-power measurements on the Diversified Science Laboratories bench.

And it certainly can develop high power: DSL's tests showed it edged up toward 30 dBW (one kilowatt) per channel on an instantaneous basis into a 2-

ohm load. With its 200-watt continuous-power rating as a starting point, it is quite unrestricted in developing the additional power afforded by the reduced duty cycle of the pulse (dynamic) testing or by load impedances lower than 8 ohms—except in the 4-ohm continuous-power test. During that, the 5-amp speaker-protection fuses blew. DSL re-ran the tests with 10-amp fuses—hurriedly, though the amplifier itself gave no sign of overloading. This retesting suggested that, but for the fuse, the reading might be 26.3 dBW (425 watts) or more per channel.

The fuses are not at the output itself, incidentally, which could compromise

output impedance. On the contrary, output impedance is very low, as witness the extremely high 50-Hz damping factor. In fact, everything about the amplifier suggests careful thought and solid construction. A slight mechanical hum was barely audible in our listening sample during pauses in the music, and only in the immediate vicinity of the amp. In most installations, it would be totally in-



DAVID A. WAGNER

ohm load. With its 200-watt continuous-power rating as a starting point, it is quite unrestricted in developing the additional power afforded by the reduced duty cycle of the pulse (dynamic) testing or by load impedances lower than 8 ohms—except in the 4-ohm continuous-power test. During that, the 5-amp speaker-protection fuses blew. DSL re-ran the tests with 10-amp fuses—hurriedly, though the amplifier itself gave no sign of overloading. This retesting suggested that, but for the fuse, the reading might be 26.3 dBW (425 watts) or more per channel.

The fuses are not at the output itself, incidentally, which could compromise

audible. Also inaudible are the distortion products, although the measurements aren't exceptionally low. The sound is simply very clean and unfettered.

This is a fine amplifier, with plenty of headroom for even the most demanding of CDs and plenty of current capability to handle oddball speakers or speaker hookups. It is also surprisingly svelte for an amp of such capabilities (thanks, no doubt, to the toroidal transformer), having an appealing shape that makes it seem more "housebroken" than most other superamps. After experiencing the RF-2000, I expect nothing but the best from Rockford Fosgate. *Robert Long*

(Continued on page 26)

Dimensions: 17½ by 4½ inches (front), 12¼ inches deep plus clearance for connections and ventilation.

Price: \$1,198.

Warranty: "Limited," two years parts and labor.

Manufacturer: Rockford Fosgate Corp., 613 S. Rockford Dr., Tempe, Ariz. 85281.

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Lyle Lovett—Lyle Lovett and His Large Band (MCA) 378935

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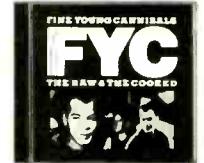
The Go-Betweens—16 Lovers Lane (Capitol) 378810

Midge Ure—Answers To Nothing (Chrysalis) 378786

They Might Be Giants—Lincoln (Rest) 378778

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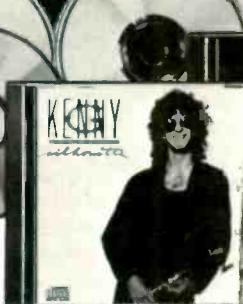
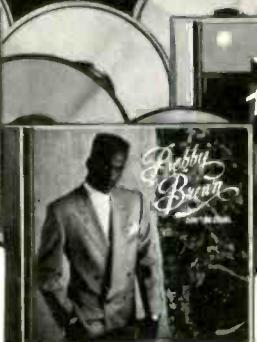
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White Lion—*Pride* (Atlantic) 359471

Bob Dylan—*Greatest Hits* (Columbia) 138586

Portrait of Wynton Marsalis (CBS Master) 373555

Luciano Pavarotti—in Concert (CBS Master) 373548

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White Lion—*Pride* (Atlantic) 359471

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Rotel RTC-850 Tuner/Preamplifier

The tuner/preamp is a superbly sensible idea. It combines in one chassis all the low-level circuitry for a stereo system and keeps it separate from the hum and heat that an included power amp inevitably imposes. It also leaves you free both to choose the amp on the basis of the power rating you'll need for your speakers and your room, and to place that amp—or those amps, depending on your setup—wherever may be most convenient, or even to use powered speakers (another superbly sensible idea).

maintains its own factory in Taiwan as well, it nonetheless relies on British engineering for the sonic polish that is intended to carve out a special high-value/moderate-price niche among the me-too offerings of other Oriental companies.

The RTC-850 is handsome, if conventional, though the front-panel design won't win any ergonomics awards. Unless the unit is at or above eye level, the volume knob tends to obscure the three tuner switches below it and their markings: for band (AM/FM), stereo and muting suppression, and auto/manual



DAVID A. WAGNER

Dimensions: 17½ by 3½ inches (front), 12 inches deep plus clearance for controls and connections.

AC Convenience Outlets: Three switched (180 watts max. total).

Price: \$549.

Warranty: "Limited," two years parts and labor.

Manufacturer: Made in Taiwan for Rotel Electronics, Japan.

U.S. Distributor: Rotel Audio of America, P.O. Box 653, Buffalo, N.Y. 14240.

Around 1950, Radio Craftsman built a very successful tuner/preamp—mono, using tubes, of course—but it has been all downhill from there. Receivers, integrated amps, and separate tuners and preamps all have prospered, but there isn't a tuner/preamp I can remember in the intervening years that has caught the public's fancy—despite efforts by major component makers. Let's hope that Rotel's RTC-850, which is exceptionally capable in some important ways, breaks the losing streak.

Rotel has undergone a number of transformations over the years and is just now emerging from its latest metamorphosis. A Japanese company that

tuning. And the neat bank of pushbuttons obscures the differences between some of the functions they control. One quickly learns where the salient controls are, however, making this minor inconvenience unimportant in the long run.

Among those controls are the various selector options: tape, aux, CD, phono, and tuner. The phono is switched between fixed-coil (MM) and moving-coil (MC) options at the back panel. There actually are two sets of tape connections, chosen at a separate front-panel switch. Only one source at a time, including either of the decks, can be chosen for listening and recording. Thus you can dub in either direction, but you cannot moni-

tor the output of a tape deck while it is recording—a serious design flaw for owners of three-head cassette decks.

Near the selector options is a muting switch. According to the manual (whose French and German texts are, I hope, clearer than the English), this switch causes "a large reduction" in output; in fact, it mutes it altogether. Another semantic quibble: the marking of the aux as an "AV" option, evidently in the expectation that a VCR will be connected to it, though there are no connections or switching for the video itself.

The supplied RRT-3 wireless remote, powered by two AA cells, addresses the major functions of the RTC-850. Included are power on/off, the main selectors (but not the Tape 1/Tape 2 switch), tuner presets, tuning band, manual tuning, mute, and volume. Additionally, on the 850's back panel there are basic transport controls for Rotel cassette decks that have a control interconnect for a DIN socket.

The 850 is fitted with dual output-jack pairs so that you can feed, say, a biamped setup directly. These jacks are gold-plated, as are those for the phono and CD inputs—a surprisingly luxurious touch. There are the usual AM loopstick antenna and mounting bracket. The AM and 300-ohm FM antenna connections are the standard lightweight binding posts. For 75-ohm FM coax, a threaded F connector is provided that (unlike the unthreaded sort on most Japanese tuners) will mate with the cable or

ABOUT THE dBW

We currently are expressing power in terms of dBW—meaning power in dB with a reference (0 dBW) of 1 watt. The conversion table will enable you to use the advantages of dBW in comparing these products to others for which you have no dBW figures.

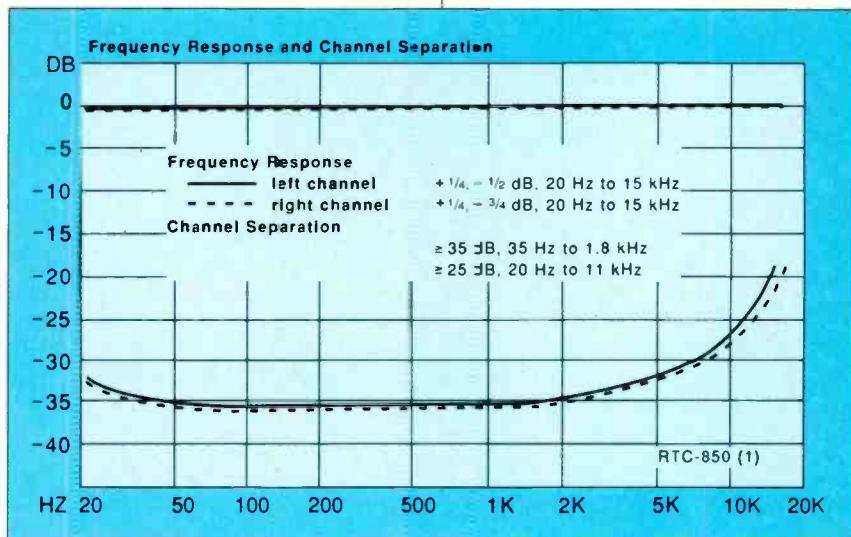
WATTS	dBW	WATTS	dBW
1.0	0	32	15
1.25	1	40	16
1.6	2	50	17
2.0	3	63	18
2.5	4	80	19
3.2	5	100	20
4.0	6	125	21
5.0	7	160	22
6.3	8	200	23
8.0	9	250	24
10.0	10	320	25
12.5	11	400	26
16.0	12	500	27
20.0	13	630	28
25.0	14	800	29

download connectors most prevalent in the United States.

The tuning process, whether on AM or FM, is assisted by a five-segment LED signal-strength indicator next to the frequency readout. Thresholds for FM re-

Test Reports

FM Tuner Section



ception range from below 5 dBf (so the first LED is almost always lit) to 36 dBf (still fairly weak) in increments of 10 dB or more, with a final step to 55½ dBf (still short of full stereo quieting). This concentrates on the weakest signals, where the most help is needed, and offers more increments than do most other tuners. If you have a rotatable antenna, therefore, this aspect of the design is distinctly better than most, although not as useful as an old-fashioned analog meter.

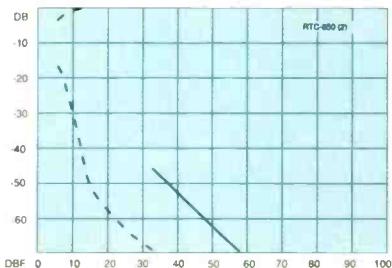
Manual tuning progresses by half-channels (0.1 MHz) on the FM band, full channels (10 kHz) on the AM. The memory consists of two banks of eight presets; each preset will memorize one AM or one FM frequency. If you press a preset that holds an FM frequency while you're tuned to AM—or vice versa—the band switches automatically.

In terms of measurable performance, the FM tuner certainly is no slouch. The signal-to-noise ratios at full quieting are particularly striking. Diversified Science Laboratories encounters few models in which the stereo noise curve goes all the way off the bottom of our graph (at -70 dB). And the figures for other characteristics are consistently comparable to those for much pricier models. Furthermore, the listening quality on the stations that are the standard fare for my tests seemed especially clean despite the absence of any special quieting circuitry or other tricks.

The preamp section is harder to com-

(Continued on page 30)

Sensitivity & Quietling



stereo quieting (noise)

mono quieting (noise)

Stereo sensitivity (for 50-dB noise suppression)

37 1/2 dBf at 98 MHz, with 0.63% THD+N

(38 1/4 dBf at 90 MHz; 37 1/2 dBf at 106 MHz)

Mono sensitivity (for 50-dB noise suppression)

14 dBf at 98 MHz

Muting threshold 31 3/4 dBf

Scan threshold 34 1/2 dBf

Stereo threshold 31 1/2 dBf

Stereo S/N ratio (at 65 dBf) 71 1/2 dB

Mono S/N ratio (at 65 dBf) 80 dB

Capture Ratio 1.3 dB

Selectivity

alternate-channel 65 dB

adjacent-channel 8 1/2 dB

Harmonic Distortion (THD+N)

stereo 0.26% mono 0.34%

at 100 Hz 0.26% 0.34%

at 1 kHz 0.25% 0.27%

at 6 kHz 0.27% 0.23%

Stereo Pilot Intermodulation 0.20%

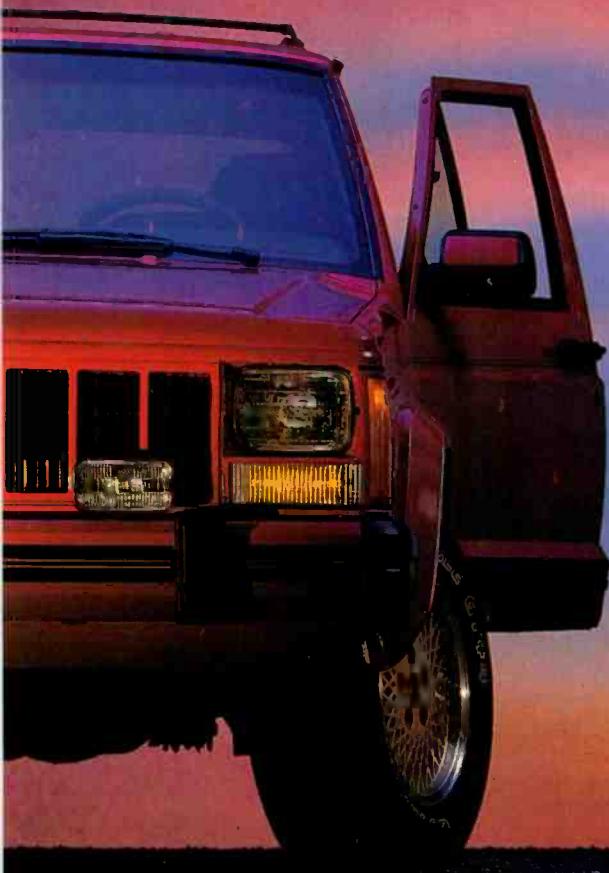
Intermodulation Distortion (mono) 0.20%

AM Suppression 62 dB

Pilot (19-kHz) Suppression 58 dB

Subcarrier (38-kHz) Suppression 104 1/2 dB

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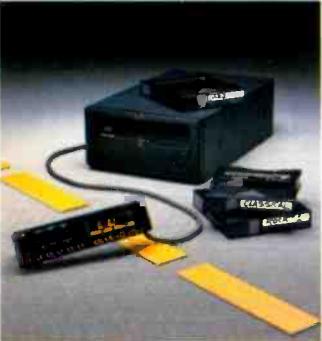


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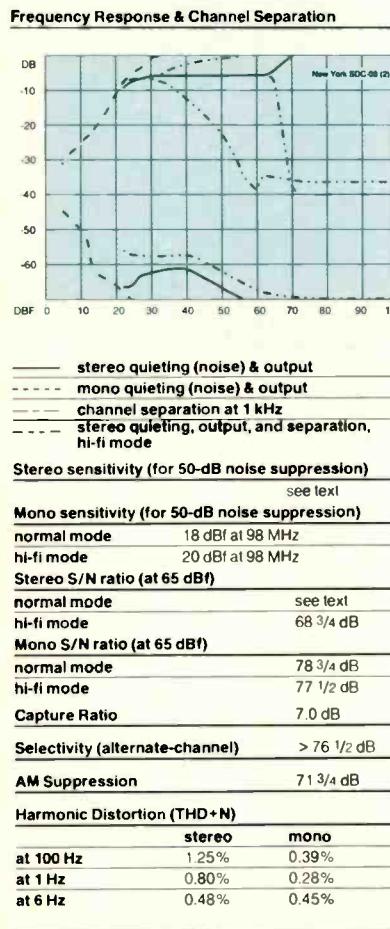
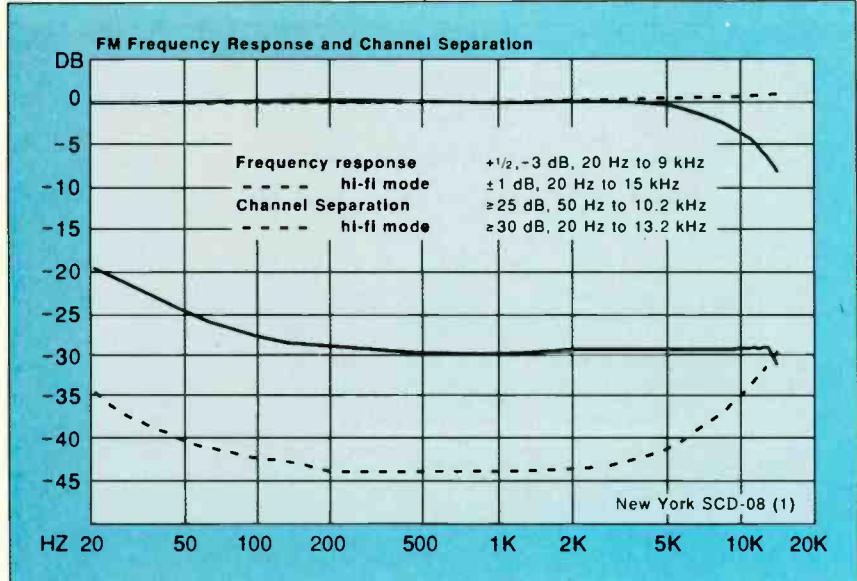
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Test Reports

FM Tuner Section

Unless otherwise indicated, measurements were made in the "normal" mode (the default at POWER-ON), rather than "hi-fi."



face is opened by the player (for laser-beam access) only after the cartridge has been inserted in it. You can read the disc's label through the cartridge's clear upper surface, and it protects against the grime that infests even the most lovingly maintained automotive interior.

Frequency response of the CD play-

for all but very strong stations—above 65 dBf, which is the signal strength normally used for "full RF" testing. For this reason, DSL had to measure some characteristics at 75 dBf instead, in order to document behavior for strong stations. At that signal strength and above, 1-kHz channel separation is about 30 dB in the normal mode; by 65 dBf it already has shrunk to barely more than 2 dB! But, as a result of the blend, quieting—which is outstanding at high signal strengths—remains excellent right down to the separationless "stereo" threshold.

The most noticeable difference between the two modes, however, is in frequency response. The high end is quite severely rolled off in the normal mode and therefore sounds distinctly dull when you switch to it after having the New York in its Hi-Fi mode, where the response curve actually rises slightly at the very top. Without that comparison, though, the normal mode sounds quite good—and, of course, the rolloff helps to muffle any spitting sounds engendered by multipath.

For strong stations, Blaupunkt creates greater separation in the Hi-Fi mode and thus passes up about 4 dB of noise quieting, reducing S/N ratio from outstanding to merely excellent. Separation remains above 10 dB in the Hi-Fi mode down to a little over 40 dBf, but there still is no meaningful stereo sensitivity rating because (as in most of the car units we test) separation is negligible by the time S/N ratio has dropped to 50 dB.

Which mode is more listenable on the road? I vacillated on that point, tending to prefer whichever was current. After listening in Hi-Fi, the normal mode sounded flat and dull. Reversing the procedure, the Hi-Fi mode's extra noise sometimes disqualified it. Your answer will no doubt depend both on your tastes and on reception conditions in the area you are motoring through. In any event, each obviously is engineered with care and intelligence for its intended purpose.

Among the AM data, those for both

REPORT POLICY

Equipment reports are based on laboratory measurements and controlled listening tests. Unless otherwise noted, test data are provided by Diversified Science Laboratories. The choice of equipment to be tested rests with the editors of High Fidelity. Samples normally are supplied on loan from the manufacturer. Manufacturers are not permitted to read reports in advance of publication, and no report or portion thereof may be reproduced for any purpose or in any form without written permission of the publisher. All reports should be construed as applying to the specific samples tested. High Fidelity and Diversified Science Laboratories assume no responsibility for product performance or quality.

Test Reports

AM Tuner Section

Sensitivity	2.1 μ V
Selectivity	47 3/4 dB
A/C Range	71 1/4 dB

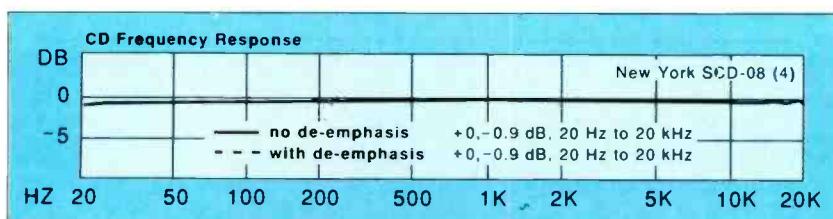
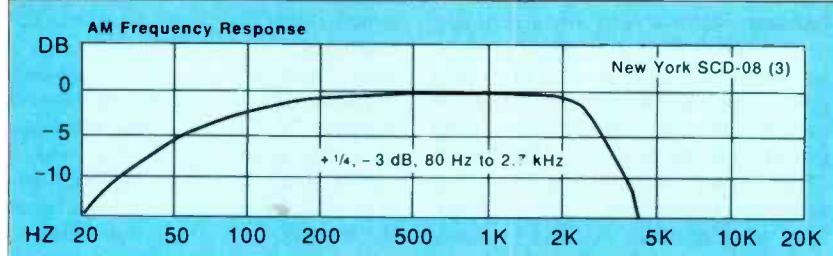
Compact Disc Section

Channel separation (at 1 kHz)	8 3/4 dB
S/N Ratio (re 0 dB; A-weighted)	
without de-emphasis	92 1/4 dB
with de-emphasis	97 dB
Harmonic Distortion (THD+N; 40 Hz to 20 kHz)	
at 0 dB	≤ 0.018%
at -24 dB	≤ 0.021%
Linearity (at 1 kHz)	no measurable error to -60 dB

Tracking & Error-Correction	
maximum signal-layer gap	> 900 μ m
maximum surface obstruction	> 800 μ m
simulated-fingerprint test	pass

Preamplifier Section

Bass Control	+ 12, -11 1/2 dB at 100 Hz
Treble Control	+ 12 1/2, -11 1/2 dB at 10 Hz
Line Output Impedance	100 ohms
Maximum Line Output Level	
from FM (100% modulation), normal mode	1.88 volts
from FM (100% modulation), hi-fi mode	2.27 volts
from CD (at clipping, open-circuit)	3.51 volts



sensitivity and selectivity stand out as top-notch. The sensitivity figure is less unusual than that for selectivity; most unusual is finding two such good figures combined in the same tuner. Frequency response of this section is typically utilitarian. Noise is lopped off sharply above 3 kHz and, with it, any pretense to high fidelity. The deep-bass rolloff is more than compensated for by the sonic boom deliberately introduced by many AM stations. Again, Blaupunkt's top priority seems to be listenability, and the design achieves that goal admirably.

The tone controls have a more generous range than most, but otherwise they behave quite conventionally. The loudness compensation is applied only in the bass, following modern research on the

subject that, nonetheless, is ignored by many prestigious manufacturers. At the test level (with the volume turned down 20 dB from full-on), the compensation adds almost 10 dB below 100 Hz or so by comparison with response throughout the treble.

At risk of offending my metropolitan colleagues, I would say Blaupunkt's New York is distinctly more elegantly self-effacing than its namesake. If you like flashing multicolor displays and lots of useless controls, you won't find them here. What you will find is thoughtful, thoroughgoing design. German engineers seem to seek the *best* way of doing things when their counterparts elsewhere are seeking the most competitive. More power to them. *Robert Long*

One could argue that the CDX-R77 is as logically conceived as is possible for a car-stereo head unit. It combines a good AM/FM tuner with a good Compact Disc player and organizes its controls so that, as much as possible, each provides comparable functions for both modes, depending on which is in use. You can add a tape player if you want (though Compact Discs certainly are better designed to withstand the rigors of the automotive environment), and the choice and placement of power amp, crossovers, and what-have-you are left open.

Moreover, the controls themselves display exceptional logic. Sony has made no attempt to ape all the intricate programming and readout modes of home equipment, which are just about worthless in a moving car and contribute only clutter and confusion. The buttons are relatively large and well grouped and positioned for their respective functions.

The volume control (separate UP and DOWN elements) are oversize and built into a sort of flange that protrudes along the bottom edge, making them the easiest of all to find—as befits the control that gets used most frequently.

Flanking it are two especially useful and unusual features: a mute button and a "select" button. The select button enables you to preset three different volume levels as well as one user-default option apiece for balance, fader, bass, and treble so you can return to these settings automatically at power-on. Thus, for example, the tone controls can be used both for permanent speaker equalization and for manual adjustments away from those default settings. Instead of returning the controls to their detents, you simply revert to the preset settings.

There are no detents in any event, because settings are chosen by stepping through the menu of parameters with the select button, then adjusting the chosen

Sony CDX-R77 Car Tuner/CD Player

parameter at what normally are the volume buttons. (However, there are center-position display markings to help guide your adjustments.) The process of making temporary settings or saving adjustments is identical except for the use of the "repeat" button (tuner Preset 3) to memorize your setting. This sort of multiple use admittedly can lead to confusion. Sony has minimized that factor by the underlying logic of its choices and

which raises the threshold of the seek tuning, plus a mono mode and a memory scan. There are six preset buttons, each of which can hold one AM and three FM stations. The CDX-R77 will, incidentally, retain its memory for days without power, which is unusual. Manual tuning is in full-channel steps on both bands: 0.2 MHz on FM, 10 kHz (or 9 kHz, for some parts of the world, via a chassis switch) on AM.



DAVID A. WAGNER

Dimensions: DIN chassis, 6 inches deep plus clearance for controls and connections.

Connections: Bared wires for ignition and battery; round female for power antenna, power-amp, accessory, and remote-switch output; round male for remote-switch input; spade lug for ground; pin-jack pairs for aux input, front-line output, and back-line output; standard coaxial female for antenna input.

Fuses: One-amp in ignition line, 3.15-amp in battery line.

Price: \$550.

Warranty: "Limited," one year parts and labor.

Manufacturer: Sony Corp., Japan.

U.S. Distributor: Sony Corporation of America, Sony Dr., Park Ridge, N.J. 07656.

by keeping the most-used functions the most straightforward.

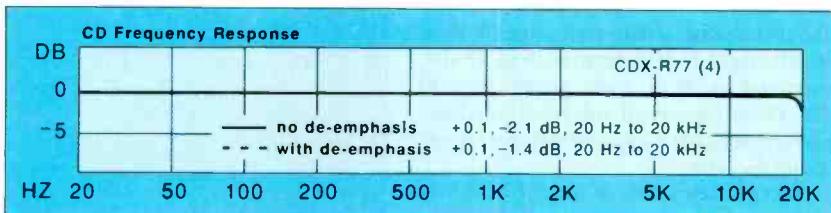
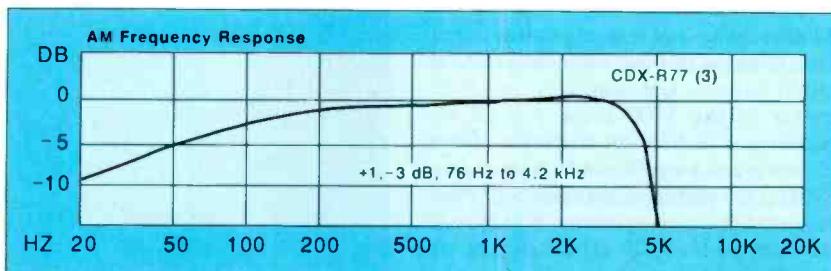
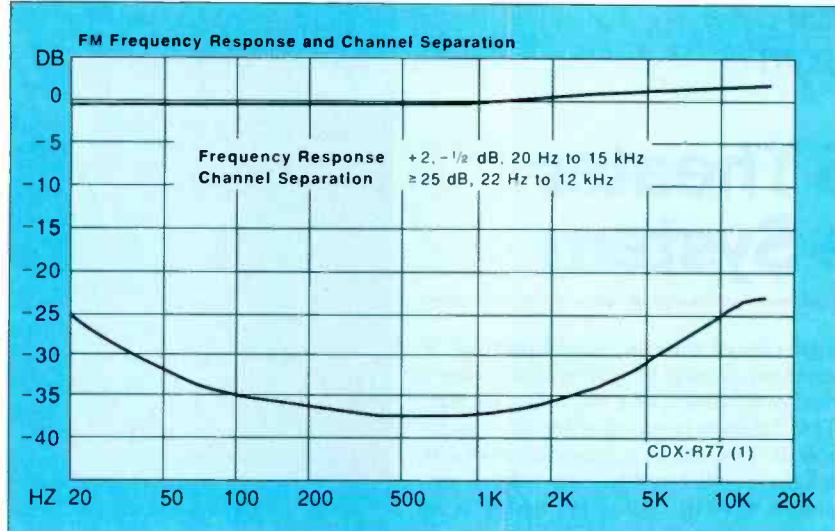
Other features include a clock display, a choice of amber or green illumination, repeat of the current CD selection, random (shuffle) CD sequencing, and timer radio-on (say, to pick up a scheduled traffic report). The presence of separate up/down auto-seek and manual tuning keys—which double as seek and scan keys for CDs—means that you don't have to fumble for a tuning-mode change switch. And again, the similarity of function with the two sources is ergonomically important.

The tuner also offers a local option,

The AM section delivers a little more output in the range around 2–3 kHz than is usually the case, but it filters more sharply above that range to exclude as much extraneous noise as possible. With that much filtration, it can't be called high fidelity, but intelligibility is good.

The FM section has a somewhat rising characteristic at the high end, though it doesn't sound excessively sibilant. Channel separation (measured, as always, at 65 dBf) is exceptional. As Divided Science Laboratories' data show, separation diminishes rapidly at lower signal strengths and is down to a dB or two below 40 dBf. This keeps noise

Test Reports



low (the intended purpose of the blend) and is fairly typical of current equipment, but it prevents any useful stereo sensitivity measurement because reception is stereo in name only at the 50-dB quieting point.

This—combined with the output attenuation, which begins at relatively high signal strengths and reaches 6 dB at 35 dBf—tames the noise bursts from fading and multipath. Those problems were, if anything, somewhat less intrusive than average in the relevant road tests. Both there and on the bench, the section acquitted itself well in all significant respects.

The frequency response of the CD section rolls off slightly and exhibits a touch more ripple than is typical of home units these days, but it still sounds fine even when playing through a good home system. On the road it behaved in exemplary fashion, never faltering on back roads tortured with spring frost heaves.

On the test bench, however, the sam-

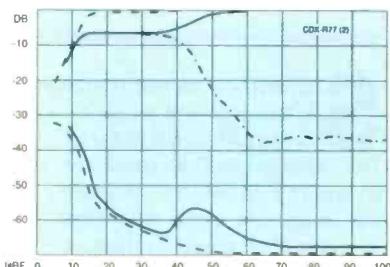
ple raised eyebrows by failing some of the tracking tests. On the demanding Pierre Vérany test disc, it stumbled over dropouts as small as 0.75 millimeter, and it had difficulty with all of the relevant Philips test cuts—none of which fazes most home players. This suggests that you should be exceptionally fastidious in avoiding scratches or dirt on your discs. A second sample fared better on these tests, and even with the first unit, I encountered no audible aberrations either on the road or on the bench. So it seems that the measurements should not be overemphasized.

In any event, I am satisfied that this is an exceptionally attractive design in both conception and performance. But its best feature is unquestionably its ergonomics. This design has really been thought through with respect to priorities in a moving car. Others may attempt to copy it, but you can't borrow originality any more than you can rent motherhood.

Robert Long

FM Tuner Section

Sensitivity & Quietling



stereo quieting (noise) & output	see text
mono quieting (noise) & output	14 3/4 dBf at 98 MHz
channel separation at 1 kHz	66 1/2 dB
Stereo sensitivity (for 50-dB noise suppression)	69 3/4 dB
Mono sensitivity (for 50-dB noise suppression)	2.5 dB
Stereotest S/N ratio (at 65 dBf)	68 1/2 dB
Mono S/N ratio (at 65 dBf)	62 1/4 dB
Capture Ratio	see text
Selectivity (alternate-channel)	14 3/4 dBf at 98 MHz
AM Suppression	66 1/2 dB
Harmonic Distortion (THD+N)	69 3/4 dB
stereo	mono
at 100 Hz	0.90%
at 1 kHz	0.75%
at 6 kHz	1.65%

AM Tuner Section

Sensitivity	4.1 μ V
Selectivity	76 1/4 dB
AVC Range	77 3/4 dB

Compact Disc Section

Channel Separation (at 1 kHz)	80 dB
S/N Ratio (re 0 dB; A-weighted)	85 3/4 dB
without de-emphasis	87 1/2 dB
with de-emphasis	see text
Harmonic Distortion (THD+N; 40 Hz to 20 kHz)	≤ 0.025%
at 0 dB	≤ 0.69%
at -24 dB	no measurable error to -50 dB
Linearity (at 1 kHz)	see text

Preamplifier Section

Bass Control	+9 3/4, -9 1/4 dB at 100 Hz
Treble Control	±10 dB at 10 kHz
Line Output Impedance	2,200 ohms
Maximum Line Output Level	see text
from FM (100% modulation)	1.36 volts
from CD (0 dB)	2.19 volts

Shure HTS Theater Reference System

Seldom has an audio manufacturer latched onto a single design concept and taken it as far as it can go. The last example I can recall was Acoustic Research's MGC-1 loudspeaker. But it has happened again with Shure's HTS Theater Reference System, which the company correctly claims is "the first dedicated audio system for the Home Theater." Shure's goal was "to re-create the theater experience in the home *exactly* as intended by the film studio—without so-called 'enhancements.'" To that end, the system starts off with a state-of-the-art surround-sound decoder and adds three special-purpose amplifiers and six matched speakers—almost precisely the gear needed to equip an actual movie theater for surround-sound playback.

In a full Reference System, the six speakers are laid out more or less as in a movie theater. There is one center-channel speaker placed beside, above, or below the system's video screen. The two other front speakers are placed in the left/right pattern familiar in a normal stereo system. The Reference System's two surround-channel speakers can be placed in any number of locations, starting from directly off to the side of the main listening position and working toward the back of the room. Shure recommends that the surround speakers be kept as far apart as possible and that they be elevated above the viewers and angled toward the "primary viewing area." The subwoofer can be placed anywhere convenient, though I usually prefer to keep such devices as close to the main speakers as possible.

The core of the Reference System is the HTS-5300 Acura Vector surround-sound decoder (available separately for \$1,250). This unit is substantially the same in features, operation, and measured performance as its predecessor—the HTS-5200—reviewed in the February 1988 issue (which contains further details on the decoder operation). The 5300 is a plain,

logic-steered surround-sound decoder; it makes no attempt to synthesize the acoustical environment of a real movie theater. That function is provided by other available devices, but, as regular readers of this magazine will remember, I have my doubts as to its utility: It's better to do things straight, like the HTS-5300.

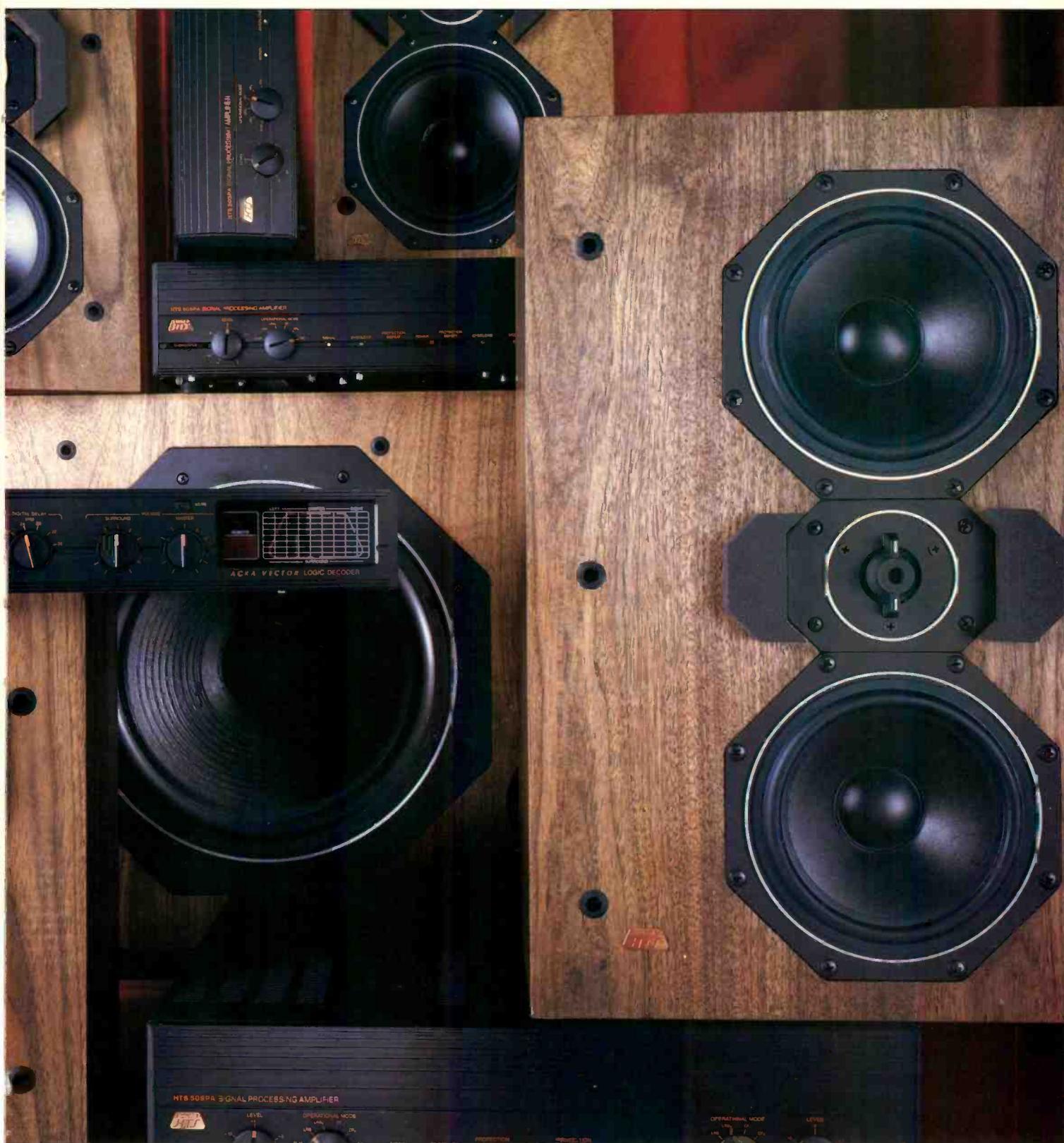
Performance has improved over the 5200 in a couple of respects—most important, in signal-to-noise ratio (S/N). Diversified Science Laboratories' measurements of the 5300 show a 2-dB improvement in S/N for the main (front) channels and a significant S/N increase of 8 dB for the surround channels. Surround-to-center channel separation is at least 47 dB from 20 Hz to 20 kHz, which betters the 5200's figure by about 7 dB. The other channel-separation figures have remained about the same: left-to-right, greater than 50 dB; right-to-left, greater than 45 dB; surround-to-left or -right, greater than 30 dB. These figures all represent excellent performance for a logic-steered surround-sound decoder.

Output impedances for the 5300 remain on the high side (measurements of the main and center channels even show a slight increase), which means that low-capacitance cables should be used if long runs are necessary. The remote handset also remains the same and controls only the volume of the surround outputs, the overall master volume, and a system-mute (all outputs off) function. An optional accessory, the \$99 HTS-60RX remote extender, can be used if the 5300 is located where infrared beams from the remote control cannot activate it. The 30-foot cord of the small 60RX box plugs into a jack on the 5300 back panel, and it serves as a sort of unobtrusive relay station for the 5300's handset commands.

Working outward from the 5300, one encounters three purpose-designed stereo power amps: the HTS-50SPA Signal Processing Amplifiers (available separately



DAVID A. WAGNER



Shure's Theater Reference System: surround decoder (left), three power amps (bottom right and top center), subwoofer (center), center-channel speaker (right), and four satellite speakers (all others). The speakers normally have grilles.

SPECIAL

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for \$1,650 each). Shure says that the highest power demands are presented by the center and subwoofer channels and that these two signals should be connected to two different amplifiers. So the company recommends that the center and left-surround signals be handled by one power amp and the subwoofer and right-surround signals by another.

The 50SPAs are large (16½ by 3½ by 13½ inches) and hefty (27 lbs.) units, as befits their 100-watt-per-channel ratings. The back-panel speaker connections are heavy-duty five-way binding posts. The company points out that gold-plated 0.08-inch-diameter pins soldered to the loudspeaker cables and inserted under the screw-down binding-post caps provide the most reliable connections—a helpful hint to users of equipment with similar binding-post connectors.

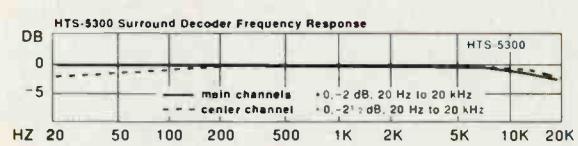
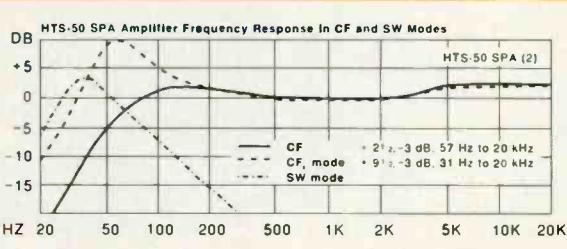
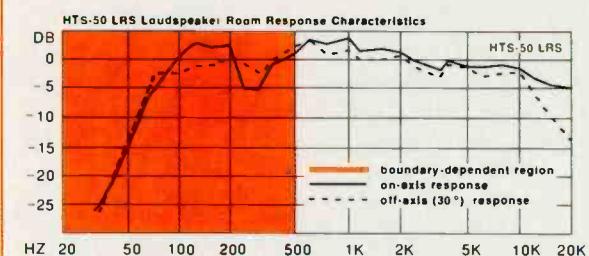
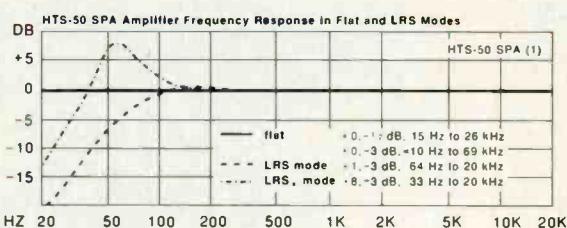
Most of the other special features of the

50SPAs relate to their use with the Reference System speakers. Each channel of the amplifier contains a rotary switch and the appropriate equalization networks for all of the HTS speakers. "For instance," runs the 5300 manual, "in the LRS or CF modes, the amplifier output is full-range and precisely complements the HTS-50LRS or HTS-50CRF loudspeaker responses, respectively." There is an SW setting for use with the HTS-50SW subwoofer, and there are separate LRS and CF settings for use in systems with (LRS, CF) or without (LRS, CF) a 50SW subwoofer. A flat-response position is provided for driving non-HTS speakers. (All these frequency responses are shown in the accompanying graphs.) The built-in HTS equalizations are not suitable for use with non-HTS speakers, except possibly for the SW curve.

In addition to speaker-specific equal-

ization, each channel of a 50SPA includes a dynamically variable limiter that "continuously measures the input signal and shapes the response, depending on the Operational Mode selection, to protect against distortion caused by overexcursion of the speaker connected to that channel." Another protection circuit "prevents long-term hard clipping." This feature is separately defeatable for each channel by front-panel switches, but was not turned off for most of the lab tests. Also included are self-resetting thermal and short-circuit protection devices.

The test results for the 50SPA show fine performance as a basic power amplifier. Output power just about doubles when going from 8-ohm to 4-ohm loads, indicating good current-delivering capability; distortion is low enough to be inaudible at all times; and the various input and output levels and impedances are all acceptable.



HTS-50SPA Amplifier

Except where noted otherwise, all data were taken with the protection circuitry on (PROTECTION DEFEAT off).

Rated Power 20 dBW (100 watts)/channel

Output at Clipping (at 1 kHz; both channels driven)

8-ohm load 20.6 dBW (115 watts)/channel
4-ohm load 23.0 dBW (200 watts)/channel

Dynamic Power (at 1 kHz)

8-ohm load 21.4 dBW
4-ohm load 23.0 dBW
2-ohm load 24.6 dBW

Dynamic Headroom (re rated power; 8-ohm load)

+1.4 dB

Harmonic Distortion (THD; 20 Hz to 20 kHz)

at 20.0 dBW (100 watts) ≤ 0.024%
at 0 dBW (1 watt) ≤ 0.018%

S/N Ratio (re 0 dBW; A-weighted) 87 dB

Sensitivity (re 0 dBW) 100 mV

Input Impedance 98k ohms

Damping Factor (at 50 Hz; re 8 ohms)

465

Channel Separation (at 1 kHz) 88 dB

With the protection circuitry defeated (PROTECTION DEFEAT on), clipping occurred at 20.9 dBW (123 watts) into 8 ohms.

HTS-50LRS Loudspeaker

Sensitivity (at 1 meter; 2.8-volt pink noise)

89 dB SPL

Average Impedance (250 Hz to 6 kHz)

9 ohms

HTS-5300 Surround Decoder

Maximum Output Level (at 1 kHz)

main channels 2.6 volts

center channel 2.6 volts

surround channels 4.4 volts

Maximum Input Level 4.0 volts

S/N Ratio (re 0.5 volt; A-weighted)

main channels 89 dB

center channel 87 3/4 dB

surround channels 90 dB

Distortion (THD; 20 Hz to 20 kHz; 0.5-volt input)

main channels ≤ 0.14%

Channel Separation see text

Input Impedance 73k ohms

Output Impedance

main channels 5,800 ohms

center channel 5,400 ohms

surround channels 5,400 ohms

SPECIAL

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The extent of the response shaping for each HTS speaker type is notable.

There are three types of Reference System speakers: the HTS-50CF center-front unit; the LTS-50LRS used for the left, right, and surround channels; and the HTS-50SW subwoofer. All models feature magnetically shielded drivers, low-diffraction removable grilles (dark-brown stretch cloth over plastic frames), genuine walnut-veneer finishing, five-way binding-post connectors, built-in fuses, and thick-walled, internally braced cabinets.

The HTS-50CF is a two-way unit with two 6½-inch woofers in a closed-box (acoustic suspension) arrangement and a fluid-cooled 1-inch dome tweeter. The 50CF measures 20 by 13½ by 8¼ inches and weighs 37 pounds. It is intended to be placed—in a vertical orientation—above, below, or beside the system's video screen. The HTS-50LRS (13½ by 10 by 8¼ inches) consists of one 6½-inch acoustic suspension woofer and a fluid-cooled 1-inch dome tweeter. The subwoofer has one 12-inch driver in a floor-standing, vented cabinet measuring 18 by 23 by 14 inches.

All three of these speakers are available separately (\$750, \$500, and \$650 each for the 50CRF, 50LRS, and 50SW, respectively), but since each requires the services of a 50SPA amplifier to work correctly, it makes little sense to consider purchase of any of them apart from a Reference System amplifier. This situation also makes certain measurements the lab normally performs somewhat irrelevant. Power handling, impedance, and sensitivity, for example, are all subsumed under the Reference System design goal of providing at least 108 dB sound-pressure level on peaks at the ideal listening position—just as in a modern movie theater. The system certainly played as loud as I would want it to in our New York listening room.

DSL did make detailed measurements of the most numerous of speakers in a Reference System: the HTS-50LRS that is used as the left and right main speakers and as the two surround-channel speakers. This unit was chosen for testing because of its importance in both movie-sound and in plain (non-surround sound) stereo playback of music-only material, where it forms the primary sound source for the system, the center channel being deactivated during such operation.

One lab measurement tells all. As the graph shows, when a 50LRS speaker is operated from a 50SPA amplifier in its LRS setting (the one for a Reference System that includes a subwoofer), response falls off sharply below 100 Hz and gradually

rolls off from its midrange level at 1 kHz by some 9 dB at 20 kHz (the dip at around 300 Hz is due to a floor reflection).

The low-frequency drop is deliberate and is a result of the response shaping of the 50SPA amplifier; when the amp is switched to its LRS mode (for a system without a subwoofer), the bass response is extended downward about an octave (to 50 Hz) before dropping off. The high-frequency rolloff also is apparently deliberate and is even more precipitous in the off-axis response, which indicates some intentional beaming (the speakers provide the "correct controlled polar patterns for [a] multi-channel theatrical sound field," says Shure).

It is the treble performance that dominates the sound of the speaker and, since the 50LRS is the most numerous of the units in a Reference System, the sound of the entire system—despite the audibly flatter response of the 50CF center-front loudspeaker. The differences in response between the 50CF center-front speaker and the 50LRS left and right speakers cause some image nonuniformity across the front soundstage. A pink-noise test signal panned from left through center to right distinctly changed sound quality as it moved. Furthermore, the high-frequency directionality of both the 50CF and 50LRS causes their sound to change depending on the aiming of their front panels and, more important, on their mounting heights.

But on the movie soundtracks with which I auditioned the entire system, such frequency-response anomalies were of little consequence: The Reference System sounded superb when accompanied by a video program. The 5300 decoder is the best in a line of decoders that produce surround effects that are, to quote our review of the 5200, "exceptionally good and remarkably subtle." Regardless of the complexity of the soundtrack, I never heard any untoward sonic-image shifts, pumping of background sounds or music, or incorrect image placements. Everything worked exactly as advertised, and the sound of the Reference System did indeed "rival the very best theatrical experience." In some ways it was even better, since in a typical home listening room one doesn't have to contend with the acoustical anomalies that even top-drawer movie theaters exhibit (such as the hall's reverberant dialogue). The center speaker did indeed fulfill its intended function of locking the dialogue onto the video screen when listening from off a central position (even though the 50CF cannot be ideally posi-

tioned behind the video screen). And the subwoofer added a stunning woosh to space-opera explosions.

It is only when the Reference System is required to reproduce well-recorded music, without an accompanying video image and movie sound effects, that it audibly falters. The rolled-off highs of the HTS-50LRS satellite speakers then become obvious, especially if the STEREO and DEFEAT buttons on the 5300 decoder are pushed to turn off the surround and center-channel speakers (the subwoofer, if any, will continue to function, making the system still more bass-heavy). Even with the surround and center-channel speakers activated—the 5300 simulating surround-channel information in its stereo mode, and a picture running—the sound quality is sometimes not up to present music-oriented, rather than movie-oriented, standards. This was apparent with, for example, the digital audio videodisc version of Michael Jackson's *Moonwalker* music-video movie—a disc that, in any case, sounded better in the 5300's simulated-surround mode and not its Dolby Surround setting.

Beyond a doubt, I am expecting too much. Shure makes no claims that its Reference System is the ultimate system for reproducing both movie soundtracks and straight music or that the Reference System can replace one's present audio equipment. Shure did call the listening location the primary viewing area, after all. The problem is simply that at the complete system's \$9,600 price level, only very few audio-video enthusiasts would be able to afford the Reference System as well as an equally definitive system for audio-only playback. As Shure states, the system is designed "for the serious audio/video enthusiast, and for the upscale consumer who wants the very best of everything in the home."

My suggestion? If you are interested in state-of-the-art surround-sound movie reproduction, but want to start small or to have a system suitable for both video-sound and music-only playback, look first at the HTS-5300 decoder as an accessory to your present audio system. Then, if you catch the bug and want only the best possible movie-sound reproduction—and have the space and the bucks—I see no simpler course to follow than adding to the 5300 the rest of the components of the Shure Home Theater Reference System. As a complete solution to movie-sound playback, it's one of a kind and unlikely to be equaled, let alone surpassed, in the near future.

David Ranada

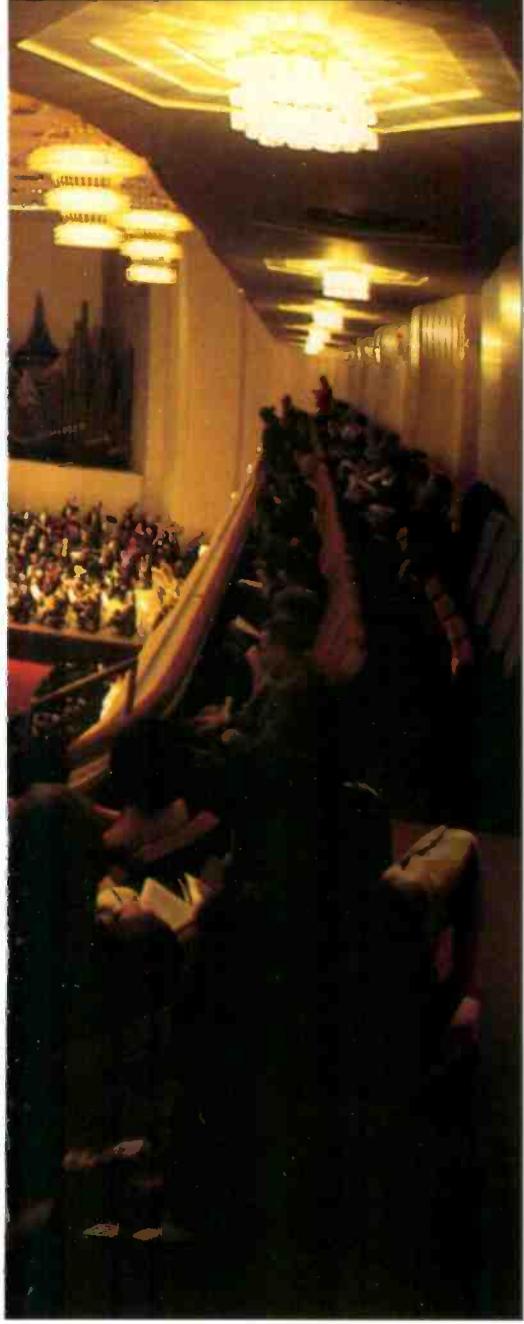


Why some concert
halls sound good and
why others don't.

By Jeffrey Borish



Dream about designing the perfect concert hall: It would have large, well-padded seats with adjustable backs, signs requesting that patrons turn off their watch beepers and pagers, and free cough-drop dispensers. Since this is a dream, you can ignore such mundane matters as how to mount an air conditioner so that its vibrations are inaudible, how to isolate the hall from street noise, and how to choose upholstery that has the proper sonic properties... even though real architectural acousticians must think about these things. Besides, as long as you're dreaming, you can fantasize a staff that will take care of these "minor" details.



THE BASICS OF Concert Hall ACOUSTICS

rooms. For the majority of music lovers, stereo sound reproduction is musical reality. But just as electronic pianos don't replace real pianos, stereo equipment doesn't replace concert halls. There's room for both. In fact, concert halls have proven to be essential to the development of audio equipment, because live music in real concert halls has been, to many consumers and audio critics (including this magazine's), the standard by which to judge sound-reproduction quality. The complete audiophile should therefore be at least familiar with what establishes the standards in concert-hall design.

First, we'll take a look at what many music lovers consider the be-all and end-all of acoustical design: reverberation.

Concert halls are not built just to keep rain off the audience; there are sounds in a concert hall that we don't get in our living rooms—and I don't mean just coughs and program rustling. Concert halls do something *good* to the sound: An enclosed space confines the sound, forcing it to return to the audience over and over again in a rapid, decaying succession of reflections known as "reverberation." Ideally, reverb produces a number of remarkable effects: It gives listeners the sense that a performance is taking place in an enclosed space and makes them feel immersed in sound; it adds warmth and fullness to the tone quality of the instruments; and it increases the music's loudness. At an outdoor concert, some or all of these qualities will be lacking. But simply throwing up four walls and tossing on a ceiling will not suffice, for unless the hall is properly designed, reverberation will not produce all of these highly desirable effects.

"Reverberation time" is traditionally considered the single most important characteristic of reverberation. It is roughly the time it takes from when the sound from a source (such as a musical instrument) ceases until the sound in the hall decays to near-inaudibility. Formally, it's the time it takes for the sound-pressure level to fall by 60 dB (to one-millionth of its initial amplitude). The reverberation time of a hall depends, mostly, on the

hall's spatial volume and on the amount of sound-absorbing material it contains (including people). The more absorbing material, the shorter the reverberation time; the larger the volume, the longer the reverberation time.

A closer look at the situation reveals a rule of thumb tying reverberation time to geometry even more directly. In most concert halls, the walls and ceiling are very reflective; most of the absorption is provided by the seats and the people in them. Usually the floor level is covered with seats, so the total absorbing power of the hall is proportional to the area of the floor. This of course means that increasing the volume of the hall by increasing the area of the floor produces a proportional increase in absorption, so that there will be no net change in reverberation time. Only by increasing the height of the hall can the volume be increased without an offsetting increase in absorption (this is the case with cathedrals). The rule of thumb is, therefore, that the reverberation time is proportional to the height of the hall—as, understandably, are construction costs.

Architectural acousticians usually employ more complicated formulas to predict reverberation time, but inaccuracies in the formulas lead to estimates that are often too high by 20 to 50 percent. To compensate, many acousticians design the hall to provide a reverberation time that is somewhat longer than desired, and then adjust the final product by introducing additional absorbing material (it is easier to *reduce* the reverberation time than to increase it). Furthermore, the adjustments supposedly make it possible to vary the acoustics to suit the style of music, although in practice such measures rarely produce the expected effects. The problem with reverberation formulas is that reverberation time depends not only upon a hall's volume and absorption but also upon its shape. Unfortunately, to take the latter into account, a computer must be used and the convenience of a simple equation is lost.

In an ideal hall, the reverberation time varies with frequency. A reverberation time that is somewhat longer at low fre-

The Concert Hall in Washington, D.C.'s, Kennedy Center. The wide-angle photo slightly distorts the hall's basically "shoebox" configuration.

This article will ignore them. Instead, we're going to focus on the big questions: How large would the ideal concert hall be? What shape would it have? How many people would it seat? Are concert halls relevant today, or is high fidelity reproduction the modern reality? Why not just listen at home?

Classical music clearly was intended to be experienced live in a concert hall or similar performance environment (such as a church or cathedral), but few listeners today experience it outside their living

Concert Hall ACOUSTICS

quencies than in the midrange creates a sense of sonic warmth. To provide a long decay at low frequencies, rigid reflecting surfaces are used to minimize the sound that escapes. For this reason, wooden walls can actually be detrimental to hall acoustics because they don't easily provide the rigidity of other materials—for example, the concrete or plaster found in the best halls. On the other hand, the appearance of wood is warm and beautiful, so people often prefer it even when its acoustical merits are dubious.

Architectural acousticians these days are usually able to get the reverberation time of their designs into the range considered ideal for the type of hall being built (good opera houses have shorter reverb times than good symphonic concert halls). Yet many halls still don't sound good. Obviously, there is more to the story than just reverberation time.

EARLY REFLECTIONS

A sound emitted in a room—concert hall or home listening room—travels along many paths from the sound source to the listener. First to reach the listener are the direct sounds, which travel from the source along straight lines to the ears. Following the direct sounds are sounds involving one or more reflections off the surfaces of the room. The first of these reflections are spaced relatively far apart in time (up to about 20 milliseconds)—far enough that our ears respond to each one

individually yet not so far apart as to be heard as distinct echoes. But as the pattern of reflections accelerates, the individual reflections lose their identity, so that we respond only to their "average" characteristics. Accordingly, we can divide reverberation into two phases, each producing its own subjective effect. The first phase is

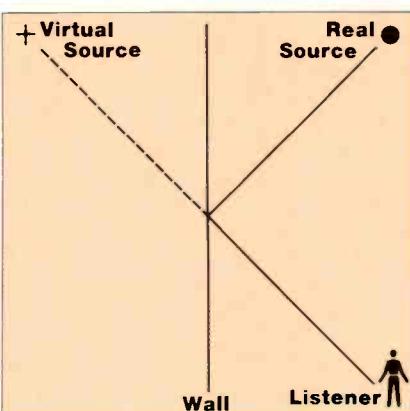


Fig. 1. Sound from a real source reflecting off a surface takes the same path to the listener as sound emitted from an imaginary or mirror-image source whose position can be derived from the angle of reflection.

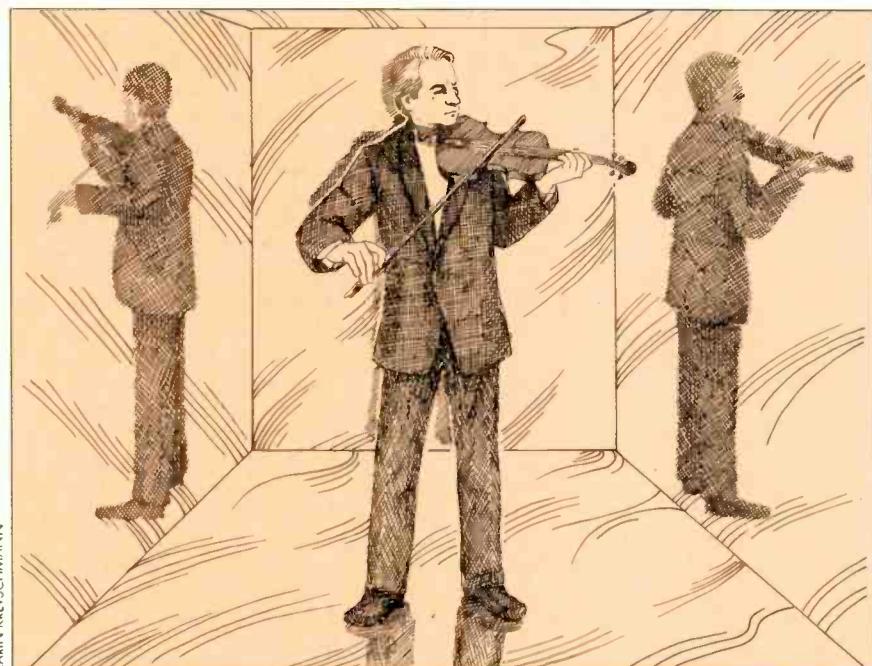


Fig. 2. Acoustically, a concert hall is a large room constructed with acoustical mirrors: the walls, floors, and ceiling. Each mirror image shown here represents a principal sound reflection.

the "early reflection pattern"; the later series of dense reflections is "continuous reverberation." (The latter is what reverberation measures.)

Hard as it is to design a hall to provide a particular continuous reverberation, that is only half the battle, and, for one simple reason, it is the less important half. Consider: We hear the luscious, gradual decay of continuous reverberation primarily when the sound source stops. At other times, the earliest, loudest sounds—the direct sound and the early reflections—overpower the reverb. Sure, we can catch an auditory glimpse of the reverb between separated notes, but the early reflections have a strong impact continuously while the music is playing; they dominate our perception. For a concert hall to sound good, it must not only have an appropriate reverberation time at all frequencies, but a pleasing early-reflection pattern as well.

DOING IT WITH MIRRORS

But how do we decide whether a design will produce a reflection pattern that will be pleasing? To answer this question, the "image model" can be used. Sound reflects from a hard surface in much the same way that light reflects from a mirror. As a result, we can consider an angled sound path that includes a reflection from a surface to be equivalent to a straight path from an imaginary sound source located where the visual image of the source would be if the sound-reflecting surface were a mirror (see Fig. 1). It is as if the concert hall were a large barber shop—one with mirrors on the floor and ceiling as well as on the walls. Every one of the reflected images of the musicians you would see in such a mirrored hall corresponds to a path the sound takes to get from the players to your ears (Fig. 2).

One way to think of these mirror-image sources is to suppose that they were not mere reflections but *real*, or *virtual*, sources, suspended in space surrounding the listener at distances proportional to their apparent visual size and in directions equivalent to their apparent direction. The smaller, more distant-appearing reflections are of distant virtual sources. All these virtual sources emit the same sound simultaneously, but the sound from the farther ones takes longer to reach the listener. Whenever the sound reaches the image of a boundary, a small amount is absorbed as it passes through, as if the boundary were a curtain. Consequently, a person hearing an array of virtual sources receives the same pattern of early reflections as a listener in the actual hall.

The subjective effect of the early reflec-

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tions depends on their delay (which is proportional to their apparent distances in the image model), amplitude, and direction. These parameters can be determined by using a computer program to compute the position of each virtual source. The information developed by a virtual-image plot can be used in two ways. One way is to electronically simulate the concert hall and subjectively evaluate the result. In effect, electronics rather than distance is used to delay the sound. If we like what we hear, then we know that we have hit on a concert-hall design that works. There is also a way to apply the image model to reach some general conclusions about good-sounding geometries.

SHAPELY HALLS

Psychoacousticians—scientists who study how we perceive and respond to sound—have found that slightly delayed sounds that reach us from the side produce a pleasing subjective effect known as “spatial impression” (SI). The more lateral and loud, the greater the SI. Spatial impression is responsible for the feeling of being enveloped by sound in a concert hall. Whereas reverberation creates the sense that a performance is taking place in a closed space, SI creates the sense that one is actually inside the space. It also makes the sound source seem broader. We can use the image model to analyze the extent to which different concert-hall geometries succeed in making the delayed sounds reach us from the side.

Suppose you are perched high above a concert hall, looking down on it, and someone has conveniently marked large + signs in the parking lot at the positions of the image sources. There are obvious differences as you move through a sequence of idealized hall geometries: from fan (Fig. 3), to the traditional “shoebox” (Fig. 4), and finally to a reverse fan (Fig. 5). Notice that in the rectangular, shoebox hall the virtual sound-source images spread out to the sides along straight lines.

In the fan, the outward splay of the walls causes the sidemost images to curve away from the listener. Now, if we want sound to reach us from the side (for greater spatial impression), this curvature is bad news: The strongest reflections arrive from a narrower range of directions in front. Spatial impression is lower in fan-shaped halls. This is the fundamental reason why shoebox concert halls almost always sound better than fan-shaped ones. (For more on what makes a hall bad, see “Fallen Arches: Why Halls Fail,” p. 44.)

In the reverse fan, on the other hand, the sidemost images curve toward the

rear, enveloping the listener in lateral sound. As a result, the reverse fan produces an even greater spatial impression than the classic shoebox, making it an acoustically superior geometry. But from a practical standpoint, it presents challenges. One of the economic pressures in designing new concert halls is increased seating capacity. Because the width of the front part of the concert hall is constrained by the requirements of the performing groups, the reverse fan sacrifices seating capacity. Nevertheless, the geometry has been successfully applied in a few recent halls, such as El Pomar Great Hall of Pike's Peak Center and the Tampa Bay Performing Arts Center.

Despite its acoustical deficiencies for

concert music, the standard fan shape is the predominant geometry for new halls because it allows more people to be accommodated within a given distance of the stage. For example, a rough calculation shows that splaying the walls of shoebox-shaped Boston Symphony Hall (one of the three greatest halls in the world and the best in the Americas) by only five degrees would increase its seating capacity from 2,631 to nearly 3,000—the target for many modern designs. But even a splay as small as five degrees would make Symphony Hall sound worse, according to mathematical modeling; many fan-shaped concert halls have splays that are significantly greater—often 30 degrees or more.

Many acousticians try to overcome the limitations of unsuitable geometries by suspending reflecting panels over the orchestra. As intended, these panels do provide some early reflections, but the reflections reach the audience from above, not from the side. Reflections that arrive from in front or overhead—in what psycho-

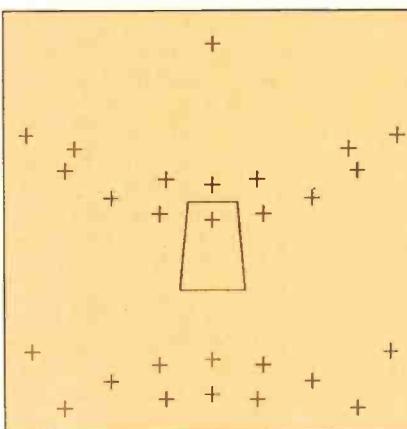


Fig. 3. In a fan-shaped hall, the virtual images for the early reflections (the + signs) curve away from the listener, a characteristic detrimental to the hall's sound quality.

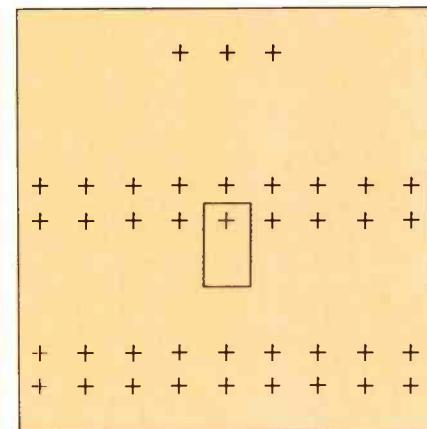


Fig. 4. In a rectangular, “shoebox” hall, the virtual images extend straight out to the sides. The world’s greatest concert halls are, by and large, of the shoebox variety.

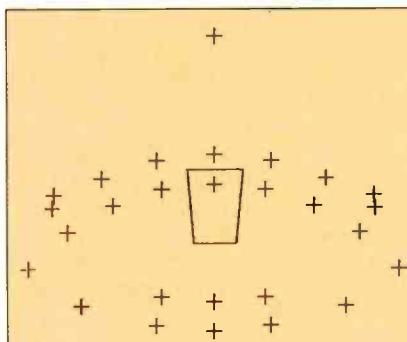


Fig. 5. In a reverse-fan hall, the virtual images curve around the audience, enveloping listeners in desirable lateral sound—an improvement over the traditional “shoebox” design.

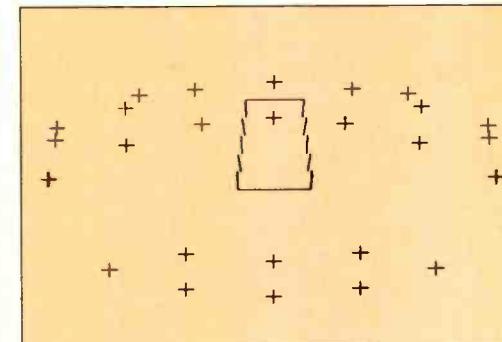


Fig. 6. A segmented reverse-fan hall can have the same enveloping virtual images as a normal reverse-fan hall, while maintaining the seating capacity and sight-lines of a standard fan.

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acousticians call the "medial plane"—decrease spatial impression. While it is probably better to have medial reflections than none at all, suspended panels cannot replace properly situated walls.

One way in which it might be possible to combine the acoustical advantages of the reverse fan with the practical advantages of the fan would be to segment the walls, with the segments positioned to provide an overall fan shape but oriented to

correspond to the reverse fan. As shown in Figure 6, the virtual sources show the same tendency as in the reverse fan to curve around toward the sides, so the

reverse fan and the segmented fan should produce comparable spatial impression. Ironically, segmentation of the walls is often applied in concert-hall designs, but usually the orientation is chosen to emulate a fan with a still larger splay, making matters worse.

It is intriguing to consider how the acoustics of the hall could be adjusted if such panels were allowed to rotate. By changing the degree of spatial impression,

Fallen Arches: Why Halls Fail

Everyone agrees that Symphony Hall in Boston is the best concert hall in this country and one of the three best in the world (the other two are the Amsterdam Concertgebouw and the Grosser Musikvereinsaal in Vienna). If that's the case, why don't symphony boards of directors—with tens of millions of dollars at stake—simply copy Boston's hall for their own orchestras and improve the odds of getting a good-sounding edifice? There are, unfortunately, several compelling impediments to cloning Symphony Hall:

Economics. Economic factors weigh heavily on new concert-hall designs. Building a concert hall today is an expensive proposition, often costing upwards of \$60 to \$70 million. A large seating capacity maximizes receipts that offset the costs of construction, maintenance, and operation, but the historically great concert halls have seating capacities considered inadequate for modern buildings. Vienna's Grosser Musikvereinsaal, perhaps the best concert hall in the world, seats only 1,680 people, whereas modern concert-hall designs usually aim for 3,000 seats.

An obvious solution would be to scale the dimensions of the Musikverein upward to accommodate the desired number of seats. Unfortunately, our hearing doesn't scale similarly. Scaling the dimensions changes the delay times of the early reflections, among other things, which changes our subjective response. The resulting hall might seat the required number of people, but it probably wouldn't sound as good. It is unlikely that concert halls seating more than 2,600 to 2,800 will ever sound good.

Comfort. Modern audiences demand greater luxury than those of yore, and,

at the very least, modern safety regulations require wider aisles than those in Symphony Hall. But leg/elbow room and wide aisles consume space and require a larger hall or fewer seats. Today's concertgoers demand, in addition, greater visual intimacy with the performers. The consequence is that architects often choose shapes that result in visual intimacy at the expense of the acoustics.

The Victorian Arts Centre Concert Hall in Melbourne, Australia, is a fan-shaped hall that seats 2,700 (slightly more than the 2,631 of Boston's Symphony Hall), yet the distance from the stage to the farthest seat in the balcony is only 112 feet as compared to Boston's 135. But as we have seen, when visual intimacy is provided by adopting a fan shape, the acoustics suffer. Even worse acoustically, although better visually, are the "surround" halls, such as Boettcher Hall in Denver and the Philharmonie in Berlin, in which the audiences are also seated in back of the stage. In a surround hall the distance of the walls from the stage makes strong early lateral reflections impossible.

Artistic Factors. Architects are artists. They like to display their genius with innovative designs. Regrettably, daring artistic leaps make bad acoustic science; prudence dictates only incremental changes from the admired prototypes. When a new design looks similar to its prototype, it probably sounds similar; and the impact of mistakes is limited. Furthermore, acousticians have a better opportunity to learn from the design: With only a few changes made, there is less confusion about which ones account for perceived differences.

Political Factors. Symphony boards, which ought to be primarily concerned with creating an enviable acoustical en-

vironment for their orchestras and audiences, often seem more interested in building only monuments. By choosing the architect first they automatically assign a higher priority to appearance than acoustics—and the architect usually subcontracts the acoustician. Unfortunately, many architects don't understand acoustics. Often they hand the completed blueprints for a new design to the architectural acoustician with the directive "Make it sound good."

As we have seen, no amount of technical wizardry can overcome some architectural features (this was the lesson learned in New York's original, fan-shaped, Philharmonic Hall, now rebuilt as Avery Fisher Hall). The only hope for outstanding acoustics is for the acoustician to be given sovereign power.

Science. Each new concert-hall design is an experiment in applied acoustics. Still, as experiments, they are far from ideal. It often takes 10 to 15 years from the initial planning to the completion of a concert hall—a long time to wait for results. During that time, an acoustician might initiate several other hall designs based on the same theories before getting any feedback from the first hall. If the theories were wrong, then all the newer halls will have the same problems. Furthermore, new designs usually differ in many ways from their prototypes, complicating the attribution of deficiencies to specific architectural features. Sometimes the wishes of the acoustician are sacrificed to economic constraints ("Put in more seats!") or subjugated to artistic considerations ("I want a round interior!"). And, of course, the ultimate gauge of acoustical qualities is subjective, introducing the uncertainties of personal preference.

J.B.

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this adjustment would provide a more meaningful control of the acoustics of a concert hall than adjustments to reverberation time. Mathematical modeling reveals that a change in the orientation of the panels in Figure 6 by only six degrees could produce a subjectively significant change in the sound quality.

HOW ABOUT THE PERFORMERS?

There is a second, smaller audience in a concert hall: the performers. Many of the design criteria for the audience get turned inside out for the performers. They are less concerned with reverberation than with onstage audibility. If an instrumentalist in an ensemble can hear only himself, the rhythmic accuracy of the performance will suffer. Early reflections are required to "amplify" the sound of the other musicians in order to produce a better balance. But, unlike the case out in the hall, amplification is the only effect sought—we don't want the early reflections to create spatial impression.

One way to assure that the reflections will not produce spatial impression is to



arrange for them to reach the performers in the medial plane, exactly the opposite of what one wants for the audience. A wall or shell behind the orchestra and overhead reflectors or a ceiling that isn't too high provide the desired reflections. Walls are acceptable (and unavoidable) as long as they aren't too far away. Unfortunately such constructions, especially orchestral shells, while helpful to performers, can be detrimental to the sound in the hall. Balancing the needs of the performers with those of the audience provides a classic dilemma for acousticians.

ELECTRONIC SIMULATIONS

As noted above, there are two applications for the image model. One is heuristic and produces the guidelines just presented for choosing a proper concert-hall geometry.

The other application is practical: the electronic simulation of a concert hall. Why would we want to do this? One reason is to assure, before construction, that a concert hall will sound good. Once the computer has determined the positions of the virtual sources, it can use this information to process a "dry" (reverberationless) audio signal, creating a recording that gives the impression that the sound had been emitted in a physical realization of the hall. Any deficiencies can be remedied before corrections become expensive.

Another application for concert-hall simulation is the addition of a reverberation effect to domestic audio reproduction. Accurate reproduction of the early-reflection pattern requires that sounds reach the listener from directions outside the range that normal stereo is capable of presenting. Rather than going back to the drawing board to develop a new multi-channel recording and playback system, another valid route to higher fidelity is to synthesize, during playback, reverberant sounds that model the behavior of real performing spaces. This approach has the



IRA WYMAN

A rear corner of the city of Boston's Symphony Hall—the best concert hall in America—showing its rectangular, "shoebox" interior. The statues are copies of Classical sculptures.

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added advantage of allowing listeners to control the parameters of the reverberation according to their taste.

Is this distortion? Because we are adding sounds during playback that are not present in the original recording, many would claim that it is. However, in a more fundamental sense it is the original stereo recording that is distorted, because it omitted sounds present at the original performance. If the ultimate objective of high-fidelity reproduction is the sonic re-creation of a performance in a different

space, then at-home concert-hall simulation corrects a deficiency of stereophonic recordings.

The situation is analogous to the use of Dolby noise reduction: Dolby encoding results in a recorded signal that is distort-

ed, but the compression applied is reversed during playback by a complementary expander. Similarly, the "spatial compression" of stereo is reversed during playback by a concert-hall simulator.

In computer modeling for domestic concert-hall simulation, the image model is used to determine the positions of the virtual sources. It is also possible to use measurements of actual concert halls, from which their virtual-source positions can be computed. The results from either process could be used to position myriad

Razing the Roof: A Case Study

My local concert hall, Louise M. Davies Symphony Hall in San Francisco, makes a good case study for the principles presented in this article. In some ways the original design was a success. Although large—it seats 3,063—the hall provides visual intimacy: The farthest seat is 135 feet from the stage, as in Boston's Symphony Hall. It has a very low background-noise level, and the reverberation time is adjustable with retractable sound-absorbing banners. The reverb time is greater at low frequencies than at midband—which is good for warmth. So what's wrong?

Although the reverberation is adequately long, one doesn't feel immersed in it: There is little "spatial impression." It is difficult to hear instrumental articulation. The orchestral balance is poor and varies with position in the hall; in some locations the woodwinds can be completely submerged. Some seats receive distinct echos. The sound is too quiet. The orchestra members have trouble hearing each other.

That litany of woes proclaims the problem: The fundamental geometry is wrong—Davies Hall is basically fan-shaped. To make matters worse, the hall has an audience terrace surrounding the stage that further weakens the lateral sound by absorbing it (people are highly absorptive, remember) or reflecting it upward (see diagram, showing the terrace and loge level of seats).

To correct for the resulting lack of early reflections, plastic "saucers" have been suspended over the stage. But as noted in the main article, only when early sounds reach listeners from the sides will they produce spatial impression. The lack of early reflections also accounts for the difficulty in hearing articulation. Curved walls in the

rear of the hall focus the sound, accounting for the distinct echoes in some parts of the hall. New absorbing panels are now helping to control the echoes.

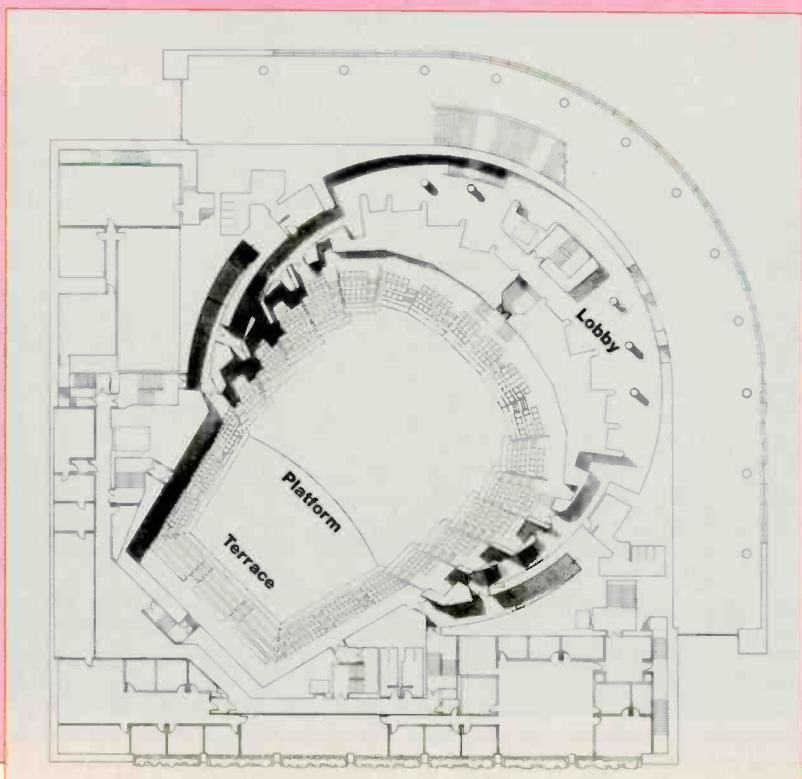
Fiddling continues in the hope of further improving the acoustics, but no amount of tweaking will correct the lack of spatial impression or the poor stage sound. The only known remedy for this degree of acoustical deficiency is demolition: Reorient the walls and eliminate the terrace.

When the New York Philharmonic asked George Szell what he thought

they should do with the then new, original Philharmonic Hall, he replied: "Tear the place down and start again. The hall is an insult to music." The owners of that hall eventually took this bitter medicine and transformed it into Avery Fisher Hall, which, though not quite on the same plane as the halls in Boston, Amsterdam, or Vienna, is an excellent example of good concert-hall design. It remains to be seen whether music lovers in San Francisco have the same determination as New Yorkers when it comes to the acoustics for their orchestra.

J.B.

This drawing of the loge/terrace level of Davies Hall, San Francisco, released by the orchestra upon its opening, shows the overall fan-shaped outward splay of the side walls.



Concert Hall ACOUSTICS



loudspeakers at the locations of the virtual sources—all of them fed with the same signal. This brute-force approach would require many loudspeakers, lots of space (you might as well have constructed a concert hall to begin with), and a lot of speaker cable. So, being good engineers, we make a series of justifiable simplifications. First, we reduce the amount of speaker cable by positioning loudspeakers around a home listening room without destroying the directional information. The delay times of the synthesized early reflections will all be too short, but we can compensate by feeding each loudspeaker from an appropriately long electronic delay line.

Next problem: The number of loudspeakers required must be reduced from hundreds to a few. Answer: Ignore elevation. As discussed previously, only when a delayed sound reaches us from the side does it create spatial impression; elevated speakers (especially those in front) do not create a subjectively desirable effect. By ignoring the elevation of the delayed sounds we are reducing the accuracy of the simulation, but we are doing so in a way that idealizes the original hall. Thus, electronics transcends architectural limitations.

Having reduced all the reflections to the same horizontal plane, we discover that they cluster in a few bands of directions. Presenting all the sounds coming from a given band with a single loudspeaker is a reasonable compromise, given the limited directional acuity of our hearing for sounds not coming from in front. This final simplification results in a system requiring only four additional loudspeakers, with the original two stereo loudspeakers retained for reproducing the direct sound.

Early ambience synthesizers used recirculation—feeding the output back to the input at a lower level—to provide the gradual decay of sound characteristic of continuous reverberation. Recirculation is completely unlike actual physical processes in concert halls and is very difficult to produce without a “springlike” sound quality. Furthermore, continuous reverberation is usually present in commercial classical recordings, so that synthesizing it duplicates sound already present.

The early reflections, in contrast, must be excluded from a recording. Were they to be presented over a standard stereo system, most would reach the listener from the wrong direction (in front), making the recording seem overly reverberant. (This is one reason why real concert halls do not always make the best recording venues.) Omitting the early reflections creates another kind of distortion, but one that can be corrected during playback. Synthesiz-

ing only the sounds excluded from the recording—the early reflections—creates an elegant balance between the two audio technologies: The recording brings as much information to the reproduction as it is capable of, and the simulator synthesizes only the signals that cannot be easily recorded.

THE FUTURE

The future for concert-hall design looks grim. The economic pressure to increase seating capacity is unlikely to go away, so architects will continue to design halls that are too large for their own sonic good

*Balancing the needs
of the performers
with those of the
audience provides
a classic dilemma
for acousticians.*

and inappropriately shaped to boot (see “Razing the Roof: A Case Study,” p. 46). What hope is there for music lovers? One possibility might be to supplement the acoustics electroacoustically. Electronic concert-hall enhancement has already been applied with some success. The most famous example is a system called Assisted Resonance, first applied at the otherwise too “dry” Royal Festival Hall in London.

More recently, Silva Hall in Eugene, Oregon, received a system called ERES (Electronic Reflected Energy System), which provides some early reflections. Electroacoustic techniques could also be useful for adjusting the acoustics to accommodate different musical styles or even different cultural events: operas, musicals, plays, etc. The technology would be expensive, but not in comparison with the construction costs of a concert hall.

Despite the potential advantages of electronic enhancement, many difficult technical questions remain. For example, any enhancement scheme requires micro-

phones, but how many are required and where should they be placed? The energy radiated by instruments varies with direction, so a single microphone won’t get a complete impression of the sound. But a panoply of microphones would be distracting in appearance and would require a mixing console. Likewise, loudspeaker positioning is a problem: To produce lateral sounds, they must be mounted on the side walls, but their output must not disturb nearby listeners. And there are also questions about acoustic feedback, as the sound produced by the loudspeakers returns to the microphones. These are tough problems and require serious research—which nobody is doing.

In addition to the technical problems of electronic fixes, there are aesthetic ones. Many music lovers object that if they’re going to listen to sounds generated by loudspeakers, they might as well stay home and listen to an audio system. And it is unlikely that an electronically enhanced concert hall will ever sound as good as a good, purely acoustical hall. But faced with a choice between a mediocre, electronically enhanced concert hall and a poor acoustical one, which would you select?

The only other future for music lovers will be to stay at home. Concert-hall simulators are getting pretty good and are relatively inexpensive for the increased realism they bring to even modest systems—and we’ve only seen the second generation of these products. With future wonders of digital processing, it’s possible that the concert-hall sound you get from your audio system will surpass the sound in the only concert halls that are economically feasible to build. If that happens, it would be unfortunate: A good concert hall is a great place to experience music, not only because the acoustics are (or could be) aesthetically pleasing but because of the emotional impact of a live performance and the camaraderie in sharing it with other music lovers. Let’s hope that architects, acousticians, and civic planners will find a way to resolve their multitudinous differences in order to prevent the sonic scandals of the recent past from ever being duplicated. □

Jeffrey Borish is president of EuPhonics, an R&D firm specializing in digital audio and digital music synthesis. He is also the inventor of the NoNoise system marketed by Sonic Solutions, a company he cofounded, and worked on the SoundDroid system at LucasFilm. EuPhonics provided the concert-hall models used in the Lexicon CP-1 Environment Processor.



John Eliot Gardiner has one last request. At the end of a long conversation about his career and the components of his musical philosophy, his final words—half entreaty, half command—are: “Just don’t call me an ‘early music conductor.’”

Fair enough. For although

Gardiner’s international reputation thus far has been built largely on his recordings of music from Mozart backwards, he is also a conductor entirely at home in Verdi’s *Falstaff* and Debussy’s *Pelléas et Mélisande*. Among his recent recordings is the operetta *Fortunio*, by André Messager, and with the modern-instrument orchestra of the Opéra de Lyon he’s done the Schubert Eighth and Ninth symphonies.

Such excursions are representative of the “mainstreaming” of conductors who got their starts in the early-music movement. Christopher Hogwood, at one time thought of as a “mere” harpsichordist, now conducts music as modern as Dvořák and Stravinsky; Roger Norrington, who started out with Heinrich Schütz and his 17th-century contemporaries, is now well into Beethoven and Berlioz, and he has his eye on Schumann and Brahms.

Gardiner’s first love was Monteverdi—and his longest musical association has been with the Monteverdi Choir, whose 25th anniversary is being celebrated this year. The choir’s founding dates back to Gardiner’s undergraduate years at Cambridge University. He had been fascinated by Monteverdi’s 1610 Vespers ever since childhood and was determined to put together a performance of his own. So Gardiner and his Monteverdi Choir made their debut in no less grand a setting than the Chapel of King’s College, Cambridge, a building whose spectacular fan vaulting had been set in place a century before Monteverdi polished off his psalms and antiphons.

“It took quite a lot of gall,” he says, looking back on that momentous occasion. “The challenge was to use the best singers of Cambridge, all of whom were beautifully schooled in the English choral tradition, which is very polite and disciplined, and to see if they were capable of singing this very difficult music with the appropriate élan and commitment and, above all, vocal color. Twenty-five years on, it seems it worked very well, because the professional musicians and critics who came to that concert all predicted a stunning future for the choir.”



Gardiner’s accomplishment was all the more remarkable for the fact that, at the time, he was essentially a self-taught musician. At Cambridge he was a history major who also studied Spanish and Arabic. But, as was the case with Roger Norrington, he’d been a beneficiary of a strong English tradition of amateur choral singing. Growing up on a farm in Dorset, in southwestern England, he had been surrounded by a family of nonprofessional—but keen—singers.

“We did a lot of singing at home, and that’s where I developed a rudimentary knowledge of Renaissance and early Baroque-period choral music. It became quite a tradition in the house to at-

tract other good amateur singers, and we actually did a concert tour in Germany and Austria and did some pretty adventurous programs. In 1962, we took the group to the Middle East: Lebanon, Israel, and Jordan.”

As they finished their degrees, Gardiner and his musical collaborators filtered out of Cambridge in the years 1967 and 1968 and somehow coalesced in London. From there, says Gardiner—with a nod to the Anglican Book of Common Prayer—the Monteverdi Choir “just went from strength to strength.

“It was and is unique as a virtuoso chamber choir,” he explains, “specializing—if in anything—in bringing Italianate music into the English choral culture. I was interested to bring the colors and intensity of Italian music to English music-making. It caught on with the BBC and the record companies, and by the late 1970s we were touring both Europe and the United States.”



The Monteverdi Choir came to life during a period of burgeoning interest in music of the Baroque and before, and it became particularly associated with the works of Monteverdi, Schütz, and Purcell. Handel was another early and enduring specialty. Shortly after moving to London, though, Gardiner decided it was time for some formal training. So, alongside working as a freelance professional singer and running the Monteverdi Choir, he took a year-long postgraduate music course at the University of London, where he worked with the harpsichordist and musicologist Thurston Dart. Then he got a French government scholarship for two years’ study with Nadia Boulanger. At the academy connected to the Dartington Summer Festival he worked on conducting with Antal Dorati and George Hurst, the latter a protégé of Pierre Monteux. And for two years he apprenticed with the BBC Northern Orchestra in Manchester.

Meanwhile, in 1968, Gardiner had founded a Monteverdi Orchestra to accompany his chorus, but not until 1977 did he jump on the original-instrument bandwagon. “Back in 1964, when I did the Monteverdi Vespers for the very first time, I used cornetti and sackbutts. Unfortunately, the standard of playing early instruments was so low in those days that it rather discouraged me, and I was dissuaded from using them in the Bach and Handel repertory.

“I switched round when I reckoned I’d gotten as far as I could with playing middle Baroque and early Classical music on regular modern instruments. So I persuaded a lot of my players to train in period instruments as well and to enlarge the pool of available players in London.”

Thus was born the English Baroque Soloists, the period-instrument orchestra with which Gardiner’s name has been associated ever since. Its players are now drawn from London’s large pool of highly skilled freelancers—which means that the EBS overlaps a good deal with Norrington’s London Classical Players, Hogwood’s Academy of Ancient Music, Roy Goodman’s Hanover Band, and the new Orchestra of the Age of Enlightenment. But, says Gardiner, “The principal groups really do sound very different from each other now. In the early days, there was a certain degree of uniformity in playing styles for early music, but that really has gone.” ▶

PHOTOGRAPH BY STEVE J. SHERMAN

ROOTED, BUT N



From
Monteverdi
to Messager,
just as
in the
farmland
of his
native
Dorset,
conductor
John Eliot
Gardiner
finds
himself
at home.

By
**Scott
Cantrell**

KEN HOWARD

Out in the Past

ROOTED, But Not in the Past

Another thing that has changed, even more dramatically, is the level of period-instrument playing. Says Gardiner: "I don't think there's a big difference at all in standards between so-called modern orchestra and period orchestra anymore. You get period orchestras that play out of tune, and you get modern orchestras that occasionally play out of tune. But basically the efficiency is very high, and that despite the sometimes colossal technical difficulties of the winds—and the gut strings, which are hydroscopic and can break."



For all his enthusiasm for old instruments and early performance styles, however, Gardiner is almost vehement in disclaiming the "authentic" label: "I don't believe in it. The whole concept of 'authenticity' is a chimera, a vain pursuit. It's worthwhile to get close, but to

ever imagine that we can truly and 'authentically'—whatever that means—have the music exactly as it was heard and performed by the composers in question is nine-tenths illusion. It's not the antiquarian pursuit that's interesting, but the fact that it makes the music sound fresh to us."

To that end, Gardiner figures it's all to the good to come at, say, Beethoven, from a saturation in Mozart, and to Mozart from Bach. And it's a perspective he is prepared to take all the way through the 19th century. "I think it's a very good corrective to the old-fashioned way that regarded the 19th century as the exclusive repertory, with a token backward glance to those primitive precursors—which is totally wrong, as far as I'm concerned.

"Mozart and to some extent Haydn seem to me the summit of so much that's gone before, the climax of what one could describe as Baroque music. It certainly seems to me that one puts a false emphasis on Beethoven and Schubert—and also Schumann and Brahms—unless one has an awareness of their musical origins. The thing that has excited me recently is how passionate and knowledgeable Schumann and Brahms were about the music of the 17th century.

"For years, Brahms has suffered from being interpreted in the style of Wagner. I don't think he is about the same sort of thing. The characteristically sostenuto style that's so much a hallmark of Wagner is misplaced in Brahms. In common with Haydn and earlier composers, Brahms's music is based on dance rhythms. And that gets so much blurred in the stodgy, turgid performances of orchestras who play in a Wagnerian way."

Period-instrument Brahms isn't in Gardiner's plans right now, but he will soon record, for Archiv, the Schumann Piano Concerto with gut-strung fiddles, hand horns, and period winds; Malcolm Bilson will play an 1839 piano built by Johann Baptist Streicher.

One of Gardiner's projects at the moment is founding a new period-instrument orchestra in Paris, the Orchestre Révolutionnaire et Romantique, to play French music written "between 1828 and 1848." The first project is a video recording, with Erato, of the Berlioz *Symphonie fantastique* and its sequel, *Lélio*, in the hall where they were first heard, at the old Paris Conservatoire. Next year, they'll do the composer's Requiem in Les Invalides.

"The thing about Berlioz is that he used natural horns, natural trumpets, and trombones of narrow bore—which had not changed much in technology from the 17th century—alongside the newest instruments that Adolphe Sax was inventing: the cornets à pistons, the valved horns. Then there's the ophicleide, a kind of keyed serpent. But my orchestra will be very different from what Norrington did in London with his Berlioz Experi-

ence. He used Baroque strings, but I will be using modern instruments with gut strings."

French music has been another longstanding Gardiner enthusiasm. It may surprise many admirers that his earliest recording, made back in 1966, was of the Berlioz *Irlande*. But Gardiner's Francophilic inclinations—nurtured during his study with Boulangier—have been further indulged over the past decade in his association with the Opéra de Lyon.

Having spent two years as music director of the Canadian Broadcasting Company's Vancouver Orchestra (1980–82), Gardiner was hired in 1983 to create a new orchestra for the opera company in France's second city. In addition to conducting operatic performances, Gardiner has led many symphony concerts with the Lyon orchestra. And they have recorded several operas (including both the Gluck *Iphigénies*), three oratorios (including Berlioz's *L'Enfance du Christ* and *La Damnation de Faust*), and four symphonic releases—"not bad," boasts Gardiner, "for an orchestra only six years old." What with the press of other work, he relinquished the Lyon directorship last year, but he continues as the orchestra's *chef fondateur*, or conductor laureate. He is also giving up a ten-year position as artistic director of the Göttingen Handel Festival in Germany, the venue where his recent Handel *Jephtha* and *Alexander's Feast* recordings (on Philips) were taped in live performances.

Gardiner certainly won't be idle. Having recently completed a project of recording all the Mozart piano concertos with the English Baroque Soloists and fortepianist Malcolm Bilson for Archiv (the release of which should be completed this year), he's now doing the late Mozart symphonies for Philips. Back with Archiv, starting next year, he'll do the seven great Mozart operas.

One of his most recent projects was the realization of a long-time dream—and, in a sense, it brought his career full circle. After draconian negotiations, he secured the use of Venice's San Marco Cathedral to record the Monteverdi Vespers in May. From here, it's on to Beethoven, launching a new series with the Mass in C major and *Missa solemnis*; next year, he'll start a cycle of the nine symphonies. Then there is the growing schedule of guest-conducting engagements with modern symphony orchestras on both sides of the Atlantic.



Despite his manifold commitments, at age forty-five Gardiner keeps going home again. And home is still the family farm in Dorset, where sheep, cattle, and wheat are raised and accounts are to be looked after. Even amid the annual rounds of *Messiahs* and Bach Passions, he tries to set aside time to help with spring lambing, and the London Proms and a few foreign festivals have to share his energies with the fall harvest.

Back at the farm—as in the concert hall and recording studio—he lives his life with violinist Elizabeth Wilcock, who plays first fiddle in the EBS and the Gainsborough String Quartet, an ensemble that does Classical-period music on authentic instruments. And, along with the sheep and cattle, there are three children to be looked after.

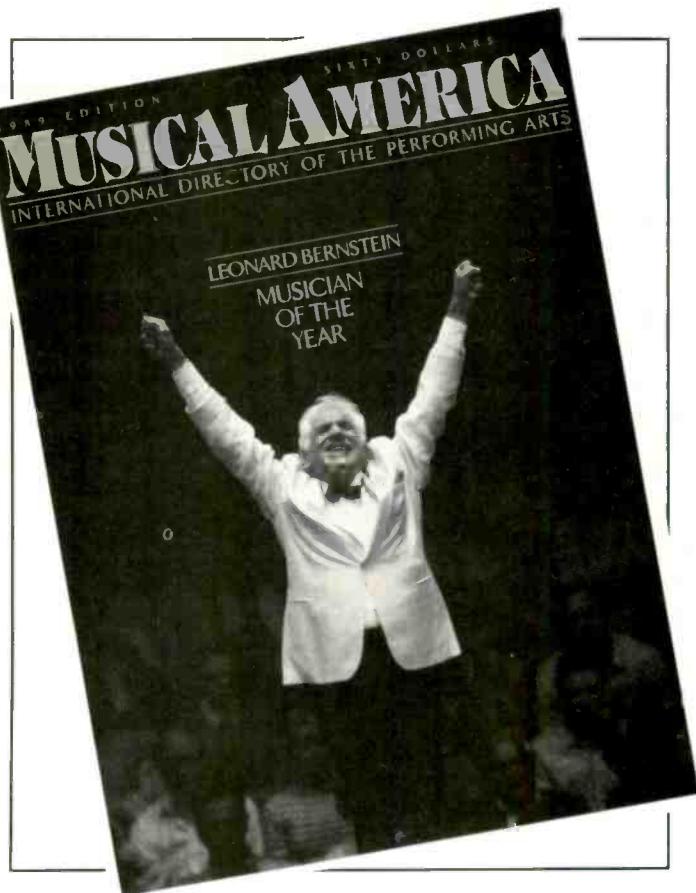
"Apart from my studies abroad—and the time in Vancouver and Lyon—I've never really left here," says Gardiner. "I've always maintained my roots here. In the stress of the music profession, it's valuable to have time now and again to touch base." □

Scott Cantrell is music critic of the Rochester (N.Y.) Times-Union and a frequent contributor to national publications.

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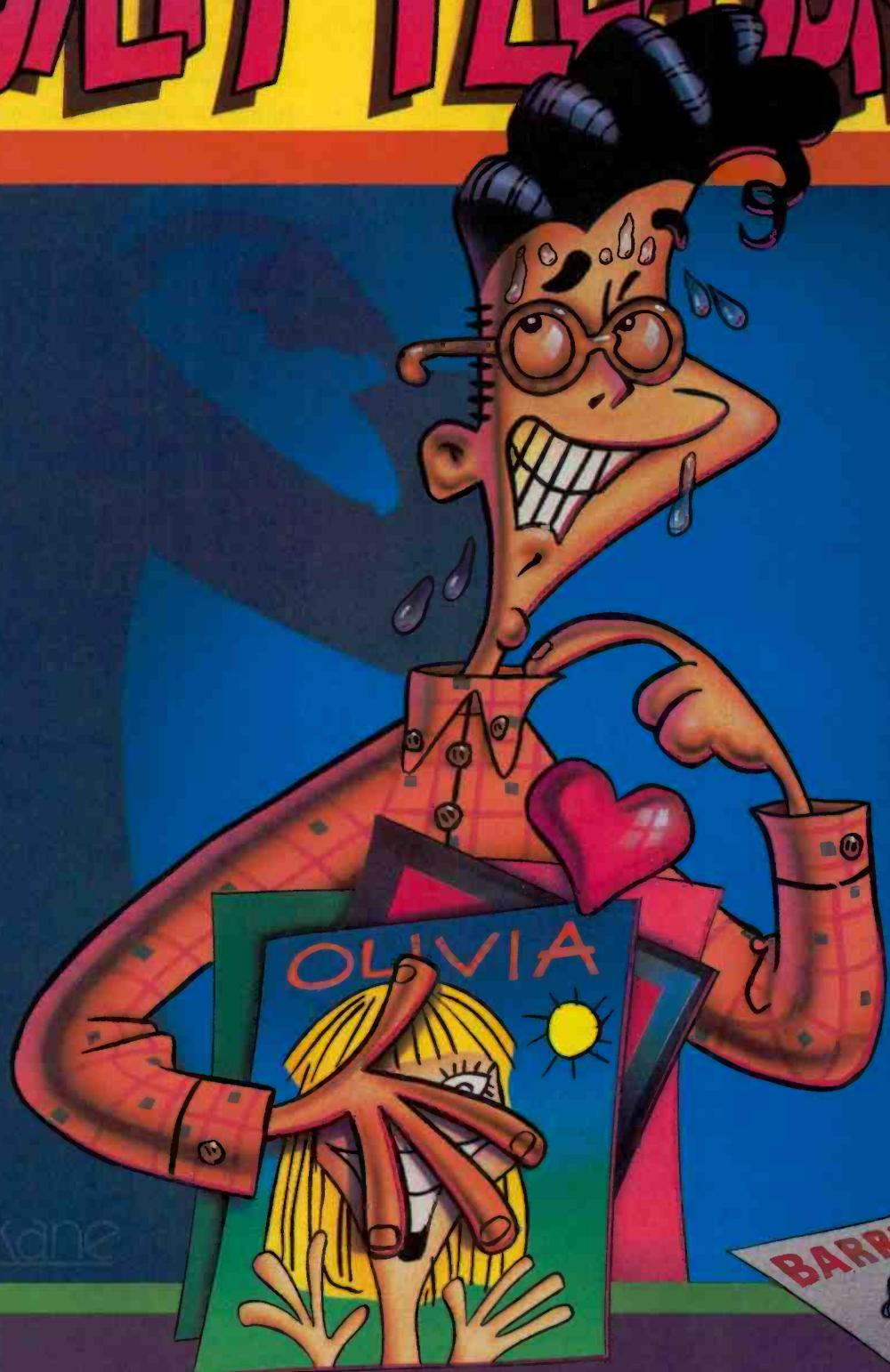


ILLUSTRATION BY KID KANE

Critics love stuff they're supposed to hate.

For those of you who think rock critics listen to nothing but Sonic Youth, welcome to true confessions. As a popular music editor with a mission of showing that critics are just normal folks, I asked several of my writers to tell the world they actually enjoy artists condemned by the critical community. We all have these guilty pleasures: Maybe, when no one's around, you still play Grand Funk Railroad. Write us, so we can fill our "Letters" department with your own choices of artists that, under any other circumstances, you'd be too embarrassed to admit liking. Meanwhile, in the spirit of good sportsmanship, I'll put my head on the block first, defending the dreaded . . .

Black Sabbath

"Finished with my woman 'cause she couldn't help me with my mind." Has a better opening verse ever been written? The line's from "Paranoid," the song's from *Paranoid*, and the creators are Black Sabbath. Alias "Dark Princes of Downer Rock," said *Rolling Stone*. Makers of "poor" album after "poor" album,

says *The New Rolling Stone Record Guide*. "Dim-witted, amoral exploitation," says the old *Christgau's Record Guide*. Lies, all lies.

Here was a marked band. "All albums have been gold discs," reported a 1975 forerunner to *The Harmony Illustrated Encyclopedia of Rock*. "Sabbath remain, however, an unfashionable band among rock critics." End of entry. Why bother saying any-



Guilty Pleasures

Guilty Pleasures

Guilty Pleasures

thing else? Well, I'm here to say that ever since 1971, when I first got *Paranoid*, I've loved the early thrashings of Black Sabbath. Why? Because when you get right down to it, rock isn't synths or strings or horns or even bass and drums and certainly not drum machines, it's guitars, loud and mean, and few bands give you more of 'em than . . .

But wait a minute. *Black Sabbath*. Witchcraft and demonology, right? Let's put this to rest. If you never believed the band members themselves, who always said their blackness was nothing more than a prop, you could simply check out the lyrics and get the message straight: "War Pigs" is anti-war. "Hand of Doom" is anti-drugs. "Lord of This World" is anti-devil. "After Forever" is pro-Christ. And "Children of the Grave" is not some Stephen King horrorfest but instead a rally cry: "Show the world that love is still alive, you must be brave/Or you children of today are children of the grave." Finally, hear the closing words to "Spiral Architect," lines that are not only uncharacteristic of would-be sorcerers but also surprisingly moist and tender: "Of all the things I value most of all/I look upon my earth and feel the warmth and know that it is good."

Meanwhile, I feel the heat of Black Sabbath metal and know that it is very

good. You can have your Metalicas and your whatevers of 1989. I'm happy to go back to metal as originally forged: slow and heavy, gorged on riffs. After all, I was a proficient air guitarist, and Tony Iommi gave me plenty of lines and chord progressions to scrape and hammer. There are six major riffs in "War Pigs"—not bad, when you consider that another metal band of the time led off its second LP with a whole lotta one. Now don't get upset, 'cause I'm a Zeppelin fan, too, but let's give a little musical credit where it's due. Sure, *Master of Reality* wasn't as meaty, and *Vol. 4* was tired and disorganized, but *Sabbath Bloody Sabbath* was a fierce, multidimensional revival that holds up well. Newcomers might want to start there before surrendering to *Paranoid* and most of *Master*. And don't forget the eponymous debut, which though plagued with wayward jamming does have the eponymous title track, all rain and thunder and tolling bell and chilling three-chord attack and Ozzy Osbourne's "Oh no, no, please God help me!," a climactic scream that must give Roger Daltrey the shivers.

There was more to be heard after *Sabbath Bloody Sabbath*—all, unfortunately, less. And now it seems there is still more to be heard: I.R.S. has just released *Headless Cross*, with Iommi on guitar and Cozy Powell on drums, and though the chorus to "When Death Calls" is mighty impressive, the rest of the LP is stupid.

I recall better days, though—and I'm not the only one. When I recently bought a copy of one of those late-era disgraces (used, \$1.99), the guy behind the counter glanced at the album cover and sighed, "Hmmm, not the same Black Sabbath. But they did save my life once." Pray tell. "In high school, I was totally depressed. Black Sabbath cheered me up."

Need we say more? Ken Richardson

Olivia Newton-John

A few weeks ago, I was stuck in traffic—late, frustrated, and feeling guilty about everything, including saying yes to this assignment—when the good Lord moved my hand to push the right button, and the car suddenly filled with the guttural guitar and sweet steel that introduce "If You Love Me (Let Me Know)," the soundalike follow-up to the wonderful "Let Me Be There." What an amazing ersatz hillbilly soul song! What a concept: A very nearly

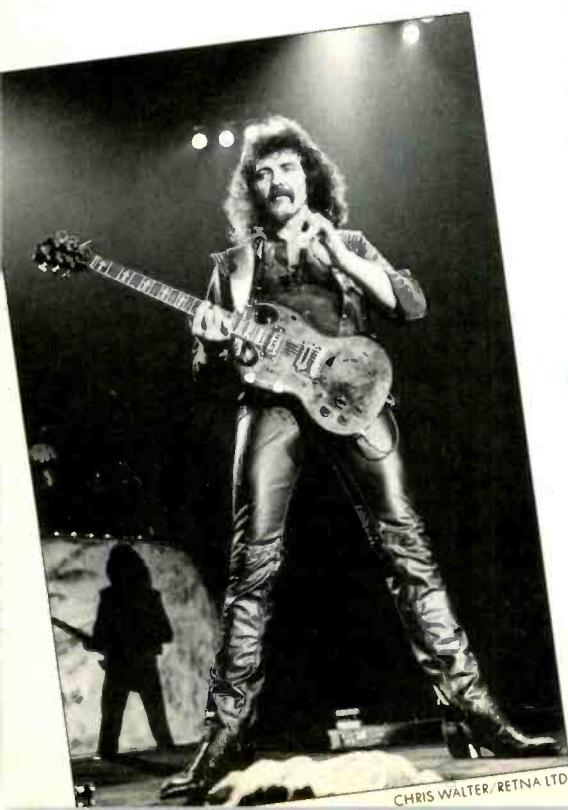


perfect creature, a subject of Her Britannic Majesty who'd never been within an ocean's length of a tent revival in her young life, pretends to be wracked by the heartlessness of her beloved and is supported in her lamentation of vulnerability and exasperation by the \$3 Bill Quartet, massed for the white gospel-style BIG chorus. What an exquisite, stirring phony! A veritable Ms. Elvis. My faith in man and womankind renewed and my burdens lifted, I pushed on through the traffic. Yes I said yes I will Yes.

I have never been quite able to account for my 15-year fascination with all the stages of Olivia Newton-John's superfine career. From mushy folk to carpetbag country to mealy-mouthed MOR to "Let me hear your body talk!"—Sade (Le Marquis, not la chanteuse) would have loved it. In a few short years, a pristinely beautiful, denim-bedecked folkie from England by way of Australia is miraculously transformed into the femme fatale of Hollywood electrodance-fluff, a Catherine the Great with better teeth. Snort if you wish, but the charts don't lie, and Ms. N-J (don't drop that hyphen, son) has tallied no fewer than 15 Top Ten hits, with nary a cloven hoofprint in sight.

The dark pact, I think, was with her recently replaced career-long producer, former substitute Shadow (trust me, that meant something in the U.K.) John Farrar, and it seems to have involved Olivia's extraordinary determination to be the ultimate all-purpose product, the isolated soy protein of pop radio. So, faster than Ms. Ciccone could say "tease," Olivia had stopped peddling threadbare platitudes—who could ever forgive or forget "I Hon-

(Continued on page 70)



CHRIS WALTER/RETNA LTD.



**Edited by Ted Libbey
and Ken Richardson**

American Beauties

They don't make as many records as they used to, but America's orchestras are still the elite of the musical world. Now and then, even foreigners have to admit it. Recently, the San Francisco Symphony and its American-born music director, Herbert Blomstedt, made believers of the Académie Charles Cros and received the academy's Grand Prix du Disque for their recording of Carl Nielsen's Symphonies Nos. 4 (*The Inextinguishable*) and 5, available on London (421 524-2). In recognizing the San Franciscans for their achievement, the French were only slightly behind the Musical Press Union of Belgium, which had already honored the same disc with its Caecilia Prize.

Recognition from the press is nice, but when recognition comes from the Kremlin, that's news in itself. In April, the National Symphony Orchestra and its music director, Mstislav Rostropovich, made headlines when they received an invitation to perform in Moscow and Leningrad this coming February. Rostropovich, who left the Soviet Union in 1974 and had his citizenship revoked in 1978, is one of the most celebrated musicians in history; with the arrival of *glasnost*, his absence had become an embarrassment in Soviet political and cultural circles. It was known for some time that an overture would be made, but since Rostropovich had steadfastly maintained that he would not return to his homeland until artistic freedom was a reality, things had to be done discreetly. But expect the reaction of Soviet music lovers—who adore "Slava"—to be anything but discreet.

One orchestral area in which America has lagged behind Europe has been period-instrument performance, but that is beginning to change. On May 10, America's first full-size Classical orchestra of period instrumentalists, fittingly called the Classical Band, gave its debut concert at Columbia University under the direction of Trevor Pinnock. Without playing a note, the band already had won a six-year contract with Deutsche Grammophon that called for a minimum of 18 discs.

In other news, Roger Norrington was in New York at the end of March to announce a festival devoted to the study and performance of Mozart's piano concertos that he is organizing in conjunction with the University of Michigan. The festival, scheduled to take place in November, will bring together eleven forte pianists to play ten of Mozart's concertos, and will involve numerous scholars and performers in discussions of various aspects of the works and their history. Norrington will conduct three concerts at the "MozartFest," which is being produced by the University Musical Society, one of America's oldest and most highly regarded concert organizations.

Ted Libbey

Explore: Adopt a Critic

During my senior-year job hunt, I happened across a potential vocation that the career counselors hadn't mentioned: rock critic. It seemed perfect. I'd get paid for listening to records all day and jotting down a few witty and insightful remarks. It certainly beat investment banking. And the influence I'd have! I envisioned my readers marveling at said wit and insight, then hurrying out to buy everything I'd recommended. And record-company execs, aware that a bad word from me could doom a new release to the cutout bin, would nervously await my reviews like prisoners awaiting a jury verdict.

Honest. I really believed that.

And then I thought of my favorite recording artists. Folks like Richard Thompson, the Feelies, and Captain Beefheart. For years, they've received universal good-to-great reviews yet made nary a dent in the best-seller charts. (And not simply because they're inaccessible; Thompson, I'm convinced, would sell gobs of records if AOR gave him half a chance.) I realized that rock critics, even more so than their literary and cinematic counterparts, have no power. I suspect that several truckloads of rave reviews will sell fewer copies of an album than, say, an MTV video with lots of cleavage. And that's a shame.

I'm not suggesting that you shouldn't like a given record just because it is panned, or that you force yourself to listen to Sonic Youth simply because the band turns many reviewers into salivating idiots. But there's a lot of wonderful music out there that's passing you by only because you're never exposed to it. Here's where critics earn their keep.

Go to the library and read as many music magazines as you can (except, of course, **HIGH FIDELITY**, to which you should subscribe). See what individual reviewers like. Some place particular emphasis on originality, others look for emotional conviction, still others are suckers for witty, insightful lyrics. Find a critic you usually agree with, and next time he or she recommends an album you've never heard of, buy it.

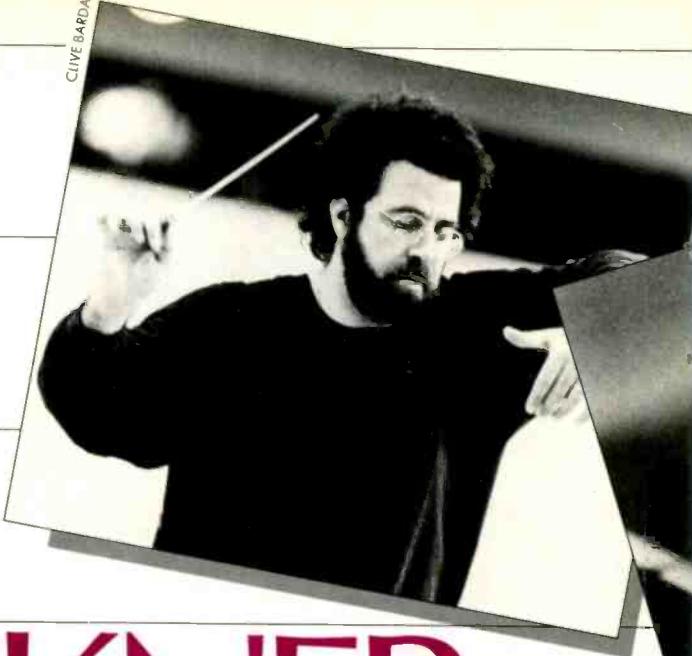
I know, I know: At 15 bucks a CD, buying something unheard is risky. But think of the potential rewards. It's exciting to "discover" an excellent but obscure artist, one whose music you may enjoy the rest of your life. It's fun to challenge yourself as a listener. And if the artist is so obscure that you've never heard of him, chances are he needs your money more than you do.

Or, in addressing these thoughts to **HIGH FIDELITY** readers, am I preaching to the converted?

Peter Doskoch

Mr. Doskoch, one of our readers, is a resident of Goshen, New York.

NEW VIEWS on BRUCKNER



BRUCKNER: Symphony No. 4, in E flat ("Romantic").

● Dresden State Orchestra, Sinopoli. Günther Breest, prod. Deutsche Grammophon 423 677-2 (D).

BRUCKNER: Symphony No. 6, in A.

● Berlin Philharmonic, Muti. David Groves, prod. Angel EMI CDC 49408 (D).

BRUCKNER: Symphony No. 7, in E; Overture in G minor.

● Czech Philharmonic Orchestra, Pešek. Jaroslav Rybář, prod. Supraphon CO 72647 (D). (Dist. by Denon.)

It's wonderful to see the music of Anton Bruckner being performed and recorded by a new generation of conductors, especially when the results are as sympathetic as they are in these three performances. Giuseppe Sinopoli, the youngest of the maestros under consideration here, seems to be earning a reputation for eccentricity based on his tendency to play Puccini as if it were Bruckner. Fortunately, he doesn't play Bruckner as if it were Puccini. His performance of the Eighth Symphony with the London Philharmonic at Carnegie Hall last season was first-rate, and so is this new recording of the Fourth.

Sinopoli adopts generally slow tempos and maintains them with admirable steadiness, but he doesn't quite sustain the music's tension over the longest spans—as Karl Böhm and Otto Klemperer were able to do. The Dresden State Orchestra brass are not the world's strongest section—the horns in particular could ring out with more gusto in the Fourth's marvelous scherzo—and the recording is a bit cav-

ernous, but these are minor quibbles in what is basically a fine job all around. Indeed, the only substantial complaint I have about it is that it could do with more excitement and, well, eccentricity.

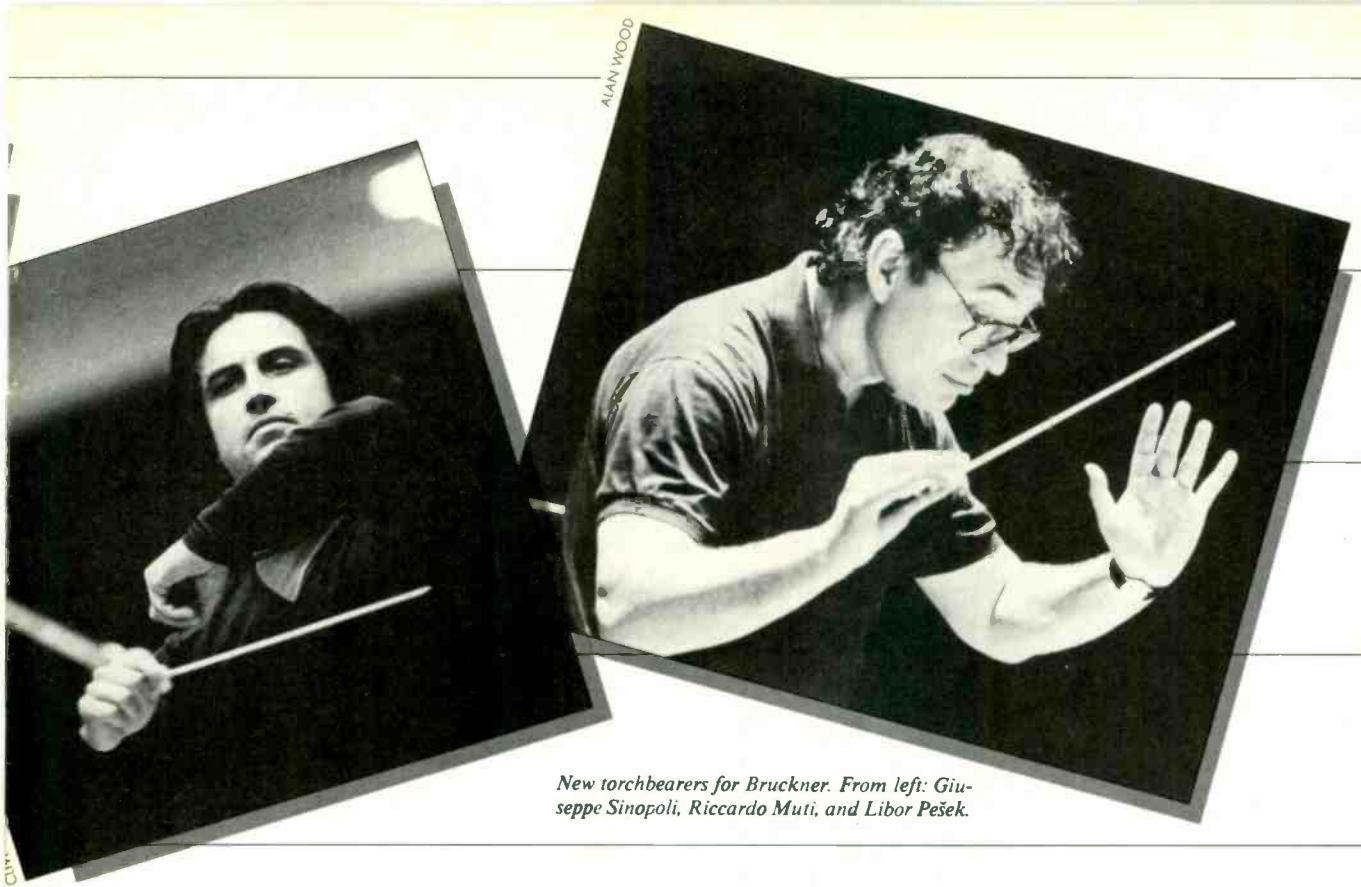
In addition to being the venue for Sinopoli's account of the Eighth, Carnegie Hall last season played host to two different performances of Bruckner's Sixth: one from the Cleveland Orchestra and Christoph von Dohnányi, the other from the Philadelphia Orchestra and Riccardo Muti. Given the strength of the latter performance, it's a pity that EMI feels it necessary to record Muti's Bruckner with the Berlin Philharmonic, for the Philadelphia is a finer orchestra, with a brass sound better suited to the music. That said, Muti manages to coax the Berliners into making some uncharacteristically idiomatic noises, granting the brass and timpani much more prominence than in other recent recordings. (It is interesting that Herbert von Karajan's new recordings of Bruckner's Seventh and Eighth Symphonies, due for release later this year, have been made not in Berlin but with the Vienna Philharmonic.)

Muti's Sixth is a far more successful performance than his earlier account of the Fourth, and it is given a vastly superior recording. The first movement takes some time to catch fire and concludes with a rather lethargic coda, but this works to the symphony's long-term advantage, inasmuch as it prevents the finale from sounding like an anticlimax. The second movement is magnificent, distinguished by a

particularly brooding reading of the "funeral march" third subject; for the scherzo Muti adopts an ideal tempo, not too quick, as in Karajan's performance with this orchestra. The finale is again magnificent: a genuine culmination rather than the appendage it sometimes becomes in other versions. There is something of the wildness of the unrevised Fourth Symphony in this movement, and Muti responds by emphasizing its raw, almost primal power. Overall, his account can be easily recommended, along with Günter Wand's on EMI/Deutsche Harmonia Mundi—at least until Klemperer's Philharmonia recording appears on CD. That performance still blows away the competition and is one of the very greatest Bruckner symphony readings ever preserved for posterity.

The Czech Philharmonic is among the world's finest orchestras, and even when it plays for a conductor of limited interpretive insight, its recordings ought to be collected on principle. Fortunately, Libor Pešek is a musician of tremendous gifts, and his interpretation of Bruckner's Seventh stands with Klemperer's and Karajan's as one of the three greatest ever recorded.

The sheer sound of this orchestra is a revelation from the symphony's first bars: Never has the opening melody, moving in one sweeping phrase, had such a vibrant lift. Instead of Karajan's spiritually grand but emotionally detached vision, Pešek presents Bruckner as vital, earthy, even rustic—and teeming with vigor. Every strand in the musical texture shimmers in



New torchbearers for Bruckner. From left: Giuseppe Sinopoli, Riccardo Muti, and Libor Pešek.

a subtle light. Listen to the way the basses gently propel the music toward the big first-movement climax that precedes the dancelike third subject, and note the way Pešek times that entrance perfectly, selecting precisely the right tempo.

The Czech conductor's account of the slow movement may excite some controversy; it is easily the quickest on disc. But how fresh and flowing it sounds! Bruckner's adagios so often become the subject of an "anything you can play I can play slower" sweepstakes, but here the warmth of the strings, combined with a solemn glow from the majestically played Wagner tubas, allows the music to make all the necessary points without becoming unduly protracted. Bruckner's cockcrow scherzo lets those superlative winds make their presence felt, and with the finale, the reading as a whole passes one of the most crucial Brucknerian tests with flying colors. Having underplayed the conclusion of the first movement slightly, Pešek here allows the coda to open out triumphantly, thus crowning the entire edifice. Never has the music sounded less choppy and more rhythmically alive.

To make matters even better, Pešek's is the only account of the Seventh on CD to find room for a filler, the sole recording available in any format of Bruckner's early (1863) but by no means immature Overture in G minor. The piece is solid, pre-symphony Bruckner, offering lots of ungrateful string writing as the accompaniment to beautiful passages for brass and winds, and ending with a thoroughly char-

acteristic peroration. Supraphon's sound is very attractive, with a natural balance and good sense of depth.

This disc is an essential purchase; all three are, in fact, a cause for cheer. Bruckner's muse would seem to be in good hands these days. Playing times: 66:58 (Deutsche Grammophon 423 677-2); 56:55 (Angel EMI CDC 49408); 72:15 (Supraphon CO 72647). *David Hurwitz*

BRAHMS: Concerto for Violin and Orchestra, in D, Op. 77; Academic Festival Overture, Op. 80.

● Mintz*; Berlin Philharmonic, Abbado. Steven Paul and Günther Breest, prods. Deutsche Grammophon 423 617-2 (D). ☎

PROKOFIEV: Sonatas for Violin and Piano: No. 1, in F minor, Op. 80; in D, Op. 94a.

● Mintz, Bronfman. Steven Paul, prod. Deutsche Grammophon 423 575-2 (D).

Violinists normally do not set out across the dangerous terrain of Brahms's Violin Concerto until they have achieved a certain maturity. Like the Beethoven Concerto, the Brahms demands more than heart-on-the-sleeve emotion and technical showmanship. Both works are symphonically conceived concertos, in which the solo part is only one strand in the overall fabric. Sublimation of ego (and sensitivity to purely musical values such as motivic development) does not come naturally to adolescents, so it is no wonder that fledgling virtuosos begin their careers with Mendelssohn, Bruch, and Tchaikovsky rather than Brahms.

Shlomo Mintz was no exception. But now, at age thirty-two, he has recorded the Brahms. The result is impressive, and certainly benefits from the participation of Claudio Abbado and the Berlin Philharmonic. Mintz himself produces a rich, creamy tone, but his delivery is taut and precisely articulated. His approach is restrained: On the emotional level, he seeks an appropriate balance between Romantic passion and Classical propriety. (If one wished to locate Mintz within the context of his Israeli compatriots, one might say that he finds the middle ground between Itzhak Perlman's heated emotionalism and Pinchas Zukerman's cool detachment.) Mintz is able to project a seamless melodic flow, shaping phrases into long, arching lines. And he understands—and even defers to—the primary role that the orchestra plays in establishing continuity and developing the thematic material.

Abbado evokes a magnificent, well-blended, mellow sound from the orchestra, and the Berliners' playing glows like the burnished brass and polished oak of a Victorian study. The conductor's pacing is broad and flexible, his phrasing, like Mintz's, perfectly seamless. Mintz and Abbado have often recorded together, and the kind of partnership they exhibit here is one that can only be nurtured over time.

One notes the same type of partnership in Mintz's ongoing series of recordings with pianist Yefim Bronfman. I have delighted in watching this duo blossom and mature, not only in recordings of the Franck, Debussy, and Ravel sonatas

(Deutsche Grammophon 415 683-2; review, January 1987) but particularly in the recently released Fauré sonatas (DG 423 065-2). Yet I was unprepared for the stunning impact of their Prokofiev sonatas. The brooding, icy F minor is filled with atmospheric timbral effects made possible by Mintz's control of vibrato and bow

mark definite stylistic periods in the composer's development. The *Piano Variations* (1930) is certainly among his finest works, if not his finest. It is the culminating achievement of a period that gave rise to the trio *Vitebsk* and the *Symphonic Ode*—like the *Piano Variations*, works of dignified severity. The *Piano Sonata*

the same composition.

A fascinating by-product of hearing these three works one after the other is the recognition that Copland's piano writing remains true to a single inner vision. The layout, sonorities, and juxtapositions of blocks of sound are unmistakably Coplandesque in all three, regardless of stylistic changes and difference in the basic materials of each piece.

David Lively's playing differs from that of most interpreters of this music in that he refuses to become percussive. His tone production is by no means extraordinary, but his pedaling is superb and bathes everything in a lightly resonant glow. Although there is no denying that certain passages in the *Piano Variations* and the *Fantasy* seem to demand a cooler, more metallic sound to achieve their intended effect, it is amazing how well these pieces respond to Lively's approach. The recording is very natural. Playing time: 63:58.

Paul Turok



Creamy tone and a balance between expressiveness and restraint mark Shlomo Mintz's Brahms.

stroke and Bronfman's skillful pedaling. Mintz avoids the temptation to emphasize Prokofiev's harsh, abrasive surfaces: Instead, although everything is bracingly articulated, the violinist's tone is robust and his demeanor poignant. One need only compare this traversal with Nadja Salerno-Sonnenberg's 1982 recording of the same sonata, which is strident and piercing to an almost painful degree (Musicmasters MMD 60022Y), in order to appreciate Mintz's achievement here.

Bronfman's playing of the powerful piano part is clearly etched, even bell-like; rather remarkably, he keeps it from sounding muddy or overbearing. These two are quite a team, and I hope their repertoire will continue to expand—in the direction of the Bartók, Shostakovich, and Brahms sonatas—in coming years. Playing times: 52:30 (423 617-2); 55:23 (423 575-2).

K. Robert Schwarz

COPLAND: Piano Fantasy; Piano Sonata; Piano Variations.

● Lively. G. Steurbaut, prod. Etcetera KTC 1062 (D). (Dist. by Qualiton Imports, Ltd.)

Here are Aaron Copland's most important piano compositions, which also happen to

(1939–41) is of the same period as *Billy the Kid* and *Rodeo*—a golden era that peaked with *Appalachian Spring* and the Third Symphony. Its materials are lighter than those of the variations, but still abstract rather than folklike; the tone, as is true of Copland's other works of the period, is rather rhetorical.

The *Piano Fantasy* (1955–57), in common with Copland's somewhat later orchestral work *Connotations* (composed for the inauguration, in September 1962, of Philharmonic Hall in New York), is based on a tone row. The composer's conversion to the compositional fashion of the moment does not seem to have grown out of an inner need (as it did, a few years earlier, in the case of Roger Sessions) but out of the fact that Stravinsky had finally gotten around to flirting with the same style. It is sad that the best-known serious American composer of his time—who fully deserved his reputation—was still in thrall to a pecking order established in Paris some 40 years earlier under the watchful eye of Nadia Boulanger. But unlike *Connotations*, the *Piano Fantasy* is fully convincing music: a summation of Copland's habitual combination of virtuosic, openly expressive, and rhythmically vital elements in

ELGAR: "Enigma" Variations, Op. 36; In the South (Alassio), Op. 50; Serenade for Strings, in E minor.

● Royal Philharmonic Orchestra, Litton. Andrew Keener, prod. Virgin Classics VC 90727 (D). □

RAVEL: Boléro.

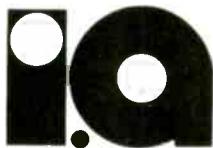
RIMSKY-KORSAKOV: Scheherazade, Op. 35.

● London Philharmonic Orchestra, Litton. Andrew Keener, prod. Virgin Classics VC 90729 (D). □

The young American conductor Andrew Litton made his debut on the Virgin Classics label with a very fresh and attractive coupling of Mahler's First Symphony and *Songs of a Wayfarer*. His Elgar is in the same class as his Mahler: fresh and unaffected, yet intelligent, full of nuance, and finely detailed. In fact, Litton's *Enigma* is now one of the very finest available, offering an especially delightful "Dorabella," as well as an "E.D.U." finale that strikes the perfect balance between grandeur and explosive vigor. Praise must also go to Virgin's recording, which gives the best balance between orchestra and organ that I've ever heard in this piece.

The two shorter works, *In the South* and the lovely *Serenade for Strings*, receive similarly successful treatment, though in the former the Royal Philharmonic brass have not quite the weight that can be heard on Sir Alexander Gibson's thrilling Chandos recording with the Scottish National Orchestra (CHAN 8309). Litton's is,

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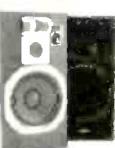
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nonetheless, one of the best performances ever recorded of this festive evocation of Alassio, Italy—a piece that is notoriously difficult to hold together in performance. It is a tribute to Litton's maturity as an interpreter and his innate musicality that he succeeds so well where noted Elgarians such as Georg Solti and Daniel Barenboim have failed.

After the success of the Elgar disc, the pairing of Rimsky-Korsakov and Ravel comes as a disappointment. There's nothing wrong with these decently played and conducted performances, but *Scheherazade* lacks fire, and as for *Boléro*—well, who cares? The last thing in the world we need are more versions of these two warhorses, and this release runs curiously counter to Virgin's avowed intention of providing fresh repertory and creative presentation. Indeed, unlike Litton's Mahler coupling, this one seems particularly ill-judged. While this disc certainly does nothing to damage the conductor's growing reputation, it makes at best only a slight claim on any prospective buyer's purse. Playing times: 65:00 (VC 90727); 60:22 (VC 90729).

David Hurwitz

JOPLIN: Piano Works (16).

● Bolcom. Leroy Perkins, prod. Omega OCD 3001 (D). (Dist. by One World Records, 1350 Ave. of the Americas, New York, NY 10019.)

Bethena; Country Club; Elite Syncopations; The Entertainer; Eugenia; Euphonic Sounds; Fig Leaf Rag; Gladiolus Rag; Magnetic Rag; Maple Leaf Rag; Nonpareil; Original Rags; The Ragtime Dance; Searchlight Rag; Solace; Sugar Cane.

PORTER: Songs (26).

● Morris, Bolcom. Seymour Solomon, prod. Omega OCD 3002 (D). (Dist. by One World Records.)

At Long Last Love; Begin the Beguine; Down in the Depths (on the Ninetieth Floor); Easy to Love; Good-bye, Little Dream, Good-bye; I Get a Kick Out of You; I Happen to Like New York; In the Still of the Night; I Sleep Easier Now; I've Got You Under My Skin; Just One of Those Things; Let's Do It; Love for Sale; Miss Otis Regrets; My Heart Belongs to Daddy; Night and Day; Nobody's Chasing Me; No Lover; Old-Fashioned Garden; The Physician; So in Love; The Tale of the Oyster; What Is This Thing Called Love?; Which; You'd

Be So Nice to Come Home To; You're the Top.

Joan Morris's latest recital of American popular song, released on Seymour Solomon's new Omega label, is devoted to the music and lyrics of Cole Porter. She slips adroitly from familiar standbys like "Night and Day" (also the album's title; 1932) and "You're the Top" (1934) to witty rarities like "No Lover" and "Nobody's Chasing Me" (both 1950). Her interpretations are sensitive, her diction sparkling, her spirits high, her infectious personality impossible to resist. William Bolcom's piano playing is perfection itself—Porter himself could hardly have played more stylishly than does Bolcom on this CD. Having heard Morris accompanied by the Philharmonia Virtuosi at a recent concert at New York's Town Hall, though, I can't help thinking that it is about time she recorded an album of theater songs with authentic pit-orchestra accompaniments. Gershwin? Berlin? Rodgers and Hart? Weill? Bernstein? The possibilities are endless.

Bolcom is featured on another new recording from Omega, a collection of Scott Joplin's piano music called *Euphonic Sounds*. Bolcom is, of course, a ragtime authority (he wrote the "Ragtime" entry for *The New Grove Dictionary of Music and Musicians*), and his choice of material is impeccably representative. Having heard him give what might politely be described as underrehearsed performances of Joplin rags on more than one occasion, I'm pleased to report that the brisk and lively playing on this album is technically secure, if not as cleanly executed as the electric performances preserved on Bolcom's 1973 Gershwin solo album (Nonesuch 79151; the CD includes a number of songs, also with Morris).

Bolcom's liner notes say nothing about his use of ornamentation, which appears to be derived from Joplin's own piano rolls and other period recordings; most of it sounds convincing enough, if a bit excessive. On the whole, I prefer the straighter, more lyrical playing offered by Joshua Rifkin on his Joplin CD (Nonesuch 79159) to Bolcom's snappier approach. Still, there is nothing at all wrong with Bolcom's more extroverted—and, one suspects, more authentic—playing. Good sound, but Omega should have taken the trouble to have Bolcom's piano tuned and voiced. Playing times: 73:35 (OCD 3001); 73:22 (OCD 3002).

Terry Teachout

LUTOSLAWSKI: Chain 2*; Partita.

STRAVINSKY: Concerto for Violin and Orchestra, in D†.

● Mutter, Molit; BBC Symphony Orchestra, Lutoslawski*†; Philharmonia Orchestra, Sacher. Steven Paul, prod. Deutsche Grammophon 423 696-2 (D).



Joan Morris and William Bolcom: They're "the top" in selected songs of Cole Porter.

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above address.**LUTOSLAWSKI: Chain 2*; Orchestral Works (3).**

● Jakowicz*: *Filharmonia Pomorska, Ukiyaga. H. Göbel, prod. Thorofon CTH 2041 (D). (Dist. by Qualiton Imports, Ltd.)*

Venetian Games; Funeral Music; Little Suite.

Witold Lutoslawski has never been as popular in the West as his younger compatriot, Krzysztof Penderecki. Unlike Penderecki, who first attracted international attention with his eerie sound-color works of the late 1950s and subsequently turned to fashionable neo-Romanticism, Lutoslawski has never sought public acclaim. Since he achieved maturity as a composer, he has rarely diverged from his course—which emphasizes integrity of line rather than Penderecki's massed sonorities—but he shares with other Eastern Europeans a grim, dark-hued tonal language.

In the early 1960s, Lutoslawski began to incorporate in his music sections of what he calls "aleatoric counterpoint"—freely intertwining melodic lines whose details are fully notated but whose exact superposition is left up to the performers. Consequently, Lutoslawski's music is no easy task to interpret, for it requires players of both individual imagination and group commitment.

It is especially fortunate that Anne-Sophie Mutter and Lutoslawski have found each other, for Mutter's performances of *Chain 2* (1985) and the *Partita* (1984) make clear that the young violinist is his ideal interpreter. She possesses the rhapsodic abandon needed to convey his mercurial juxtapositions of mood and technique; she pours herself into the aleatoric *ad libitum* sections with spontaneity tempered by insight; and she produces a

rich, sumptuous tone that wrings every expressive nuance out of these powerfully emotional scores. So flexible and fiery are Mutter's performances that one feels she lives and breathes this music, much as a gypsy fiddler lives and breathes his demonic improvisations.

Considering Mutter's achievements, it is almost unfair to compare her with Krzysztof Jakowicz on the other Lutoslawski disc. Jakowicz is burdened with an indistinct recorded sound that buries him within the already muddy orchestral fabric. Although he is less concerned with tonal beauty (and more willing to sacrifice it for visceral effect), he gets little help from his colleagues: The Filharmonia Pomorska's playing is surprisingly timid and its coordination uncertain. Again, comparing the two CDs seems unfair: Mutter is blessed by the presence of Lutoslawski himself as conductor, and he draws a violent yet crystalline reading from the BBC Symphony Orchestra.

There is one good reason to purchase the Thorofon disc, and that is its unique overview of Lutoslawski's stylistic development. For, along with the recent *Chain 2*, the Filharmonia Pomorska offers the early *Little Suite* (1951), filled with Polish folk themes; the masterful *Funeral Music* (1958), a haunting, grief-stricken breakthrough toward the composer's mature language; and *Venetian Games* (1961), his first orchestral application of aleatoric principles.

On Mutter's disc, Lutoslawski is paired with Stravinsky. Once again, the violinist is blessed with an ideal collaborator—here conductor Paul Sacher, long intimately associated with Stravinsky's music. Mutter's vision of the Violin Concerto initially may



In Anne-Sophie Mutter, composer Witold Lutoslawski may have found his perfect interpreter.

appear surprising. Since she is incapable of either a rough attack or a dry tone, she imposes a lush, vibrato-laden timbre on this leanest, most objective of concertos. But she compensates for her subjectivity by an unfailingly precise, crisply articulated treatment of rhythm, and she brings an uncanny sense of coordination to the performance, in which Sacher leads the Philharmonia Orchestra.

I must admit that until now I have underestimated Anne-Sophie Mutter. But it has become obvious that, besides technique, she possesses musical insight and genuine personality. Playing times: 56:08 (DG 423 696-2); 54:08 (Thorofon CTH 2041).

K. Robert Schwarz

MORRICONE: Chamber Works (7).

● Unnamed performers. Ennio de Melis, prod. Virgin 90996 (A). ○ □

Distanze; Musica per due violini; Quattro pezzi per chitarra; Ricercare per pianoforte; Sestetto; Suoni per Dino; Tre studi.

MORRICONE: Film Music, Vol. II.

● Unnamed performers. Ennio de Melis, prod. Virgin Movie Music 90901 (A). ○ □

Music from "Fear Over the City"; "A Fistful of Dynamite"; "Free My Love"; "God With Us"; "The Marginal"; "The Mission"; "Moses the Lawgiver"; "My Name Is Nobody"; "Ogro"; "Once Upon a Time in America"; "Once Upon a Time in the West"; "The Professional"; "La venexiana."

Among appreciators of film music, the Italian composer Ennio Morricone is so highly regarded as to be almost a cult figure. Morricone's music for the concert hall, however, remains something of a mystery, and it seems that Virgin Records is determined to keep it that way: Unlike the insert for the album of film music, which features both a chronology and an enthusiastic essay by Morricone champion John Zorn, the four-page liner booklet for the chamber music collection contains not a stitch of data about when these works were created or how many more of them might still be waiting to be recorded. One is left to suppose that they parallel the massive output of film scores that began in the early 1960s. In any case, although the gestural and harmonic vocabularies of the chamber music are quite different from those of the eclectic, sometimes pop-oriented movie music, the rhetoric—the ways in which elements of the vocabulary are isolated from one another and rearranged into mosaics that have gripping dramatic effect—is similar.

Of the works presented here, only the sextet (*Sestetto*) for woodwinds and strings stands apart from the austere Morricone aesthetic. This is a note-filled piece in three movements, by and large perky and bubbly in the manner of Poulenc, though never overtly tonal or regular in

its rhythms. It smacks a bit of academicism, and possibly it dates from the years just following Morricone's studies at the Conservatory of Santa Cecilia in his native Rome.

Everything else is quite in keeping with Morricone's masterly approach to film scoring. Thematic materials, most of which seem to derive from twelve-tone rows, are deliberately limited. Limited, too, are the textural ingredients: Rarely does the music involve more than two or three bits of information at the same time, and typically their contrasts in timbre and register are extreme. As in the film music, the statements in the chamber works tend to be short and self-contained. Ideas are developed, but not in continuous, linear fashion, and their different treatments are separated enough by silence—or moments of musical stasis—that they command the listener's fullest attention.

The *Musica per due violini* sets chilly tone clusters and isolated two- or three-note phrases amid a drizzle of snappish pizzicatos. The *Tre studi*, longer and more formal than their title implies, translate the same imagery into the language of flute, clarinet, and bassoon. Tonal cadences in the *Ricercare per pianoforte* serve merely as resting points in a composition essentially vapory and unbound by gravitational pull. The *Quattro pezzi per chitarra* are condensed yet richly episodic, like abstract synopses of some of the film scores. *Suoni per Dino* (for chamber ensemble and electronic sounds) and *Distanze* (for piano and strings) are just the opposite: leisurely chains of gradual variations of patently simple atonal themes that, in the long run, seem as meditative as the drawings of Hokusai's *One Hundred Views of Mt. Fuji*.

Morricone's compelling chamber music gets fine treatment from whoever it is that performs it here; like the dates of the compositions, the artists get no mention. Playing times: 56:53 (90996); 61:01 (90901).

James Wierzbicki

NOVÁK: Nikotina, Op. 59.

● Brno State Philharmonic Orchestra, Brno Madrigal Singers, Jilek, Pavel Kühn, prod. Supraphon CO 2198 (D). (Dist. by Denon.)

Vítězslav Novák (1870–1949) is a marvelous composer whose achievement has as yet received almost no recognition in the West. Like his colleagues Janáček, Suk, and Martinů, he carried into the 20th century the Romantic tradition in Czech music begun by Smetana and Dvořák, creating an artistic legacy that stands with the very best. An earlier release, a Supraphon Compact Disc containing his *Slovak Suite* and *South Bohemian Suite* (CO 1743), revealed Novák as something of a Czech Delius. There was no hint in that dreamy, sensuous nature music of the forceful orchestral style one encounters with the present work, *Nikotina*.

Written in 1929–30, *Nikotina* is a ballet-pantomime telling the story of a snuff-addicted monk who dreams of a series of wild adventures with a sexy, female incarnation of his dependency. Unfortunately, the inadequate notes fail to describe the plot in any detail, but this may actually be an advantage, to the extent that it forces the listener to focus on the music. And what music! Imagine the melodic freshness of Dvořák united with a thoroughly Mahlerian orchestral mastery. For over 50 minutes, the piece proceeds without a single dead spot or pointless gesture. Humor, vitality, and tenderness rub shoulders with a delightfully wicked sense of parody (there's a particularly kinky habañera about halfway through). As far as ballets of this type go, *Nikotina* has much more musical interest than, say, Stravinsky's *Firebird*, along with a sense of beauty and fantasy that is easily the equal of Ravel's *Daphnis et Chloé*.

Fortunately, the performance and recording offered here do the work full justice. Under the sympathetic guidance of František Jilek, the Brno State Philharmonic Orchestra sounds absolutely world-class, while the Brno Madrigal Singers make an enchanting moment of their wordless vocalise toward the ballet's end. This is a major masterpiece by a major composer, and the best thing about it is that it was conceived as the second half of a 1930 Prague double bill. The first work in the series, Novák's *Signorina Gioventù*, will be available by the time this notice sees print. Don't deprive yourself for a moment by waiting for the next review. Playing time: 52:34.

David Hurwitz

WUORINEN: Concerto for Piano and Orchestra No. 3*; The Golden Dance.

● Ohlsson*: San Francisco Symphony, Herbert Blomstedt, cond. Marc Aubort and Joanna Nickrenz, prods. Nonesuch 79185 (D).

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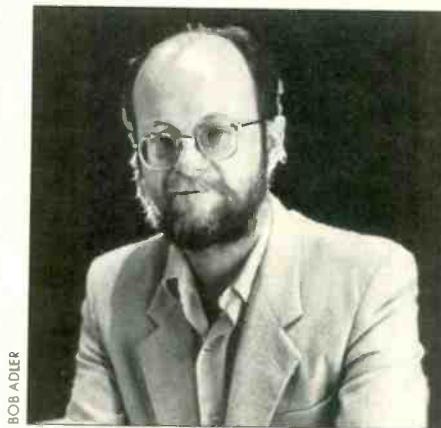
Both of these powerhouse works date from Charles Wuorinen's tenure (1985-89) as composer-in-residence with the San Francisco Symphony, which under Herbert Blomstedt's leadership continues to get better and better. Garrick Ohlsson's international career took off when he, a mere American, had the temerity to win the 1970 International Chopin Competition in Warsaw. He lives part-time in San Francisco, and Wuorinen (himself an excellent pianist, and the soloist in his previous two concertos) tailored this one to Ohlsson's imposing measure.

Wuorinen, as intellectual a composer in his own way as Elliott Carter and Milton Babbitt are in theirs, has made no secret of his disdain for the postwar Webers who stripped their works to the very bone. He has dismissed that cult as a "grotesque exaggeration, done mainly for the purpose of having something to sloganize." He vastly admires Stravinsky (particularly the later works) and Schoenberg and has spoken of "the inexhaustible treasures" of what he called his "patrimony": the twelve-tone system. As both the expansive works under review make plain, he also shuns the minimalist vogue in favor of the grand, sweeping gesture.

The concerto gets off to a no-nonsense start with a staggering cadenza for the pianist, building to a slam-bang climax that also shows off the virtuosity of the San Francisco Symphony's nimble percussionist Jack Van Geem. The first and third movements exude power and vitality; the second affords a pause for introspective, lyrical reflection. Ohlsson has by now played the work repeatedly, and I agree with his assessment of it as "an instant impact piece." Wuorinen has himself fittingly described his finale as "a hip-swinging wing-ding." The virtuoso repertory holds no terrors for a pianist of Ohlsson's formidable technical endowment, but even he forthrightly calls that movement "hard as hell . . . a bit like an aerobics class."

Wuorinen calls the second work here "golden" not only because of California's reputation as the Golden State and San Francisco's Golden Gate but because, in the piece's second half, he has made modified structural use of the ancient Greeks' "golden section"—a mathematical aesthetic formula (approximately 382:618) with the smaller part in the same proportion to the larger as the larger is to the whole. Never mind the fancy reference; in this energetic reading by Blomstedt (to whom Wuorinen dedicated the piece), *The Golden Dance* holds its own as vital, at times exciting music.

This recording exists thanks to the Meet the Composer Orchestra Residency Program. This praiseworthy organization "fosters the creation and performance of orchestra music by American composers.



Master of twelve tones Charles Wuorinen

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Paul Moor

Recitals and Miscellany

DAVID BRITTON: Organ Works.

● Britton. John Eargle, prod. Delos DCD 3077 (D).

J. S. BACH: *Capriccio on the Departure to Distant Climes of His Dearly Beloved Brother*, B.W.V. 992. CONCEIÇÃO: *Battle on the Fifth Tone*. CORRETTE: *Grand Chorus with Thunder*. DUPRÉ: *Carillon*, Op. 27, No. 4. GHERARDESCHI: *Sonata in the Guise of a Military Band Which Plays a March*. LEFÉBURE-WÉLY: *Boléro de concert*; *Élévation*. SAINT-SAËNS: *Prelude and Fugue*, in C, Op. 109. SOWERBY: *Carillon*. VIERNE: *Gargoyles and Chimerae*; *On the Rhine*.

MICHAEL FARRIS: French Organ Works.

● Farris. John Eargle, prod. Delos DCD 3049 (D).

ALAIN: *Deuxième Fantaisie*. DUPRÉ: *Variations sur un vieux noël*, Op. 20. DU-RUFLÉ: *Prélude et fugue sur le nom d'Alain*, Op. 7; *Scherzo*, Op. 2. FRANCK: *Fantaisie*, in A. VIERNE: *Finale*, from *Organ Symphony No. 6*. WIDOR: *Allegro*, from *Organ Symphony No. 6*.

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**DVOŘÁK SYMPHONIES NOS. 7, 8:
CONCERTGEBOUW, DAVIS**

Sir Colin Davis made a number of memorable recordings with the Amsterdam Concertgebouw Orchestra in the 1970s; this well-filled CD contains two of the finest. Davis's interpretation of Dvořák's Symphony No. 7, in D minor, Op. 70, is powerful and noble, an eloquent expression of the work's brooding majesty. The Symphony No. 8, in G, Op. 88, receives a radiant performance—surely among the best extant recordings of this music—that features the Concertgebouw brass in dazzling form in the finale.

Most competing accounts of the symphonies are inferior to Davis's both interpretively and sonically. I have owned the LP versions of both of these recordings since they were issued; it is remarkable how much the sound has improved on Compact Disc. There is a satisfying solidity and new depth and warmth, plus some of the most natural string sound I've ever heard. The lustrous performances, superb remastering, generous playing time (most other accounts are available on individual CDs, often without filler), and midline price of this disc are hard to beat. Program notes are limited to two pages; a 16-page listing of other Philips Silver Line CDs is part of the package. Playing time: 73:40. (Philips 420 890-2.) *R.E.B.*

**BERNSTEIN "ON THE TOWN":
COMDEN, GREEN, BERNSTEIN**

Jerome Robbins' Broadway, the hottest ticket in New York, blasts off with the opening scene of *On the Town*, Leonard Bernstein's second collaboration with Broadway's greatest choreographer. (*Fancy Free* came first.) It's a high-stepping wonder—one that makes you want to see the whole thing. Impossible, but at least you can *hear* the whole thing, courtesy of CBS's long-overdue CD reissue of its celebrated *On the Town* recording. In 1960, producer Goddard Lieberson reassembled original cast members Betty Comden, Adolph Green, Nancy Walker, and Chris Alexander, with baritone John Reardon brought in to sing the ballads. Then Bernstein himself decided to take over the baton from veteran Broadway conductor Lehman Engel.

The resulting recording, though not ideal, leaves no doubt as to why the show was such a smash hit in 1944. Great bal-

lads like "Some Other Time" (with great lyrics by Comden and Green) rub shoulders with witty comedy numbers like "Come Up to My Place." Best of all is the dazzling ballet music, a sophisticated amalgam of Copland, Gershwin, and Stravinsky that somehow adds up to pure Bernstein. Although producer John McClure has done his best by the sound, it remains harsh and shrill. What's needed now is a modern recording of *On the Town*, with younger voices, a better orchestra, and digital sound. Until then, grab this CD as fast as you can. Playing time: 60:04. (CBS Masterworks CK 2038.) *T.T.*

**MOZART WIND CONCERTOS:
ORPHEUS CHAMBER ORCHESTRA**

The conductorless Orpheus Chamber Orchestra from New York is fast becoming one of my favorite presenters of music from the late 18th century. Its sound is sleek and thoroughly modern, yet its readings seem so attuned to the Classical style that it makes one wonder what the "authenticity" fuss is really all about. This latest release showcases three of the Orpheus wind players in concertos by Mozart: William Purvis in the Second and Third concertos for horn (K. 417 and K. 447); Randall Wolfgang in the K. 314 Concerto for Oboe; and Frank Morelli in the K. 191 Concerto for Bassoon. Each soloist provides his own cadenzas—which in most cases are both extended and adventurous. Playing time: 68:41. (Deutsche Grammophon 423 623-2.) *J.W.*

**LISZT REQUIEM: MALE CHORUS OF THE
HUNGARIAN ARMY, FERENCSIK**

This curiosity will probably puzzle and even startle those Liszt fans not already familiar with it. One wonders about Liszt's reasons, unconscious as well as conscious, for making his Requiem so strikingly one of a kind. He dispensed with female voices entirely, and also with instruments, except for the organ (plus some timpani that turn up unexpectedly to reinforce a dramatic passage). The ending, at first encounter, left me wondering whether Liszt might have left the work unfinished; a sort of organ afterthought merely trails off—and on the dominant, at that. Liszt sided aesthetically with a group of contemporaneous composers who aspired to return liturgical music to its archaic origins. In the case of

this work, such endeavors resulted in a queer mélange of pre-Baroque and Wagnerian harmonies.

The chorus of men from Hungary's army sounds rather less refined than rough and ready, but these singers pack the performance with conviction, as do the soloists, and conductor János Ferencsik keeps the musical tension high. Playing time: 50:32. (Hungaroton HCD 11267-2. Dist. by Qualiton Imports, Ltd.) *P.M.*

**DETT PIANO WORKS:
OLDHAM**

It is interesting that the primary influence on the folksong-rich music of the black American composer R. Nathaniel Dett was not so much the songs themselves as their distillation by a foreigner. Dett was already an accomplished composer when he was a student, in the first decade of this century, at the Oberlin Conservatory in Ohio, but apparently it was not until he encountered the Opus 96 string quartet of Antonín Dvořák—the so-called *American Quartet*—that he found his voice. Inspired by Dvořák, Dett saw his purpose clearly: to "take the loose timber of Negro themes and fashion from it music . . . in choral form, in lyric and operatic works, in concertos and suites and salon music." The pieces recorded here—the *Magnolia Suite*, *In the Bottoms*, and *Eight Bible Vignettes*—fall into the latter category and get an appropriately light touch from pianist Denver Oldham. Their simplicity of melody is balanced by sophistication of harmony and structure, and the results are invariably—at the very least—lovely. Playing time: 69:12. (New World NW 367-2.) *J.W.*

**HAYDN "THE SEASONS":
VIENNA SYMPHONY, BÖHM**

Anyone who thinks of Karl Böhm as a somewhat stiff and humorless interpreter ought to hear this classic performance of Haydn's *The Seasons* (1801), recently reissued on two midprice CDs. Despite the fact that this oratorio has never been as popular as its predecessor, *The Creation* (1798), there's no reason why it should not be recognized as an equally fine piece. Haydn obviously felt that the subject matter of *The Seasons* was less lofty than the story of God's work, and he pretended to despise the many passages of pictorial

(Continued on page 68)



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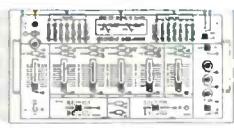
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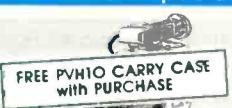
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(Continued from page 65)

writing necessitated by the text. I say "pretended" because his avowed loathing seems strangely at odds with the spirited way the music seizes every opportunity to explore new, illustrative sounds.

No other recording of *The Seasons* comes close to this one in enthusiasm and grandeur. Böhm has the Vienna Symphony playing with a virtuosity that would not be out of place in the music of Richard Strauss, and the singing of Gundula Janowitz, Peter Schreier, Martti Talvela, and the Vienna Singverein remains unsurpassed. This is a joyous experience from start to finish. Playing time: 132:18. (Deutsche Grammophon 423 886-2.)

D.H.

ELGAR "ENIGMA," "FALSTAFF": PHILHARMONIA, HALLÉ, BARBIROLI

This intelligent coupling of Sir John Barbirolli's stereo recordings of Elgar's *Enigma Variations*, Op. 36, and *Falstaff*, Op. 68, reissued on Angel EMI's Studio mid-price line, belongs in every CD collection. Barbirolli's interpretations are warmly affectionate without slipping into self-indulgence. The playing (by the Philharmonia Orchestra in *Enigma*, by Barbirolli's own Hallé Orchestra in *Falstaff*) is more than satisfactory. An excellent introduction to Elgar's orchestral music for those who need one. Playing time: 65:10. (Angel EMI CDM 69185.)

T.T.

MESSIAEN "QUATUOR POUR LA FIN DU TEMPS": TASHI

The celebration of Olivier Messiaen's eightieth birthday last year produced a good crop of recordings, including some reissues of material whose "flow" is considerably improved by the CD format. One of the first works committed to vinyl by the group called Tashi (pianist Peter Serkin, violinist Ida Kavafian, clarinetist Richard Stoltzman, cellist Fred Sherry) was Messiaen's ethereal *Quartet for the End of Time*. The music dates from 1941, when the composer was a prisoner in a German camp; the recording was made in 1975, and while the interpretation may not be to everyone's taste—too aggressive, perhaps, or too hasty?—the performance certainly remains a fine one. Playing time: 47:25. (RCA 7835-2.)

J.W.

CHOPIN PRÉLUDES, OTHER SOLO PIANO WORKS: CORTOT

Recent reissues by both British EMI and Music and Arts of Alfred Cortot performing Chopin provide a listening experience just short of enchanting. A door on the past is opened for all young collectors, would-be Chopinists, and other piano-philes (except for those already Brendelized or Pollini-ized). The refreshment offered by these two discs is comparable

only to listening to the sublime Artur Schnabel after overdosing on "modern" Beethoven.

For those unwilling to purchase both releases, either because of budgetary constraints or the duplication of some of the *Préludes*, I would—if really pressed—suggest the EMI disc, but only for its somewhat cleaner sonics; the performances themselves are not vastly different. However, what a joy it is to hear a true artist, without infallible fingers, and to encounter genuine interpretive exploration after living so long with the polished Chopin of Artur Rubinstein. Cortot made many recordings, none better than these. Now one awaits the resurrection of all of his Schumann, especially his 1934 performance of the Piano Concerto. Playing times: 68:27 (EMI CDH 61050, dist. by Allegro Imports); 70:20 (Music and Arts Programs of America CD 317, dist. by Allegro Imports).

T.L.D.

BERNSTEIN, GERSHWIN FOR GUITAR: BARBOSA-LIMA, ISBIN

Concord Jazz, one of the top jazz labels in America, has started a new line called "Concerto," which, so the company says, is "dedicated to presenting the finest artists with a Contemporary approach to Classical music, and a Classical approach to Contemporary music." This CD, a collection of music by Leonard Bernstein and George Gershwin arranged for two guitars and performed by Carlos Barbosa-Lima and Sharon Isbin, appears to be exactly what the folks at Concord Concerto have in mind. Not to put too fine a point on it, the results are strictly for easy listening, unless you've been waiting all your life to hear what *Rhapsody in Blue* sounds like on two guitars. On the other hand, the playing is exquisitely tasteful, and Barbosa-Lima's arrangements, particularly his *West Side Story* suite, are clever and imaginative. If you're looking for music to relax by, you could do a whole lot worse than this attractive disc. Playing time: 47:37. (Concord Concerto CCD 42012.)

T.T.

COUPERIN FAMILY HARPSICHORD WORKS: LEONHARDT

Louis Couperin (1626–1661) was the uncle of François; Armand-Louis, born almost 60 years after François, was Louis's grandson and François's second cousin. If the CD had enough space, harpsichordist Gustav Leonhardt might also have included works by six or seven other members of the very musical, and very large, Couperin clan. Although few of them had the genius that earned for François the nickname "le grand," even Armand-Louis did his part to maintain the family tradition. The author of the Couperin article in *The New Grove Dictionary of Music and Musicians*

says that Armand-Louis's music "lacks the muscle and discipline that struggle might have imparted to it," but as played here by Leonhardt—with incisive ornamentation and robust rhythmic lilt—the selections from his 1751 *Pièces de clavecin* hardly come across as the work of a wimp. Like so many of Leonhardt's recordings, this one is sonically and musically excellent. Playing time: 61:36. (Philips 420 939-2.)

J.W.

SIBELIUS TONE POEMS: SUISSE ROMANDE, STEIN

This disc gets my "Sleeper of the Month" award. When was the last time you thought of Sibelius in association with Horst Stein and L'Orchestre de la Suisse Romande? Well, it's high time to start, because this well-filled disc contains performances of *Finlandia*, *The Swan of Tuonela*, *Night Ride and Sunrise*, *Pohjola's Daughter*, and *En Saga* that yield nothing to the competition. In fact, I would say that the accounts of the last three items have never been bettered, though other recordings are, admittedly, equally fine. The opening of Stein's *En Saga*, however, has an unparalleled creepy atmosphere of epic mystery.

Stein is a wonderful Sibelian, with an intuitive feel for that peculiar sense of musical movement by which a Sibelius performance lives or dies. The way in which he handles the tempo relationships in *Pohjola's Daughter*, for example, is an object lesson in how to play this work. Even the Swiss orchestra, not noted for its polish, sounds uncommonly good, the occasional rough edges pressed into the service of the music. London's sound is terrific, and the Weekend Classics series price is rock-bottom. Playing time: 59:45. (London 417 697-2.)

D.H.

DEBUSSY PRÉLUDES, BOOK TWO: BENEDETTI MICHELANGELI

Arturo Benedetti Michelangeli, who records exactly what he wants exactly when he wants and releases it at his pleasure—if at all—has finally given us a recording of Book Two of Debussy's *Préludes* to go with the recording of Book One he recorded for Deutsche Grammophon 11 years ago. It's about time. For all his notorious eccentricities, Benedetti Michelangeli is still capable of the most beautiful playing imaginable, and Debussy brings out the very best in him. Certain moments on this recording (listen to the left-hand shading in *Feuilles mortes* or the breathtakingly varied articulation in the opening of *Feux d'artifice*) hardly seem to be the work of human hands playing a man-made instrument. This is the kind of music-making for which the word "great" should be carefully reserved. Playing time: 39:09. (Deutsche Grammophon 427 391-2.)

T.T.



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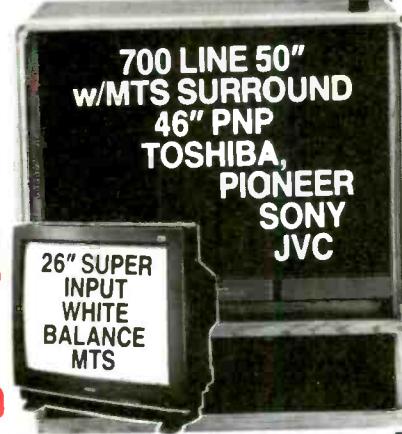
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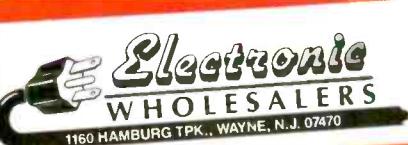
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Guilty Pleasures

(Continued from page 54)

estly Love You" or "Have You Never Been Mellow"—and started selling damp promises: "You're the One That I Want," "Physical," "Make a Move on Me," "Heart Attack," and last year's coulda-been "Let's Talk It Over in Bed." And the album-photo makeover... *Totally Hot*, indeed! My fave is Helmut "The Swine" Newton boudoir black-and-white, strategically lit and shot from behind, with a topless Olivia wearing a silk scarf, tights, and high leather boots, with a riding crop framing her magnificent tush.

I don't know the details of her personal life, and I don't care... well, I know a couple. I know she has a kid and she turned forty last fall. Now before she gets written into the last episodes of *Dynasty* as a treacherous, concupiscent older woman, I have a plan. It is plain that Olivia Newton-John is the one true eternal mate of Elvis Aaron Presley, though neither may have been aware of it in the time they trod this earth together! Had they been a pair, he might never have checked out. Hell, he might never have checked out anyway. So I propose, come August, a Memphis mausoleum-side jamboree: ON-J, backed by Joe South and the Jordanaires, giving the King some old-time religion. Guaranteed to heal the sick and raise the unquiet and uncircumcised dead. Then we'll know for sure. Meanwhile, as long as there's VH-1 and award shows and me, Olivia has nothing to worry about.

Jeff Nesin

Barry White



Though never what you would call a dancing fool, I had my favorites in the disco era. Who would have thought that ten to 15 years later, Barry White would outrank them all in my personal cosmology?

Not me, but *Barry White's Greatest Hits*, from the big fella's three biggest years (1973-75), never really left my turntable. Simple, but elegant, gold record jacket. Liner notes by wife Glodean, whose prose conjures up the halcyon days when Dzondira Lalsac was behind the typewriter at Duke-Peacock Records. "Spiritual adviser" credits to Larry Nunes, who by now is no doubt peddling herbal remedies on late-night cable. Then there's the music. What's perhaps most surprising is that as a ballad singer on something like "I've Found Someone," White reveals himself to be a strict disciple of Lou Rawls. Still, he made his mark with the dance numbers and the love-man jive.

When, after Barry's breathy, rumbling, introductory sexual incantations, the album picks up a full head of steam on the opening "What Am I Gonna Do with You," I'm thinking the words to "Can't Get Enough of Your Love, Babe." And no wonder: The former is a follow-up to the latter and uses basically the same melody and similar orchestration. Both convey the same too-much-sex-ain't-enough message, though I think "What Am I Gonna Do with You" tops its forerunner when, after noting "(We) been making love for hours and, baby, we're still going strong," Barry divulges, "Oh I know when we get through/Girl, I won't be able to move."

Barry may have said only one thing his whole career, but for a while there he said it a little more memorably each time out. Plus those orchestrations are not at all shabby. The man had a way with strings, and the overall level of craftsmanship is every bit as high as you might expect from an auteur who previously had spent his time in the studio playing all the instruments and singing all the parts on records released under the name of the Saturday-morning-cartoon group Banana Splits. And while I'm the last to suggest that what disco was about was good melodies, give the oaf some credit: He wrote good melodies. And while I am the first to admit that the beat at the end of "Love Serenade" slogs along like a stegosaurus on Quaaludes—I can't believe people danced to this, let alone allegedly made love to it—more often Barry and crew pack as much of a wallop as a sequined circus elephant with a snootful of Locker Room.

HIGH FIDELITY ARCHIVES

But enough of this rock-crit talk about music: Praising Barry White on purely musical grounds is like pointing out that Dwight Gooden is a good-hitting pitcher who can win you a ballgame or two with his bat, when the fact is he'll win you 20 with his arm and everything else is gravy. Barry White sang exclusively about sex, which seemed like a good idea at the time to him and to any number of other disco stars. But Barry was different, too, because though he prowled the stage in a cape and exhibited the perfect bodies of his female backup group, Love Unlimited, White was disco when disco wasn't cool, when it wasn't the plaything of the idle rich. His music was for people whose best clothes cost them a week's pay rather than an insignificant flick of the credit card, people who couldn't get past the doorman at Studio 54. White accordingly reduced his message to the absolute basics, and while it helped to appreciate Dunn, anyone could get into his club, for his was about something other than Glamour. That's why he had the most blue-collar audience in all of disco. And yeah, a working-class hero is something to be. Barry, we hardly knew ye.

John Morthland

Eddie Money

All I know about Eddie Money's personal life is: (1) He used to be a New York cop. (2) The tabloids claim he's now fully recovered from a bunch of vague but apparently serious vices that I gather wreaked considerable havoc on his pocketbook and lovelife, but I guarantee when the discussion turns to wild 'n' crazy rock-star hoodlums, Mr. Money isn't the first person who comes to mind. Tiffany is. (3) He's arranging to expose *glasnost*-ites to the big beat, but so is everybody else. (4) His mouth appears to be positioned toward the side of his face, exactly like this bozobrain back in my high-school German class. (Everybody called him "Sidecar.")

When Eddie Money first materialized, he pulled this sub-Bruce studley-from-the-docks shtick, and I paid very little attention. Always pretty much despised "Two Tickets to Paradise," and though I remember kinda enjoying some boogalooed fugitive tale that rhymed "water" with "Mexican border," I can't recall its name, nor can I recall which Yoko Ono song he covers on *Every Man Has a Woman Who Loves Him*. Likewise, though the recent

Guilty Pleasures

Guilty Pleasures



BONNIE SCHIFFMAN

"Walk on Water" did revitalize Eddie's recurrent dihydrogen-oxide motif, it was just too gushy to hold up, and I expect more than mere gush from this man. He's obviously a boring dolt, but in the '80s he has unleashed a quartet of truly world-class singles, a total that puts him on a plateau with such hallowed artists as A Flock of Seagulls and Billy Squier, places him within slingshot range of geniuses like the Bellamy Brothers and Poison, and beats the living pants off Leonard Cohen:

"Think I'm in Love" (1982). Its traction comes from how the initial mythological acoustic lures you siren-style toward the hard-boiled fuzz riff, which comes and goes. Trapped between walls of sod, Ed esays obsession: "It surrounds me, moves in like a sea of madness." (More dihydrogen oxide!) His diction on "it surrounds me" could also be construed as "it's a rat race." As well it is, but his life's looking up.

"Shakin'" (1982). Drums start slow, loud, non-metallic, warlike: Imagine banging your desktop and walls with two huge rubber mallets. The guitar's from Skynyrd's "Saturday Night Special" and murderous as anything radio has accepted this decade; naturally, the sweet hijacker who kidnaps our hero immediately turns it up full-blast, blows out his speakers. They burn rubber at 80 with no particular place to go, but suddenly she brakes fast, and everything gets quiet. Rosanne starts undressing. Nervous Ed starts having second thoughts: "I'm always talking, maybe talking too much." Like, look what a fine mess I've gotten myself into now.

"Take Me Home Tonight" (1986). First words are mumbled, but the production's a Phil Spector symphony. Ed's serenading you, pleading with you, but he

knows his case has been stated before more persuasively. So for his Cyrano, he gets Phil's wife. "Be my little baby," Ronnie coos, and not even an era of old gold can keep that lovely voice from snagging you.

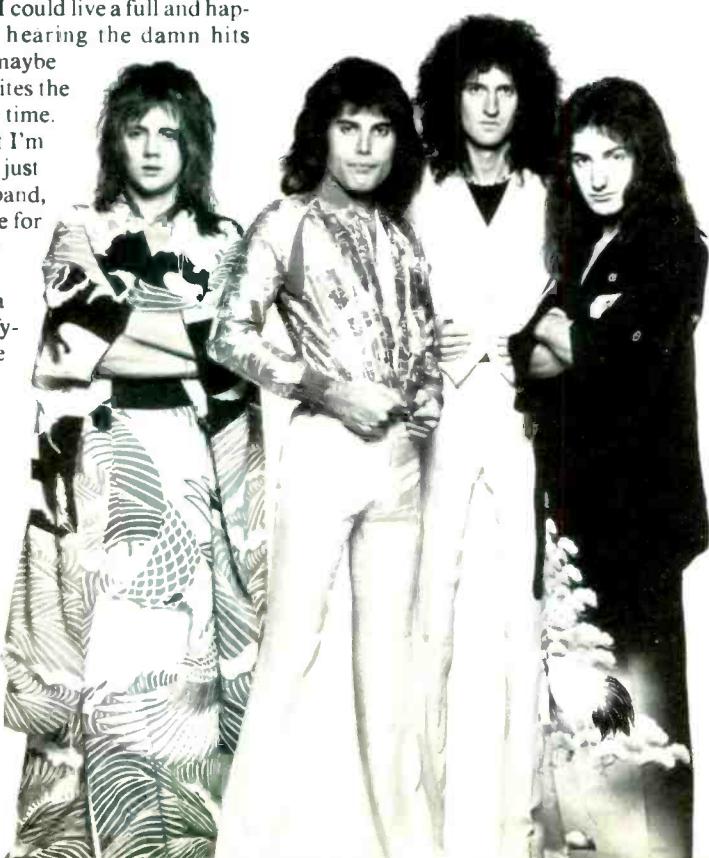
"I Wanna Go Back" (1987). The way Eddie emphasizes that line "I can't go back, I know," it's like while he's singing, out of the blue the big 200-watt bulb atop his head lights up and he realizes, omigod, this is it, it's over, a frightening thought for anybody whose livelihood depends on youth, only this guy doesn't feel like Seger or Cougarcamp—more like Sinatra in "It Was a Very Good Year," or maybe George Jones, not merely soaked in self-pity but drowning in it. O'course, my youngest sibling says I wouldn't like this song so much if I weren't getting on in years myself. But, um, you're not gonna fall for that one, are you? Chuck Eddy

phoned in from various remote corners, pressed into place. Everything about the band sounds willed and inauthentic, which for me is a major part of its charm—that and the members' inability to forge any kind of consistent identity. It's their chameleonlike way of assuming a number of facile (and enjoyably clever) pop poses that's worked against them in the critical sphere. By 1976's *A Day at the Races* (and through 1980's *The Game*), practically every song was designed to be a change of pace. Admittedly, this was excessive, but so was the ferocity with which knowing scribes responded. Rock-critic hostility is unique: Jazz crits, for example, tend to worship in the cult of personality and so will cogitate cartwheels in an attempt to justify the artist's latest move. But in the rock arena, genre-hopping is most often looked on as a mark of phoniness (few creatures being as relentlessly intolerant as a rock crit in search of sincerity).

Enough surly digression, let's cut to the grooves. Take the second side of *Jazz*, the neglected half of Queen's most maligned album. "In Only Seven Days" and "Leaving Home Ain't Easy" foretell the type of ballad that all metal bands now realize they must come up with in order to cross over, with their sweet, chewy melodies. "Dreamers Ball" is a nice old-timey

Queen

No, not the whole corpus: We're talking guilt, not insanity. And no, not the early stuff, where the heat of guilt would be mitigated by detectable traces of archival cool: Yesterday's embarrassments (and yawns) are today's hip artifacts. And finally, truth be told, I could live a full and happy life without hearing the damn hits again . . . okay, maybe "Another One Bites the Dust," one more time. Essentially, what I'm coping to is not just liking a suspect band, but having a taste for what is generally agreed to be its worst stuff. But a little more qualifying before I come clean. I have never gotten the impression from any of Queen's records that this group is actually a real band that plays together. Rather, the feeling is that the various parts have been worked over, polished, and, after being



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Guilty Pleasures

tune that puts Brian May's too-fat guitar sound to good use for a drowsy chorus. "Don't Stop Me Now" could serve as a respectable pre-intermission finale for any Broadway musical of the last 30 years (lead singer Freddie Mercury coulda been another Chita Rivera). The LP's closer, "More of That Jazz," has drummer Roger Taylor singing like Lennon c. the Plastic Ono Band and, amid off-center rhythms and harmonies, reveals a cynicism as deep as you always suspected: "Only football gives us thrills/Rock 'n' roll just pays the bills/Only our team is the real team" (this last no doubt a mocking nod to the many sports teams that have adopted "We Will Rock You"/"We Are the Champions" as an anthem). Then the perfect touch toward the end of the song, as they scuttle all pretension with a tacky medley/reprise of the LP's highlights. Of course, it all makes sense: Scathing self-revelation is just another lick in their repertoire of star turns. Only saps with limited imaginations make whole careers out of such single moves.

All of this is calculated to give pleasure. How can you not like it? Still, I doubt I'll change any minds. Maybe it's just that a heavy dude like me needs a place to go when the mood is: Be a knucklehead. (Geez, I can't believe I said that.)

Richard C. Walls

RUSSELL YOUNG



Marillion

I've been known to enjoy a lousy movie or a trashy novel; likewise, I have my share of guilty musical pleasures. Some fall into the category by virtue of their being too mainstream, appealing to all types of undesirables with whom I'd rather have nothing in common. Others are cult acts that can be shared with fellow cultists but are best not mentioned to the rest of the world. But the guiltiest of pleasures must be the ones enjoyed alone. And I like Marillion.

Even the most broad-minded of my music-loving friends have turned thumbs down and noses up at this British band-out-of-time, and critics are always writing them off as a self-indulgent throwback. Indeed, they're derivative—and worse, they derive from an extremely unfashionable style, the sort-of-early-Genesis stuff that had yet to discover the American marketability of short-form pop. As an unabashed admirer of '70s art rock, I loved soothing mellotrons, long solos, and complex concept albums—and loved them guilt-free—when the pioneers first fleshed out the progressive genre. But what happened to those guys? King Crimson keeps disappearing. The commercialization of

post-Moon Pink Floyd and post-Gabriel Genesis has taken much of the pleasure out of listening to those bands. And Yes has evolved into a shadow of its former self—or, with separate projects expected from personnel representing different periods in the band's history, two shadows.

Marillion filled the void by reviving the original prog-rock feel with updated production values. Their first few releases were far from perfect, but it was uncanny how much Scottish vocalist Fish sounded like Peter Gabriel, how guitarist Steve Rothery recalled peak-Genesis axeman Steve Hackett. And they were better than just a tribute band doing covers: They had their own mystical melodramas to unfold.

Marillion may never do anything as complicatedly satisfying as Genesis gems "Supper's Ready" or *The Lamb Lies Down on Broadway*, but their third album, 1985's *Misplaced Childhood*, comes close. This moody tale of lost love and search for self is sweetened with just the right formula of spacey guitars, classically influenced keyboards, and majestic crescendos. The lyrics are oblique enough to suggest something deep without crossing the line to the more embarrassing would-be profundities of, say, the Moody Blues. The first verse on *Misplaced Childhood*, "Huddled in the safety of a pseudo silk kimono," is probably the best metaphor for Marillion's appeal: This music, after all, is masquerading as something classier than it really is, but it's still pretty, and the fortune-cookie philosophizing is reassuring on some lightweight agnostic level.

With the recent departure of Fish for a solo career, the amusing parallel to Genesis continues. Now Marillion will probably conquer America, and I'll lose interest. Until then, I plead guilty. Andrew Nash

Gordon Lightfoot

It's a summer Sunday afternoon in 1972, and I'm hanging out at the Mariposa Folk Festival, held each year on an island off Toronto, and though the weekend celebration is in its final hours, none of the several thousand people are leaving, 'cause all these superstars keep popping up and playing unannounced sets, like during the past few hours both Joni Mitchell and Neil Young have appeared out of nowhere at workshop stages, and now Bob Dylan has been spotted and the entire festival has ground to a frenzied halt 'cause everyone

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is following him around figuring he's going to play, too, only Dylan doesn't want to play, and as this isn't Newport 1965, he doesn't have to listen to folk people anymore, and so he finally just leaves on a private motorboat and now everybody's getting really bummed out, and suddenly what do I hear wafting my way from under a tree but a pretty good version of "If You Could Read My Mind," and I figure, you know how it is at these festivals, lotsa folks bring guitars and sit under trees and play, and some of 'em do pretty good imitations of known artists, but then I look and damned if it isn't Gordon Lightfoot himself in the proverbial Canadian flesh, and soon about a hundred people are sitting cross-legged in a semicircle and he's playing every single great song he's ever written—and he's writ a toque load of 'em over the years, eh?—and he's actually asking people what songs they want to hear and then he's actually playin' 'em, and after a while a few hundred more people are sitting under the tree, and before you know it everybody who hasn't left after the Dylan fiasco has come and sat down under that tree, too, and now Gordon's doing sing-alongs fer chrissakes, and I'm half expecting a campfire and some marshmallows to break out any minute, and my whole uneasy faith in folk music winds up being restored 'cause, hey, Gordie (dig it, had he

been a hockey player and not a musician, that's what he'd be called, 'cause that's what Canadian guys named Gordon are called if they're hockey players) is a folksinger, and here he is, big hits and all, just singing for folks like it's no big deal, and maybe that's why I've always liked him, 'cause he's NO BIG DEAL and has stayed such through thick and thin, whether or not he's having hits like the aforementioned Top Tenner (written, if memory serves, as the theme for a Canadian film called *Paperback Hero*, which starred Keir Dullea as a coal-mining-town hockey star and, in turn, was spoofed by SCTV in the form of *Billy*, starring John Candy as hockey goon Billy Stemhalovichki and featuring Eugene Levy as the Lightfoot-style minstrel—see how that country protects its own?) or "Wreck of the Edmund Fitzgerald" (only hit song ever written about the Great Lakes!) or "Sundown," which shouldn't be confused with John Denver's shoulder-pad "Sunshine," especially since Gordon tends to write more about down than up, as evidenced by his numerous songs with "rain" in the title, like "Early Morning Rain" and "Rainy Day People" . . . nonetheless the guy's into natural things, which reminds me that my all-time favorite Lightfoot song is called "Knotty Pine" and has lines like "She's my knotty pine . . . all her sap runs

free and sticks to me" and "Sometimes she nettles me but I don't mind"—and anyway, I just think he's real neat, that's all.

Billy Altman

Neil Diamond

Those who are less enlightened see Neil Diamond as a windbag responsible for some of the most pompous schlock of all time. They're absolutely right, but what they fail to realize is that these are his *good* points. In the '60s, when everyone else was coppering Clapton licks and writing about the Chicago 7, Diamond stuck by his Brill Building pompadour and recorded future wedding-reception anthems like "Sweet Caroline." Later, during the back-to-basics singer-songwriter vogue, he toured with strings and went platinum with the soundtrack to *Jonathan Livingston Seagull*, the MOR equivalent of *Tales from Topographic Oceans*. These are the marks of a mind so twisted and self-centered that one can't help but be humbled by it. And when you combine these qualities with attitude, presence, and a gift for songcraft, you have Neil Diamond, arguably the gutsiest mainstream icon in pop history.

I didn't always feel this way. I can recall being utterly appalled when, for my 13th birthday, my sister bought me Diamond's *Stones*, home of "I Am . . . I Said." Even as a naive teenager, I sensed that beneath Diamond's long hair and bell-bottoms was the ultimate square. His subsequent work, which built on the ponderousness of "Song Sung Blue" instead of the rhythmic drive of "Cherry, Cherry," didn't do much to alter my opinion.

Then, on a recent trip to a record store, I noticed *His 12 Greatest Hits*, which compiles his singles for Uni and MCA. I'd always had a soft spot for "Cracklin' Rosie," and the "hands . . . touching hands" part of "Sweet Caroline" always gave me chills. So I bought the record and heard what I'd been missing all those years: the staggering grandiosity of "Holy Holy," the sweeping string section on the bridge of "Shilo," the deadpan-cool opening of "Brother Love's Traveling Salvation Show," not to mention the seductiveness of his baritone and his fondness for minor chords and deft percussion. Soon after, I snapped up *Classics: The Early Years*, a collection of pre-Uni singles for Bang ("Cherry, Cherry," "Kentucky Woman") that are all so tightly wound it's scary.



HIGH FIDELITY ARCHIVES

Guilty Pleasures

Guilty

Pleasures

Today, both albums wind up on my turntable more often than all those boring Robyn Hitchcock and John Hiatt records gathering dust on my shelves. Friends are always surprised when I tell them this, and I don't know why. "Sweet Caroline" and "Play Me" are as seductive as great pop records get, and the *Hits* album, taken as a whole, tells the story of one man's search for self, with the help of an orchestra.

In recent years, Diamond's arrogance has soured. His fertile period ended with 1976's Robbie Robertson-produced half-success *Beautiful Noise*, and today he has almost completely lost the touch: His current album, *The Best Years of Our Lives*, is a hackneyed attempt at "rock." None of that, though, has spoiled "Cracklin' Rosie" for me. I must have heard this song a few hundred times since it was released in 1970, but I never tire of the graceful guitar-and-trumpet intro, the swinging rhythm, the sawing cellos in the bridge, or Diamond's exuberant (and very uncharacteristic) "bow-ba-bow" improv during the fadeout. The song was reportedly inspired by an American Indian tribe that had more men than women, forcing the lonely



MICHAEL OCHS ARCHIVES, VENICE, CALIF.

prairie-dwellers to seek comfort with a "store-bought woman" (i.e., wine). That makes as much sense as my fondness for Neil Diamond, but some things you just don't question.

David Browne



Classics IV

Let's get real for a moment. Anyone can enjoy, and write about, good music: Our entire cultural bias shoves us in that direction. Garbage is easy to deal with, too: We revile it, laugh at it, ignore it.

Then there's the stuff in the middle. At its best/worst/truest, schlock is the toughest to handle, because it calls into question many of the assumptions we use to get by. Most of us improve at making judgments more quickly, more assuredly, as we go along. Trouble is, you take that too far and soon you notice the steady hum of a machine rather than the responses of a functioning person. Schlock, if it serves no other purpose, jams the machinery, shows it for the jury-rigged contraption it is.

So why the Classics IV featuring Dennis Yost? Because 20 years after they had their brief, largely forgotten chart run, the hand trembles on the lever that would consign them to the pit. I won't perversely argue at length over the minor virtues of "Spooky" and "Stormy." Anyone who wants to dismiss their stuff outright, go

ahead. Back there in an age when rock's horizons were widening on an almost daily basis, the Classics IV offered merely a few simple, decently crafted songs with some mellow saxophone thrown in. If you had your radio on during those moments, your life was not going to be changed.

I have no idea whether the Classics IV believed for a moment in anything they did, or whether they indeed were consummate pop hacks (the fact that a couple of them went on to form the Atlanta Rhythm Section probably settles the issue). But who wants to know, anyway? In the only sense that matters, the answers are still up for grabs each time "Traces" unexpectedly comes over the late-night airwaves of an oldies station, or catches the eye in a bin of 45s at a garage sale, or gets played on a jukebox deep into your third beer.

No matter how many times you listen to schlockmeisters like the Classics IV, they're not going anywhere; Dennis Yost won't be replacing, say, Van Morrison in the pantheon anytime soon. Yet listening to them—or anyone else caught up by the demands of craft and marketplace and the miserable limitations of average talent—has its purpose, serving as a way of slowing down that process by which judgments are made automatically, without full consideration. In a way that even the best stuff doesn't, this keeps me honest.

Excuse me, I feel a "Straight Up" marathon coming on.

Wayne King

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CLASSICAL REVIEWS

(Continued from page 63)

gether some of this country's finest organists playing carefully chosen, especially suitable instruments in programs of unusual musical interest. Michael Farris plays the Casavant Frères instrument in the Cathedral of St. Peter in Erie, Pennsylvania, and David Britton the Rosales organ ("Op. 11, 1987") of Trinity Episcopal Church in Portland, Oregon. John Eargle, obviously an organ buff himself, has not only produced both recordings but also engineered them in an exemplary manner—although you may find that the bass gives your speakers quite a workout.

The French program concentrates on music reasonably familiar to anyone who knows that repertory and that type of organ—which paved the way for the Mighty Wurlitzer of the American silent-movie era. The other program manifests considerable musicological investigation, and the composition by Michel Corrette (1709–1795) proves once again the absence of anything new under the sun. In getting his thunder effect, which contemporaneous organ fans considered quite a gas, the composer anticipated Ives's *Concord Sonata* by having a plank laid across the pedal keyboard, and foretold as well numerous pieces of Henry Cowell by

winding up with a forearm depressing the manual keys. The Gherardeschi piece interpolates a stop, typical of the late 18th century in Italy, that imitates a chorus of twittering nightingales. Delos calls this disc *Gargoyles and Chimeras: Exotic Works for Organ*, after the Vierne piece, but the label might just as aptly have billed it "Organ Music to Have Fun With."

Farris plays with electrifying virtuosity, and particularly in the Franck he demonstrates solid musicianship as well. Britton tends toward a certain sluggishness and metrical unincisiveness (the "Postillion" section of the Bach almost lumbers along), but he brings off the flashier pieces with considerable élan. Playing times: 73:29 (DCD 3077); 60:05 (DCD 3049).

Paul Moor

SEQUENTIA: English Songs, Instrumental Works of the Middle Ages (13).

● *Sequentia. Klaus Neumann, prod. EMI/Deutsche Harmonia Mundi CDC 49192 (D). (Dist. by Allegro Imports.)*

The Sequentia ensemble for medieval music has here gathered together some of the earliest surviving English songs in a varied program of secular and quasi-sacred works. Those accustomed to hearing this and similar repertory in the "big band" arrangements that were popular in the 1960s and 1970s may find these performances

quite stark. Textures are rather sparse, with minimal instrumental accompaniment and an emphasis on simple, declamatory vocal presentation. Text has primacy over music, leading to highly expressive readings, but with little sense of the exotic or festive mood so prominent in the earlier recordings. The final effect is sometimes more scholarly than emotionally involving, but one need merely realign one's sensitivities to appreciate the beauty contained in the simplicity of these works.

There are a number of surprises in these songs, such as the unusual polyphonic closing of St. Godric's Ode to St. Mary, Christ, and St. Nicholas, or the seemingly deranged text to *Füweles in the frith* that appears to contradict the mildness of its music. Most of the songs are on religious themes, often cautionary or confessional in tone. Generally the more mournful pieces come off best, with *The milde Lomb*, a melancholy ballad-style work, and *Ar ne kuth ich sorghe non*, the moving plaint of the unjustly persecuted, most successful. A number of relatively tame instrumental works punctuate the program but do not really break the sense of monotony that occasionally creeps in. The voices, as well as the recording, are pleasant without drawing attention to themselves. Playing time: 59:49.

Christopher Rothko

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(Continued from page 12)

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On the (8mm) Ball

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New 8mm offerings from Minolta: the Master Series-8 models 80 and 81.

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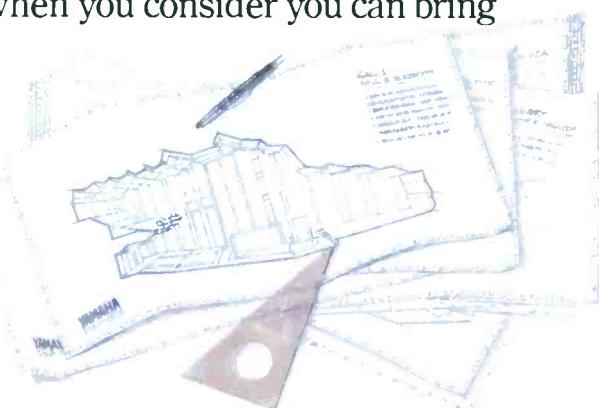
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