

STUNNING NEW HOME THEATER REFERENCE SYSTEM

**“We Like Trash!”
9 Rock Critics Confess**

HIGH FIDELITY

AUDIO • VIDEO • TEST REPORTS • MUSIC

JULY 1989

CONCERT HALL ACOUSTICS

**Bringing It
All Back Home,
Electronically**

**What Makes a
Great Concert Hall**

**Tested:
Philips CD-V Player,
Rotel Tuner/Preamp,
Rockford Fosgate Power Amp,
& More!**

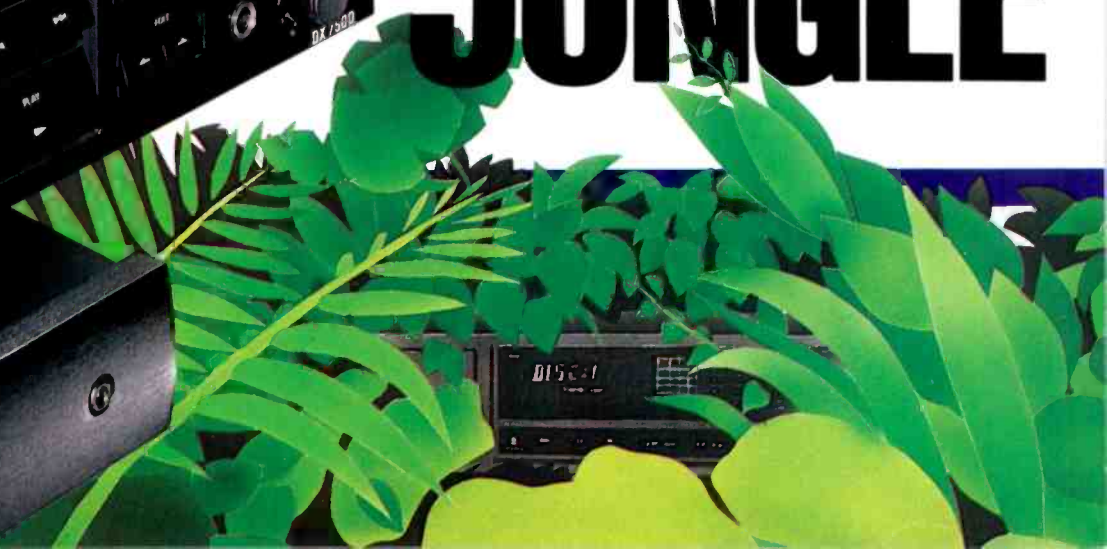


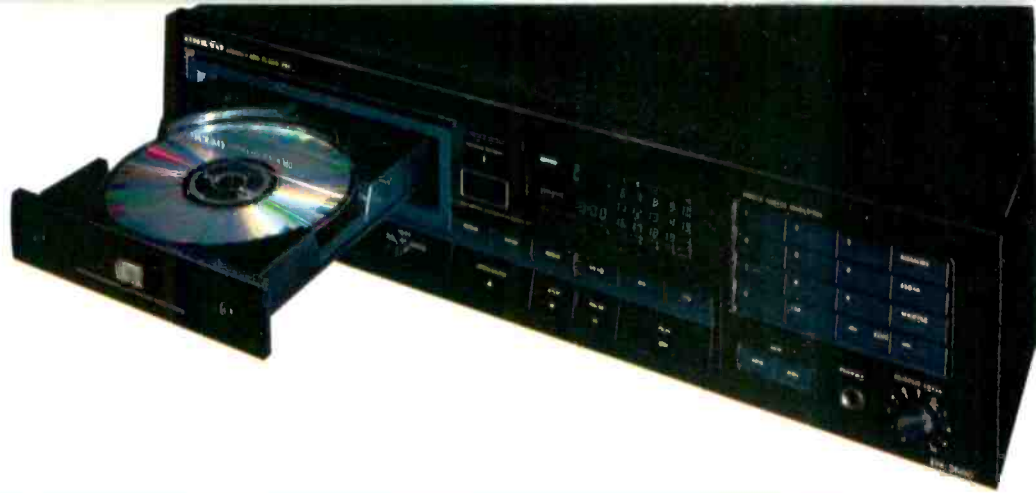
\$2.50 USA
\$2.95 CANADA





RISING ABOVE THE CD JUNGLE





For most people, buying a CD player is a lot like taking a short stroll along the Amazon. And forgetting your map. Sooner or later, you're going to get lost.

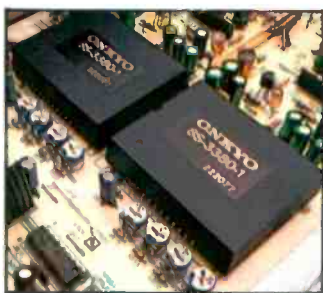
That's because the "jungle of misinformation" about CD players makes it difficult to know what's really important. And what isn't.

Take a quick look at some of the claims—digital bit structures (what are they, anyway?) ranging from 1 to 45. Oversampling rates from 2x to (quick, who's got the latest?) 16x. All this for the sake of a numbers race. And not necessarily for the sake of the music.

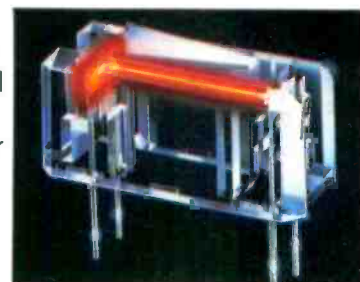
Well, Onkyo offers you a real way through this undergrowth.

Of course, we have an impressive variety of both single- and multiple-disc players. With extraordinary levels of technology in even our most affordable models.

For example, we individually calibrate the critical Digital-to-Analog Converters in our DX-1700 and DX-2700 players to fine-tune their linearity and minimize distortions peculiar to the digital process.

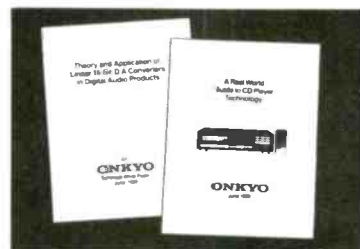


Most of our models also benefit from Opto-Coupling, an Onkyo-developed technology that transmits data optically rather than through conventional wiring for more accurate CD sound.



But for Onkyo, outstanding products are just the beginning. We'll make your journey through the CD jungle even easier with two indispensable guides.

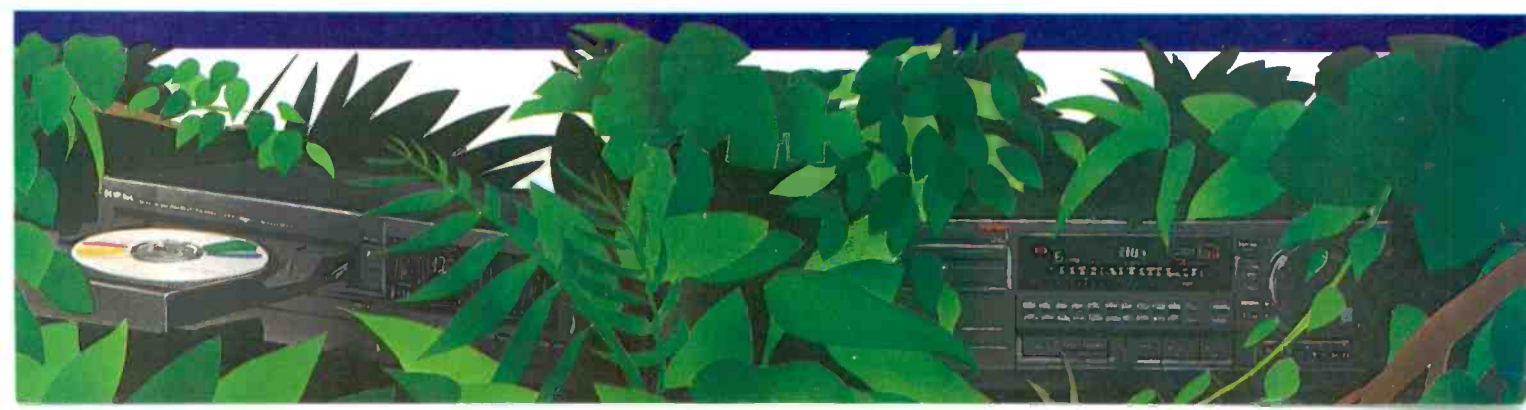
The first is an in-depth explanation of digital bit structures and how they affect musical performance. The second is a down-to-earth journey through all the claims you're likely to run into, as well as the hard facts you'll need to master the CD jungle. And they're available at your Onkyo dealer now.



Onkyo. We'll give you more than just superb CD players. We'll also give you the knowledge you need. Because it is a jungle out there. And only the fittest survive.

ONKYO®

200 Williams Drive, Ramsey, N.J. 07446 201-825-7950





REALISTIC®

The CD Player for the Changing Times

America's biggest name in audio presents a better way to enjoy the best in sound—the Realistic compact disc changer. You can load up to six discs in its magazine and enjoy hours of superb digital stereo. Or, program up to 32 selections from the discs to play in any sequence. Either way, you can pause, replay, program and search, using the wireless remote control.

The large LED display simplifies remote operation. Manual and automatic search make it easy to find selections.

This high-performance changer has a Tri-Spot laser pickup system for accurate tracking. Two-times oversampling

provides super sound. And Radio Shack carries extra magazines so you can protect all of your CDs and have them loaded and ready for play.

Come in and try the Realistic CD-6000. It's affordably priced at only 359.95 and available today.

Exclusively at

Radio Shack®
The Technology Store™

A DIVISION OF TANDY CORPORATION

Price applies at participating Radio Shack stores and dealers.

Protect Your Equipment Investment With the Tandy Service Plan—Details in Store



Tested: Philips CD-V player, four more 19



Ultimate surround-sound? 36



Forbidden love 52

TEST REPORTS

Philips CDV-488 CD Video player	19
Rockford Fosgate RF-2000 power amplifier	22
Rotel RTC-850 tuner/preamplifier	26
Blaupunkt New York SCD-08 car tuner/CD player	30
Sony CDX-R77 car tuner/CD player	33

AUDIO & VIDEO

SPECIAL TEST REPORT Shure HTS Theater Reference System. A multicomponent system for decoding and playing movie soundtracks. DAVID RANADA	36
The Basics of Concert Hall Acoustics. Why some halls sound great and others are acoustical failures./JEFFREY BORISH	40

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	48
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!	52

COLUMNS

Crosstalk What HQ circuitry does; excessive concert volume and the human ear; how to dub Dolby-encoded tapes./LARRY KLEIN	14
Tape Tracks The new Dolby S noise-reduction system. ROBERT LONG	16
Scan Lines Are advances in VCR technology neglecting color? DAVID RANADA	17
Practicalities New: the practical side of buying and enjoying equipment! BETH C. FISHKIND	18
Medley American orchestras on parade./TED LIBBEY Critics—endorsed by a reader. The wonder! The wonder! PETER DOSKOCH	55

DEPARTMENTS

Letters	5
Currents The factory-installed Audi/Bose car audio system; M&K Sound's pedestal-shaped subwoofer; Minolta's new 8mm camcorders.	12
Classical Reviews Brahms and Prokofiev from Mintz; Lutoslawski and Stravinsky from Mutter; a nicotine fit from Novák; and Porter songs from Bolcom and Morris.	56
The CD Spread Debussy's Préludes, long awaited from Benedetti Michelangeli; Liszt's little-known Requiem; Bernstein's On the Town.	65
Advertising Index	79

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

YES, WE DO OFFER AN IN-DASH COMPACT DISC SYSTEM.



WHY DO YOU ASK?

It must have been the richness and full clarity of the laser/digital sound that caught your ear. Or how faithfully full-frequency sound is reproduced.

That's what you probably noticed about our new in-dash compact disc system with integral receiver. It's one more example of the wide range of systems we offer to suit your taste in music. Which also includes the premium cassette/receiver with graphic equalizer. And even a Digital Audio Tape system for select GM cars.

They're all the result of the

Delco Electronics

Subsidiary of GM Hughes Electronics

Delco Electronics "designed-in" philosophy. Designing sound systems to match specific car and truck interiors.

And that's just part of what we do at Delco Electronics. From music systems and engine controls to security systems and anti-lock brake controls. We're working to help make the cars and trucks you drive more secure, more enjoyable, more comfortable and dependable. Through electronics.

Delco Electronics.
We give you the best seat in the house.

© 1988 GM Corp. All Rights Reserved.

It's who we are.

HIGH FIDELITY ACQUIRED

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-philés," 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)

AVL

The Art of Video display



Prominently display your CD's, Videos or Cassettes with the ultimate Audio Visual library! Available in elegant black lacquer, walnut or natural oak finishes!

A. Single unit \$29.95* holds 42 CDs, 16 video tapes or 26 cassettes

B. Double unit \$39.95* holds 84 CDs, 32 video tapes or 52 cassettes

*Add \$4.95 for shipping and handling
Dealer inquiries welcome.

Order Now!

1-800-255-5550 ext. 674
Visa or Mastercard accepted

High Image Products, Inc.

RECORDABLE DAT'S IN STOCK NOW

HOME D.A.T.	PORTABLE D.A.T.	PROFESSIONAL D.A.T.
AIWA XD-999 995	SONY TCD-D10 2250	
SONY DTC-M100 1400	Includes all factory accessories.	
SONY DTC-300ES 1650		
SONY DTC-500ES 1750		
SONY DTC-1000ES 1950	PANASONIC SV-3500 CALL	
JVC XD-2700 1750	PANASONIC SV-250 CALL	
JVC XD-21100 1850	FOSTEX D-20 CALL	
JVC XD-2900 2250	SHARP SX-D100 CALL	
AKAI D-9000 1800	SONY PCM-2500 CALL	
PIONEER D-900 1800	SONY PCM-2000 CALL	

BLANK TAPE — ALWAYS IN STOCK

Maxell, TDK, Fuji, Panasonic

COMPLETE INVENTORY OF ACCESSORIES

FULL WRITTEN WARRANTY PLUS FREE LOANERS

IMMEDIATE DELIVERY

NO DEPOSITS REQUIRED

ENGLISH OWNERS MANUALS

A/C ADAPTORS INCLUDED

9 A.M. — 7 P.M. 7 DAYS

AMEX • VISA • MC SHIP VIA UPS/FED-EX

(213) 828-6487 FAX (213) 470-6176

The

DAT

Digital Audio Tape

STORE

2624 Wilshire Blvd. Santa Monica CA 90403



Special CD
Changer Offer
Save \$50 or Receive
a Free 6-Disc Magazine.
See your Pioneer Dealer for Details.

Quality Time. Your moments together are too precious to waste. That's why Pioneer created the PD-M700 6-disc CD player. Now you can enjoy up to six hours of digital music without interruption, at the touch of a single button.

Pioneer invented the 6-disc CD magazine system. This innovative format offers you multiple programming options, cataloging capability and is designed to work in both Pioneer home and car multi-CD players. Simply put, no other CD format offers you so many features and is so easy to use.

Pioneer offers a complete line of 6-disc CD players, all with Non-Repeating Random Play. Now you can spend less time changing your music and more time enjoying it.



PIONEER

We Bring The Revolution Home.™

(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 De-Preist'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. ►

HIGH FIDELITY

Editor in Chief Michael Riggs
Associate Publisher Kathleen Green
Art Director Joanne Goodfellow

Managing Editor Jonathan Tesser
Copy Editor G. Donn Teal
Assistant Editor Arinda J. Segarra

TECHNICAL DEPARTMENT

Technical Editor David Ranada
Associate Technical Editor Beth C. Fishkind
Consulting Technical Editors Edward J. Foster, Robert Long
Contributing Editor Larry Klein

MUSIC DEPARTMENT

Classical Music Editor Theodore W. Libbey, Jr.
Popular Music Editor Ken Richardson
Associate Classical Music Editor Patricia Reilly
Contributing Editors Robert E. Benson, Leslie Berman, Jim Bessman, Pamela Bloom, Joe Blum, Hank Bordowitz, David Browne, Francis Davis, Rev. Thomas L. Dixon, Thor Eckert, Jr., Edward Greenfield, Thomas Hathaway, David Hurwitz, Paul Moor, John Morthland, Mark Moses, Andrew Nash, Jeff Nesin, Robert R. Reilly, Christopher Roitko, K. Robert Schwarz, Terry Teachout, Noah André Trudeau, Michael Ullman, Richard C. Walls, Kate Walter, James Wierzbicki

ART DEPARTMENT

Assistant Art Director Laura Sutcliffe
Technical Art Daniel Tesser

PRODUCTION DEPARTMENT

Senior Production Director Frank Marchetta
Production Coordinator Gina Fladger
Atex System Manager Mildred Richardson

CIRCULATION DEPARTMENT

Subscriptions Ora Blackmon-DeBrown, Harold Buckley, Maureen Buckley, Beth Healy, Thomas D. Slater, Raymond Ward
Newsstand Mitch Frank, Jana Friedman
Customer Service S. Adekemi-Adaralegbe

VICE-PRESIDENT

Group Publisher/Editorial Director William Tynan

ABC CONSUMER MAGAZINES, INC.

Senior Vice-President Richard D. Bay
Vice-President, Advertising Peter T. Johnsmeyer
Vice-President, Circulation Robert I. Gursha
Vice-President, Production Ilene Berson Weiner
Director, Financial Analysis Andrew D. Landis
Senior Art Director John Ciofalo

President, ABC Publishing Robert G. Burton
825 Seventh Avenue
New York, N.Y. 10019

ABC Consumer Magazines, Inc. 

CHILTON Company, One of the ABC Publishing Companies,
a part of Capital Cities/ABC, Inc.

HIGH FIDELITY is published monthly by ABC Consumer Magazines, Inc., Chilton Company, one of the ABC Publishing Companies, a part of Capital Cities/ABC, Inc. © 1989 Chilton/ABC Consumer Magazines, Inc. Member, Audit Bureau of Circulations. Indexed in Reader's Guide to Periodical Literature. Current and back copies of HIGH FIDELITY are available on microfilm from University Microfilms, Ann Arbor, Mich. 48106. Microfiche copies (1973 forward) are available from Bell & Howell Micro Photo Div., Old Mansfield Rd., Wooster, Ohio 44691.

ADVERTISING OFFICES

New York: ABC Consumer Magazines, Inc., 825 Seventh Ave., 8th fl., New York, N.Y. 10019. Tel. (212) 265-8360. Peter T. Johnsmeyer, Vice-President, Advertising; Walter Stolz, Associate Advertising Director; James R. McCallum, Advertising Director (Music/Books); Maria Manser, Classified Advertising Director.

Midwest: HIGH FIDELITY, 191 South Gary Avenue, Carol Stream, Ill. 60188. Tel. (312) 462-2872. Starr Lane, Midwest Advertising Director.

Los Angeles: ABC Consumer Magazines, Inc., 2029 Century Park East, Suite 800, Los Angeles, Calif. 90067. Tel. (213) 284-8118. Howard Berman, National Sales Manager.

Editorial correspondence should be addressed to The Editor, HIGH FIDELITY, 825 Seventh Ave., New York, N.Y. 10019. Editorial contributions will be welcomed, and payment for articles accepted will be arranged prior to publication. Submissions must be accompanied by return postage and will be handled with reasonable care; however, the publisher assumes no responsibility for return of unsolicited photographs or manuscripts.





DON'T BUY ONE OF THESE UNTIL YOU TAKE A HEARING TEST.

Warning: If you read this ad you'll wind up at your Sherwood dealer.

Why? Well, it won't be the fact that our current line of home components is the finest we've ever built. Or because our engineers didn't cut corners to assure excellent, long lasting performance. Or because you'll have enough jacks to handle an entire home entertainment center.

No, the reason you'll see your Sherwood dealer is to listen to these components for yourself. Because putting our sensibly priced components to the test is a heck of a lot more important than anything you'll find in an ad.

If you think they sound good now, wait until you hear them.

 **Sherwood**
LIVE PERFORMANCE SOUND™

However, in praising Jansons' giving us "the unmutated 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 rescoring. 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*, unlistenablely 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.

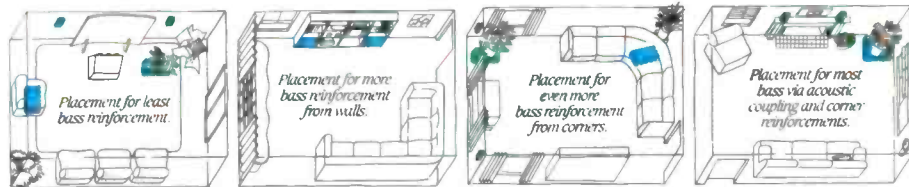
As for the idea of buying the Who documentary *The Kids Are Alright* in order to get "Baba O'Riley," "Won't Get Fooled Again," and "Who Are You" at their correct pitch, forget it. All videocassette versions are both speeded up and edited (most of "A Quick One While He's Away" is chopped out), and the 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.

"They...Play Music And Make It Sound Like Music...
Unobtrusively...At A Bargain Price" *Julian Hirsch*
Stereophile, Sept. '88

Cambridge SoundWorks has created Ensemble™ a speaker system that can provide the sound once reserved for the best speakers under laboratory conditions. It virtually disappears in your room. And because we market it directly, Ensemble costs hundreds less than it would in stores.



Henry Kloss, creator of the dominant speaker models of the '50s (Acoustic Research), '60s (KLH), and '70s (Advent), brings you Ensemble, a genuinely new kind of speaker system for the '90s, available only factory direct from Cambridge SoundWorks.



You can put Ensemble's low-frequency units exactly where they should go for superb bass. You can't do this with conventional speakers because you have to be concerned about the upper frequencies coming from the same enclosures as the low ones.

The best sound comes in four small packages.

Ensemble consists of four speaker units. Two compact low-frequency speakers reproduce the deep bass, while two small satellite units reproduce the rest of the music, making it possible to reproduce just the right amount of energy in each part of the musical range without turning your listening room into a stereo showroom.

Your listening room works with Ensemble, not against it.

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
3927 W. 7th St., #4
Los Angeles, Calif. 90005

All letters should be addressed to The Editor, High Fidelity, 825 Seventh Ave., New York, N.Y. 10019. Letters are subject to editing for brevity and clarity.

bass units can be tucked out of the way—on the floor, atop bookshelves, or under furniture. The satellites can be hung directly on the wall, or placed on windowsills or shelves. No bulky speakers dominate your living space, yet Ensemble reproduces the deep bass that no mini speakers can.

Not all the differences are as obvious as our two subwoofers.

Unlike seemingly similar three-piece systems, Ensemble uses premium quality components for

Unlike seemingly similar satellite systems which use a single large subwoofer, Ensemble uses two separate, compact bass units. They fit more gracefully into your living environment, and help minimize the effects of the listening room's standing waves.



Ensemble is a Trademark of Cambridge SoundWorks, Inc.

maximum power handling, individual crossovers that allow several wiring options and cabinets ruggedly constructed for proper acoustical performance. We even gold-plate all connectors to prevent corrosion. An even bigger difference is how we sell it . . .

Thousands agree: the best showroom is your living room.

We make it possible to audition Ensemble the right way—in your own home. In fact, Ensemble is sold *only* by Cambridge SoundWorks directly from the factory. Listen for hours without a salesman hovering nearby. If after 30 days you're not happy, return Ensemble for a full refund.

At only \$499*—complete with all hardware

and 100' of speaker cable—Ensemble is the value on today's speaker market.

**Call 1-800-AKA-HIFI†
(1-800-252-4434)**

Our toll-free number will connect you to a Cambridge SoundWorks audio expert. He or she will answer all your questions, take your order and arrange surface shipment via UPS. Your Cambridge SoundWorks audio expert will continue as your personal contact with us. We think you'll like this new way of doing business.

†In Canada, call 1-800-525-4434. Audio experts are on duty Mon.-Sat., 9AM-10PM, Sun., 9AM-6PM Eastern Time. Fax #: 617-332-9229.

CAMBRIDGE SOUNDWORKS

Suite 123JUL 154 California St., Newton, MA 02158

- Send more information and test reports.
 - Send Ensemble risk-free for 30 days, for \$499*.
 - Send an Ensemble Gift Certificate for \$499*.
- I'm paying by Check MC Visa AmEx

Acct. Number _____ Exp. _____

Signature _____

Name _____

Address _____

City _____ State _____ Zip _____

Phone (Area Code) _____ Number _____

FOR IMMEDIATE SERVICE: 1-800-AKA-HIFI

We ship worldwide, including APO & FPO.

MA residents add 5% sales tax. Suite 123JUL

*Plus freight (\$7-\$24). Delivery time usually 2-7 days.

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 4 $\frac{1}{4}$ -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 21 $\frac{1}{2}$ 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)



The Belles 150 stereo power amp pumps out 100 watts per side.

GREAT NEWS FOR IBM, TANDY, & PC COMPATIBLE USERS

More Power. More Excitement. More Fun from your PC.

SAVE
over
\$37



Get powerful and exciting new programs on disk in every big issue of COMPUTE!'s PC.

Start getting the most from your PC now — by saying "YES" to a discount subscription to COMPUTE!'s PC.

Each exciting new issue comes complete with disk — featuring powerful game and utility programs guaranteed to challenge, entertain and delight.

You'll also get our "buyer's guide" features, reviews of the latest hardware and software, valuable ideas, time and trouble-saving tips, and more.

Save over \$37 with this discount subscription offer. Get 6 big issues, each with disk, for just \$39.95. If you're not delighted, cancel at any time for a full refund of all unmailed issues. You simply cannot lose. So start getting more from your PC now. Return the attached reply card or complete and mail the coupon today.

REPLY COUPON

MAIL TODAY TO: **COMPUTE!'s PC,**
P.O. Box 3247, Harlan, IA 51593-2427

- YES!** Send 6 big issues of COMPUTE!'s PC, each with an all-new program-packed disk for just \$39.95. I save over \$37 off the cover price!
- Payment Enclosed
- Bill Me
- Send 5.25" Disk 3.5" Disk

Mr./Mrs./Ms. (circle one) (please print)

Address Apt No.

City

State Zip

Outside U.S. add \$6 per year for postage. Excluding Canada, all foreign orders must be in U.S. currency. Price subject to change.

JORA5

FOR FASTER SERVICE, CALL TOLL-FREE 1-800-727-6937



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.



—Leonard Feather, Celebrated Jazz Critic for the L.A. Times, Washington Post News Service and Author of many books including "The Jazz Years—Earwitness to an Era."

"BBE made my audio system sound better than I ever dreamed possible!"

"Listening to music has been my vocation and avocation for a lifetime. I've spent countless hours sitting in front of bandstands while some of the world's greatest musicians mesmerized me with their artistry.

"Listening to recorded music, of course, falls short of the delights of listening to a live performance. I was therefore skeptical when told that BBE could make a dramatic improvement to virtually all audio systems and I had to hear for myself.

"I was amazed at how much better the BBE 1002 made my music system sound! There was a presence, a *being there* sense of excitement. The rich textures of the instrumental sounds, the subtle nuances and details in the music come through with clarity and authenticity.

"BBE is clearly one of the most important advances in the electronic reproduction of music to come along in my lifetime. Bravo, BBE! Encore!"

The Great Professional Music Magazines Love BBE

"The difference in processed audio and non-processed audio is like the difference between high-fidelity speakers with and without pillows placed in front of them."

—Radio World

"There was no doubt the BBE processor added more spatial quality, more transients and more clean highs. This is the first black box that actually helped make my music sound the way that I *knew* it should. The effect is shattering!" —*Music Technology*

BBE Really Fits In

Measuring 16½" x 9" x 1¾", BBE fits perfectly into your audio rack. Then just plug it into your wall socket and standard tape loop.

Full Money-Back Guarantee

If you're not completely satisfied with the BBE 1002, return it within 30 days. We'll refund your money. No questions asked.

Full Warranty

All BBE products are backed by a full year's warranty on all parts and labor—and by our reputation for innovation and leadership in the audio and electronics industries.

Easy to Order

It's as easy as one, two, or three.

1. Call us. Toll free. 1-800-233-8346. In California, 1-800-558-3963.
2. Or, complete and send us the coupon at right.
3. Or, if you're in New York or New Jersey, pick up your BBE 1002 in any MACY's audio department.

BBE[™] Sound Inc.

5500 Bolsa Ave., Suite 245, Huntington Beach, CA 92649, (714) 897-6766. (800) 233-8346. In California, (800) 558-3963. In Canada, contact Daymen Audio, 3241 Kennedy Road, #22, Scarborough, Ontario M1V2J9 or call (416) 298-9644. BBE is a trademark of BBE Sound, Inc.

Send me _____ BBE 1002 unit(s) at \$189 each. (U.S. currency only. California residents add applicable tax. Price includes UPS ground shipping charges. For UPS overnight shipping, add \$18. For UPS 2nd day shipping, add \$8.50. Canadian residents: please write or call for additional information.)

Enclosed is a check for \$ _____
Or please charge to my:

- Visa MasterCard
 American Express

Card #

Exp. Date _____

Signature _____

Name (print) _____

Address _____

City/State/Zip _____

Area Code/Phone No. (To facilitate shipping) _____

5500 Bolsa Ave., Suite 245, Huntington Beach, CA 92649, (714) 897-6766. (800) 233-8346. In California, (800) 558-3963.



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 shirt-pocket 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. □

The ultimate in sound...The ultimate in savings...

GET **6**
COMPACT DISCS
for the
price of **1**
...with nothing more to buy ever!



100516

R.E.M.: Green • Orange Crush, Pop Song 89, Get Up, Stand, etc. Warner Bros. 100715
Def Leppard: Hysteria • Women, Love Bites, more. Mercury. 100927
The Best Of Dire Straits: Money For Nothing • Sultans Of Swing, etc. Warner Bros. 100713
Dirty Dancing/Original Soundtrack (I've Had) The Time Of My Life etc. RCA 182522
James Galway: Greatest Hits • Memory, The Pink Panther, 18 more. RCA 173233
The Judds: Greatest Hits • Give A Little Love, Love Is Alive, etc. RCA 144578
Guns N' Roses: Appetite For Destruction Welcome To The Jungle, etc. Geffen 170348
Solti, Chicago Symphony: Tchaikovsky, 1812 Overture & More London 125179
Robert Palmer: Heavy Nova • Simply Irresistible, etc. EMI 100035
Elton John: Reg Strikes Back • I Don't Wanna Go On With You Like That. MCA 100602
D.J. Jazzy Jeff & The Fresh Prince: He's The D.J., I'm The Rapper • Jive 264134
Pet Shop Boys: Introspective • Domino Dancing, etc. EMI 100681
Tracy Chapman: Fast Car, Talkin' Bout A Revolution, etc. Elektra 153582
Bobby McFerrin: Simple Pleasures Don't Worry Be Happy, etc. EMI 164165
Simon & Garfunkel: The Concert In Central Park • Mrs. Robinson, etc. Warner Bros. 244006
Steve Earle: Copperhead Road • Snake Oil, title song, more. UNI 100679
Cocktail (Original Soundtrack) Elektra 100459
Canadian Brass: More Greatest Hits Sabre Dance, more. RCA 154348
45's On CD, Vol. 1 • Big Bopper, Rick Nelson, Sheb Wooley, etc. Polydor 150044

100603

John Cougar Mellencamp: The Lonesome Jubilee Paper In Fire, more. Mercury 134420
Jimi Hendrix: Kiss The Sky • Purple Haze, Voodoo Child, etc. Reprise 161349
The Sound Of Music • Original motion picture soundtrack. RCA 100046
Jazz CD Sampler • Classic performances by Ella, Basie, etc. Polygram 173406
James Taylor: Greatest Hits • Fire & Rain, more. Warner Bros. 123790



Horowitz Plays Mozart 115436

Randy Travis: Old 8x10 • Honky Tonk Moon, more. Warner Bros. 100008
By Request...The Best Of John Williams & The Boston Pops Philips 125360
The Police: Every Breath You Take—The Singles A&M 173924
Benny Goodman: Sing, Sing, Sing Title song, more. RCA 104857
Richard Marx: Repeat Offender Satisfied, Angelia, Etc. EMI 101118
Beethoven, Symphony No. 9 (Choral) R. Nourington, conductor. Angel 100467
Diana Ross & The Supremes: 20 Greatest Hits • Motown 163867

Dokken: Beast From The East • "Live" hits Walk Away, etc. Elektra 200717



The Traveling Wilburys: Volume One 100711

Dirty Dancing: Live In Concert Hungry Eyes, Yes, etc. RCA 201026
Count Basie: April In Paris • Title song, Shiny Stockings, etc. Verve 164004
Itzhak Perlman: French Violin Showpieces • DG 115457
Gordon Lightfoot: Gord's Gold • Folk classics! Reprise 224008
Ella Fitzgerald & Louis Armstrong: Ella & Louis • April In Paris, etc. Verve 133381
XTC: Oranges And Lemons • The Mayor Of Simpton, others. Geffen 201086
Vanilli Vanilli: Girl You Know It's True Title song, others. Arista 101048
Charlie Parker & Dizzy Gillespie: Bird And Diz • Leap Frog, etc. Verve 173413
Patsy Cline: 12 Greatest Hits • I Fall To Pieces, Crazy, more. MCA 153849
Van Halen: OU812 • When It's Love, Black And Blue, etc. Warner Bros. 150913
Winger • Seventeen. Atlantic 100830

YOUR SAVINGS START HERE
Complete And Mail This Card Today!

YES, Please accept my membership in the BMG Compact Disc Club and send me the four compact discs I've indicated here, billing me for just shipping and handling under the terms of this ad. I need buy just 1 CD at regular Club prices during the next year—after which I can choose a FREE CD! That's 6 for the price of 1...with nothing more to buy ever! (Shipping & handling is added to each shipment.)

RUSH ME THESE 4 CDs
(Indicate by number):

D	D
D	D

I am most interested in the musical category checked here—but I may always feel free to choose from any (check one only):

1 EASY LISTENING (Instrumental/Vocal Moods)
 2 COUNTRY 3 HARD ROCK
 4 POP/SOFT ROCK 5 CLASSICAL

MR.
 MRS.
 MISS

First Name _____ Initial _____ Last Name _____ (PLEASE PRINT)

Address _____

City _____ State _____ Zip _____

Telephone (Area Code) _____

Signature _____

BMG COMPACT DISC CLUB

Limited to new members, continental U.S.A. only. Current BMG CD Club members not eligible for this offer. One membership per family. We reserve the right to request additional information or reject any application. Local taxes, if any, will be added.

YG773 (BU)

SAVE 50%

INSTANT HALF-PRICE BONUS SAVINGS!

SEE OTHER SIDE FOR DETAILS... AND 57 MORE HITS TO CHOOSE FROM

Enjoy Spectacular Savings On Compact Discs!



The Duke Ellington Orchestra:
Digital Duke • GRP 163356

Elvis Presley: The Number One Hits
Hound Dog, Don't, etc. RCA 172190

New Age Bach: The Goldberg Variations
• Splegeman, synthesizer. East-West 100488

Phil Collins: Buster • Original Motion Picture Soundtrack. Atlantic 100517

Skid Row • Youth Gone Wild, Big Guns, others. Atlantic 101038

Genesis: Invisable Touch • Tonight Tonight Tonight, more. Atlantic 153740

Steve Winwood: Roll With It • Title song, Holding On, etc. Virgin 154633

Metallica: And Justice For All • One, Blackened, etc. Elektra 200478

The Beach Boys: Endless Summer
Help Me Rhonda, etc. Capitol 223559

Diane Schuur: Talkin' 'Bout You • For Your Love, etc. GRP 100532

The Cult: Sonic Temple • Fire Woman, Sun King, Soul Asylum, etc. Sire 101015

Whitney Houston: Whitney • Where Do Broken Hearts Go, etc. Arista 152854

SAVE 50%

INSTANT HALF-PRICE BONUS PLAN
Unlike other clubs, you get 50%-off Bonus Savings with every CD you buy at regular Club prices, effective with your first full-price purchase!

Tone-Loc: Loc-Ed After Dark • Wild Thing, etc. Delicious Vinyl 101033

Paula Abdul: Forever Your Girl
Straight Up, others. Virgin 100933

Edie Brickell & New Bohemians:
Shooting Rubber Bands At The Stars
What I Am, Circle, etc. Geffen 100789

Fine Young Cannibals: The Raw And The Cooked • I.R.S. Digital 101068

Mike + The Mechanics: The Living Years • Nobody's Perfect, etc. Atlantic 100710

Van Morrison & The Chieftans: Irish Heartbeat • Mercury 100489

Mike Oldfield: Tubular Bells • Music from 'The Exorcist', Virgin 170345

Guns N' Roses: GN'R Lies • Patience, Used To Love Her, etc. Geffen 100805

Horowitz in Moscow • Classical music's #1 album, a Grammy winner! DG 125264

The Complete Lester Young • Just You And Me, etc. Mercury 164163

The Sun Story • Songs from Elvis Presley, Johnny Cash, etc. Rhino 244534

Dave Grusin: Cinemagic • Movie themes. GRP 133316

Powagqati • Haunting film soundtrack, music by Philip Glass. Nonesuch 172268

Chicago: 19 • I Don't Wanna Live Without Your Love, more. Reprise 154404

Peter Cetera: One More Story
Warner Bros. 100463

Pavarotti At Carnegie Hall • The world-famous tenor in concert! London 115311

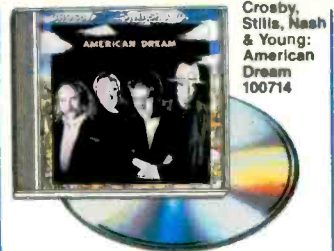
Classic Old & Gold, Vol. 1 • Music Explosion, more. Laurie 134627

Eric Clapton: Time Pieces (The Best Of) • Layla, etc. Polydor 123385

K.T. Oslin: This Woman • Hold Me, Money, title song, etc. RCA 100579

Vangells: Direct • The Motion Of Stars, First Approach, etc. Arista 100470

Charlie Parker: Compact Jazz
Bird lives! Verve 153983



Crosby, Stills, Nash & Young: American Dream
100714

Karyn White • Love Saw It, Superwoman, more. Warner Bros. 100832

The Best Of Steely Dan: Decade • 14 hits. MCA 154135

Supertramp: Classics (14 Greatest Hits) • A&M 104871

Alabama: Greatest Hits • Why Lady Why, Feels So Right, etc. RCA 120247

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 270106

Bobby Brown: Don't Be Cruel • My Prerogative, 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 And Zen • Heaven Knows, etc. Es Paranza 134392

Led Zeppelin: Houses Of The Holy
D'yer 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: An Old Friend's Hand
100707

Start with **4** COMPACT DISCS now!
pay only shipping and handling with membership

Buy just **1** smash hit in one year's time.

Then get **1** FREE BONUS CD of your choice.

Enjoy **6** CDs for the price of one.

Nothing more to buy...EVER!

START NOW WITH 4 COMPACT DISCS!

Yes, pick any 4 compact discs shown here! You need buy just one selection at regular Club prices (usually \$14.98-\$15.98)...and take up to one full year to do it. Then you can choose another CD free as a bonus. That's 6 compact discs for the price of 1 and there's nothing more to buy...ever!(Shipping & handling added to each shipment.)

HOW THE CLUB OPERATES

You select from hundreds of exciting compact discs described in the Club's magazine mailed to you approximately every 3 weeks (19 times a year). Each issue highlights a Featured Selection in your preferred music category, plus alternate selections. If you'd like the Featured Selection, do nothing. It will be sent to you automatically. If you'd prefer an alternate selection, or none at all, just return the card enclosed with each issue of your magazine by the date specified on the card. You will have at least 10 days to decide, or you may return your Featured Selection at our expense for full credit. Cancel your membership at any time after completing your membership agreement, simply by writing to us.

FREE 10-DAY TRIAL

Listen to your 4 introductory selections for a full 10 days. If not satisfied, return them with no further obligation. You send no money now, so complete the postpaid reply card and mail it today.

BUSINESS REPLY MAIL
FIRST CLASS PERMIT NO. 5071 INDIANAPOLIS, IN

POSTAGE WILL BE PAID BY ADDRESSEE

BMG COMPACT DISC CLUB
P.O. Box 91412
INDIANAPOLIS IN 46209-9758

NO POSTAGE
NECESSARY
IF MAILED
IN THE
UNITED STATES



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-designated 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



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.

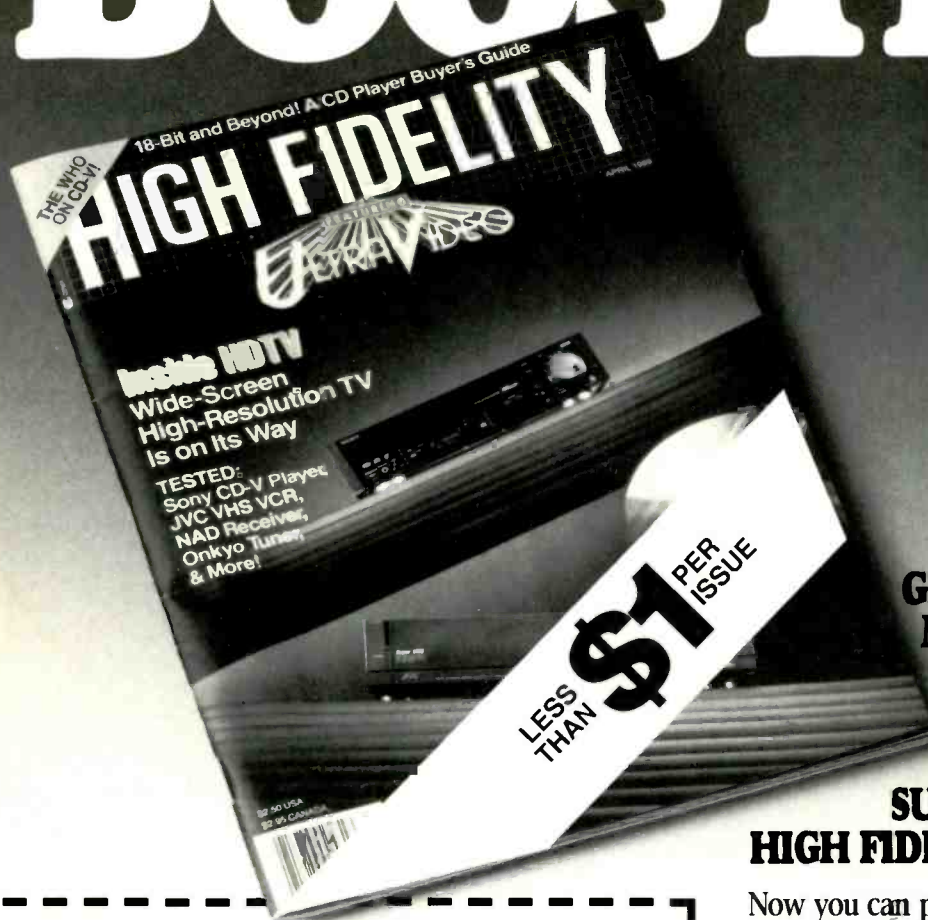
Price: \$1,300.

Warranty: Two years parts and labor.

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

DAVID A. WAGNER

POWER BOOSTER!



**GET
MORE SYSTEM
FOR LESS MONEY
WITH A
MONEY-SAVING
SUBSCRIPTION TO
HIGH FIDELITY!**

REPLY COUPON

MAIL TODAY TO: HIGH FIDELITY, P.O. Box 3234
Harlan, IA 51593-2414

- Yes!** Sign me up for 12 big issues of HIGH FIDELITY for just \$11.97. I save 60% off the cover price!
- I want to save even more. Sign me up for 2 years of HIGH FIDELITY—24 big issues, just \$22!
- Payment Enclosed Bill Me

Mr./Mrs./Ms. (circle one)

(please print)

Address

Apt. No.

City

State, Zip

FOR FASTER SERVICE CALL TOLL-FREE

1-800-666-3977 JINA 3

Outside U.S. add \$7 per year for postage. Excluding Canada, all foreign orders must be in U.S. currency. Price subject to change. Annual Basic Rate is \$13.95.

Now you can put more power behind your audio and video system—get the best components at the best price, with a money-saving subscription to HIGH FIDELITY.

Issue after exciting issue, HIGH FIDELITY delivers the latest news and analysis from the world of audio and video—with detailed test reports and sound buying advice on loudspeakers, digital compact discs, audio and video tapes, CD players, cassette decks, color monitors, VCRs and super VCRs, camcorders, amplifiers, equalizers and much, much more.

Say "YES" today and get 12 big issues for just \$11.97. That's less than \$1 per issue—a savings of 60% off the cover price. So don't delay. Get more power, more performance for less money with a money-saving subscription to HIGH FIDELITY. Return the attached card or mail the coupon today.

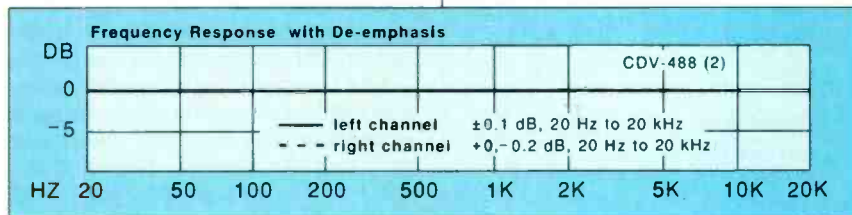
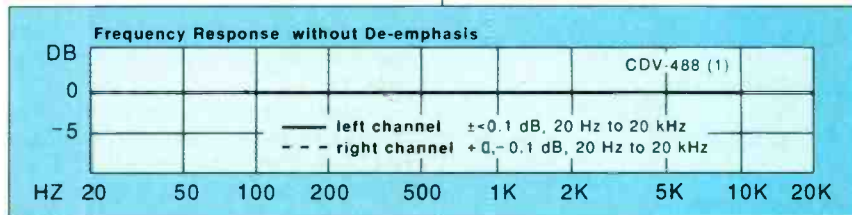
In addition to "mosaic" effects, the CDV-488 provides freeze frame, forward and reverse, slow and strobe motion, and bidirectional accelerated motion at up to ten times normal speed via a quasi-professional "jog" dial and a shuttle ring that lie on the RC-488CDV Universal Remote Commander. The RC-488CDV 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 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 Véray test disc, stumbled only when the



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

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.

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	≤ 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 μm
maximum surface obstruction	> 800 μm
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	± < 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	± < 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%



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

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—its 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 ambient-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 biamp 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-

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 reran 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.

DISCS, DISCS, DISCS,



R.E.M.—Green (Warner Bros.) 375162

The Traveling Wilburys—Volume One (Wilbury) 375089

Elvis Costello—Spike (Warner Bros.) 378190

Enya—Watermark (Geffen) 379925

Debbie Gibson—Electric Youth (Atlantic) 377275

Tone-Loc—Locoated After Dark (Delicious Vinyl) 379875

Paula Abdul—Forever Your Girl (Virgin) 374637

TAKE YOUR PICK OF ANY 8

- Skid Row** (Atlantic) 379602
- Dave Grusin Collection** (GRP) 378398
- Joe Sample**—Spellbound (Warner Bros.) 378224
- Oingo Boingo**—Skeletons In The Closet (A&M) 378125
- Bob Dylan & Grateful Dead** (Columbia) 378117
- Jessye Norman Sings Wagner**—Triston Und Isolde; Tannhauser; etc. (Anget) 378075
- The Pursuit Of Happiness**—Love Junk (Chrysalis) 377994
- Tesla**—The Great Radio Controversy (Geffen) 377986
- The Fantasy Strings**—The Greatest Love Of All Conducted By Ettore Stratta (Real) 377978
- Charlie Sexton** (MCA) 379230
- Tequila Sunrise**—Original Sound Track (Capitol) 379180
- Paul Dean**—Hard Core (Columbia) 379164
- Simply Red**—A New Flame (Elektra) 378943
- Lyle Lovett**—Lyle Lovett and His Large Band (MCA) 378935
- The Replacements**—Don't Tell A Soul (Sire/Reprise) 378927
- The Go-Betweens**—16 Lovers Lane (Capitol) 378810
- Midge Ure**—Answers To Nothing (Chrysalis) 378786
- They Might Be Giants**—Lincoln (Rest) 378778
- New Order**—Technique (Qwest) 378760
- Polson**—Open Up And Say... Ahh! (Capitol/Enigma) 368688
- Madonna**—Like A Prayer (Sire) 379594
- Tiffany**—Hold An Old Friend's Hand. (MCA) 376236
- Dokken**—Beast From The East (Elektra) 376228
- The Best Of Earth, Wind & Fire**—Vol. 2 (Columbia) 376160
- Best Of Berlin**—1979-1988 (Geffen) 376145
- Sheena Easton**—The Lover In Me (MCA) 376095
- Andre Watts At Carnegie Hall** (Angel) 376053
- Nadja Salerno Sonnberg / Cecile Licad**—Franck, Sonata In A Brahms, Sonata No. 2 In A, Sonatasatz In C Minor (Angel) 376038
- Gipsy Kings** (Elektra/Musician) 377812
- Andres Segovia**—The Baroque Guitar Segovia Collection; Vol. 4 (MCA Classics) 375998
- Fishbone**—Truth And Soul (Columbia) 375865
- Was (Not Was)**—What's Up Dog? (Chrysalis) 375857
- Kim Wilde**—Close (MCA) 375816
- Fleetwood Mac's Greatest Hits** (Warner Bros.) 375782
- Chaka Khan**—C.K. (Warner Bros.) 375774
- Jane's Addiction**—Nothing's Shocking (Warner Bros.) 375741
- Samantha Fox**—I Wanna Have Some Fun (Jive/RCA) 375725
- John Hiatt**—Slow Turning (A&M) 375717
- The Human League's Greatest Hits** (A&M) 375709
- Weird Al Yankovic Greatest Hits** (Rock 'N' Roll) 375642
- Pet Shop Boys**—Introspective (EMI) 375592
- Karyn White** (Warner Bros.) 375394
- John Adams**—"Nixon In China" (Nonesuch) 375345
- Beaches**—Original Soundtrack (Atlantic) 379669
- .38 Special**—Rock & Roll Strategy (A&M) 375139
- Levert**—Just Coolin' (Atlantic) 375105
- Ratt**—Reach For The Sky (Atlantic) 375071
- Barbra Streisand**—Till I Loved You (Columbia) 374884
- R.E.M.**—Eponymous (I.R.S.) 374777
- Michael Brecker**—Don't Try This At Home (MCA/Impulse) 374769
- Blues For Coltrane**—Various Artists (MCA/Impulse) 374744
- Bulletboys** (Warner Bros.) 374702
- Winger** (Atlantic) 374652
- Al Jarreau**—Heart's Horizon (Reprise) 376186
- The Smiths**—Rank (Sire) 374397
- Robbie Nevil**—A Place Like This (EMI) 374348
- Diane Schuur**—Talkin' 'Bout You (GRP) 374298
- Eddie Money**—Nothing To Lose (Columbia) 374223
- Ready For The World**—Ruff 'N' Ready (MCA) 374124
- Vixen** (EMI) 374108
- Johnny Clegg & Savuka**—Shadow Man (Capitol) 374025
- Kronos Quartet**—Winter Was Hard (Nonesuch) 373993
- London Classical Players**—Roger Norrington, Beethoven Symphony (Angel) 373985
- Stanley Jordan**—Flying Home (EMI) 373860
- Joan Armatrading**—The Shouting Stage (A&M) 373837
- Escape Club**—Wild Wild West (Atlantic) 373787
- Cocktail**—Original Sound Track (Elektra) 373779
- Little Feat**—Let It Roll (Warner Bros.) 373720
- Yes**—Big Generator (ATCO) 361170
- Richard Marx**—Repeat Offender (EMI) 380915
- Guy** (MCA) 373415
- Luther Vandross**—Any Love (Epic) 373399
- Bird**—Original Motion Picture Soundtrack (Columbia) 373332
- Ozzy Osbourne**—No Rest For The Wicked (Epic) 373308
- A Tribute To Woody Guthrie And Leadbelly**—Various Artists (Columbia) 372995
- Metallica**—And Justice For All (Elektra) 372805
- Canadian Brass**—The Mozart Album (CBS Master) 374561
- Najee**—Day By Day (EMI-Manhattan) 371856
- Melissa Etheridge** (Island) 371468
- Journey**—Greatest Hits (Columbia) 375279
- Ramones**—Ramones Mania (Sire) 371450
- Breathe**—All That Jazz (A&M) 371427
- Huey Lewis And The News**—Small World (Chrysalis) 371419
- Toni Childs**—Union (A&M) 371351
- Bruce Cockburn**—Waiting For A Miracle (Gold Castle) 371278
- Steve Winwood**—Roll With It (Virgin) 371211
- The Bernstein Songbook**—selections from West Side Story, On The Town, etc. Bernstein cond. (CBS) 371088
- New Edition**—Heart Break (MCA) 370882
- Spyro Gyra**—Rites of Summer (MCA) 370767
- Randy Travis**—Old 8 x 10 (Warner Bros.) 370643
- Elton John**—Reg Strikes Back (MCA) 370536
- Patti Smith Group**—Dream Of Life (Arista) 370478
- Robert Palmer**—Heavy Nova (EMI) 370395
- David Sanborn**—Close Up (Warner Bros.) 370304
- Wynton Marsalis Quartet**—Live At Blues Alley (Columbia) 370080-390088
- Anita Baker**—Giving You The Best That I Got (Elektra) 374058
- The Clash**—The Story Of The Clash Vol. 1 (Epic) 368597-398594
- Michael Feinstein**—Isn't It Romantic (Elektra) 368399
- Basia**—Time And Tide (Epic) 368043
- Sade**—Stronger Than Pride (Epic) 368027
- Orchestral Manoeuvres In The Dark**—Best Of O.M.D. (A&M) 367755
- REO Speedwagon**—Greatest Hits (Epic) 367672
- Sinead O'Connor**—The Lion and The Cobra (Chrysalis) 367086
- Tina Turner**—Live In Europe (Capitol) 366898-396895
- Robert Plant**—Now and Zen (Es Paranza) 366716
- Carly Simon**—Greatest Hits Live (Arista) 365874
- The Manhattan Transfer**—Brasil (Atlantic) 363648
- Linda Ronstadt**—Canciones De Mi Padre (Asylum) 362640
- Pretenders**—The Singles (Sire) 362541
- Steve Winwood**—Chronicles (Island) 362525
- Robbie Robertson** (Geffen) 362152
- Michael Jackson**—Bad (Epic) 362079
- Sting**—... Nothing Like The Sun (A&M) 361675
- Introducing The Hardline According To Terence Trent D'Arby** (Columbia) 361618
- Guns N' Roses**—GN'R Lies (Geffen) 370870
- Tracy Chapman** (Elektra) 369892
- Al B. Sure**—In Effect Mode (Warner Bros.) 369637
- Ziggy Marley & The Melody Makers**—Conscious Party (Virgin) 369512
- Joe Jackson**—Live 1980/1986 (A&M) 369504-399501
- Van Halen**—OU812 (Warner Bros.) 369371
- Bobby McFerrin**—Simple Pleasures (EMI) 369306
- DJ Jazzy Jeff & Fresh Prince**—He's the DJ, I'm The Rapper (Jive/RCA) 369264
- Edie Brickell & New Bohemians**—Shooting Rubberbands At The Stars (Geffen) 374835
- Guns N' Roses**—Appetite For Destruction (Geffen) 359984
- Bruce Springsteen**—Tunnel Of Love (Columbia) 360115
- Billy Idol**—Vital Idol (Chrysalis) 360107
- Jethro Tull**—Crest Of A Knave (Chrysalis) 360040

DISCS, DISCS, DISCS!



Living Colour—Vivid
(Epic) 370833

Bobby Brown—Don't Be Cruel (MCA) 372045

The Movies Go To The Opera
—Various Artists (Angel) 372342

Kenny G—Silhouette
(Arista) 371559

Roy Orbison—Mystery Girl
(Virgin) 377101

CDs FOR ONLY A PENNY

plus shipping/handling with membership
Details below.

U2—Rattle And Hum
(Island) 374017

Aerosmith—Permanent
Vacation (Geffen) 359075

Bruce Springsteen—Born
In The U.S.A. (Columbia)
326629

Bangles—Everything
(Columbia) 373829

Duke Ellington Orch.—
Digital Duke (GRP) 357350

The Police—Every Breath
You Take... The Singles
(A&M) 348318

Portrait of Wymton
Marsalis (CBS Master)
373555

Best Of The Kinks—1977-
1986 (Arista) 345314

Kiri Te Kanawa—Verdi &
Puccini Arias (CBS Master)
343269

Luciano Pavarotti—In
Concert (CBS Master)
373548

The Cars—Greatest Hits
(Elektra) 339903

Best Of J. Geils Band—
Flashback (EMI) 339424

New Kids On The Block
—Hangin' Tough
(Columbia) 368423

U2—The Unforgettable Fire
(Island) 337659

Dire Straits—Brothers In
Arms (Warner Bros.) 336222

White Lion—Pride
(Atlantic) 359471

Squeeze—Singles—45's
And Under (A&M) 317974

Barry Manilow—Greatest
Hits (Arista) 288670

Classic Rock from the 50's, 60's & 70's

Crosby, Stills, Nash and
Young—So Far (Atlantic)
378745

Grateful Dead—Skeletons
From The Closet
(Warner Bros.) 378406

Rockpile—Seconds Of
Pleasure (Columbia) 377846

Jerry Lee Lewis—18
Original Sun Greatest Hits
(Rhino) 369108

Joni Mitchell—Court and
Spark (Asylum) 367102

The Who—Greatest Hits
(MCA) 365361

Little Feat—Feats Don't
Fail Me Now (Warner Bros.)
363523

Grateful Dead—
Workingman's Dead
(Warner Bros.) 358887

Best Of The Doors
(Elektra) 357616-397612

Jimi Hendrix—Are You
Experienced? (Reprise)
353102

Yes—Fragile (Atlantic)
351957

Yes—Fragile (Atlantic)
351957

Yes—Fragile (Atlantic)
351957

Yes—Fragile (Atlantic)
351957

Yes—Fragile (Atlantic)
351957

Yes—Fragile (Atlantic)
351957

Yes—Fragile (Atlantic)
351957

Yes—Fragile (Atlantic)
351957

Yes—Fragile (Atlantic)
351957

Yes—Fragile (Atlantic)
351957

Yes—Fragile (Atlantic)
351957

Yes—Fragile (Atlantic)
351957

Yes—Fragile (Atlantic)
351957

Yes—Fragile (Atlantic)
351957

Yes—Fragile (Atlantic)
351957

Yes—Fragile (Atlantic)
351957

Yes—Fragile (Atlantic)
351957

Yes—Fragile (Atlantic)
351957

Yes—Fragile (Atlantic)
351957

Yes—Fragile (Atlantic)
351957

Yes—Fragile (Atlantic)
351957

Yes—Fragile (Atlantic)
351957

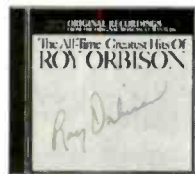
Yes—Fragile (Atlantic)
351957

Yes—Fragile (Atlantic)
351957

Yes—Fragile (Atlantic)
351957

Yes—Fragile (Atlantic)
351957

Yes—Fragile (Atlantic)
351957



Roy Orbison—The All-
Time Hits, Vols. 1 & 2
(Columbia Special Product)
377945

Traffic—The Low Spark Of
High Heeled Boys (Island)
351924

Rolling Stones—Sticky
Fingers (Rolling
Stones Rec.) 350645



The Beach Boys—Made
In The U.S.A. (Capitol)
346445

Buddy Holly—From The
Orig. Master Tapes (MCA)
348110

Chuck Berry—The Great
Twenty-Eight (Chess)
343657

A Decade Of
Steely Dan (MCA) 341073

Motown's 25 #1 Hits—
Various Artists (Motown)
319996-399998

Creedence Clearwater
Revival—20 Greatest Hits
(Fantasy) 308049



Woodstock—Original
Soundtrack (Atlantic)
291864-391862

Led Zeppelin (Atlantic)
299966

Harry Chapin—Greatest
Stories: Live (Elektra)
296939

Joe Jackson—Look Sharp
(A&M) 294421

James Taylor—Greatest
Hits (Warner Bros.) 291302

Best Of The Band (Capitol)
269365

Chicago—Greatest Hits
(Columbia) 260638

Simon & Garfunkel—
Greatest Hits
(Columbia) 219477

Bob Dylan—Greatest Hits
(Columbia) 138586

The Byrds—Greatest Hits
(Columbia) 342501

The age of CD sound is here—and you have a practical new way to find the CDs you want. As your introduction to the CBS Compact Disc Club, you can choose any 8 CDs listed in this ad for 1¢. Fill in and mail the application—we'll send you CDs and bill you for 1¢ plus shipping and handling. You simply agree to buy 6 more CDs (at regular Club prices) in the next three years—and you may then cancel your membership anytime after doing so.

How the Club works: About every four weeks (13 times a year) you'll receive the Club's music magazine, which describes the Selection of the Month... plus new hits and old favorites from every field of music. In addition, up to six times a year, you may receive offers of Special Selections, usually at a discount off regular Club prices, for a total of up to 19 buying opportunities.

If you wish to receive the Selection of the Month, you need do nothing—it will be shipped automatically. If you prefer an alternate selection, or none at all, fill in the response card always provided and mail it by the date specified. You will always have at

least 10 days in which to make your decision. If you ever receive any Selection without having 10 days to decide, you may return it at our expense.

The CDs you order during your membership will be billed at regular Club prices, which currently are \$12.98 to \$15.98—plus shipping and handling. (Multiple-unit sets may be somewhat higher.) After completing your enrollment agreement you may cancel membership at any time; if you decide to continue as a member, you'll be eligible for our money-saving bonus plan. It lets you buy one CD at half price for each CD you buy at regular Club prices.

10-Day Free Trial: We'll send details of the Club's operation with your introductory shipment. If you are not satisfied for any reason whatsoever, just return everything within 10 days and you will have no further obligation. So why not choose 8 CDs for 1¢ right now?

ADVANCE BONUS OFFER: As a special offer to new members, take one additional Compact Disc right now and pay only \$6.95. It's a chance to get a ninth selection at a super low price!

Selections with two numbers contain 2 CDs and count as 2—so write in both numbers. © 1989 CBS Records Inc.

CBS COMPACT DISC CLUB: Terre Haute, IN 47811

CBS COMPACT DISC CLUB, 1400 N. Fruitridge 97/89
PO. Box 1129, Terre Haute, Indiana 47811-1129

Please accept my membership application under the terms outlined in this advertisement. Send me the 8 Compact Discs listed here and bill me 1¢ plus shipping and handling for all eight. I agree to buy six more selections at regular Club prices in the coming three years—and may cancel my membership at any time after doing so.

SEND ME THESE 8 CDs FOR 1¢			

My main musical interest is (check one): But I may always choose from any category.

Hard Rock
Von Hagen, U2

Soft Rock
Debbie Gibson, Fleetwood Mac

Jazz
Kenny G., Al Jarreau

Easy Listening/Pop
Neil Diamond, Barbra Streisand, Johnny Mathis, Ray Conniff

Classical*
Vladimir Horowitz, Luciano Pavarotti

Mr. _____
Miss Print First Name _____ Initial _____ Last Name _____

Address _____ Apt. _____

City _____

State _____ Zip _____

Do you have a VCR? (04) Yes No
Do you have a credit card? (03) Yes No CTZ/F6 CVA/F7

ADVANCE BONUS OFFER: Also send me one more CD right now at the super low price of just \$6.95, which will be billed to me.

Note: We reserve the right to reject any application or cancel any membership. These offers not available in APO, FPO, Alaska, Hawaii, Puerto Rico, write for details of alternative offer. Canadian residents serviced from Toronto. Applicable sales tax added to all orders. *Classical members serviced by the CBS Classical Club.

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-

FM Tuner Section

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

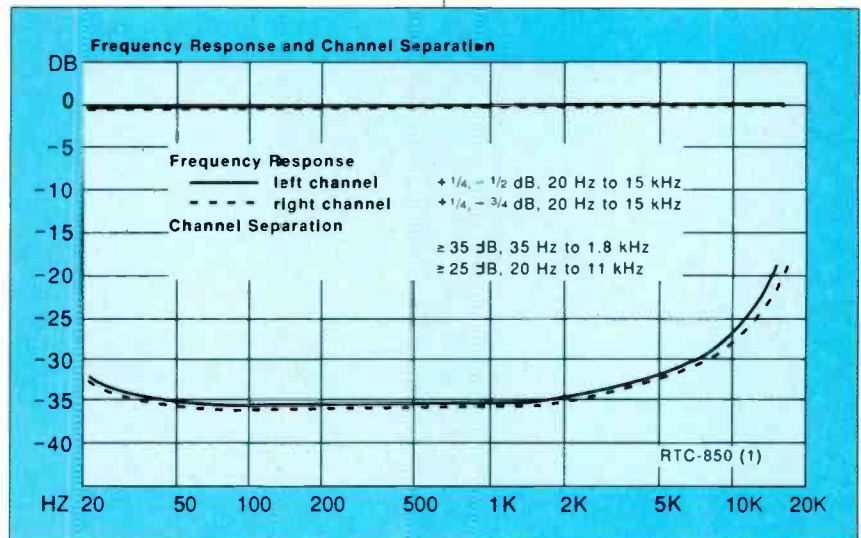
Near the selector options is a muting switch. According to the manual (whose French and German texts are, I hope, clearer than the English), this switch causes "a large reduction" in output; in fact, it mutes it altogether. Another semantic quibble: the marking of the aux as an "AV" option, evidently 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

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-



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.

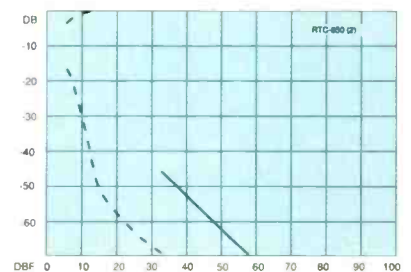
Manual tuning progresses by half-channels (0.1 MHz) on the FM band, full channels (10 kHz) on the AM. The memory consists of two banks of eight presets; each preset will memorize one AM or one FM frequency. If you press a preset that holds an FM frequency while you're tuned to AM—or vice versa—the band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



—	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	mono
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

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

**Special CD
Changer Offer**
Save \$50 or Receive
a Free 6-Disc Magazine.
See your Pioneer Dealer for Details.



Thanks to Pioneer's CD Changer system, this is

Before you buy a CD changer, there are two things you should consider. Your home. And your car.

Because Pioneer makes a compatible 6-disc CD changer system for both, now you can enjoy your favorite music wherever you go.


The key to home and car compatibility



is Pioneer's ingenious 6-disc magazine, which works in all Pioneer home and car CD changers. It's the most convenient way to load, store and catalog your CDs.

All of Pioneer's home CD changers feature the latest innovations in digital



A man in a dark suit is running out of a house at sunset. The sky is a mix of orange, red, and blue. The house has a large window with a grid pattern, and the interior lights are on, casting a warm glow. The man is captured in mid-stride, looking back over his shoulder.

the only place you'll be without your music.

© 1989 Pioneer Electronics (USA) Inc., Long Beach, CA



technology, as well as multiple programming capability and random play.

As for versatility, you simply won't find a better car CD changer system. A Pioneer car CD changer can either replace or be added on to your current car

stereo, using one of four advanced CD controller units.

Of course, there are still some places where you won't be able to enjoy Pioneer's 6-disc CD Changer system. But we're working on it.

 **PIONEER®**

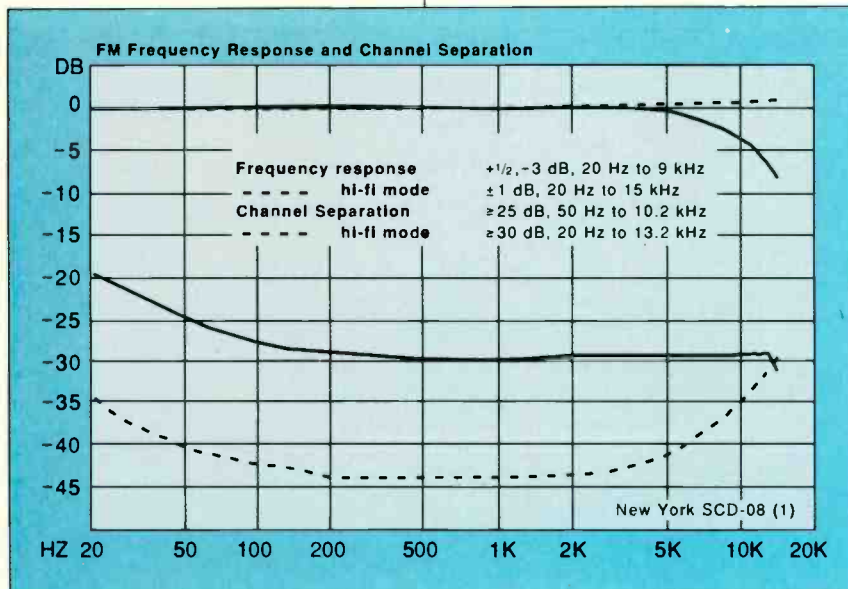
For more information and the name of your nearest Pioneer Dealer, call toll-free 1-800-421-1404.



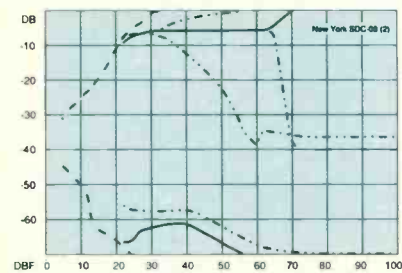
Test Reports

FM Tuner Section

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



Frequency Response & Channel Separation



— stereo quieting (noise) & output
 - - - - mono quieting (noise) & output
 channel separation at 1 kHz
 - - - - stereo quieting, output, and separation, hi-fi mode

Stereo sensitivity (for 50-dB noise suppression)
 see text

Mono sensitivity (for 50-dB noise suppression)
 normal mode 18 dBf at 98 MHz
 hi-fi mode 20 dBf at 98 MHz

Stereo S/N ratio (at 65 dBf)
 normal mode see text
 hi-fi mode 68 3/4 dB

Mono S/N ratio (at 65 dBf)
 normal mode 78 3/4 dB
 hi-fi mode 77 1/2 dB

Capture Ratio 7.0 dB

Selectivity (alternate-channel) > 76 1/2 dB

AM Suppression 71 3/4 dB

Harmonic Distortion (THD+N)

	stereo	mono
at 100 Hz	1.25%	0.39%
at 1 Hz	0.80%	0.28%
at 6 Hz	0.48%	0.45%

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

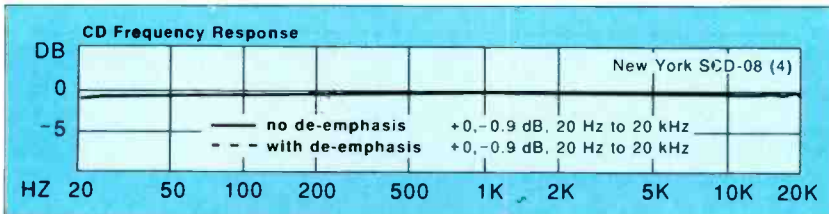
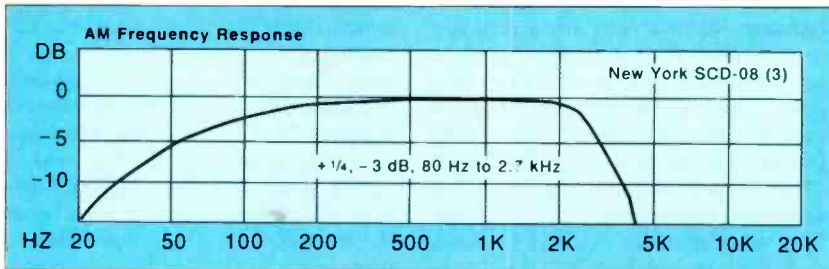
er, as measured by Diversified Science Laboratories, isn't the flattest around, but its slight bass rolloff and even slighter high-treble ripple are insignificant compared with the response-curve anomalies we regularly see in home tape decks, let alone the car models. Furthermore, its linearity figures should make many a home player blush for shame. The Blaupunkt's ability to cope with information lapses also compares well with that of home units; it faltered only on interruptions of 1 millimeter or larger. On the road, there was no sign of mistracking due to shock. As sometimes occurs in car equipment, a 0-dB test signal clips when the volume control is at maximum, so the section had to be measured with it backed off to the 11-o'clock position—which shouldn't be a disadvantage with a well-devised, typical installation.

The FM section is unlike any we have tested before. The normal mode (which is the turn-on default) isn't high fidelity; the Hi-Fi alternative is. Thus the first priority evidently is listenability under reception conditions that are less than ideal—and in that respect the normal mode acquitted itself very well, the "spitting" noises of the road test for fluctuating signal and multipath being relatively faint, infrequent, and muted.

In order to achieve this, stereo reception in any meaningful sense is discarded

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.



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

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)	81 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	\leq 0.018%
at -24dB	\leq 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

Sony CDX-R77 Car Tuner/CD Player

Test Reports

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.

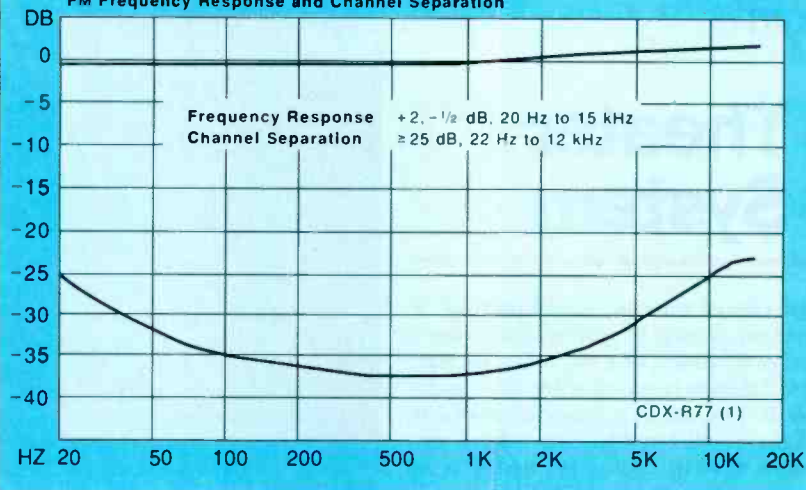
Other features include a clock display, a choice of amber or green illumination, repeat of the current CD selection, random (shuffle) CD sequencing, and timer radio-on (say, to pick up a scheduled traffic report). The presence of separate up/down auto-seek and manual tuning keys—which double as seek 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,

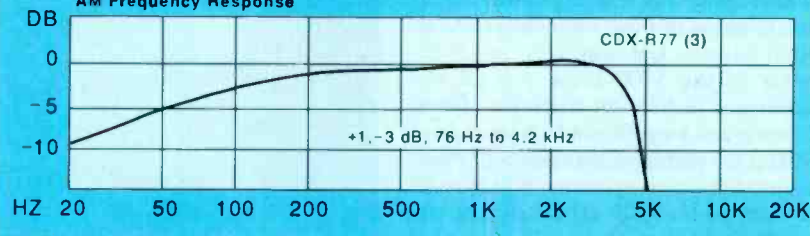
The AM section delivers a little more output in the range around 2–3 kHz than is usually the case, but it filters more sharply above that range to exclude as much extraneous noise as possible. With that much filtration, it can't be called high fidelity, but intelligibility is good.

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 Diversified 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

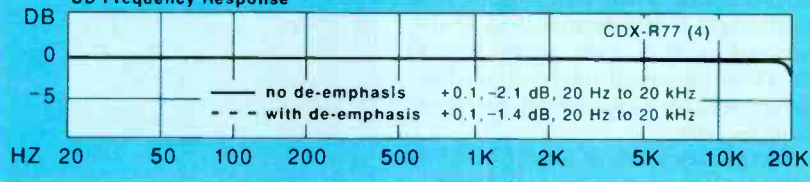
FM Frequency Response and Channel Separation



AM Frequency Response



CD Frequency Response



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-

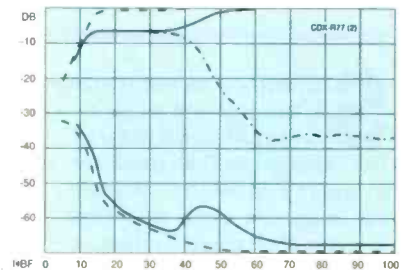
ple raised eyebrows by failing some of the tracking tests. On the demanding Pierre Véron test disc, it stumbled over dropouts as small as 0.75 millimeter, and it had difficulty with all of the relevant Philips test cuts—none of which fazes most home players. This suggests that you should be exceptionally 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 & Quieting



— stereo quieting (noise) & output
 - - - mono quieting (noise) & output
 - - - channel separation at 1 kHz

Stereo sensitivity (for 50-dB noise suppression) see text

Mono sensitivity (for 50-dB noise suppression) $14\ 3/4$ dBf at 98 MHz

Stereo S/N ratio (at 65 dBf) 66 $1/2$ dB

Mono S/N ratio (at 65 dBf) 69 $3/4$ dB

Capture Ratio 2.5 dB

Selectivity (alternate-channel) 68 $1/2$ dB

AM Suppression 62 $1/4$ dB

	Harmonic Distortion (THD+N)	
	stereo	mono
at 100 Hz	0.90%	0.24%
at 1 kHz	0.75%	0.42%
at 6 kHz	1.65%	0.42%

AM Tuner Section

Sensitivity 4 $1/2$ 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)
 without de-emphasis 85 $3/4$ dB
 with de-emphasis 87 $1/2$ dB

Harmonic Distortion (THD+N; 40 Hz to 20 kHz)
 at 0 dB $\leq 0.025\%$
 at -24 dB $\leq 0.69\%$

Linearity (at 1 kHz) no measurable error to -50 dB

Tracking & Error-Correction 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
 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.

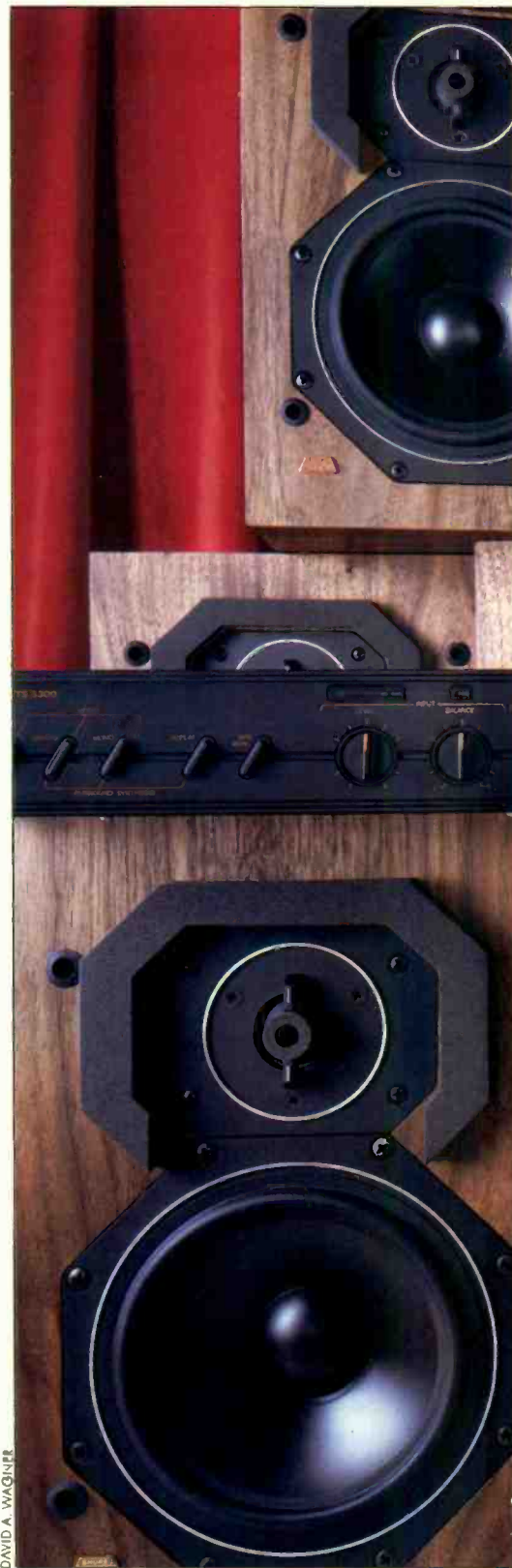
The core of the Reference System is the HTS-5300 Acra Vector surround-sound decoder (available separately for \$1,250). This unit is substantially the same in features, operation, and measured performance as its predecessor—the HTS-5200—reviewed in the February 1988 issue (which contains further details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

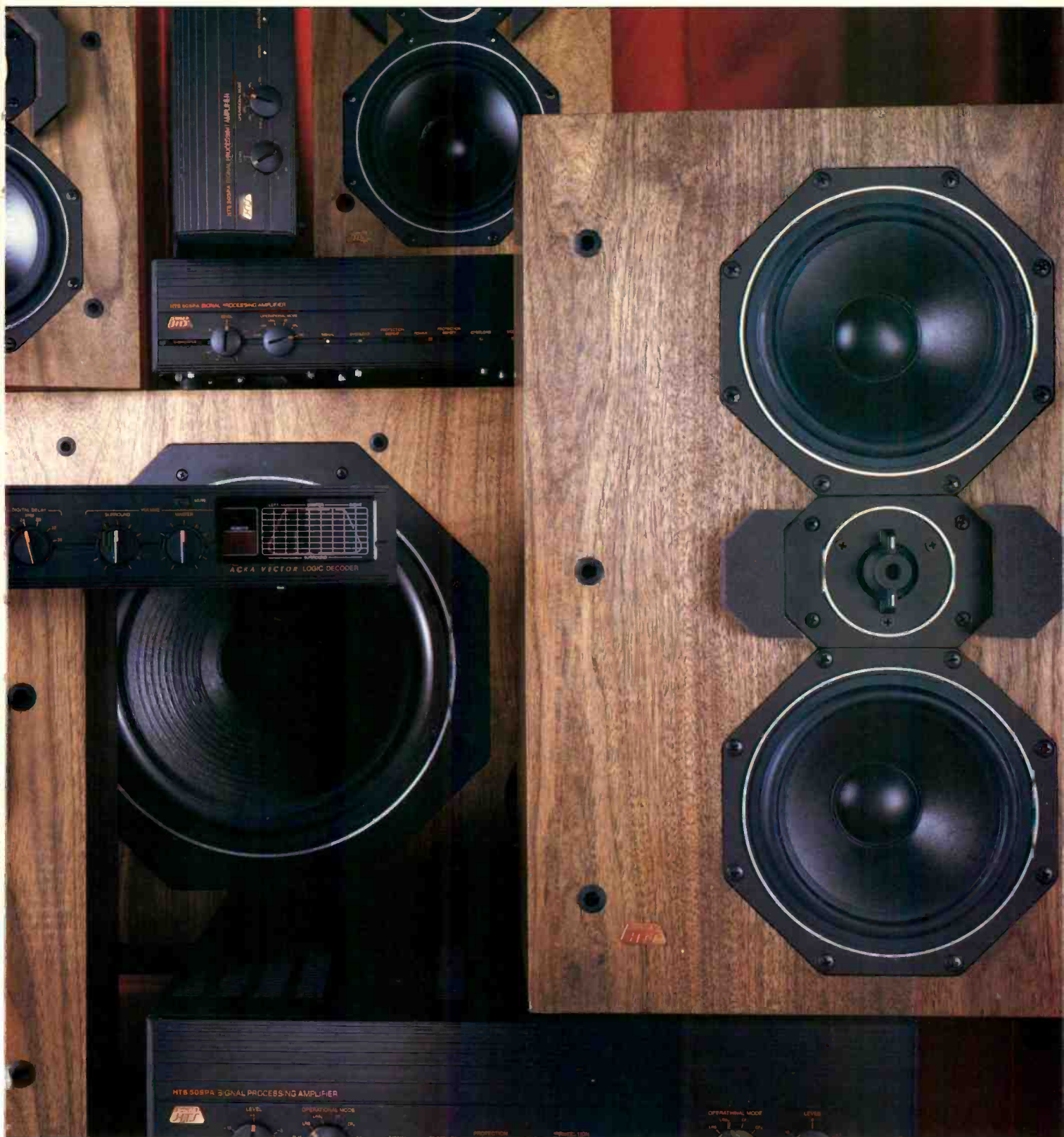
Performance has improved over the 5200 in a couple of respects—most important, in signal-to-noise ratio (S/N). Diversified Science Laboratories' measurements of the 5300 show a 2-dB improvement in S/N for the main (front) channels and a significant S/N increase of 8 dB for the surround channels. Surround-to-center 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

TEST REPORT

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 (16 $\frac{1}{2}$ " by 3 $\frac{3}{4}$ " by 13 $\frac{1}{2}$ " 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.

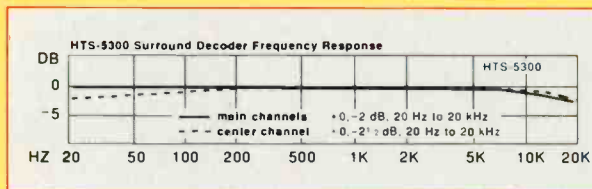
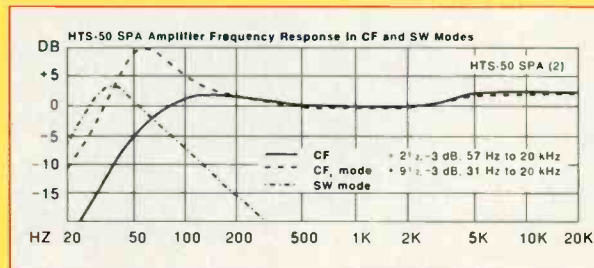
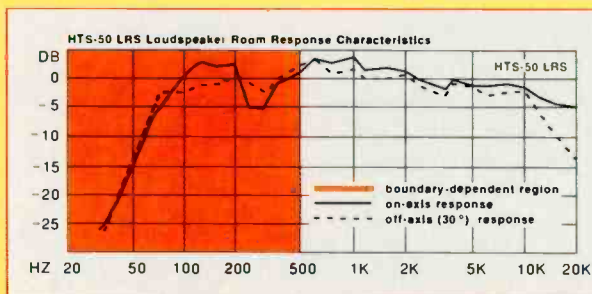
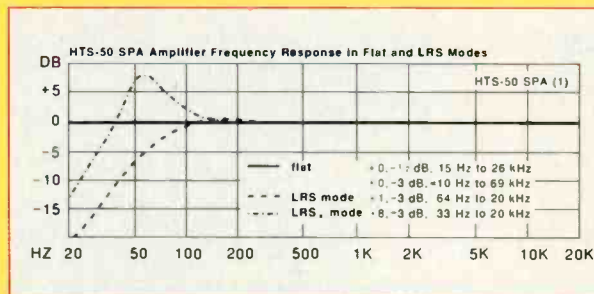
Most of the other special features of the

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) $\leq 0.024\%$

at 0 dBW (1 watt) $\leq 0.018\%$

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 $\leq 0.14\%$

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

TEST REPORT

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 50CF, 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 reverb covering 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 woomph 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 reverb 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 reverb 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

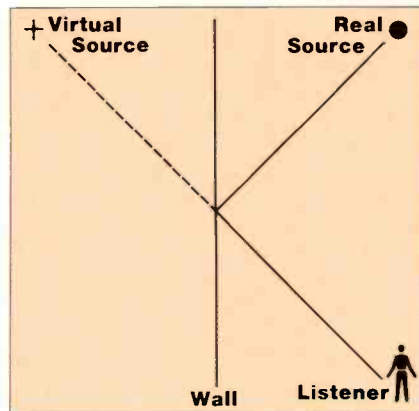


Fig. 1. Sound from a real source reflecting off a surface takes the same path to the listener as sound emitted from an imaginary or mirror-image source whose position can be derived from the angle of reflection.



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 reverb time 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-

Concert Hall ACOUSTICS



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 “shoobox” (Fig. 4), and finally to a reverse fan (Fig. 5). Notice that in the rectangular, shoobox 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 shoobox 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 shoobox, 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

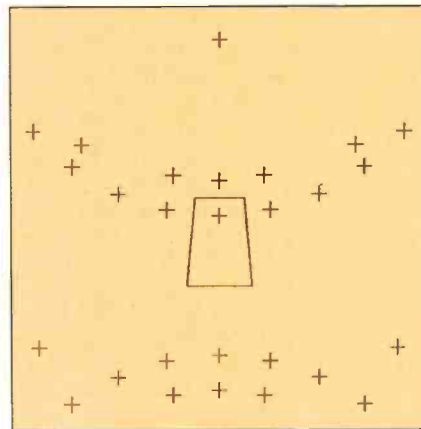


Fig. 3. In a fan-shaped hall, the virtual images for the early reflections (the + signs) curve away from the listener, a characteristic detrimental to the hall’s sound quality.

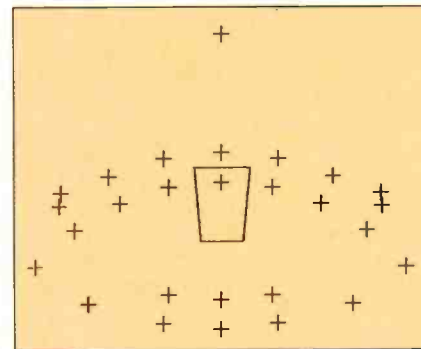


Fig. 5. In a reverse-fan hall, the virtual images curve around the audience, enveloping listeners in desirable lateral sound—an improvement over the traditional “shoobox” design.

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 shoobox-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-

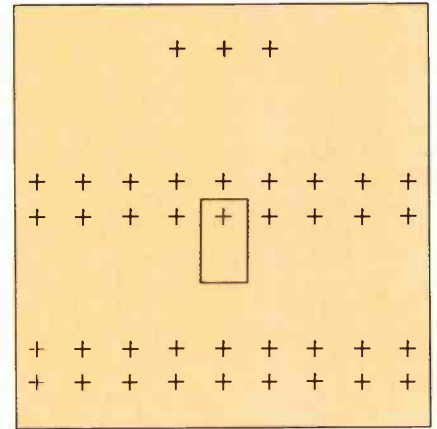


Fig. 4. In a rectangular, “shoobox” hall, the virtual images extend straight out to the sides. The world’s greatest concert halls are, by and large, of the shoobox variety.

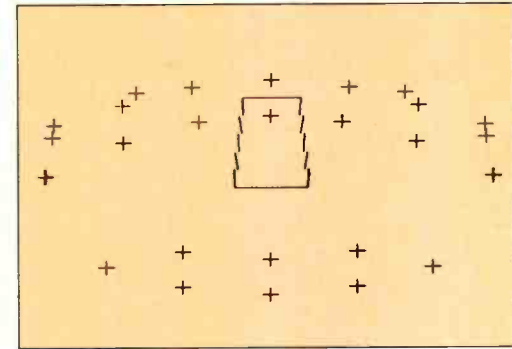


Fig. 6. A segmented reverse-fan hall can have the same enveloping virtual images as a normal reverse-fan hall, while maintaining the seating capacity and sight-lines of a standard fan.

Concert Hall ACOUSTICS



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.*

Concert Hall ACOUSTICS



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.

Concert Hall ACOUSTICS



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 recreation 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

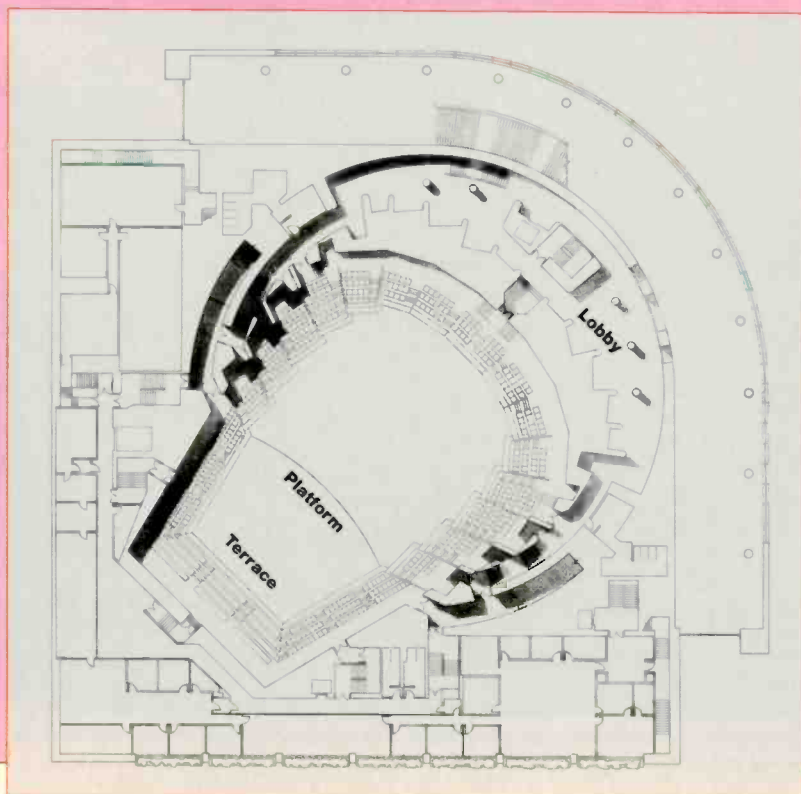
rear of the hall focus the sound, accounting for the distinct echoes in some parts of the hall. New absorbing panels are now helping to control the echoes.

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 Lon-

don, 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 sackbuts. 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.” ▶

PHOTOGRAPHY BY STEVE J. SHERMAN

ROOTED, But N

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

**By
Scott
Cantrell**



KEN HOWARD

ot 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 hydrotropic 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.

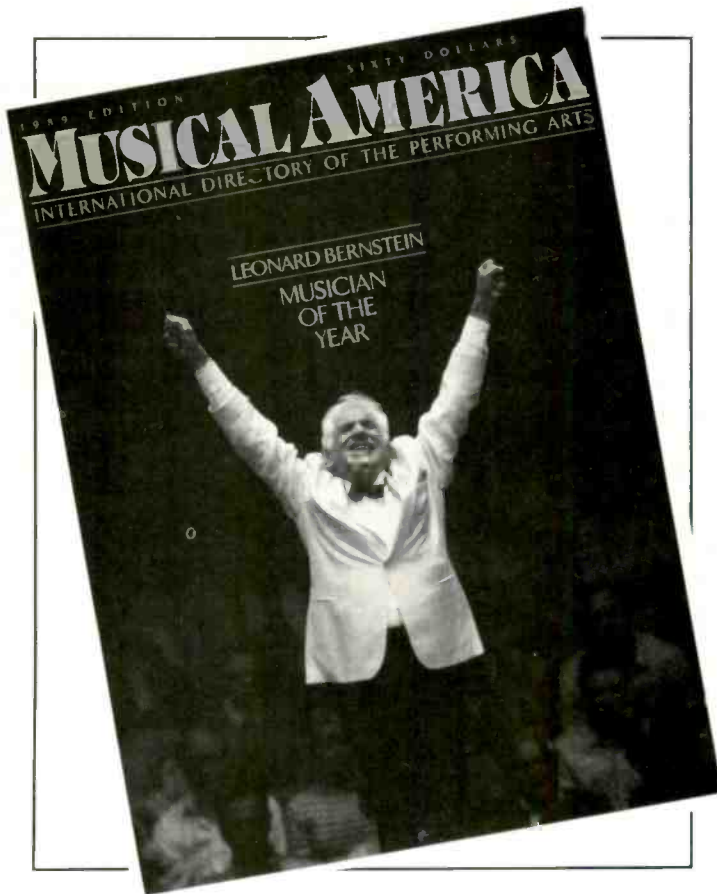
"Apart from my studies abroad—and the time in Vancouver and Lyon—I've never really left here," says Gardiner. "I've always maintained my roots here. In the stress of the music profession, it's valuable to have time now and again to touch base." □

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

MUSICAL AMERICA

INTERNATIONAL DIRECTORY OF THE PERFORMING ARTS

“I wouldn't be without it!”



Softbound edition for only \$60, or the deluxe hardbound edition for only \$100 cover price.

ANNOUNCING THE 1989 EDITION OF THE MUSICAL AMERICA INTERNATIONAL DIRECTORY OF THE PERFORMING ARTS—the one indispensable reference volume that can put you in touch with the international performing arts.

Act now and you can enjoy this sought-after reference source, commonly called “the bible” and “the source” to the entire performing arts industry.

More than 725 pages of facts at your fingertips.

COMPREHENSIVE LISTINGS OF

- *Every orchestra in the U.S. and Canada, including capacity, phone, address, and more
- *Opera and dance companies
- *Music festivals, competitions, and schools
- *More than 850 major facilities by city and state
- *Media contacts
- *Profile of the 1989 Musical America Musician of the Year
- *And much, much more from Argentina to Yugoslavia
- *Plus, reports from North America's top artists managers

Yes, please send me _____ soft-bound Directories for \$60 each (plus \$3 postage and handling on U.S. orders. Outside U.S. add \$10 for surface mail, \$20 for air mail.)

I'd prefer _____ copies of the deluxe hardbound limited edition for \$100 each (plus \$3 postage and handling on U.S. orders. Outside U.S. add \$10 for surface mail, \$20 for air mail. Shipped in rugged, corrugated protective box.)

I enclose \$ _____
ALL ORDERS MUST BE PREPAID

Check enclosed

Please charge:

Mastercard Visa

CARD NO. _____ EXP. _____

SIGNATURE _____

Make check or money order (in U.S. dollars only, drawn on a bank with a U.S. address)
PAYABLE TO MUSICAL AMERICA
DIRECTORY.

Send form to MUSICAL AMERICA DIRECTORY,
Single Copy Sales, 8th Flr., 825 Seventh Ave.,
New York, N.Y. 10019.

Send my Directory to:

NAME _____

ADDRESS _____

CITY/STATE/ZIP _____

Directories will be shipped by UPS. Please provide street address.

GUILTY PLEASURES

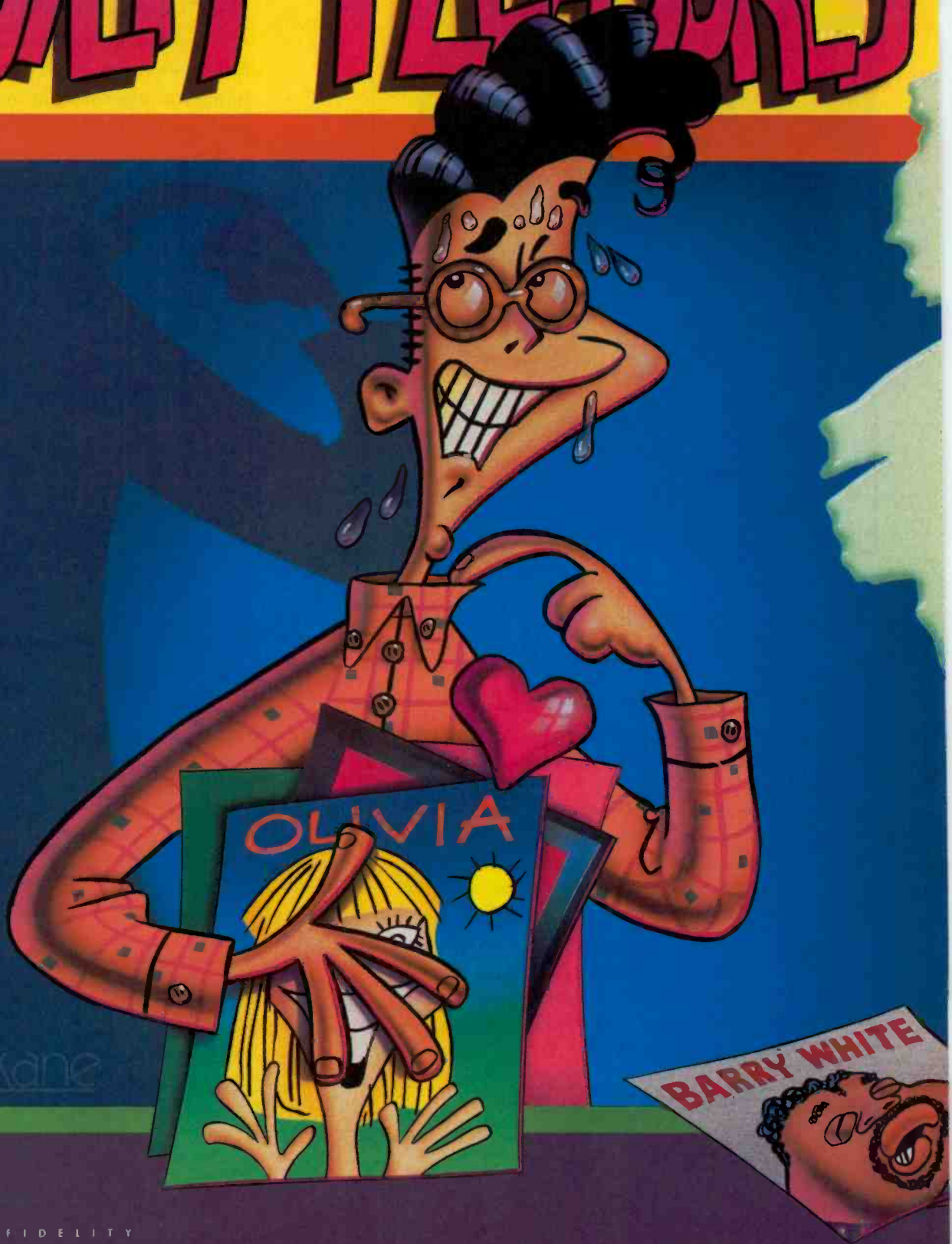


ILLUSTRATION BY KID KANE

kidkane

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 Metallicas 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 souladlike follow-up to the wonderful "Let Me Be There." What an amazing ersatz hillbilly soul song! What a concept: A very nearly

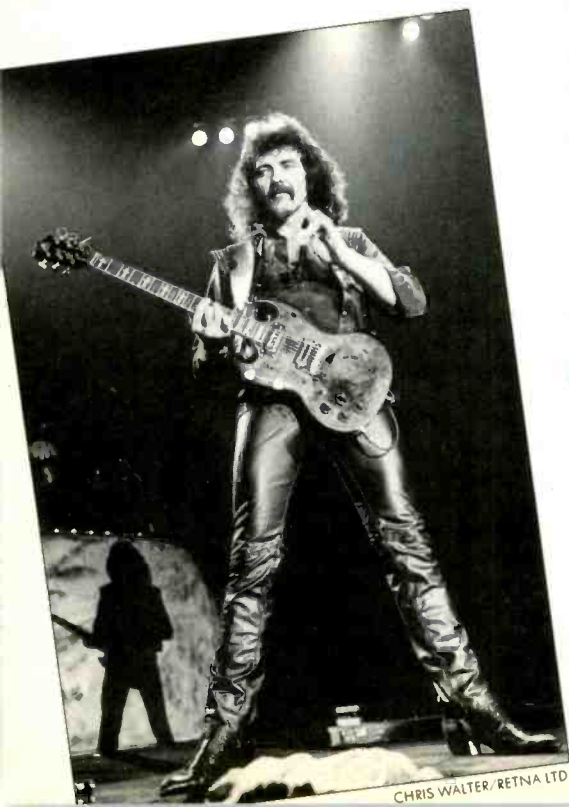


perfect creature, a subject of Her Britannic Majesty who'd never been within an ocean's length of a tent revival in her young life, pretends to be wracked by the heartlessness of her beloved and is supported in her lamentation of vulnerability and exasperation by the \$3 Bill Quartet, massed for the 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.

HIGH FIDELITY ARCHIVES



**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 fortepianists 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.

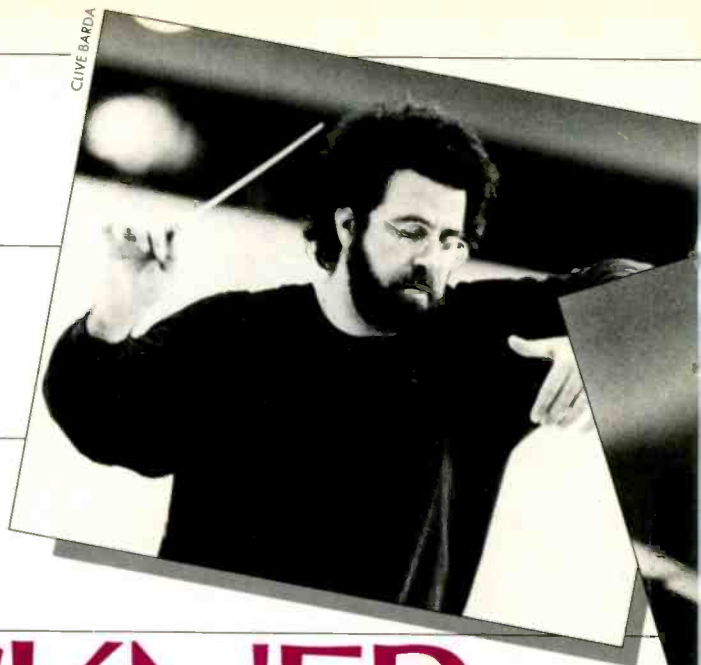
I know, I know: At 15 bucks a CD, buying something unheard is risky. But think of the potential rewards. It's exciting to "discover" an excellent but obscure artist, one whose music you may enjoy the rest of your life. It's fun to challenge yourself as a listener. And if the artist is so obscure that 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.

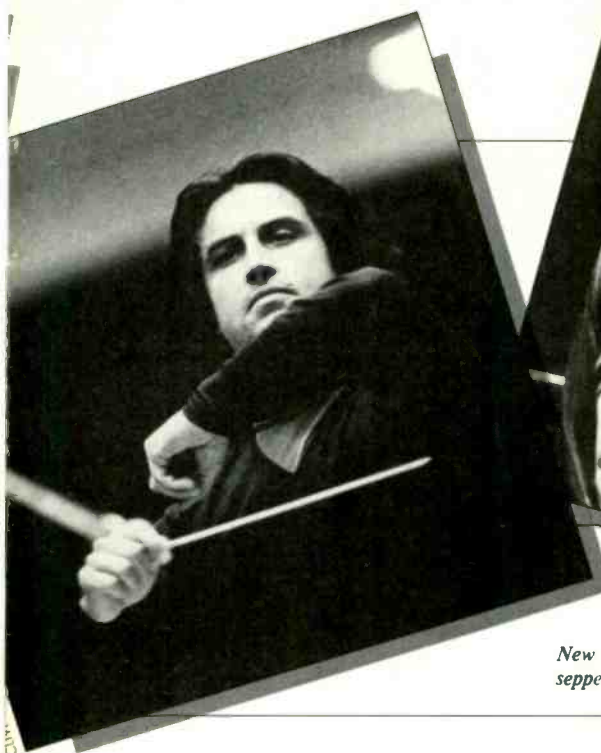
In addition to being the venue for Sinopoli's account of the Eighth, Carnegie Hall last season played host to two different performances of Bruckner's Sixth: one from the Cleveland Orchestra and Christoph von Dohnányi, the other from the Philadelphia Orchestra and Riccardo Muti. Given the strength of 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



JACK MITCHELL

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.

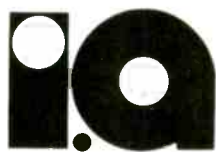
RIMSKY-KORSAKOV: Scheherazade, Op. 35.

● *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,

SAVE MONEY, TIME AND FREIGHT ON FAMOUS BRAND STEREO EQUIPMENT



illinois audio (800) 621-8042 / (312) 664-0020
12 E. DELAWARE PLACE • CHICAGO, IL 60611

LOUDSPEAKERS



TECHNICS SBL-36
Powerful
Loudspeaker System
• Linear Phase 2-Way System • Large Diam. 10" Woofer • Anti-resonance cabinet • Attractive Woodgrain Finish
CALL FOR PRICE

E.P.I. CD55
3-Way Speaker System

• 12" Bass Driver • Wide Frequency Response • Constant Dispersion Design • Specially Designed High Efficiency Cabinet
List \$250.00 ea.
SALE: \$99.00 ea.



TECHNICS SBS407
3-Way Speaker System

• 12" Woofer • Horn Super Tweeter • High Heat Resistance • Efficiency Bass Reflex Design • Heavy Duty Anti-Resonance Cabinet
CALL FOR PRICE



E.P.I. TE320
Powerful 3-Way Speaker System

• 10" Bass Drive • Amazingly Accurate Frequency Response • Ultra-Wide Dispersion • Integrated Midrange/Treble
CALL FOR PRICE



PORTABLES

TOSHIBA KT4048
AM/FM Stereo Radio
Cassette Player

• Dolby B NR • Auto Reverse • 3 Band EQ • Built-In Stereo Tuner • Auto Shut-Off • Light weight headphones & Belt Clip Included
List \$89.95
SALE: \$55.00



SONY WMF100III
Sony Super Walkman

• AM/FM Stereo Cassette Player • Xtra Small Size • Auto Reverse • Quick Charger • Dolby B NR
List \$199.95
SALE: \$125.00



SONY D-25
Discman Portable
CD Player

• Ultra Small & Light • 21-Track Random Music Sensor • 4-Repeat Modes • Unilinear Converter w/Digital Filter
CALL FOR PRICE



AUTO



SONY ES-S92
6" x 9" 2-Way Car Speakers
• Co-Axial • Hi-Power • Oval Shape • 80 Watts Max Power Handling
List \$79.95 **SALE: \$39.95**



SHERWOOD CRD350
Car Stereo with Cassette Deck
• AM Stereo/FM Stereo Receiver • Full Logic Controlled • Dolby B C NR • Auto Reverse • Built-In Amp w. Balance & Fader • Local/Dist. Switch • Preset Scan • Clock • Security Cover
List \$329.95 **SALE: \$182.00**

CASSETTE DECKS



TEAC V-285CHX
Stereo Cassette Deck
• Dolby B, C & HX PRO NR • Bias Fine Tuning • Full Auto Stop Mech. • Metal Tape Compatible • 3-Pos. Tape Select • 3-Digit Tape Counter
List \$149.95 **SALE: \$99.95**



TEAC R455X
Auto Reverse Cassette Deck
• Bi-Directional record/playback • Auto reverse • Repeat • Dolby B & C NR • HX Pro • Timer Rec. Play
List \$219.95 **SALE: \$139.95**



TEAC RS-TR555
Double Quick Auto Reverse
Cassette Deck
• Auto Reverse on both tape decks • 24 hour contin. playback • Hi-speed editing • Synchro start & stop & mute • Dolby • HX-Pro
CALL FOR PRICE



TEAC W660R
Double Auto Reverse
Cassette Deck
• Dolby B & C • One touch high speed dubbing • Continuous Play • Memory play/search dubbing • Full logic control
List \$519.00 **SALE: \$299.95**

RECEIVERS



TECHNICS SA-160
Quartz Synthesizer
AM/FM Stereo Receiver
• 80 Wats (40x2) • 24 preset station file • 5 Band Graphic Equalizer
List \$209.95 **SALE: \$147.95**



TECHNICS SAR377
Quartz Synthesized
Remote Controlled Receiver
• AM/FM Stereo Receiver • 160 Watts (80 RMSx2) • Full Remote Control • 24 Presets • 7-Band EQ w/ Spectrum Analyzer • 4 Aud. Inputs plus 2 Aud. Vid. Inputs • Station File
CALL FOR PRICE



JVC RX-701VBK
Surround Sound Receiver
• AM/FM Stereo Digital Receiver • 160 Watts (80x2) • Dolby Surround Sound • Built-in Synthesizer-Tuner • 40 Memory Presets • 7 Band EQ • 2 PR. Speaker Connections
CALL FOR PRICE



JVC RX-901BVK
Remote Controlled Receiver
• 200 Watts (100x2) • Dolby Pro-logic with adjustable digital delay • 3 Video Inputs • Programm. 7 band EQ • Dig. Synth. Tuner • 80 presets • Preset Scan
CALL FOR PRICE

HEADPHONES

KOSS PRO/450
• Sound isolating • Dual element dynamic driver • Precision performance • Perfect for digital music
List \$175.00 **SALE: \$138.00**

SENNHEISER HD480
• Digital • Open Air Design • CD Perfect
List \$99.00 **SALE: \$69.95**

SONY MDR CD6
Adjustable • Open Air • Digital Ready
List \$149.95 **SALE: \$79.00**

AUDIO TAPE

MAXELL XLII-100
• 90 minutes perfect for CD recording • Improved performance hi-bias
10 for **\$24.95**

SONY UX-PRO 90
High bias, perfect for live or digital recordings
10 for **\$24.89**

TDK SA76
• Super high resolution • Super a/vilyn • Anti-Resonance
10 for **\$17.95**

MAXEL MX90
Melaxial 90 min cassette
10 for **\$28.95**

CARTRIDGES

SHURE M411HE
• Precision crafted hyper-legendal diamond tip • Dynamic stabilizer • Side guard protector
List \$149.95 **SALE: \$49.95**

AT 422LP
Dual Magnet • Plug-In Connector • Linear Contact Diamond Stylus
List \$125.00 **SALE: \$49.95**

SHURE V15VMR
Ultra Accurate Tracking • Dynamic Stabilizer • Side-guard Protection
List \$275.00 **SALE: \$129.95**

CD PLAYERS



SHARP DX670
Compact Disc Player
• 3-Beam Laser Pick-up • Programmable Memory • Cue/Review
List \$249.95 **SALE: \$118.00**



TECHNICS SLP999
Remote Controlled CD Player
With The Works!
• 20 bit • 32 Track programmability • 8X oversampling • 4 DAC's • Peak Level Control • A/B Repeat Auto Level • 3 CD capable • Edit guide • Music Scan
CALL FOR PRICE



TEAC AD-4
CD Player/Cassette Deck Combo
• Remote control of CD player and cassette deck • 16-track random program dubbing and play • Dolby B & C • Auto reverse rec. play • Synchro start dubbing
List \$599.95 **SALE: \$275.00**



TECHNICS SLP300
Multi-Disc CD Changer
• Programmable 6-Disc Changer • Player • 36 Step Random Access Program • Quadruple Oversampling Digital Filter • High Resolution Laser Pick-Up
CALL FOR PRICE



JVCXLM701BK
CD Multi-Changer
• 6+1 CD Changers player • Remote control • Random Access program up to 32 steps • 18 bit DAC • 4 X oversamplings • Digital Filter
CALL FOR PRICE

TURNTABLES

TECHNICS SLLJ33
Programmable
Quartz Linear
Tracking Turntable
• 8-Band random programming • Auto high speed latching • Remote control capable • TAP carl connector system
CALL FOR PRICE



TECHNICS SLL25
Fully Automatic
Linear Tracking
Turntable
• Remote control capable • Repeat function • Front panel operation • Anti-vibration construction
CALL FOR PRICE



DUAL 503-1
Top Class, Audiophile
Semi-Automatic
Turntable
• Belt driven • Low resonance, anti-vibration design • Electronic speed control • Auto switch off • Gimbal mount low mass tonearm
List \$250.00 **SALE: \$150.00**



illinois audio
12 E. Delaware Pl., Chicago 60611

16 YEARS OF MEETING THE NATION'S STEREO NEEDS WITH THE ABSOLUTE BEST PRICES ON TOP NAME NATIONAL BRANDS
Call Mon. thru Sat. 10 to 5 (312) 664-0020 • 1 (800) 621-8042



Prices in this ad are for mail-order only. Freight charges not included in prices. All merchandise shipped brand new, factory fresh with full warranty. Not responsible for typographical errors.



NOTE: This is just a partial listing of our extensive inventory, please call for quotes on additional items or to request a free price list.

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 war-horses, 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).

① *Bolcom, Leroy Parkins, 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).

① *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‡.

① *Mutter, Moll†; 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.

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

● *Jakowicz**; *Filharmonia Pomorska, Ukigaya. 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.

GUARANTEED LOWEST USA PRICE!

HIGHVOLTAGE

<p>RECEIVERS + AMPS</p> <p>Pioneer VSX-9300S.....New Pioneer VSX-5300.....Call Pioneer VSX-3300.....249 Pioneer VSA-910.....Call Sony STR AV1000.....489 Sony STR AV900.....369 Sony STR AV290.....199 Nikko Alpha 650.....949 Nikko Alpha 450.....579 JVC RX 1001V.....Best JVC RX 999.....Price JVC RX 777.....in JVC RX 555.....The JVC RX 333.....USA SSI 4000 Pro Logic.....New SSI 360 II.....299 Sherwood AI-1110.....Call Sherwood RV-1340R.....369</p> <p>CASSETTE DECKS</p> <p>Pioneer CT W900R.....Best Pioneer CT W700R.....Price Pioneer CT W500.....in Pioneer CT S800.....USA JVC TDW 999.....Call JVC TDW 777.....265 JVC TDW 444.....205 Sherwood DD-1230R.....225 Sherwood DD-1030.....99</p> <p>CD PLAYERS</p> <p>JVC XLM 600.....369 JVC XLM 400.....320 JVC XLZ 555.....385 JVC XLZ 444.....225 Pioneer PD M700.....Call Pioneer PD M600.....For Pioneer PD M500.....Best Pioneer PD M400.....Price Magnovox CDB 473.....Call Sherwood CD-1182R.....185 Sherwood CD-1160R.....169</p> <p>RADAR</p> <p>Miniden RD 9XL.....139 Whistler Spectrum I.....99 Whistler Spectrum II.....159</p>	<p>SURROUND SOUND</p> <p>SSI System 4000.....Call • #1 Pro Logic • Wireless Remote Control • Volume Control For Entire A/V System • Center Ant Sub Wool Ch. • Four A/V Inputs</p> <p>VCR SPECIALS</p> <p>Panasonic PV S4864.....699 Panasonic PV 4860.....449 RCA VPT 695.....899 RCA VR 595.....New RCA VR 475.....Call JVC HRS 8000U.....995 JVC HRS 7000U.....699 Mitsubishi U-70.....New Mitsubishi U-50.....Call Quasar VH 5677.....Call Quasar VH 5485.....399</p> <p>CAMCORDER SPECIALS</p> <p>Panasonic PV S350.....1589 Panasonic PV 420.....949 RCA CPR 300.....899 RCA CPR 250.....899 Sony CCD V9.....Call Sony CCD F40.....1099 Minolta V2000.....Call Olympus VX 802.....899 JVC GRC 55U.....1289 JVC GRC 25U.....949</p> <p>CAR STEREO</p> <p>We Carry a Full Line of Sony and Pioneer Clanion JVC Jensen Call Us For Your Best Price!</p> <p>AZDEN HEADPHONES</p> <p>DSR-90 Pro Digital.....75 DSR-50 Digital.....49</p> <p>EXTENDED WARRANTIES</p> <p>Nationwide Network of Service Centers Audio Component 5 Yrs.....49 CD Player 3 Yrs.....59</p>
---	--

800-654-7787

FAX 212-268-6828

HIGHVOLTAGE, 39 W. 32nd St., New York, NY 10001
VISA, MC and COB Accepted. All Products New, Factory Fresh and Subject to Availability. Customer Service Call 212-564-4410

MAIL TO:
HIGH FIDELITY SUBSCRIBER SERVICE
P.O. Box 3235, Harlan, IA 51537

Change of Address: Please advise as early as possible. Attach label with your old address and write in new address below.

New Subscriber: Fill in your name and address below. Use separate sheet for gift orders.

PLACE LABEL HERE

Renewal: Attach label.
..... One year \$13.95 Two years \$26.00
(Foreign subscribers please add \$7.00 per year for postage)

NAME

STREET

CITY/STATE/ZIP

..... Please bill me..... Payment enclosed

For other subscription questions or problems, please write a note and send entire form to the above address.

ZOE DOMINIC

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).

① *Unnamed performers. Ennio de Melis, prod. Virgin 90996 (A).* ◉ ◻

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

MORRICONE: Film Music, Vol. II.

① *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.

① *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.

① *Ohlsson*; San Francisco Symphony, Herbert Blomstedt, cond. Marc Aubort and Joanna Nickrenz, prods. Nonesuch 79185 (D).*

FORMAT KEY

- ◉ LP
- ◻ Videocassette
- ◻ Cassette
- ◻ Videodisc
- ① Compact Disc

RECORDING INFORMATION
(A) Analog original (D) Digital original

Large symbol at left margin indicates reviewed format. Small symbols following catalog number of reviewed format indicate other available formats (if any). Catalog numbers of formats other than the reviewed format are printed only if their basic numbers differ substantially from that of the reviewed format. Arabic numeral in parentheses indicates number of items in multi-item set.

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 Webernists 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 slogan-ear." 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.



BOB ADLER

Master of twelve tones Charles Wuorinen

Resident composers in the program write a major work to be premiered and recorded by their host orchestra, organize concerts of new music, review scores, and meet regularly with host music directors, staff, and orchestra musicians as advocates for new music. Meet the Composer promotes the music of American composers and supports over 9,000 composer events yearly." It, in turn, deserves our own support—especially when it produces things as excellent and interesting as this brilliant recording. Playing time: 53:08.

Paul Moor

Recitals and Miscellany

DAVID BRITTON: Organ Works.

① 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 Chimeras*; *On the Rhine*.

MICHAEL FARRIS: French Organ Works.

① Farris. John Eargle, prod. Delos DCD 3049 (D).

ALAIN: *Deuxième Fantaisie*. DUPRÉ: *Variations sur un vieux Noël*, Op. 20. DURUFLÉ: *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*.

With these releases Delos continues an admirable, adventurous series that brings to

(Continued on page 79)

Before you do crack, do this.

ORGAN DONOR AUTHORIZATION

Pursuant to the Uniform Anatomical Gift Act, I hereby give, effective upon my death:

A _____ Any needed organ or parts

B _____ Parts or organs listed _____

Signature of Donor: _____

Date: _____

Hey, it's no big deal. It's a simple legal form, that's all. Take a minute. Fill it out. Sign it. Carry it with you. It's the least you can do. Then no one can say you didn't do anything worthwhile with your life.

Partnership for a Drug-Free America, N.Y., NY 10017

WDS

"A CUT ABOVE THE REST"

WISCONSIN DISCOUNT STEREO
2417 W. Badger Road
Madison, WI 53713
1-608-271-6889
SOME ITEMS CLOSEOUTS

CAMCORDERS

- JVC HRD520** CALL
Dual Screen Programming
with Instant TV Monitor
- VHS MTS HIFI** \$349
On Screen Programming
- GE VHS MTS HIFI** . \$359
On Screen 4E/MTH
- TOSHIBA M9485** . CALL
4-Head MTS HIFI
- 4-HEAD MTS HIFI** . \$389
SPECIAL PURCHASE
- GE 4-HEAD HIFI** \$389
On Screen 4E/MTH
- PANASONIC PV4860** . CALL
4-Head MTS HIFI
- JVC HRD750** CALL
4-Head MTS HIFI
- SONY SLV70** CALL
4-Head MTS HIFI
- RCA VR630** CALL
4-Head MTS HIFI



- PANASONIC** CALL
PV400A 6X Zoom Autofocus
CCD with 7 Lux
- SONY CCDV5** \$839
8mm 6X Zoom
- JVC GRA30** CALL
6X Zoom with 8 Lux
- SHARP VLL80U** \$849
Flying Erase Heads
- JVC GRS77** CALL
Super VHS, 8-Head, 8X
- HITACHI VM5200** CALL
Audio Monitor, 8X
- RCA CC310** CALL
Audio Monitor, 8X
- JVC GFS550** CALL
Super VHS—8X
- RCA CC175** CALL
Super VHS—SPECIAL
- RCA CC350** CALL
Super VHS—8X

MISCELLANEOUS

- JVC HRS5000** CALL
4-Head MTS HIFI
- HITACHI VT3800A** CALL
5 + 2 Head MTS HIFI
- JVC HRS8000** CALL
Best VCR Made
- HITACHI VT2700** CALL
Special Closeout Price
- TOSHIBA SV970** CALL
Digital Special Effects
- UNIDEN RD9** \$119
Radar Detector
- DESIGN ACOUSTICS** \$399
PS-30 Subwoofer System
- BOSE AM5** CALL
Subwoofer System
- AUDIO SOURCE** CALL
SSTWO Dolby Surround
- 26" MONITOR/TV** \$469
S-VHS Input



Guaranteed Low Price

- ★ We get the BEST volume discounts
- ★ LOW OVERHEAD—To sell at best discounts
- ★ We shop the competition to ensure the best price

Most Major Brands

- ★ THIS IS ONLY A PARTIAL LISTING
- ★ IF YOU DON'T SEE IT LISTED—CALL!

10-Day Return

- ★ Returns accepted within 10 days (must be called in for prior authorization). Products must be in original condition. Returns subject to restocking fee. Shipping and handling not refundable.

Buyer Protection Plan—FREE

- ★ 30-DAY GUARANTEED NO LEMON
- ★ EVERY PRODUCT BRAND NEW—FULL WARRANTY

1-800-356-9514

IF YOU FIND A BETTER PRICE — CALL US



TV'S



- PIONEER SDP502** CALL
50" Projection TV
- SONY KV27XR10** CALL
Best 27" Made
- JVC AV3587** CALL
Best 35" Made
- JVC AV2658** CALL
Best 26" Made
- SONY KV1380R** CALL
Best 13" Made
- SONY KV8AD10** CALL
8" AC/DC Color TV

REC, AMPS, PREAMPS



- SHERWOOD S2770 II** \$239
74-Watt/Ch Receiver
- JVC RX555VBK** CALL
60 Watt/Ch Receiver
- JVC RX777VBK** CALL
80 Watt/Ch Receiver
- SAE A202** \$289
100 Watt/Ch Amp
- SAE P102** \$239
Digital Line Preamp
- SAE A502** \$429
200 Watt/Ch Amp

MISCELLANEOUS



- ATUS AM300E** \$199
DJ Mixing Board
- ADC SS525X** \$339
Computerized 12-Band EQ
- MEMOREX CP8** CALL
Programmable Remote
- SONY WMF100 III** \$119
AM/FM Cassette Walkman
- FREEDOM FF1700X** \$119
Best Cordless Phone
- CODE A PHONE 2650** CALL
Phone/Answering Machine

DISCMANS



- SONY D2** \$149
AMS Search
- SONY D9** \$195
Mega Bass Circuit
- SONY D160** CALL
Home and Car Player
- TOSHIBA XRP9458** \$257
Wireless Remote
- SONY DT10** CALL
With Tuner—Special
- SONY D25** CALL
Smallest Discman

PHONE HOURS
M-F 8 a.m. - 8 p.m.
SAT 8 a.m. - 5:30 p.m.
SUN 11 a.m. - 5 p.m.
Central Time Zone

CALL US TOLL FREE
★ For expert recommendations
★ For more product information
★ **TO ORDER PRODUCT**

DISC PLAYERS



- PIONEER CLD1070** CALL
Laser Disc—Compact Disc
Brand New Model
- SHARP DX670** \$129
20-Track, Random Access
- TEAC AD5** \$357
Combination CD/Cassette
- SAE D102** \$289
SPECIAL PURCHASE
- TEAC PD500** \$219
6 Disc Stacker
- JVC XLM300** CALL
6 Disc Stacker
- TEAC PD470** \$189
4X Oversampling
- TEAC ZD3000** \$297
Zero Distortion Circuitry
- TEAC PD700** \$269
6-Disc, 4X, Dual D/A
- 10-DISC STACKER** . \$399
32 Track Programming

CASSETTE DECKS



- SAE C102** \$269
Way Below Cost
Manual AZ Adjusts
- TEAC V285CHX** \$97
Dolby B + C + HX PRO
- JVC TDV711** CALL
3-Head Loaded
- JVC TDR611** CALL
A/R Dolby B + C + HX Pro
- TEAC W355** \$109
High Speed Dubbing
- JVC TDW999** CALL
Auto Reverse Dubber
- TEAC X300R** CALL
A/R 7" Reel-Reel
- TEAC X2000R** CALL
A/R 10" Reel to Reel
- TEAC W660** \$299
Double Auto Reverse
- JVC TDW777** CALL
Auto-Reverse Dubbing

CAR STEREO



- SHERWOOD XR1604** \$229
Removable DIN Chassis
- SHERWOOD CRD350** \$179
High Power DIN
- CLARION 5630** CALL
AM/FM CD, High Power
- CLARION 9700** CALL
Dolby, High Power
- SHERWOOD CRD210** . \$149
Auto-Reverse/CD Inputs

CAR STEREO



- CLARION SE9350** CALL
6x9—3-Way
- CLARION 8671** CALL
Removable DIN Chassis
- CLARION 1000A** \$167
100 Total Watt AMP
- PYLE KP6940** CALL
6 x 9 High Power
- CLARION 9770** CALL
Removable DIN Chassis

CD PORTABLES



- SONY CFD64** \$197
AM/FM/Cassette/CD
- JVC PCV2** CALL
Hyper Bass Sound
- SHARP QTCD25** \$175
AMPS, Cue/Review
- SEIKO WK81CD** CALL
With Dubbing Cassette
- SHARP GFCD55** CALL
X-Bass Speakers

MISCELLANEOUS



- DUAL CS5000** CALL
Walnut Base Turntable
- AUDIOSOURCE EQ8II** \$97
10-Band EQ/LED'S
- AUDIOSOURCE 1 II** \$169
Dolby Surround Sound
- TEAC EQA20** \$99
10-Band EQ with Spectrum
- SHURE V15 V MR** \$129
Best Tracking Cartridge

HEADPHONES



- KOSS JCK200S** \$99
Wireless Headphones
- SONY MDRV4** \$59
Professional Quality
- SONY MDR1FSK6** CALL
Wireless Headphones
- SONY MDRV6** \$67
Professional Quality
- KOSS JCK300S** CALL
Wireless Headphones

HOME OFFICE



- SHARP UX50** \$599
FAX Machine
- SHARP Z70** \$759
Copier
- PANASONIC KSR340** \$197
Typewriter
- SHARP UX250** CALL
FAX Machine
- SMITH CORONA PWP3** . \$369
Word Processor



MINI-REVIEWS OF THE LATEST COMPACT DISCS

By Robert E. Benson, Thomas L. Dixon, David Hurwitz, Paul Moor, Terry Teachout, and James Wierzbicki

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)



This Month's

Cassette Deck Specials



Teac V-570
 IC Logic Control Cassette Deck
 • Dolby B and C • Hi-Pro headroom extension
 • IC-logic control transport • Bias fine tuning
 • Electronic tape and time • Two motor design
 • Master volume

Sale Price **\$199⁹⁵** Retail \$299 (TEA V570)

Teac V2B5CHX
 Dolby B/C & Hi-Pro, LED-meters . . . \$99⁹⁵

Teac R445CHX
 Auto-Rev, Dolby B/C, Soft-Touch . . . \$149⁹⁵

Nikko D100III
 3-Heads, Dolby B/C & dbx, Real-Time \$299⁹⁵

SAE C102
 Dolby B/C, 19" Rack-Mount, Auto-Bias \$299⁹⁵

Teac X2000
 10" Real-To-Real, 4-Tk/2-Ch, dbx . . . \$999⁹⁵

Teac V250
 Dolby B, One-Touch Record, Auto-Stop \$69⁹⁵

Stereo Dual Cassette Decks



Teac W-66OR
 Double Auto Reverse Cassette Deck
 • Dolby B and C • One touch high speed cassette dubbing • Continuous play • Memory play/search/dubbing • Full logic control • Black finish

Sale Price **\$299⁹⁵** Retail \$519 (TEA W66OR)

Teac W450R
 Hi-Speed, Dolby B/C & Hi-Pro, Auto-Rev \$199⁹⁵

Technics RSTBOR
 Series & Parallel, Dolby B/C & dbx . . . \$449⁹⁵


Teac W370C
 Hi-Speed, Dolby B/C, Continuous-Play \$119⁹⁵

Sharp RTW800
 Auto-Rev, Dolby B, Continuous-Play . . . \$159⁹⁵

Technics RST55R
 Double Auto-Rev, Dolby B/C & dbx \$299⁹⁵

Scott DD696
 Double Auto-Rev, Remote, Dolby B/C \$279⁹⁵

Stereo Receivers



Technics SA-R430
 Remote Audio/Video Stereo Receiver
 • 100 watts RMS per channel • Matrix A/V surround system • 44-key unified remote
 • 7-band EQ with memories • Digital tuner with 24 presets • Black finish

Sale Price **\$399⁹⁵** Retail \$520 (TEC SAR430)

Teac AG35
 35-Watts/channel, 8-AM/8-FM Presets \$109⁹⁵

Sharp SAX50
 50-Wt per/ch, Surround-Sound, EQ . . . \$129⁹⁵

Technics SA160
 40-Wt per/ch, 24-Presets, 5-Band EQ . . . \$149⁹⁵

Sherwood S2770CP-II
 74-Wt per/ch, Remote, Surround . . . \$239⁹⁵

Teac AG55
 55-Watts per/ch, 7-Band EQ, Remote \$179⁹⁵

Scott RS250
 25-Watts per/ch, LCD-Tuner W/16-Presets \$99⁹⁵

LPs, Cassette & CD Specials

Columbia Jazz Masterpiece Sale



DUKE ELLINGTON
 ELLINGTON
 COLUMBIA JAZZ MASTERPIECES
 DIGITALLY REMASTERED

Also Available . . .

- Billie Holiday: The Quintessential Billie Holiday Vol. 5 1937-38 (CBS 44423)
- Benny Goodman: Small Groups 1941-45 (CBS 44437)
- Miles Davis: At The Blackhawk Volume 2 (CBS 44425)
- Louis Armstrong: The Hot Fives & Hot Sevens Volume III (CBS 44422)
- Bessie Smith: The Collection (CBS 44441)
- J.J. Johnson: The Trombone Master (CBS 44443)
- Lambert Hendricks & Ross: Everybody's Boppin' (CBS 45020)

Your Choice **10⁹⁹** or **4⁹⁹** (per CD or Cassette)

Compact Disc Players



Technics SL-P555
 Programmable Compact Disc Player
 • New 18 bit signal processing with 4X oversampling for excellent low-level response
 • 4 D/A converters • Remote control • Dial shuttle music search • Black finish

Sale Price **\$299⁹⁵** Retail \$449 (TEC SLP555)

Technics SLP222
 18-Bit, 4X-Oversampling, Remote . . . \$229⁹⁵

Sharp DXR770
 16-Bit, 2X-Oversampling, 19-Key Remote \$149⁹⁵

Sharp DX670
 16-Bit, 2X-Oversampling, 20-Track Prog \$124⁹⁵

Teac PD470
 16-Bit, 4X-Oversampling, Remote, 20-Tk \$199⁹⁵

SAE D102
 16-Bit, 4X-Oversampling, 19" Rk-Mt . . . \$299⁹⁵

Technics SLP300C
 6-Disc Changer, 36-Tk Program . . . \$259⁹⁵

Audio Add-Ons



Terk FM-9500
 Indoor FM Electronic Antenna
 • Perfect for the apartment or office • Modern high tech style • 24-dB's of gain
 • Omnidirectional pick-up • LED display • One year warranty • Black finish

Sale Price **\$49⁹⁵** Retail \$99 (TRK 9500)

Terk 8500
 Electronic FM-Antenna, 20db Gain . . . \$34⁹⁵

Terk 9650
 Antenna, Disc-Shaped, 30db Gain . . . \$79⁹⁵

Parsec LS3
 Electronic FM-Antenna, 18db Gain . . . \$29⁹⁵

Parsec LS4
 Deluxe FM-Antenna, Omni-Directional \$49⁹⁵

Memorex CP-8
 Universal Remote, upto 8-Component: \$69⁹⁵

One For All URC5000
 Universal Remote, upto 13-Units . . . \$99⁹⁵

Amplifiers, Preamp & Tuners



SAE A-202
 High Resolution Power Amplifier
 • 100 watts RMS per channel
 • Complementarily amplifier design delivers greater stereo imaging and reduced phase shift • LED power output display • Black finish

Sale Price **\$299⁹⁵** Retail \$500 (SAE A202)

SAE A502
 200-Watts per/ch, Hi-Current . . . \$449⁹⁵

Scott STA1010
 Amp/Tuner, 110-watts per/ch, Remote \$259⁹⁵

Great American Sound 'Thalia'
 Preamplifier, 19" Rack-Mount . . . \$149⁹⁵

SAE P102
 Direct-Line Preamplifier, 19" Rack Mount \$249⁹⁵

SAE T02
 AM/FM Quartz-Tuner, 19" Rack-Mount \$199⁹⁵

SAE T01
 Direct-Line Tuner, 19" Rack-Mount . . . \$249⁹⁵

Graphic Equalizers



ADC SS-525X
 Computerized Graphic Equalizer
 • 12 bands per channel • Automatic room equalization for flat room response • Wireless remote • Analyzer/EQ display • Pink noise generator • Microphone • Black finish

Sale Price **\$349⁹⁵** Retail \$599 (ADC SS525X)

ADC SS300SL
 10-Bands per/ch, Analyzer W/Pink-Noise \$149⁹⁵

ADC SS100SL
 10-Bands per/ch, Analyzer-Display . . . \$99⁹⁵

ADC SS325X
 12-Bands per/ch, Analyzer, Memory \$289⁹⁵

Teac EQA20
 10-Bands per/ch, LED Spectrum-Display \$99⁹⁵

Teac EQA30
 10-Bands per/ch, Spectrum-Analyzer \$199⁹⁵

Nikko EQ950
 10-Bands per/ch, Spectrum-Analyzer \$169⁹⁵

Turntables



Dual CS-2110A
 Belt Drive Turntable
 • Convenient semi automatic, auto return operation featuring easy-to-use top mounted controls • Hinged dust cover • European styling

Sale Price **\$99⁹⁵** Retail \$189 (DUS CS2110A)

Dual CS5000/X3MC
 Semi-Auto Table W/Ortolon Carl . . . \$449⁹⁵

Technics SLBD22K
 Semi-Auto, Belt-Drive, P-Mount . . . \$94⁹⁵


Technics SLQD33K
 Fully-Auto, Quartz Direct-Drive . . . \$139⁹⁵

Gemini DJ1100
 Semi-Auto, Belt-Drive, Pitch-Control \$84⁹⁵

Gemini DJ1200
 Manual, Direct Drive, Pitch-Control \$139⁹⁵

Dual CS503-1
 Semi-Auto, Belt-Drive, Standard-Mount \$129⁹⁵

Phono Cartridges



Shure V-15 Type V-MR
 Deluxe Micro Ridge Phono Cartridge
 • Micro ridge stylus tip • Excellent trackability
 • Dynamic stabilizer • Side-guard stylus protection • Duo-point alignment gauge • Top rated design

Sale Price **\$129⁹⁵** Retail \$299 (SHU V15-VMR)

Audio Technica AT2311P
 Universal, Linear-Contact . . . \$39⁹⁵

Stanton 680EL
 Standard Mount, Elliptical, Disco-Use . . . \$54⁹⁵

Stanton 500AL
 Standard-Mount, Spherical, Disco-Use . . . \$19⁹⁵

Shure M111HE
 Universal-Mount, Hypere Elliptical-Stylus \$49⁹⁵

Shure DC40
 Standard-Mount, Elliptical, Disco-Use . . . \$29⁹⁵

Audio Technica AT152MLP
 P-Mount, Microline-Stylus . . . \$99⁹⁵

Speaker Systems



The Bose Acoustimass AM-5
 Speaker System
 • A new technology for the home • Clean sound & low distortion system contains 2 cube speaker arrays with 1 acoustimass module that can hidden almost anywhere

Sale Price **\$699⁹⁵** Retail \$799 (BOS AMS)

Bose AM-5
 Acoustimass Module W/Two-Speakers \$699⁹⁵

Bose RM-2 RoomMate-II
 Mini-Speakers W/Built-In Amps . . . \$279⁹⁵

Pinnacle PN5+
 5 1/4" Two-Way Mini Speakers . . . \$139⁹⁵

Technics SBL36
 10" Two-Way Speakers, 100-watts Pair \$99⁹⁵

Technics SBL-56
 10" 3-Way Speakers, 120-watts . . . \$149⁹⁵

Technics SBL-76
 12" 3-Way Speakers, 150-watts max Pair \$199⁹⁵



ORDER TOLL-FREE 1-800-221-8180 Outside U.S.A. Call: 1-718-417-3737
 Mail Order Hours: Monday To Friday 8 AM to 6 PM, Saturday 9 AM to 6 PM, Sunday 10 AM to 4 PM
 Dealer & Institutional Inquiries Call Toll-Free 1-800-221-3191 — In New York 1-718-417-3747
 J&R Music World, Dept. HF0789, 59-50 Queens-Midwn Expressway, Maspeth, Queens, NY 11378



MUSIC WORLD

Super Specials!

VHS Video Movie Specials

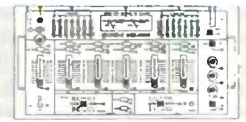
Fine Arts From Homevision



34⁹⁵ Each

- Abduction From The Seraglio
- Aida (Pavarotti)
- Barber Of Seville
- Madam Butterfly (Hayashi)
- Mikado
- Nabucco
- La Traviata
- Il Trovatore
- DANCE
- ABT In San Francisco
- Alvin Ailey, Evening With
- Masters Of Tap
- ART
- Degas (MET)
- Gauguin
- Georgia O'Keeffe
- Picasso

DJ Equipment



- Gemini MX-6200**
Stereo Graphic Equalizer Mixer
• Designed to handle high power amplifiers
• 7-band equalizer • Echo circuit • 3-phonos
• 3-mic, and 4-line inputs • Talkover • Rock mountable
- Sale Price **\$159⁹⁵** Retail \$249 (GMI MX6200)
- Ahus AM-100**
Mixer W/2-Phono, 2-Aux & Cueing . . . \$79⁹⁵
- Gemini MX-4200**
DJ-Mixer W/Echo, Cueing & Fader . . . \$109⁹⁵
- GLI 5991**
Pro-Mixer W/3-Band EQ, Beat-Match . . . \$999⁹⁵
- Ahus AM-300E**
DJ-Mixer W/2-Phono, Echo, 5-Band EQ . . . \$199⁹⁵
- Gemini MX-9200**
DJ-Mixer W/3-Phono, 10-Band/Ch EQ . . . \$274⁹⁵
- American DJ**
Complete Line of Disco Lights . . . **CALL**

Portable CD Players



- Panasonic RX-DT50**
AM/FM Cassette CD Portable System
• XBS extra bass system for big sound
• Programmable music track CD player
• Synchro tape/CD dubbing • Dolby B noise reduction • Auto reverse • AM/FM stereo tuner
- Sale Price **\$269⁹⁵** Retail \$369 (PAN RXDT50)
- Technics SLXP6**
Portable CD-Player W/16 Track Prog . . . \$259⁹⁵
- Sharp QTCD20**
AM/FM/Cassette CD, EQ . . . \$179⁹⁵
- Panasonic RXFD75**
AM/FM Dual-Cassette CD-Player . . . \$399⁹⁵
- JVC PCV2J**
AM/FM Auto-Rev Cassette CD-Player . . . \$349⁹⁵
- Sony DT4**
AM/FM CD-Player, 16-Track Prog . . . \$234⁹⁵
- Sony D25**
CD-Player W/Remote & Headphones . . . **CALL**

Personal Stereo



- Sony WM-F200III**
Super Walkman with MegaBass
• AM/FM stereo tuner • Records by stereo with one-point mic • Auto-reverse cassette playback • Dolby B • Soft-touch controls • Folding headphones • Rechargeable battery
- Sale Price **\$199⁹⁵** Retail \$279 (SON WMF200-3)
- Toshiba KT-4568**
AM/FM Auto-Rev Cass. Headphones . . . \$119⁹⁵
- Sony WMF-73**
Water-Resistant AM/FM Cassette . . . \$99⁹⁵
- JVC CX78K**
Auto-Reverse, Dolby B, Headphones . . . \$59⁹⁵
- JVC PCV55**
3-Piece AM/FM Auto-Rev, 5-Band EQ . . . \$149⁹⁵
- Panasonic RFB-20**
AM/FM/6-Short Wave Bands Radio . . . \$109⁹⁵
- Sony CFS-220**
AM/FM, Auto-Reverse Cassette . . . \$64⁹⁵

Video Specials



- Panasonic PV-4768**
VHS HQ Hi-Fi Video Recorder
• 4-video heads for special effects playback
• Built-in 25-watt per channel amplifier
• 60-function remote W/LED display • 21 day/8 event timer • MTS stereo cable ready tuner
- Sale Price **\$499⁹⁵** Retail \$1000 (PAN PV4768)
- RCA VR630HF**
4-Head VHS Hi-Fi W/MTS Stereo Tuner . . . \$479⁹⁵
- Toshiba DX-900**
4-Head VHS Hi-Fi W/PCM Digital & MTS . . . \$699⁹⁵
- Panasonic PV-4924**
4-Head VHS W/Flying Erase Head . . . \$369⁹⁵
- JVC HRD-410**
3-Head VHS Mid-Size, Unified-Remote . . . \$349⁹⁵
- RCA VPT-640HF**
3-Head Super-VHS Hi-Fi W/MTS-Tuner . . . \$499⁹⁵
- Teac MV-900**
Digital Hi-Fi VHS W/MTS-Tuner . . . \$499⁹⁵

Camcorder Specials



- Panasonic PV-110**
VHS-C Compact Camcorder
• Lightweight compact design • Low light sensitivity of 7 Lux • High speed shutter • Piezo auto-focus • Automatic white balance • 6-l power zoom
- Sale Price **\$849⁹⁵** Retail \$1460 (PAN PV110)
- Sharp VLL-80**
VHS Camcorder (Free: VR80H Case) . . . \$999⁹⁵
- Sharp VLL-250**
VHS Camcorder, 6-LUX 12:1 Zoom . . . \$1199⁹⁵
- Sharp CLV-77**
Super VHS-C Camcorder (Free: Case) . . . \$999⁹⁵
- Panasonic PV-S150**
Super VHS-C Camcorder (Free Case) . . . \$1149⁹⁵
- RCA CC-275**
VHS Camcorder (Free: KKO46 Case) . . . \$899⁹⁵
- Panasonic PV-460**
VHS Camcorder, Image-Stabilizer . . . \$1729⁹⁵

Home Office Specials



- Sharp UX-180**
Fax Machine
• Perfect for the home office • Timer transmission/polling • Auto document feeder • G2, G3 compatible • 16 halftones • LCD display • 32 number auto dialer
- Sale Price **\$829⁹⁵** Retail \$1350 (SHA UX180)
- Brother WP-490**
Portable Word-Processor W/64K . . . \$459⁹⁵
- Canon FAX-8**
FAX Machine, Group 2 & 3 . . . \$649⁹⁵
- Royal Signet 10**
Portable Electronic Typewriter . . . \$149⁹⁵
- Panasonic KXW-1500**
Word Processor W/Accu-Spell . . . \$529⁹⁵
- Sharp Wizard**
Multi-Function Organizer, 32K . . . **CALL**
- Hewlett Packard HP-12C**
Programmable Financial Calculator . . . \$59⁹⁵

Headphones



- Sennheiser HD-540**
"Gold Limited Edition"
• Special hand made limited edition headphones are actually signed by Dr. Sennheiser himself • Improved high performance drivers • Comes in an wood case
- Sale Price **\$249⁹⁵** Retail \$350 (SEM HD540-GOLD)
- Koss PortaPro**
Lightweight W/Multi-Pivoting Earcup . . . \$34⁹⁵
- Koss Pro4AAA +**
Digital-Ready, Closed-Ear Design . . . \$38⁹⁵
- Sony MDRCD6**
Digital-Ready, Sealed-Ear Design . . . \$74⁹⁵
- Sony MDR1A15L**
Water-Resistant, Folding-Design . . . \$19⁹⁵
- Beyer DT-990**
Audiophile Dynamic Open Design . . . \$189⁹⁵
- Sony MDR-M22**
Lightweight Digital-Ready . . . \$38⁹⁵

Audio Accessories

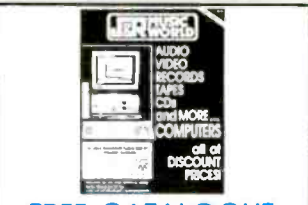


- Recoton W-100**
Wireless Stereo Speaker System
• Eliminate the need for room-to-room wires
• Enjoy true stereo anywhere you choose
• Speakers plug into convenient wall AC outlets anywhere
- Sale Price **\$199⁹⁵** Retail \$299/PR (REC W100)
- AudioSource LCL1**
Compact Disc Lens Cleaner Disc . . . \$24⁹⁵
- Discwasher 'RCS'**
Record Cleaning System . . . \$8⁹⁵
- Discwasher 'CD'**
Radial CD Cleaner W/Fluid . . . \$12⁹⁵
- Recoton CD-20**
Portable CD-To-Car Stereo Adaptor . . . \$19⁹⁵
- Nalad RF-2**
Oak Finished Record-Rack, Holds 65-LP's . . . \$177
- Sony RMP-700E**
Universal Programmable Remote Control . . . \$88⁹⁵

Blank Audio/Video Tape



- TDK SA-100**
Extended Length High Bias Cassettes
• Now 100 minutes for extended length and compact disc recording • Super precision anti-resonance mechanism • Super high resolution
- Sale Price **\$11⁸⁸** 5-Pack (TDK SA100CD)
- Maxell XLII-90**
High-Bias Cassette Tape . . . 10-Pack \$19⁹⁵
- Maxell XLIS-100**
Extended High-Bias Cassette . . . 10-Pack \$27⁹⁵
- TDK SA-90**
Super-Avilyn Hi-Bias Cassette Tape 10-Pack . . . \$17⁹⁵
- Sony UX Pro-90**
High-Bias Cassette Tape . . . 10-Pack \$23⁹⁵
- Fuji FR90-Metal**
Metal-Bias Cassette Tape . . . 10-Pack \$22⁹⁵
- Scotch T-160EG +**
High-Grade VHS Video Tape . . . 10-Pack \$46⁹⁵



FREE CATALOGUE
For a FREE catalogue call toll-free 800-426-6027, or Write:
J&R Music World
Department HF0789
59-50 Queens-Midtown Expressway
Maspeth, NY 11378.

Name _____

Address _____

City _____ State _____ Zip _____

SEND MONEY ORDER, CERTIFIED OR CASHIER'S CHECK, MASTERCARD, VISA, AMERICAN EXPRESS or DISCOVER CARD (include Interbank No. expiration date and signature), TO: J&R MUSIC WORLD, DEPT. HF0789, 59-50 QUEENS-MIDTOWN EXPRESSWAY, MASPETH, QUEENS, NY 11378. Personal and business checks must clear our Authorization Center before processing. Shipping, Handling & Insurance Charge is 5% of Total Order with a \$4.95 minimum. (Canadian Orders Add 15% Shipping, with a \$9.95 minimum charge.) For shipments by air, please double these charges. \$25 MINIMUM ORDER. DO NOT SEND CASH. SORRY, NO C.O.D.'S. NEW YORK RESIDENTS PLEASE ADD SALES TAX. WE ARE NOT RESPONSIBLE FOR TYPOGRAPHICAL ERRORS. ALL PICTURES SHOWN FOR VISUAL REPRESENTATION ONLY.



(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, BARBIROLLI

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 pianophiles (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 Schnabel. 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.

SUPER VHS CAMCORDERS



CANON
F1000 10:1Z

8mm HI-BAND
SONY PRICES — CALL



OLYMPUS
VSX405
VX406

OLYMPUS
VX803
Call

HI-FI STEREO CAMCORDERS



PANASONIC
PV445
PV420



KYOCERA
MINOLTA
JVC

HITACHI
RCA
MINOLTA

— MOST POPULAR FEATURES —

- SUPER VHS 8:1 ZOOM w/FLYING ERASE HEAD
INCLUDES ALL ACCESSORIES
- SUPER VHS FULL SIZE TIME/DATE 8x ZOOM
- SAME AS ABOVE w/DIGITAL EFFECTS
- 8mm/SPECIAL EFFECTS 420 PIX, SLOW MO.
HI-FI, 1:2000 SHUT

\$1199
\$995
\$1399
\$998

- VHS-C 6:1 ZOOM 5 LUX
- 8mm 5 LUX KD1700 FLY ERASE HI-FI
- VHS FULL-SIZE CAM TIME/DATE 6:1 ZOOM
- VHS-C FLY ERASE
- VHS FULL-SIZE CAM TIME/DATE 8:1 ZOOM
- VHS 8:1 ZOOM FLY ERASE w/CH GEN

\$699
\$749
\$749
\$759
\$850
\$975

INCLUDES
— ALL —
ACCESSORIES

BEST VALUE:

- PANASONIC PV430
- RICOH R630
- OLYMPUS VX803
- OLYMPUS VXS405KU
- CANON E808
- RCA CC320
- JVC GRS707
- JVC GR60
- CANON A1
- RICOH R800

SUPER PRICE REDUCTIONS:

- CANON E77
- CANON E708
- HITACHI VM5200
- RCA CC310
- GE GE9825
- SONY CCDF30
- HITACHI VM3150
- MINOLTA C50
- JVC GRS77
- PV460

CANON
E708
E808 & E80



Call For
Lowest
Price
on A-1
CANON

**VCR's - VHS & BETA
8mm**



- PANASONIC 4 HD VHS
w/FLY ERASE HD \$359
- QUASAR 4+2 HD HI-FI ST MTS \$349
- 4+2 SUPER VHS HI-FI MTS
SUPER & FLY ERASE \$649
- 4+2 SUPER VHS HI-FI MTS
SUPER & FLY ERASE w/DIGITAL \$899
- VHS RECORDER \$200
- BETA DECK \$275
- PLAYER ONLY VHS \$159
- AC/DC VHS PLAYER \$198
- 8mm & STEREO PCM HI-FI PORT. \$700
- 20" TV VCR PANASONIC \$550
- 5" TV VHS PLAYER ONLY \$399

**SPECIAL EFFECT
& CHARACTER GEN.
EDITING PROCESSOR**



- JVC JXS55 NEWARK VIDEO MIX GEN LOCK
- SANSUI Character Generator VCG99 Call
 - NEWARK VAM2000 Digital Dissolv Call
 - JVC JXW9 Special Effects \$319
 - SANSUI VX99 \$350
 - AZDEN or NADY Wireless Mics Call

ACCESSORIES

- JVC RMS1 MEMOREX CP8
- SONY RMP 700 SONY SBV1000 SELECTOR
- SUN PAK VIDEO LIGHT**
- #150 \$88 • #300 \$119.00
- NP77 \$68 • P6120 8mm SONY \$65.00
- SUPER VHS TAPE (T120) \$10.00

TV's

20" REMOTE
COLOR TV
MTS STEREO
\$299

40" PNP
HI-RESOLUTION
\$1995
STEREO

SUPER VHS
30" TV
\$1299



700 LINE 50"
w/MTS SURROUND
46" PNP
TOSHIBA,
PIONEER
SONY
JVC

26" SUPER
INPUT
WHITE
BALANCE
MTS

AUDIO HI-FI RECEIVERS



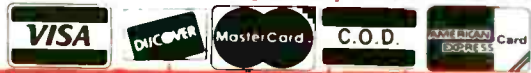
LASER DISC COMPACT DISC
Pioneer • Magnavox Pioneer • Magnavox • JVC • Teac

**CAR STEREO'S
— CALL TOLL FREE —
& RADAR DETECTORS**



FAX MACHINES

- TOSHIBA
3700 \$1195
3300 \$988
30100 \$789
- MURATA
M1200 \$619
M1600 \$698



We ship within 24 hours. All prices quoted included manufacturer's standard accessories & U.S. Warranty. All units are factory sealed. Shipping & handling extra. Not responsible for typographical errors. S&H non-refundable. Prices valid thru 6/30/85

Guilty Pleasures

Guilty Pleasures

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 Jordanares, 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.

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 Dumb, 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 love life, 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 acoustica lures you siren-style toward the hard-boiled fuzz riff, which comes and goes. Trapped between walls of sod, Ed essays 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*

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 copping 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

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



HIGH FIDELITY ARCHIVES

NO GIMMICKS - NO NONSENSE

*A.C. ADAPTER POWER SUPPLY - BATTERY - BATTERY CHARGER - RF/TV ADAPT. - 75 TO 300 OHM CONVERTER - 8 ALUM-AUDIO VIDEO WIRES - SHOULDER STRAP - CARRY HANDLE - PROTECTIVE LENS HOOD - PROTECTIVE LENS COVER - BLANK TAPE - ENG. INSTRUCTION BOOK - COAXIAL CABLE - VHS/VHS ADAPTER - MICROPHONE - A/B SWITCH KIT - CAMCORDER CLUB MEMBERSHIP - 8 PPS USA ACCESSORY KIT - 1 PPS USA WARRANTY - RELIABLE ACCESSORY BOOK - REMOTE CONTROL LENS CLEANING KIT - MANUFACTURER'S DELUXE HAND CARRY

NO INCOMPLETE VHS CAMCORDER "DEALS" (HD CS, 2 HR BATT.) NO EXTRA CHARGE FOR NEW AND MANUFACTURERS U.S.A. WARRANTY

RELIABLE

C.O.D. NO EXTRA CHARGE

INFORMATION: 1-718-462-9500 NEXT DAY & 2ND DAY DELIVERY AVAILABLE

VIDEO TAPES; 1-800-522-8991 AUDIO/VIDEO; 1-800-525-9922

CAMCORDERS: UP TO 24 PIECE OUTFIT

SHARP VLL 80 w/case 839 VLL 250 w/case 939	FAX Toshiba 30100 759 Sharp UX50 499 Sharp UX160 699 Sharp UX350 1049 Sharp F2020 739 Sharp UX140 599 Sharp UX80 599	BOSE 101 Call/pair 901 899/pair 6.2 388/pair 10.2 799/pair 4.2 278/pair 2.2 179/pair SE5 Call AMS 699/pair plus \$200 credit	MINOLTA Super See!!! While they last! C50 Kit w/HdCs 869 B200 Kit w/HdCs 949 W1400 Kit w/HdCs 849 V2000 Kit w/HdCs 849 V2100 w/c 1149 w/2 YR WARRANTY!
---	--	--	--

HARMON KARDON HX500 CD 239 HX 400 CD 349 HX 800 CD 349 Tuner 909 179 Tuner 920 289 Receiver 880 519 Receiver 990 229 Amp 640 229 Amp 645 319 Cassette 302 349 Cassette 392 499 Cassette 481 499	SUPER SALE 1 Quality W.A. Lens 2 Quality Tais Lens 3 Adapter Rings 4 Real Fluid Hd Trpd 5 Tripod Carry Case 6 Headcleaner 7 AC & DC Light Kit 8 2 Light Bulbs 9 Batt for Lite & Cam 10 Lens Filter Kit Only \$219.95!	PANASONIC PV200 245 PV2912 245 PV400 291 PV412 318 PV4822 Cat PV481 338 PV482 448 PV480 428 PV484 818 PV484 828 PV4880 S-VHS 825 PV5150 w/hd cs 979 PV400 A 929 PV420 w/hd cs 969 PV425 w/hd cs 999 PV430 w/hd cs 1219 PV440 w/hd cs 1169 PV445 w/hd cs 1299 AG400 w/hdcs 1699 PV350 w/hd cs 1329 PV400 w/hd cs 1419 AG170 w/hd cs 1079 AG450 w/hd cs 1459 AGA95 1459 AG1950 1029 AG1830 1149 Chartr Gen 169	SHOWTIME 7100 Color Proc 259 7010 AV Proc 219 VSE C1 Creator 318 VC-1 Colonizer 359 4AB1 Editor 259	SONY BUY A REF & REQUEST A FREE HEAD CLEANER SLV 70 HF VHS 689 SLV50 318 SLV30 Player Call SLHF 860 Zoom Call SL 340 279 SLHF 360 Hifi 369
--	---	---	---	--

TECHNICS DX500 709 DSX8000 919 978 449	NEC	NIKON NV900 HFI Call
--	------------	--------------------------------

ALL TAPES SOLD BY THE BOX (10) ONLY

FUJI S-VHS120 10.39 T120 3.69 T120 S-HG 4.39 T120 S-HG HFI 5.39 T120XG Pro w/cs 6.89 T160 S-HG 6.59 BASF P6-30 4.19 BASF P6-90 5.19 BASF T160 S-HG 6.29 BASF T120 3.39 BASF T140 3.69 BASF T160 4.69 RCA S-VHS-C 9.79	MAXELL SQ VHS120 10.39 T120 HGX 4.49 T120 XL HFI 5.49 T160 HGX 6.59 T120 Pro Pro w/cs 6.89 L500 BC Pro w/cs 6.99 T120 BC Pro w/cs 6.99 T200 RX Pro w/c 5.19 T200 AGX 4.39 8mm 120 min. 6.59 8mm 90 min. 5.89 8mm 60 min. 4.69 S-VHS C 9.79	TOSHIBA SV970 S-VHS 889 SV950 S-VHS 859 DX900 PCM 549 SK80 w/case 1189 VR485 HFI 399 MP200 HFI Player 249 T.V.'s Call	CHINON CVT 70 1149 CVT 65 Color w/c 1099 CVT 80 1349 8mm HFI CALL
---	--	---	--

SONY 8mm 30 min 4.79 8mm 60 min. 4.95 8mm 90 min. 5.79 8mm 120 min. 6.49 8mm 120 ME 16.00 L500 ES 3.29 L750 ES 3.59 L830 ES 4.49 L750 ESAG New 5.19 L750 ESAG 4.49 T120 ES HG 4.49 T120 ESX HFI 5.39 EDL500 17.99 L500 PRO X 5.99 T120 PRO X 6.39	TDK XPT 120 S-VHS 10.39 T120 HS 3.59 T120 EHG 4.59 T120 HD HFI WOW 4.79 T120 HDX Power 6.79 T160 HG 6.29 L750 HD HFI 4.39 8mm 30 min. 4.89 8mm 60 min. 4.99 8mm 90 min. 5.59 8mm 120 min. 6.29 T200 PRO 4.99 S-VHS-C 9.99 RCA T200 HFI 3.59 RCA T200 S-VHS-C 9.99	CERWIN VEGA AVP100 299 SE240 Pro 289/pair SE280 Pro 389/pair SE300 Pro 489/pair SE380 Pro 589/pair	JBL PRO LINE 4312 Spkr 379 ea. 8216 Spkr 85 ea. 1681 pair Call L100 TBQ 489 VRE200 269 VR1100V Black 429
---	---	--	---

SCOTCH T120 S VHS 10.39 T120 EG 3.59 T120 EG Plus 3.99 T120 EXG Gold HFI 5.49	T120 Pro Camera 6.59 T160 EG Plus 5.29 L750 EXG Gold 5.19	ADVENT Baby II 139/pr. Legacy 149 Prodigy 199/pr. Tower 199/pr.	MITSUBISHI HSU70 SVHS 829 HSU50 HFI 499 HSU30 4 Hd 359 HSU20 329
--	--	--	---

QUASAR VM23 w/hd cs 799 VM24 w/hd cs 919 VM26 w/hd cs 1199 VM27S w/hdcs 1349	TECHNICS
---	-----------------

INFINITY Kappa 9 9.99ea Kappa 8 6.79 ea Kappa 7 4.99 ea Kappa 6 3.59 ea Kappa 5 2.99 ea Subwoofer 289	PIONEER VSX 9300 S with smart 560 PDM700 389 VSX 3300 239 VSX 3300S 269 VSX 5300 379 VSX 7300 WOW SW1000 299 CTS 705 289 CT5605 229 CTW700 WOW CTW 910R 389 PDT100 339 PDM 610 289 PDM 700 WOW CLD 1070 429 CLD 2070 669 CLD3070 849 SDP402 CALL SDP452 CALL SDP502 CALL EX9000 CALL GR777 CALL GR555 129 VH930D S-VHS CALL
--	--

CANON E80 929 E808 1038 E-70 829 VM E77 1179 E-708 PRO 1179 VC50A Camera 969 1000-S Camera 1399 Cue 1 29 Zap Snap 749 SCE708 49	SONY BUY A REF & REQUEST A FREE HEAD CLEANER SLV 70 HF VHS 689 SLV50 318 SLV30 Player Call SLHF 860 Zoom Call SL 340 279 SLHF 360 Hifi 369
--	--

CCDSP7 w/HdCs 1195	CCD V220 1435 CCDF-40 909 CCDV9 1019
---------------------------	---

RCA Guaranteed Best Delivered Prices in the U.S.A. CCDV11 1299 CCDF35 799 CCDF50 959 CCDF70 1049
--

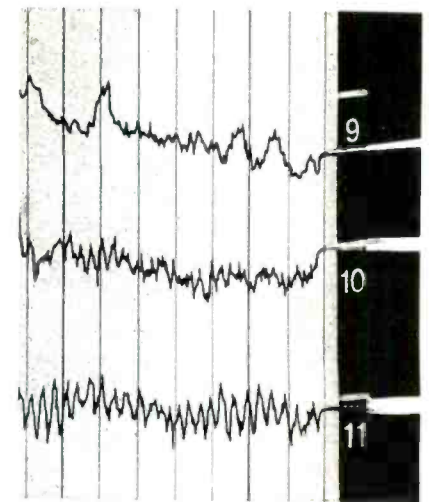
MAGNAVOX 9680 519 9780S 789 9760 409 9665 299 2072 419 9770 S-VHS 549 9780 S-VHS Dgd 789 CVJ310 w/hd. cs 779 CVJ320 w/hdcs. 879 CVJ350 s w/hd cs 1129 CVJ360 w/hd cs 1299 CVJ340 w/hd cs 999 VR968 SVHS 549 9246 s w/hdcs 1299 9265 s w/hd. cs 959 M474 Laser 525 473 CD 189 486 CD 235 424 Laser Wow!
--

CCDV99 New May

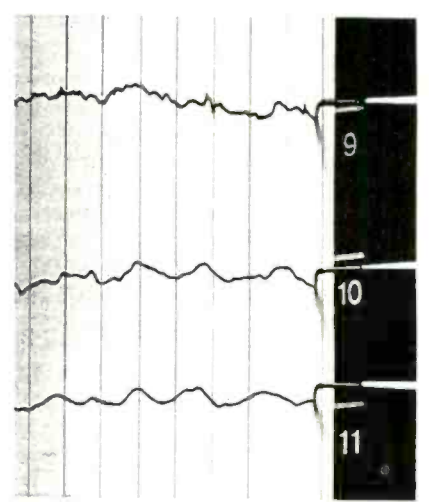
AUDIO COPC70 C.D. 329 MDP700 Stock STRAY1000 Rec. 449 STRAY900 Rec. Wow! DT10 Rec. 249 WMF100 III 99

PAL SYSTEMS Television, VCR Stereos, Camcorders	HITACHI VM48100 SVHS Call VM5700 New! Call VM6000 w/c Call VM3000w/c Wow VM30 w/cs 699
---	--

JVC VIDEO HRD600 4Hd. OSP 299 HRD620 329 HRD750 New! 439 HRSS500 659 HRSS800U 949 GRCT77U S-C w/cs 1179 GRSS5 w/hd cs 1049 GR300 w/cs 779 GR340 w/hdcs. 989 GR330 w/hdcs. Stock GFS S50S w/hdcs. 1199	JVC AUDIO RX1100 469 RX999 VSBK 629 RX777 VSBK 329 RX801 359 XLV311 159 XL4401 229 XL4701 345 TDR111 BK 369 XPA 1000 BK 309 TDV621 715 Car Stereo Call
---	--



The brain activity of a normal 14-year old.



The brain activity of a 14-year old after smoking marijuana

**IF YOU USE POT,
YOU'RE NOT
USING YOUR
BRAIN.**

Don't Forget!

Send for the latest edition of the free Consumer Information Catalog. The Catalog lists over 200 selected federal publications of consumer interest on subjects like health, nutrition, federal benefits, money management. The Catalog is free and so are many of the booklets. Just send your name and address, no strings attached. Write today.

Consumer Information Center
Dept. DE, Pueblo, Colorado 81009

U.S. General Services Administration

Partnership for a Drug-Free America

Guilty Pleasures

Guilty Pleasures

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

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

RUSSELL YOUNG



Guilty Pleasures

Guilty Pleasures

Guilty Pleasures

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 toqueload 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 folk-singer, 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 copping 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 "Holly 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 LOCHS 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/trupest, 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*



HIGH FIDELITY CLASSIFIED

MAIL TO: 825 7th Ave., 9th floor, New York, N.Y. 10019. Phone: 1-800-ABC-MAGS. In New York call: (212) 887-8458 **GENERAL:** all copy subject to publisher approval. Users of P.O. Box MUST supply permanent address and telephone number before ad can run. **CLOSING DATE:** 1st of second month preceding cover date. **15 Word minimum** No charge for Zip Code. **CLASSIFIED RATES:** regular type, per word: 1x—\$2.95; 3x—\$2.85; 6x—\$2.75; 12x—\$2.65. Words in caps—15¢ extra each. **IMPERIAL type, per word: 1x—\$3.95; 3x—\$3.85; 6x—3.75; 12x—\$3.65. Words in caps—15¢ extra each.** Minimum 15 words. Box numbers: \$3.00 additional per insertion to cover cost of handling and postage. Display, per inch. 1x—\$365; 3x—\$355; 6x—\$345; 12x—\$330 **PAYMENT WITH ORDER:** Send check, M.O., MASTERCARD or VISA No. and expiration date to: Maria Manaseri, Classified Dept., HIGH FIDELITY, 825 7th Ave., 6th Floor, New York, NY 10019.

ACCESSORIES

FREE DIAMOND NEEDLES FOREVER. JOIN OUR electronic accessories club: \$10.00 lifetime membership (REFUNDABLE). Includes catalog & free needle certificate. Applehill, Box 317, Lincolnshire, IL 60069. 312-634-1226.

AUDIO/VIDEO SPECIALTY SHOP

WE HAVE THE FINEST SHOWROOM IN OUR AREA WITH the widest selection of Audio/Video components on display and in stock. Adcom, Infinity, Thorens, Dual, Jamo, Yamaha, Canton, Luxman, Sony ES, Klipsch, Allison, NEC, Bose, Proton. CONTINENTAL SOUND, 98-77 Queens Blvd., Rego Park, NY 11734. (718) 459-7507.

BUSINESS OPPORTUNITIES

YOUR OWN RADIO STATION, AM-FM, licensed/unlicensed, free tapes/records. Broadcasting, Box 130-H, Paradise, CA 95967

CLUBS/SINGLES

CLASSICAL MUSIC LOVERS' EXCHANGE. Nationwide Link Between Unattached Music Lovers. CMLE, Box 31, Pelham, NY 10803.

COMPACT DISCS

COMPACT DISC - AT LOW WAREHOUSE prices. Now in our fifth year. Send \$2.00 for catalog. OZ Warehouse, 1575P Hwy. 29, Lawrenceville, GA 30244.

low COMPACT DISC prices—LARGE inventory—mini-Catalogs \$1—DUWARS, PO BOX 6662-F, GREENVILLE, SC. 29606

WE'VE SLIPPED OUR DISC PRICES TO FIT your budget, prices start at \$8.99! Write; Laser Locker Box 8611 Somerville, N.J. 08876.

MAGNAVOX CD PLAYERS: CDB480 \$139.00, CDB482, \$165.00 CDB582, CDB586 call, CDB486 \$259.00, CDB473 \$195.00, CDB650, reconditioned \$259.00. Philips/Mod, Heybrook, Audioquest, Mod Squad, Soundcraftsmen, Digital Sound, (312) 674-8024.

FREE JAZZ CATALOGUE

CD'S, LP'S CASSETTES AND VIDEOS
Daybreak Express Records, P.O. Box 150250-Dept. HE, Van Brunt Station Brooklyn, NY 11215-0005 THE JAZZ SPECIALIST SINCE 1975

CABLE TV

YOUR CABLE TV CONVERTERS AND DE-SCRAMBLERS bargain headquarters: Zenith, Tocom, Jerrold, Scientific Atlanta, Hamlin. Oak M35B \$60.00 Visa, M/C-COD. Order yours today 415-584-1627.

CABLE TV CONVERTERS. Jerrold, Scientific Atlanta. All major Brands available. Visa/MasterCard. Call for information 1-800-638-6898. E&O Video, 9691 N East 265th Street, Elko, MN 55020

CABLE TV CONVERTERS, Jerrold, Oak, Scientific Atlanta, Zenith, and many others. "New" MTS Stereo Add-On: Mute & Vol., ideal for 400 to 450 owners! Visa, MasterCard, American Express. B & B Inc. 4030 Beau-D-Rue Drive, Eagan, MN 55122. (1-800-826-7623).

CATV CONVERTERS & DESCRABLERS. Quality Products. Professional Service. Call 1-800-541-5487. Visa/MC Accepted. Mountaintech, Inc., Box 5074, Mt. Crested Butte, CO. 81225.

CABLE DESCRAMBLE LIQUIDATION. Major makes and models available. Industry pricing! (Example: Hamlin Combo's, \$44.00 each, minimum 10 orders). Call West Coast Electronics. (818) 709-1758.

CABLE TV DESCRABLERS & CONVERTERS

Your best buys and warranty's start with a free catalog from M.D. Electronics call toll free or write us today!
All products guaranteed we accept Visa, M.C., C.O.D.  M.D. Electronics
115 New York Mall
Ste. 133H
Omaha, NE 68114
1-800-624-1150

EQUIPMENT FOR SALE

CABLE TV Converters / Descramblers GUARANTEED LOWEST PRICES IN U.S.
Jerrold, Hamlin, Zenith—Many Others! Lowest Dealer Prices! Orders shipped within 24 hours! Complete FREE illustrated catalog, MasterCard-VISA-COD accepted
PACIFIC CABLE CO., INC. (800) 345-8927
7325 1/2, Reseda Blvd. #833 Reseda, CA 91335

DISCO LIGHTING, DJ SUPPLIES, FOG MACHINES, STAGE lighting effects at wholesale prices. Send \$1.00 for catalog P.O.B. 20395, Bowling Green, KY 42101.

ELECTRONICS

"STEREO WORLD" IS YOUR DISCOUNT mailorder source with super deals on Audio/Video & Car Stereo. Lines like: Magnovox, JVC, TEAC, AIWA, Technics, Pioneer, Koss, Sennheiser, Pinnacle, TDK, Maxell, Panasonic, Advent, ADC. Car Stereo lines like: Pyle, Clarion, Sherwood, Philips, Sony, Pioneer, G&S design amps, JVC, Panasonic, Technics, Blaupunkt, AIWA & more! Call or write for FREE catalog! Call for closest specials! FREE shipping! P.O. Box 596, Monroe, NY 10950. 914-782-6044, M-F till 6:00 pm, Wed. till 7:00. VISA, MC, C.O.D. accepted. FULL U.S.A. WARRANTIES

FOR SALE

THE FINEST IN HOME AUDIO, CAR STEREO & VIDEO EQUIPMENT

- | | |
|-----------------|-------------------|
| *ADS | *MINOLTA |
| *ADVENT | *MISSION |
| *AKG | *ORION |
| *ALTEC-LANSING | *OLYMPUS |
| *AUDIO CONTROL | *POLK AUDIO (CAR) |
| *AUDIO DYNAMICS | *PROTON |
| *B & W | *SAE |
| *dbx | *SANSUI |
| *DENON | *SURROUND SOUND |
| *GUL | *SNOOPER |
| *HAFIER | *SONANCE |
| *INFINITY (CAR) | *SOUND CRAFTSMEN |
| *JVC | *TERK ANENNAS |
| *KENWOOD | *CLESTION |
| *KICKER | *CERWIN VEGA |

Sound City 
Meadtown Shopping Center
Route 23 South
Kinneton, N.J. (201) 838-3444

WE SELL SECOND HAND HIGH QUALITY AUDIO-VIDEO with money back guarantee! Send your name and address for FREE monthly Inventory. Ross' Stereo & Video Exchange, 2423 Morena Blvd., San Diego, CA 92110. (619) 275-3632.

SINGERS! REMOVE VOCALS FROM RECORDS AND CD'S!



SING WITH THE WORLD'S BEST BANDS!

An Unlimited supply of Backgrounds from standard stereo records! Record with your voice or perform live with the backgrounds. Used in Professional Performance yet connects easily to a home component stereo. This unique product is manufactured and sold Exclusively by LT Sound - Not sold through dealers. Call or write for a Free Brochure and Demo Record.

LT Sound, Dept. HF-3, 7980 LT Parkway Lithonia, GA 30058 (404) 482-4724
Manufactured and Sold Exclusively by LT Sound
24 HOUR PHONE DEMO LINE: (404) 482-2485

EXPERIENCED FRIENDLY ADVICE!
THORENS, FRIED, STAX, CWD, PS,
MONSTER CABLE, GRADO, AUDIRE,
SPICA, MIRAGE, SUPERPHON,
STRAIGHTWIRE, QUAD, more. Immediate,
FREE shipping. READ BROTHERS STEREO,
593-C King Street, Charleston, South
Carolina 29403. (803) 723-7276.

CARVER, NAKAMICHI, BANG & OLUFSEN,
A.D.S., CROWN, REVOX, HAFLER, ADCOM,
MISSION, MERIDIAN, N.A.D., HARMAN/
KARDON, KYOCERA, YAMAHA, LUXMAN,
DENON, KLIPSCH, B & W, POLK, KEF,
D.C.M., E-V, J.B.L., INFINITY, D.B.X.,
AKG, BEST PRICES PROFESSIONAL CON-
SULTATION, AMERISOUND SALES, INC.
EAST: (904) 262-4000; WEST (818) 243-1168.

The Sound Seller

For the Musical Difference

Authorized Dealer For:

Acoustat	CWD
Audio Control	dbx
Nitty Gritty	Fried
M&K	Harman Kardon
Oracle	3D
PROAC	Onkyo
Proton	Grado
STAX	Audioquest
Thorens	Celestion
Dahlquist	DCM
Hafler	Niles
Monster Cable	Kinergetics
NAD	Duntech
Belles	Citation

1706 Main St.
Marinette, WI 54143
(715) 735-9002
800-826-0520

LOWEST PRICES ON OVER 120 HIGH
quality famous brands esoteric/car/video.
Wide selection means you get what you
want. Thousands of happy satisfied
customers. For specials list only—call 800-
233-8375. prices 503-963-5731. Audio
Unlimited, 1203B Adams, La Grande,
Oregon, 97850.

LOW PRICES!!! YAMAHA * DENON * CARVER * ADCOM *
BOSTON ACOUSTICS * LUXMAN * HAFLER * A/D/S *
B&K * KEF * ONKYO * PROTON * BOSE * SNELL * DCM *
NAKAMICHI * M&K * PS AUDIO * AR & MANY OTHERS *
SOUND ADVICE (414) 727-0071

CHADWICK MODIFICATIONS

Our speaker cables and interconnects bring the music back to you!

- Upgrades for Thorens turntables & Grado cartridges
 - Corktone Platter Mat, F-1 Dustcover Weight and more...
 - Complete catalog \$3.00, refundable with purchase.
- 1925 Mass. Ave., Cambridge, MA 02140 (617) 354-8933

TAKE THE SOUND APPROACH

AUTHORIZED DEALERS FOR:

- ADS
- ALPHASONIC
- AUDIO CONTROL
- BOSTON ACOUSTICS
- BANG & OLUFSEN
- CARVER
- DENON
- DUAL
- HAFLER
- INFINITY
- ORTOFON
- ONKYO
- & MORE

VISIT OUR SHOWROOM AT

THE SOUND APPROACH
6067 JERICHO TPKE., COMMACK, NY 11725
516-499-7680

ORDER: 1-800-622-HIFI (4434) NAKAMICHI,
YAMAHA, KYOCERA, DENON, HARMAN
KARDON, JBL, NAD, CARVER, DBX,
MISSION, LUXMAN, KEF, ADCOM, ONKYO,
B&O. Manufacturers USA warranty, factory
fresh, 15%-35% off list. Tax free (except
Wash. Res.). Most equipment received
within 2-7 days. 7 day defective exchange.
VISA/MC, Discover, Diners, Amex, COD.
Warranty information, service or order,
please call: 1-206-747-9999, TASKAMICHI
AUDIO

CAUTION, YAMAHA BUYERS!! Some
dealers are offering Yamaha products for
sale that are not designed for use or sale in
the U.S.A. These units may not carry the UL
approval for safety nor are they designed
for usage on 110 volt U.S. current. YAMAHA
ELECTRONICS CORPORATION, USA
CANNOT BE HELD RESPONSIBLE FOR
THESE UNITS MEETING U.S.
PERFORMANCE SPECIFICATIONS NOR
ARE WE RESPONSIBLE FOR WARRANTY
SERVICING. For the name and location of
your nearest authorized Yamaha dealer
write, Yamaha Electronics Corporation,
USA, P.O. Box 6660, Buena Park, CA 90622.

BUSINESS OPPORTUNITY

INTERESTED
PROFIT PRODUCING
ADVERTISERS!

Get FREE INFORMATION
on rates and how to create
your own classified ad,
similar to those on these pages.
TOLL FREE 1-800-222-6247,
or 212-887-8458.

SERIOUS
AUDIOPHILES
DESERVE
SERIOUS
SERVICE.

And that's what you'll get
at Reference Audio Sys-
tems. We offer the best
in high-end audio and
the best in friendly ser-
vice by our knowledge-
able staff. From the latest
CD player to a classic
mega-watt amplifier,
you'll like our surpris-
ingly affordable prices and
fast shipping.

Reference
Audio Systems

Call Us... (213) 719-1500

Member Better Business Bureau
18214 Dalton Ave, Dept. D, Gardena, CA 90248
Hours: M-F 9 to 6, Sat. 9 to 1 Pacific Time

ATTENTION DENON CUSTOMERS

Not everyone offering Denon
products for sale is an authorized
Denon dealer. This has great
significance to you as a potential
Denon customer.

Denon America's warranty applies
to the original purchase only. Denon
products sold by non-authorized
dealers are not covered under this or
any other warranty.

Additionally, some of this equipment
may have been designed for foreign
markets and therefore will not meet
Denon America's specifications.

So look for the Authorized Denon
Dealer Sticker before you buy.



To find your nearest
AUTHORIZED Denon Dealer call:
1-201-575-7810 (9:00am - 5:00pm EST)

HELP WANTED

EASY WORK! EXCELLENT PAY! ASSEMBLE PRODUCTS at home. Call for Information. 504-641-8003 Ext. 5037.

INVENTIONS

INVENTORS! AIM wants—Ideas, INVENTIONS, NEW products. Improvements on existing products. We submit ideas to manufacturers. Confidentiality Guaranteed. Call in U.S. & Canada Toll Free 1-800-225-5800 for information kit

MISCELLANEOUS

IS IT TRUE... JEEPS FOR \$44 THROUGH THE GOVERNMENT? Call for facts! 1-312-742-1142 Ext. 4671.

MUSICAL INSTRUMENTS

WE BUY USED BRASS & WOODWINDS. Top \$. Send INF. Rayburn Music, 263 Huntington, Boston, MA 02115. (617) 266-4727. Emilio or David.

SCHOOL & INSTRUCTION

BE A RECORDING ENGINEER! New classes quarterly. Institute of Audio/Video Engineering, 1831 Hyperion Ave., Hollywood, Ca. 90027 213-666-2380 or outside Ca. 800-551-8877 - approved by NATTS.

SPEAKER COMPONENTS

SAVE 40% ON HIGH-END HOME SPEAKERS, subwoofers, amplifiers. FREE CATALOG! RTRD-1, 3021 Sangamon Ave., Springfield, IL 62702. (217) 529-8793.

AUDIO PRO POWERED SUBWOOFERS —
The most accurate Powered Subwoofer available today. Call for the dealer nearest you. Sonic Research, New Milford, Conn. 1-800-243-2673.

SONUS CARTRIDGE OWNERS! Looking for a replacement stylus? Call 1-800-243-2673. Also complete reconditioning of all Sonus cartridges with a new 2 year warranty.

SPEAKERS - SPEAKERS - SPEAKERS. Best Selection, Best Prices — All types. 88 page catalog - 1,000's of values. Send \$2.00 McGee Radio — 1901 McGee, Kansas City, MO 64108 Dept 2G

FIND OUT WHY WE SELL MORE HIGH PERFORMANCE speaker kits than anyone in the U.S. For free catalog call: 1-800-346-9183. AUDIO CONCEPTS INC. 901 South 4th St. La Crosse, WI 54601.

WANTED TO BUY

TOP DOLLAR PAID-LP's, CASSETTES, & CD's: Classical, Rock, Jazz, Etc. U.S.A.'s LARGEST USED & COLLECTOR shop needs quality collections. Princeton Record Exchange, 20 Tulane St., Princeton, NJ 08542 (609) 921-0881.

MARANTZ, & MCINTOSH TUBE EQUIP., all late model high-end items — vintage speaker systems. Charlie Dripps. (818) 444-7079 fax (818)-444-6863

TAPES & RECORDS

CASSETTE CATALOG—ALL CATEGORIES. OVER 7000 titles. Cheapest prices anywhere. Send \$1.00 for postage: Music by Mail, P.O. Box 090066-Dept. HF, Ft. Hamilton Station, Brooklyn, NY 11209-0002.

SHOW ALBUMS—Rare, out-of-print lps 64-page list \$1.00. Broadway-Hollywood Recordings. Georgetown, CT. 06829

3.95 SHIPPING ANY SIZE ORDER, UPS 1-800-245-6000

ITEM	QUANTITY	PRICE	ITEM	QUANTITY	PRICE
MAR 90	1.99	RE-HI-15	99	SONY UXS-90	2.29
MAR 90	3.49	RE-HI-30	1.99	SONY JFE5-90	2.59
MAR 90	2.79	RE-HI-45	1.99	SONY UXJPH-90	2.99
SAR 90	2.29	RE-HI-90	1.99	SONY ES-90	3.99
APR 90	2.49	RE-HI-100	1.49	FLOR OR-90	.99
SA 100	2.49	RE-HI-120	2.49	MAXELL RL100	2.49
SA 90	1.99	RE-LES-10	KE WOOD	DATE	10.99
SA 90	1.79	RE-LES-10	KE WOOD	DATE	10.99
MA 110	2.49	RE-LES-10	KE WOOD	DATE	10.99
AD 90	1.59	RE-LES-10	KE WOOD	DATE	10.99
AR 90	1.59	RE-LES-10	KE WOOD	DATE	10.99
D-90	1.09	RE-LES-10	KE WOOD	DATE	10.99
O-90	.99	RE-LES-10	KE WOOD	DATE	10.99
FR 110	.79	RE-LES-10	KE WOOD	DATE	10.99
FLOR METAL	2.99	RE-LES-10	KE WOOD	DATE	10.99

MAXELL VIDEO TAPE: UXL-120 4 TO 12:30 1.99 MCX 050 1.99

SPECIAL OFFER: FREE \$2.00 SHIPPING ALONG WITH ANY 100¢ Item Buy Any Piece of the Total Order including All Shipping & Handling Charges to You. 3.95 Shipping Any Size Order. COD Add 2.75. All Taxes Here U.S. Mastercard Please Print S/N Call

VISA, MC NO EXTRA CHARGE

TAPE WORLD
TRIAD, DAT CALL

M-F 9:30-5:00
612-283-9021
800-245-6000

SOUND OF NAKAMICHI REFERENCE CASSETTES
Individually duplicated in Real-Time on the finest TDK Metal Tapes from the finest analog and digital masters. The only challenge to the Compact Disc and the finest source for high-end mobile cassette systems. Labels represented WINDHAM HILL, SPINDLETOP, GRP, PRO ARC, A&M, DELOS, GOOD VIBES AND SHEFFIELD LAB. All titles available in Dolby B or C. For a catalog or more information contact PACIFIC CASSETTE LABORATORIES, P.O. BOX 6248-SP, Torrance, CA 90504, (213) 618-4267. Dealer inquiries welcome.

RECORD COLLECTORS SUPPLIES, REPLACEMENT
jackets, inner sleeves, 78 rpm sleeves, opera boxes, CLD supplies, etc. Free brochure. Cabco, Room 301-6, Box 8212, Columbus, Ohio 43201.

FROM EDISON TO ELVIS (AND BEYOND) LP's, 78's, 45's, etc. Visit or mail in wants. The Olde Tyme Music Scene, 915 Main Street, Boonton, NJ 07005. 201/335-5040—Tuesday thru Sunday.

RARE CLASSICAL AND JAZZ. 250,000 LP's. The Record Collector, 1158 N. Highland, Los Angeles, CA 90038. (213) 467-2875.

AMPEX OPEN REEL TAPE-USED ONCE; 1800' or 2400' (boxed)-10 Reels: \$25.00. Sample: \$2.50. Also: New MAXELL Reels/Cassettes. AUDIO TAPES, Box 9584-T Alexandria, VA 22304. (703) 370-5555. VISA/MC.

FREE RECORD, CASSETTE AND COMPACT DISC CATALOG: Features a tremendous selection of remaindered LP and cassette values in all musical categories. Compact disc, cassette and LP new releases at discount prices. Many imports and smaller labels offered. Prompt delivery. Rose Records, Dept. H, 214 South Wabash Avenue, Chicago, IL 60604.

SEARCHING FOR OUT-OF-PRINTS? Try for Discontinued Records, 444 South Victory, Burbank, California 91502 (213) 849-4791.

LIVE OPERA TAPES, CASSETTES. Incredible selection. Free Catalogue, Live Opera, Box 3141, Steinway Station, L.I.C., NY 11103.

OLDTIME RADIO PROGRAMS . . . Classic broadcasts on high quality tapes. Mystery! Adventure! Comedy! Music! Free catalogue. Carl Froelich, 2-H Heritage Farm, New Freedom, Pennsylvania 17349.

COLLECTORS' SOUNDTRACKS, MINT. TOP TITLES, speedy service. List \$1.00 (refundable). Jem's P.O. Box # 157, Glenview, IL 60025.

IN-PRINT & OUT-OF-PRINT NOSTALGIA ON RECORDS & SELECT CD'S. Plus Video Tapes. Spectacular Catalog! \$2.00 USA \$4.00 Foreign. Serendipity Records, 4775 Durham Road, Guilford, CT 06437 USA. 203-457-1039.

PROTECT YOUR LPS
Poly sleeves for jackets . 13¢. Poly sleeves for records 8¢
Polylined paper 17¢
Cardboard Jackets 50¢
Postage \$3.00
House of Records P.O. Box 323, Hillburn, New York 10931

RARE OPERA & CLASSICAL PERFORMANCES on CD, Records, Tapes, & Video.
The most detailed & complete catalog of live & historical performances. Fast & dependable service,—discounts. Write for FREE catalog,—LEGENDARY RECORDINGS, INC., P.O. Box 104, Ansonia Station, NY, NY 10023.

RECORD STORAGE

THE BEST RECORD RACK IN AMERICA

Stackable, portable, oak units hold LP's, CD's and tapes

Free Mailorder Brochure (please mention High Fidelity)

Per Madsen Design (415) 928-4509
P.O. Box 330101, San Francisco, CA 94133

VIDEO ELECTRONICS

HiFi VCRs - UTILIZE VIDEO WHILE MAKING AUDIOPHILE Recordings. On Screen Video Indexing Software. IBM PC w/RCA video output required. \$6.99. R. Tong, 12518 Montrose Street, El Monte CA 91732

MONEY MAKING

G E N E R A T E Y O U R O W N

HIGH FIDELITY
Attn: M. Manasari
825 7th Avenue
N.Y., N.Y. 10019
212-887-8458
1-800-ABC-MAGS

B U S I N E S S H E R E

Name _____

Address _____

City _____ St. _____

Zip _____ Tel. _____

Payment: _____ Check

_____ M.O. _____ Visa _____

_____ Mastercharge _____

Card # _____

_____ exp. _____

run ad copy for the _____

issue: _____

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 "Postilion" 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).

① *Sequentia*. Klauss 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 sorghen 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

A D V E R T I S I N G I N D E X

Many advertisers will send you additional product literature free of charge. Write them in care of Dept. HF 7/89, unless otherwise noted, at the address below. If no address appears, literature is available only through dealers. Bold-face numbers by company names are page numbers for ads in this issue.

Audio Advisor (80)

225 Oakes SW
Grand Rapids, MI 49503
1-800-669-4434

Barcus Berry (15)

5500 Bolsa Ave., S-245
Huntington, CA 92649
1-800-233-8346

Cambridge Soundworks (10, 11)

154 California St.
Newton, MA 02158
1-800-252-4434

The DAT Store (5)

2624 Wilshire Blvd.
Santa Monica, CA 90403
(213) 828-6487

Electronic Wholesalers (69)

1160 Hamburg Tpk.
Wayne, NJ 07470
1-800-444-6300

High Voltage (61)

39 W. 32nd St.
New York, NY 10001
1-800-654-7787

Illinois Audio (59)

12 E. Delaware Place
Chicago, ILL 60611
1-800-621-8042

J & R Music World (66, 67)

23 Park Row
New York, NY 10038
(212) 732-8600

Maxell Corp. of America (Cov. 4)

22-08 Route 208
Fairlawn, NJ 07410
(201) 794-5900

Onkyo (Cov. 2, p. 1)

200 Williams Dr.
Ramsey, NJ 07446
(201) 825-7950

Pioneer Electronics (6, 7, 28, 29)

2265 E. 220th St.
Long Beach, CA 90810
(213) 835-6177

Reliable Video

933 Coney Island Ave.
Brooklyn, NY 11230
1-800-525-9922

Sherwood (9)

13845 Artesia Blvd.
Cerritos, CA 90701
(213) 926-6337

Wisconsin Discount Stereo (64)

2417 W. Badger Rd.
Madison, WI 53713
1-800-356-9514

Yamaha (Cov. 3)

6660 Orangethorpe Ave.
Buena Park, CA 90620
(714) 522-9105

(Continued from page 12)

nates all signal-degrading wiring, which can cause performance variations. The Belles 150 is warranted for three years. *Belles Research Corp., 1237 E. Main St., Rochester, N.Y. 14609.*

On the (8mm) Ball

If you want to catch those shots as day's light dims, take a look at Minolta's two new 8mm camcorders. Part of the Master Series-8 line, the models 81 and 80 (\$1,625 and \$1,455) are said to be capable of recording at light levels as low as four lux. The major difference between the two models is that the 81 features an 8x zoom lens (8.5 to 68mm, f/1.4), while the 80 has a 6x power zoom (9 to 54mm, f/1.4). Each lens also has a macro mode for close-up shots as near as 1 centimeter. Both cameras have most of today's popular features, including a high-speed electronic shutter to freeze fast action; an automatic fade control and flying erase heads for smooth scene transitions; and a negative/positive switch, enabling you to record in



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

negative color and brightness for special effects. Additionally, the camcorders provide an interval timer for time-lapse recording and a self-timer that lets you get in the picture. Focus, exposure, and white balance are all automatic. High-quality

audio is obtained by using an FM system.

These models can also be used as playback systems. Features that enhance this application include: visual search at five times normal speed to find a certain portion of the tape and a memory function that enables you to return to a user-specified point at any time. Power is supplied by one- or two-hour rechargeable battery packs, an AC adaptor, or a car-battery adapter. Power level is indicated by a bar graph in the viewfinder. *Minolta Corp., 101 Williams Dr., Ramsey, N.J. 07446.*

Low-Price Accessories

Hard-to-Find Audiophile LPs/CDs Get 'em while they last!

Proprius: Cantate Domino (cd/lp) 17.95
Jazz Pawn Shop (cd) 16.95 (2 lps) 34.95
Antiphone Blues (cd/lp) 17.95
3-Blind-Mice Jazz #1 & #2 (cd) 17.95
Mobile Fidelity LPs—Last Chance Sale!
Beatles: Sgt. Pepper, Hard Day's, Help!, Yellow Sub, Let it Be (lps) 17.95
Sinatra Collector's Set (16 lps) 299.95
Rolling Stones Set (11 lps) 299.95
EMI: Brit. Imports: Cat Stevens (lp) 14.99
Pink Floyd: Dark Side of Moon (lp) 14.99
Pink Floyd: The Wall (2 lps) 24.95
Chesky Jazz CDs: Jn. Frigo, Clark Terry, Phil Woods (cd) 14.98
Reference Recordings LPs/CDs Call
Sheffield Moscow Sessions (cd/lp) 39.95
Sheffield Kodo Drums (cd) 14.99
Wilson Audiophile Recordings Call

Everything for CD Players:

CD Stabilizer Rings: 15 w/locator 19.95
25 w/loc. 29.95 100 w/loc. 89.95
Monster Cable Sound Rings:
(12) 14.95 (15) 29.95 (50) 49.95
Monster Footers: New! Small 29.95
Reg (CD) 49.95 Large 99.95
Interconnects for CD Players Call
Magnavox CD Players:
CDB482 w/remote 149.95
CDB582 w/remote 199.95
CDB586 CD Changer 279.95
CDV485 CD/Video player 659.95

Powerstrips for Audio/Video w/ Isolated Line Filtering

Triplite IB-4-220, 220/240v 89.95
Triplite IB-6, 6 outlets, 110v 89.95
Triplite IB-8, 8 outlets, 110v 99.95
Triplite power Regulators w/ filtering:
LC-1200-220, 220v, 4 outlets 249.95
LC-1800, 6 outlets, 120v 299.00

Prices subject to change

Everything for Turntables:

Aphason auto. tonearm raiser 29.95
AR ES-1 turntable, armless 419.95
Audioquest Ruby cart., hi output 199.95
DB cartridge alignment protractor 24.50
Grado Cartridges: Grado ZTE+1 19.95
Grado Signature 8MZ, MCZ, TLZ, XTZ. Call
Electronic stylus cleaner 19.95
Record Doctor: vac-pwr record cleaning machine 120v 169.95 220v 189.95
LAST Record Products: #1 Cleaner 11.95
#2 Preservative 14.95
#4 Stylus Cleaner 7.95
#5 Stylus Treatment 16.95
Headshell wires: SME silver litz 22.95
Record brushes: AQ or Nitty Gritty 9.95
Record Cleaning Machine Solutions:
Nitty Gritty 1st. 6oz. 14.95 16oz 24.95
Turomat Fluid: 16 oz 14.95
Nitty Gritty Pur2 16oz 11.95 Gal 39.95
Record Mats: AQ Sorbothane Mat 29.95
SOTA Mat 129.95 Sumiko Acrylic 84.95
SOTA Reflex Clamp 129.95
Stylus Gauge: Shure Gauge 14.95
Sumiko: FB-1 MC demagnetizer 149.95
FB-1 220 volt 209.95
Sumiko Blue Point MC cartridge 95.00
Tip Toes for turntables: C3 for AR 4.95
C-17-VPI, C-37-Sota, C-10 Oracle 8.95
Turntable Stand: Lead Balloon 249.95
Turntable Wall Shelves: TT-1 109.95
Target PS-1, for large tables 149.95
VPI Record Cleaning Machines Call
Suction tubes for 16.5 & 17 19.95
VPI PLC: Power Line Conditioner Call

Target Equipment Racks from UK

TT3 3 shelves for gear, 33" tall 219.95
TT3RR record rack, 33" tall 245.00
PS3 3 shelves for large gear 275.00
TT5 5 shelves for gear, 33" tall 275.00
TT5T 5 shelves for gear, 40" tall 299.95
AIB floor stands for amplifiers 75.00
Target HJ British stands Call

Cables and Cable Accessories

Interconnect Cables: As-One, Cardas, FMS, Distech, Livewire, MIT, Monster, VandenHul Call
Custom longer length cables Call
Distech Powerbridge cables 8ft. 169.95
Speaker Cables: Aural, Cardas, FMS, Livewire, MIT, Monster, Tara Labs Space & Time, VandenHul Call
Banana Connectors: KingSize 8ga 9.95
Monster X-terminators (pr) 24.95
Spade Lugs: Monster (12ga) 95
Cardas/Rhodium/Gold Spades (8ga) 2.00
VandenHul 5ga, (4) 6.95 2ga (4) 13.95
Welder Solder: 1.5oz. 9.99 1 lb 39.95
WBT Silver Solder, 250g roll 29.95
Video Cables: MonsterVideo 1m 19.95
VandenHul D300 1m 24.95 2m 30.95
Tweek: Contact conditioner 14.95

Speaker Stands & Wall Brackets

Chicago Hercules Speaker Stands Call
Target "HS" Speaker Stands 175.00
ArcidQuadStand (old & new) 119.95
ArcidRigidRiser, adjusts 20-34" 119.95
SoundAnchors stands for VS IIC 219.95
BT-1 wall-brackets to hang spkrs 27.95

All Kinds of Other Accessories:

ASC Tube Trap room dampers Call
AQ Sorbothane Isolation Feet
Large (4) 34.95 Small (for CDs) (4) 19.95
Audiophile Books: Good Sound 12.95
David Manley, VTL Tube Book 10.00
Cramline contact clean/condition 15.95
dbx 200XG tape routing selector 99.95
Dust cover scratch remover 14.95
Sonex Acoustic Room Treatment
Sonex Jrs: 2'x2'x2' sheets (4) 49.95
Niles SPS-1 4 spkr selector 75.00
Niles HDS-6 6 spkr selector 175.00
Niles Audio/Video Switching Systems Call
Terk "Pi" FM Antenna 79.95
Vacuum Tubes: RAM/Gold/AeroPrem Call
VPI HW-5db. "Magic Brick" 39.95

Shipping Charges

UPS, Insured, 48 States
Accessories: One Item 3.95
Each Extra Item 1.25
*Turntables, Stands 12.95
*Electronics 8.95

We use UPS International to the Far East, W. Europe, New Zealand and Australia.

1-800-942-0220

Amex / Visa / Mastercard / Discover



audio
advisor, inc.

225 Oakes SW • Grand Rapids, MI • 49503
FAX: 616-451-0709 Service: 616-451-3868

Alpine Gets Ahead

Alpine has put its best tape head—previously found only on the \$600 model 7390—on its new \$350 model 7380 removable AM/FM/cassette head unit. The 7380 also features dual preamp outputs, 24 station presets, Dolby B, and negative-feedback tone controls. By combining the 7380 with the model 3522 30 watt-per-channel bridgeable stereo power amp for \$150, Alpine hopes to achieve its goal of offering high-performance car audio systems that don't break the bank. But if you want to be on the cutting edge of car audio and have the bucks, check out Alpine's model 7909 (\$1,200), a removable AM/FM/CD player that Alpine says is the first in the industry to offer eight-times oversampling, 18-bit processing, and dual D/A converters. What's more, the company says it is the first in-dash Compact Disc player to control a remote-mounted CD changer. Other features include Auto Memory tuner, 24 station presets, 3-inch CD capability (without adaptor), disc scan, and repeat. *Alpine, 19145 Gramercy Pl., Torrance, Calif. 90501.*

The most affordable way to add 100,000 square feet without a building permit.



\$699 suggested retail price

You're looking at the biggest home improvement you can make without lifting a hammer.

Yamaha's new DSP-100.

One of the few additions that can make a man's home actually sound like his castle.

Recreating sonic depth and realism, that up to now, could only be experienced by attending concerts or screenings in the world's finest music halls and movie theaters.

The very same acoustic sampling that made the legendary Yamaha DSP-3000 legendary.

An important point, especially when you consider you can bring



With Yamaha's 30-key wireless remote you've got the best listening environments the world has to offer, right in the palm of your hand.

home the new DSP-100 for less than half the price.

It features soundfields from 20 actual performing spaces — including famous concert halls, jazz clubs, movie theaters — there's even a setting for Dolby® Surround.

And like our top-of-the-line DSP-3000, the DSP-100 lets you adjust main and presence speaker levels with a single master volume control.

There's even a built-in test tone generator that helps you balance speaker levels manually or by remote control.

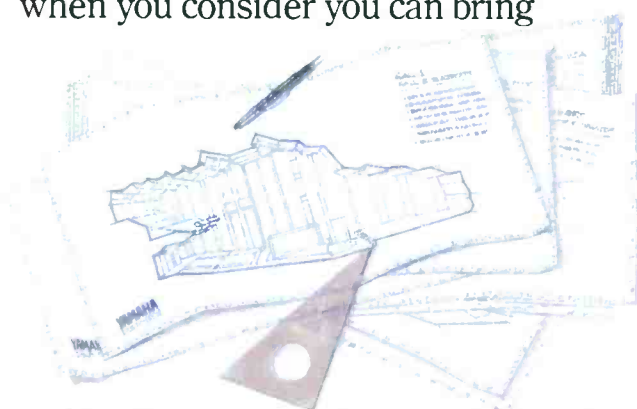
As well as superimposition — a remarkably useful feature that displays on your video screen all the settings and all the changes you make to each particular soundfield.

Stop by your local Yamaha home improvement center for a demonstration of the remarkable DSP-100 today.

And discover how to put on a 100,000 square foot room addition.

Without winding up in the poor house.

YAMAHA®



The DSP-100 features the acoustic blueprints of 20 of the world's finest clubs, concert halls and theaters. All of which you can add to your home for a song.



COMPROMISING WITH YOUR TAPE IS LIKE COMPROMISING WITH ANY OTHER COMPONENT IN YOUR SYSTEM.

Even the most advanced system is only as good as the tape you put into it. That's why Maxell has created XLII-S.

Its unique Epitaxial formula combines gammaferric oxide and cobalt ferrite for superior response at all frequency levels. The resulting superfine particles offer unprecedented clarity and brilliance. And make XLII-S the perfect tape for recording your most demanding sources.

So match your tape to the other components in your system and use only XLII-S from Maxell. Anything less is just kid stuff.



maxell
The Tape That Delivers
Higher Performance.