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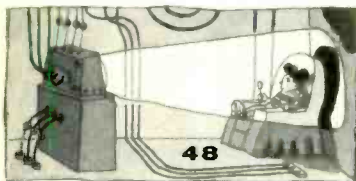


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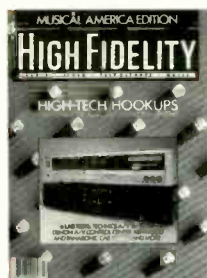
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# HIGH FIDELITY

Volume 36 Number 3 March 1986



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Cover Design: Michael D. Delevante and Robert V. Delevante, Jr.

Cover Photos: David Hedrich

On the Cover: Technics SA 460 audio-video receiver (top), Denon AVC-500 audio-video control center

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## PUBLISHER'S PAGE

by William Tynan



### *The Government Connection*

Late last year, while President Reagan and Soviet General Secretary Gorbachev were meeting in Geneva to discuss global issues, a summit on issues of import to the music world was taking place in Moscow. Joel W. Spiegelman, a professor of composition at Sarah Lawrence College, was meeting with Tikhon Khrennikov, who—as a deputy to the Supreme Soviet, as a member of the Central Committee of the Communist party, and, last but not least, as a composer and pianist and as chairman of the Union of Soviet Composers for the past 38 years—has actively shaped his country's musical policy. In the exclusive, wide-ranging interview featured in our CLASSICAL MUSIC section this month, seventy-two-year-old Khrennikov gives his account of the censuring of Shostakovich and Prokofiev under Stalin, opines about the trends being followed by the Soviet Union's leading composers, and reveals himself to be an affable, energetic musician who still has the strength and skill to perform his own piano concertos in public. As he tells Spiegelman in "The Czar of Soviet Music," "A good Soviet composer can create a stir in any part of the globe."

No matter where you are in the world, the government seems to have a hand in communications. In the United States, the Federal Communications Commission is one such body, and its actions and inactions have profoundly affected what can and cannot be communicated over the air. Two specific cases are examined this month. In "Happy Hookups," Robert Angus investigates what happened when the FCC stepped in and shut the door on some innovative "high-tech hookup" equipment. As Angus recounts it, the wireless devices—actually miniature TV transmitters—were prospering until a manufacturer and an inventor asked the FCC to issue production and operation guidelines. Leslie B. Tyler, in "Coming to You in Stereo," illuminates the long and twisted trail that finally led to the adoption of a single broadcasting standard for multichannel television sound. Tyler focuses on how a relatively simple concept can escalate into a project involving the government and dozens of the world's top electronics experts, all to ensure the choice of the best technology possible.

Also in this issue, Technical Editor David Ranada contemplates some as-yet-unrealized goals for Compact Disc players, and our technical staff puts six more components—including two high-tech car stereo units—through their paces. Meanwhile, in BACKBEAT's "Country's Future Days," John Morthland provides background on great artists such as Floyd Tillman, Roy Acuff, and Hank Williams, highlighting significant reissues of their work in the context of an increasingly commercialized country music market.

Next month, we will be presenting our annual spring roundup of the hundreds of new audio and video products introduced at the recent Winter Consumer Electronics Show.

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1330 Avenue of the Americas, New York, N.Y. 10019

HIGH FIDELITY and HIGH FIDELITY/MUSICAL AMERICA are published monthly by ABC Consumer Magazines, Inc., a division of ABC Publishing, Inc., and a subsidiary of American Broadcasting Companies, Inc. © 1986 ABC Consumer Magazines, Inc. Member, Audit Bureau of Circulations. Indexed in Reader's Guide to Periodical Literature. Current and back copies of HIGH FIDELITY and HIGH FIDELITY/MUSICAL AMERICA 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 7th Ave., 8th Floor, New York, N.Y. 10019. Tel: (212) 285-8360. Richard J. Marino, Group Advertising Director; Michael H. Goldberg, Eastern Advertising Manager; James R. McCallum, Record Advertising Manager; Mary McCormick, Network Advertising Manager; Candice Leyden, Classified Advertising Manager; Angelo Puleo, Director of Production; Janet Cermak, Advertising Production Manager.  
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**Editorial correspondence** should be addressed to The Editor, HIGH FIDELITY, 825 7th 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.



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## LETTERS

### US VS. THEM?

In "DAT Standard Announced" ["Currents," October], David Ranada writes that its provision for a playback-only 44.1-kHz sampling rate will make straight digital-to-digital copying of Compact Discs impossible, while enabling record companies to make prerecorded RDAT cassettes directly from their CD-format master tapes. I can't, but they can?

**Lawrence W. McFarland**  
Carmel, N.Y.

*Precisely. The record companies will have special duplicating machines that can record at 44.1 kHz. Consumer digital cassette decks will be able to play back these tapes, but they will not be able to record at 44.1 kHz. This restriction is intended to deter piracy without making it difficult to turn out legitimate prerecorded cassettes. Tapes that you record yourself will be at a 48-kHz sampling rate. The correct playback sampling frequency will be chosen automatically by the deck.—Ed.*

### YOUR SERVICE

In response to the letter from Ted and Sylvia Blishak of Menlo Park, Calif. [November]: Their problem with service would not exist if they purchased their equipment from independent dealers with repair shops and if they stuck with brands that are concerned with service. We sell Sylvania and Zenith products and provide loaners to people who bought from us. We also have little trouble getting parts for RCA, Philco, and Quasar components.

It is unfortunate that most electronics companies take the attitude that nothing ever goes wrong with their products.

**Gary L. Johnson**  
Clarkfield Radio & TV  
Clarkfield, Minn.

### BBE UPDATE

We want to inform you of a couple of changes that have occurred since your January test report on the Barcus-Berry BBE-2002R signal processor. First is a 50-percent reduction in the suggested retail price, from

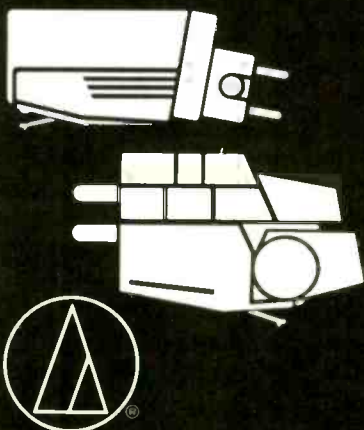
\$499 to \$250. The other is in the status of our patents on the BBE process, which the report describes as pending: We are happy to say that all 42 claims have now been granted.

**Jeanne Vasta**  
Communications Director  
Barcus-Berry Electronics, Inc.  
Huntington Beach, Calif.

### DUMB QUESTIONS

Every so often you get a letter in "Cross-talk" that goes something like this: "I recently played a Dolby tape and neglected to engage the Dolby system on my deck. Have I ruined my machine or the tape?" Or: "While recording on a ferric tape, I accidentally set my deck's selector switch for chrome. On playback, the sound was noticeably dulled. Have I ruined my deck or the tape?" I think you get the idea. Anyway, my point is this: Dolby noise reduction and chrome tape have been around for 15 years, and if these people haven't learned how to use them by now, they should have their tape decks confiscated. It's difficult for me to understand why

# The last word in phono cartridges



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anyone so ignorant in this regard would even bother to subscribe to an audio magazine. They certainly aren't reading it, for if they were, they wouldn't ask such basic questions. Nor can I understand why you bother to print them: Your regular readers already know the answers.

**Francis Pivar**  
New Kensington, Pa.

*The reason a person who doesn't know the answers to such questions subscribes to an audio magazine is to find them out. We all have to start somewhere, and there are few (almost no) other sources of solid information. We try to go over the fundamentals periodically just to give new readers a leg up on what can be a complex and intimidating subject. The trick is to do that while providing an adequate flow of new information for advanced audiophiles and videophiles. We hope we're succeeding on both counts.—Ed.*

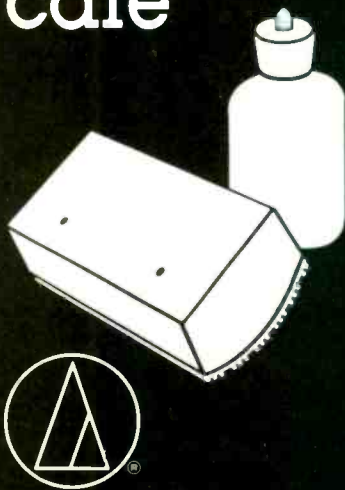
## CDs ARE FOR KIDS, TOO

I think we have just passed another milestone in audio (and particularly the Compact Disc). Today I went down to do some post-

holiday browsing through the CD selection at my local record store, anticipating an undisturbed, pensive search in my own quiet, cloistered nook of the shop. But something was obviously amiss. As I reached toward the S section, I noticed an unusual number of hands moving about on either side. I looked up and gasped in horror: Kids! Dozens of them, all flocking around the CD table. They had to be high-school age or younger, and they fought tooth and claw for Bruce Springsteen and Madonna. I reeled in confusion.

Then it hit me: Christmas! Millions of

# The last word in record care



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kids across the land must have been offered CD players by parents and other relatives in a desperate bid for appeasement. Now I must share my hi-fi pastures with the plebeians, the members of society once confined to the LP and tape sections.

Looking back, I smile on those simpler times; deep down, I had known this had to come someday. The CD industry will continue to steam forward to ultimate market domination. Reservations aside, I wish it well. After all, democracy is universal.

**Barclay L. Boody**  
Little Silver, N.J.

## A PREFERABLE "PIERROT"?

Your reviewer Paul Moor seems puzzled because Schoenberg's *Pierrot lunaire* has not yet caught on with the public [November]. May I suggest the following substitute: *Zwölf Gedichte aus Pierrot lunaire*, by Max Kowalski (his Opus 4), published by Simrock in 1913. There are no problems. I wonder why it didn't catch on.

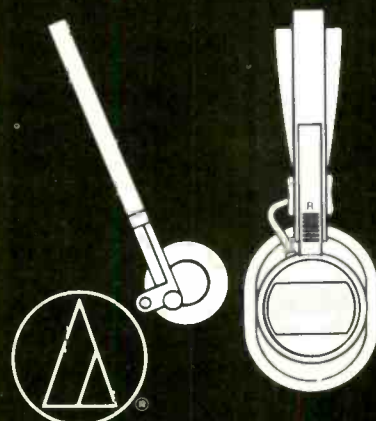
**Eldon Rathburn**  
Ottawa, Ontario, Canada

## NOTES ON "DON CARLOS"

In your January issue, Harry Halbreich refers to the new Deutsche Grammophon recording of Verdi's *Don Carlos* as the first recording in French. Not so, although it may be the first on a major label. I refer you to Voce 23, a four-record set with John Matheson conducting the BBC Concert Orchestra, from a 1973 performance. True, this does not come with a libretto, but it does have a synopsis and a discussion of "versions," and the cuts are restored in the opera itself, not in an appendix. For a supplier, I refer you to Legendary Recordings, P.O. Box 104, Ansonia Station, New York, N.Y. 10023.

*(Continued on page 6)*

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(Continued from page 5)

When can we look forward to major-label, French-language recordings of Verdi's *Les Vêpres Siciliennes* (available on Voce 56, with the BBC Concert Orchestra, Mario Rossi conducting) and *Jérusalem* (BJRS 150-3, a 1963 recording from the Teatro La Fenice, Gianandrea Gavazzeni conducting)?

**Charles N. Hubbell**

Kenmore, N.Y.

In his review of the new recording of Verdi's *Don Carlos*, Harry Halbreich notes that "Carlo Bergonzi's Carlo [in Sir Georg Solti's 1965 recording of the Italian-translation *Don Carlo*] has not been surpassed." Such a view is not surprising: Mr. Bergonzi is as much a symbol of Verdi's music as are Maria Callas, Arturo Toscanini, and, most recently, James Levine. From his early-1950s recording of *Simon Boccanegra* to the recently released *Oberto* (Verdi's first opera), Bergonzi's style has been exemplary and bracing, and his fine voice has remained intact.

A wonderful three-disc set of Bergonzi singing all of Verdi's tenor arias was released on the Philips label in 1976. Each aria, from *Oberto* to *Falstaff*, is sung with a sense of phrasing and line that simply eludes Plácido Domingo and Luciano Pavarotti. Sadly, those fine recordings were deleted, but I hope they will be reinstated soon.

Bergonzi's riveting delivery of two arias from *Otello* on the Philips set would certainly whet my appetite for an "ideal-cast" recording of *Otello* featuring him, Johanna Meier, and Piero Cappuccilli, conducted by Lamberto Gardelli. Verdi's greatest opera with the greatest Verdi tenor! For now, I will revel in the titanic proportions of some mythical recording of *Otello* with Bergonzi, Callas, Lawrence Tibbett, and Toscanini!

**Thomas R. Wilson**

Westmont, Ill.

### ONE MAN'S "TRASH" . . .

I have been a subscriber to HIGH FIDELITY since its first year and believe that you have made significant contributions to the causes of good music and its faithful reproduction. But I write to disagree strongly with reviewer Paul Moor's description of recently recorded Paganini works for violin and orchestra as "sheer trash" [June 1985]. This is beautiful music impeccably played. My opinion is shared by all who have heard my cassettes; several went straightaway to purchase their own copies.

How refreshing in an age when reviewers praise contemporary music—music with



no melodies and with dissonant harmonies—to hear works with memorable melodies and pleasing harmonies.

**Grady L. Hallman**  
Houston, Texas

#### LEOPOLD LOST

Not long before the advent of the LP, Leopold Stokowski recorded Strauss's *Death and Transfiguration* on electrical transcription. Although I cannot remember the orchestra or the label (probably RCA), memory insists that it was the best reading of the work I have ever heard. I do not believe it was ever transferred to LP, though I could be wrong. Would you have any information on the availability of this performance?

**Joseph Gale**  
Millburn, N.J.

*Clough and Cuning's The World's Encyclopedia of Recorded Music lists several pre-LP recordings of Death and Transfiguration by Leopold Stokowski: one with the Philadelphia Orchestra (Victor 8288/90, set M 217), one with the All American Orchestra (Columbia 11728/30D, set M 492), and one with the New York City Symphony (Victor 11-8826/8, set M 1006). Chances are, it's the last of these you have in mind, a splendid performance that was reissued on a Camden LP (backed by Stravinsky's The Song of the Nightingale performed by the Cincinnati Symphony and Eugene Goossens) that is sadly long out of print. For further help, contact the Leopold Stokowski Society of America, c/o Robert M. Stumpf II, 870 N. Meadows Ct., Apt. E, Columbus, Ohio 43229.—Ed.*

#### IN A FUNK

Ho!!! Your review of George Clinton's *Some of My Best Jokes Are Friends* [November] is about as accurate as a state policeman's radar gun. You clocked this album at 110 mph when it's only doing 50. At first these fake-ateers had me fooled on "Double Oh Oh." Backed by a solid groove, this "Atomic Dog" came out growling and snarling on its leash, which Clinton seemed to be holding very tight. I figured, "Hey, he's just getting warmed up." Boy, was I wrong. The rest is a rehash of Funkadelic's *America Eats Its Young* and *Hard Core Jollies* that barely makes a ripple in Clinton's ocean of funk. Not counting his work with splinter groups, this album is one of his worst in ten years.

These may seem like harsh words coming from a Funkateer, but I know what I'm talking about. Bootsy! Where were you

when George needed you? Obviously the man's a musical genius, but even geniuses drift off course occasionally.

**Willie Swanson**  
Westville, N.J.

#### A LIVE ONE

If all record producers adopted the position of Steven Epstein [January]—which appears to be not to bother with live recordings because they don't always generate more excitement than studio sessions—we would be deprived of much magic in listening experiences.

It is interesting to note that in a recent interview, Claudio Abbado commented on the failure of studio recordings to elicit those unpredictable but priceless moments when a performance catches fire. It should also be noted that an article in your own magazine, about Takashi Asahina and other "Home-spun Japanese Talent" ["Notes from Underground," January], mentioned that the Japanese treasure a live recording of the Bruckner Seventh.

I have been made freshly aware of what a great difference there can be between studio and live performances in opera by playing, one after another, studio recordings of Verdi's *Il Trovatore* (with Jussi Björling and

Zinka Milanov) and *La Traviata* (with Plácido Domingo and Ileana Cotrubas) and a live recording of *Rigoletto* made in Mexico City in 1952 (with Maria Callas and Giuseppe Di Stefano). The studio performances have everything polished and right in place, but they sound very dull compared with the 1952 live opera.

In a studio session, a segment of a composition may be repeated many times, killing the spontaneity of the performers. Sections of an opera may even be recorded out of sequence to take advantage of the limited time available to a star. Consequently, there is no involvement in the sweep of the complete performance.

If perfection according to the score is what "objective" record-making is headed for, we might as well use voice and instrument synthesizers instead of human musicians. It will necessitate only one recording of each work—very efficient, economical, and deadly.

**Frederick S. Lightfoot**  
Greenport, N.Y.

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*Letters should be addressed to The Editor, HIGH FIDELITY, 825 7th Ave., New York, N.Y. 10019. All letters are subject to editing for brevity and clarity.*

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# Mostly Mobile Audio

## MULTIFEATURED SOUNDSTREAM TUNER/DECK

Four interesting features together set the Soundstream TC-308 tuner/cassette deck apart from most of its competition. First is a tape play-trim circuit meant to reduce Dolby mistracking. Controlled by the lower front-panel knob, it enables the user to adjust high-frequency playback equalization over a range of  $\pm 3$  dB at 10 kHz and  $\pm 6$  dB at 20 kHz to compensate for azimuth misalignments, partial tape demagnetization, over- or underbiased recordings, or slightly incorrect record equalization, all of which could otherwise produce erroneous decoding by the unit's Dolby B and Dolby C circuits.

Second, the tuner (designed by Larry Schotz) is said to produce less noise during poor reception conditions. Depending on the quality of the incoming FM signal,

channel blend and a high-cut filter are activated as needed. If the signal is very bad, a soft-muting circuit reduces volume gradually. The tuner incorporates two automatic gain-control (AGC) stages that are claimed to dramatically reduce "picket fencing" and mutual station interference or intermodulation in areas subject to high signal strengths.

Third, the preamp section has a CD-player input, activated with a push of the tape-eject button. The last special feature is an antitheft quick-release chassis. The TC-308, which conforms to DIN dimensions, slides into a permanently mounted housing and can be easily removed when necessary for safekeeping. A \$20 quick-release handlebar, the SH-30 (shown installed), eases that task further.

The TC-308's autoreverse tape deck includes a DC servo motor with low torque

# THE JENSEN®

## JENSEN'S ENTIRE LINE OF CLASSIC CAR STEREO SPEAKERS WILL

Model for model, size for size, and dollar for dollar, we have designed Classic speakers to deliver more volume, smoother bass response, and greater dynamic range than ever before.

**PROVE IT TO YOURSELF!** Visit your nearest Jensen® dealer. Set the display

amplifier at any level you choose. Cut in any Jensen Classic speaker, then switch over to any comparable competitive speaker. Now switch back and forth to compare the two. In every model category the Jensen Classic speaker will stand out right there on the floor!

Most car stereo speakers have pole mounts. Jensen Classic speakers have the unitized array. This improved method of mounting the midrange and tweeter gives the woofer a larger working area, and better bass response than possible with other systems. The unitized array



**JTX-300 6" x 9" TRIAX® 3-Way Speakers**

Power Handling: 150 Watts Peak, 80 Watts Continuous • Useable Frequency Response: 40 Hz–25 kHz • Sensitivity (1 Watt @ 1 Meter): 92 dB SPL • Impedance: 4 Ohm • Woofer: 6" x 9" Cone • Midrange: 2 1/2" Cone • Tweeter: 2" Cone • Mounting Depth: 4"



**JTX-365 6 1/2" TRIAX® 3-Way Speakers**

Power Handling: 120 Watts Peak, 60 Watts Continuous • Useable Frequency Response: 58 Hz–20 kHz • Sensitivity (1 Watt @ 1 Meter): 91 dB SPL • Impedance: 4 Ohm • Woofer: 6 1/2" Cone • Midrange: 2" Cone • Tweeter: 1 1/2" Cone • Mounting Depth: 1 1/2"



**JFX-140 4" Dual Cone Speakers**

Power Handling: 60 Watts Peak, 30 Watts Continuous • Useable Frequency Response: 70 Hz–20 kHz • Sensitivity (1 Watt @ 1 Meter): 88 dB SPL • Impedance: 4 Ohm • Woofer: 4" Cone • Mounting Depth: 1 1/2"

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fluctuation, a laminated sendust-core head with a gap width of 1.2 micrometers, motor-assisted tape loading, key-off cassette ejection, and 120-microsecond/70-microsecond playback EQ switching. Frequency response is given as 30 Hz to 18 kHz,  $\pm 3$  dB; wow and flutter, as 0.1 percent WRMS. FM sensitivity for 50-dB quieting in mono is said to be 20 dBf. Dimensions are  $7\frac{1}{4}$  by  $2\frac{1}{4}$  by 7 inches. Price is \$580. Details can be obtained from Soundstream Technologies, 2907 W. 182nd St., Redondo Beach, Calif. 90278.

### THREE AUDIOVOX AMPS



Part of an entirely new line of Hi-Comp Series products, these three Audiovox power amplifiers have pin-plug inputs, LED power-on indicators, and variable input level controls. The top-of-the-line unit, the HCB-

865 (right), has a power rating of 65 watts ( $18\frac{1}{4}$  dBW) per channel at 0.5 percent total harmonic distortion (THD). It has a 30-amp fuseable power line and can be bridged to provide 130 watts in mono. Dimensions are  $2\frac{3}{4}$  by  $6\frac{3}{4}$  by  $11\frac{3}{4}$  inches. Price is \$200. The HCB-840 (left), rated at 40 watts (16 dBW) per channel for 0.5 percent THD, and the HCB-818 (middle), rated at 14 watts ( $11\frac{1}{2}$  dBW) per channel at 1 percent THD, have Molex plug-in wiring harnesses for quick upgrades without rewiring. The former measures  $2\frac{3}{4}$  by  $6\frac{3}{4}$  by  $7\frac{1}{2}$  inches; the latter,  $1\frac{1}{2}$  by 4 by  $4\frac{3}{4}$  inches. The HCB-840 can be bridged for 80-watt mono operation. Its price is \$150, and the HCB-818 goes for \$60. More information is available from Audiovox Corp., 150 Marcus Blvd., Hauppauge, N.Y. 11788.

### POUNDERS FROM PYLE

The first model in the Pyle Pounder Series of car stereo speakers, the P-200, is specifically intended for hatchbacks and fastbacks, but the company says that it also is excellent for use in off-road vehicles and in the backs of cargo vans. The computer-designed stereo enclosure houses two  $6\frac{1}{2}$ -



PYLE P-200 STEREO CAR SPEAKER

inch polypropylene woofers and a shared 10-inch drone cone that radiates through a loaded slot at the bottom of the unit. The two tweeters are cooled with magnetic fluid. The glued and multiple-doweled wooden enclosure has a nonmarring black finish and a snap-on cloth grille panel. Sensitivity is given as 92 dB SPL (sound pressure level) at one meter with a 1-watt (0-dBW) input. Price is \$290. For further details, contact Pyle Industries, Inc., P.O. Box 620, Huntington, Ind. 46750.

### INFINITY REFERENCE AMP

Infinity's MRA-90, second in the company's Mobile Reference Amplifier Series, is said to fit in a wide variety of car interiors, including foreign and domestic compacts, sports cars, and other vehicles in which

# CHALLENGE:

## TAKE ON ANY OTHER BRAND IN HEAD TO HEAD COMPETITION!

construction provides up to 48% more speaker area than some pole mount speakers fitting in the same installation. The result is more bass, more overall performance superiority—more sound for the dollar. The Jensen Classic car stereo speakers deliver the power

handling and performance to make them digitally ready for compact disc players.

Take The Jensen challenge with the entire Classic line. You will hear the difference a Jensen speaker makes, loud and clear, with your own ears. It's no longer a matter of which brand, but which Jensen.



**JENSEN**<sup>®</sup>  
When you want it all



JCX-265 6 $\frac{1}{2}$ " COAX 2-Way Speakers

Power Handling: 90 Watts Peak, 45 Watts Continuous • Useable Frequency Response: 60 Hz–20 kHz • Sensitivity (1 Watt @ 1 Meter): 90 dB SPL • Impedance: 4 Ohm • Woofer: 6 $\frac{1}{2}$ " Cone • Tweeter: 2" Cone • Mounting Depth: 1 $\frac{1}{4}$ "



JCX-200 6" x 9" COAX 2-Way Speakers

Power Handling: 150 Watts Peak, 80 Watts Continuous • Useable Frequency Response: 40 Hz–22 kHz • Sensitivity (1 Watt @ 1 Meter): 91 dB SPL • Impedance: 4 Ohm • Woofer: 6" x 9" Cone • Tweeter: 2 $\frac{1}{2}$ " Cone • Mounting Depth: 4"



JCX-245 4 $\frac{1}{2}$ " COAX 2-Way Convertible Speakers

Power Handling: 70 Watts Peak, 35 Watts Continuous • Useable Frequency Response: Flush Installation 65 Hz–20 kHz, Surface Installation 185 Hz–20 kHz • Sensitivity (1 Watt @ 1 Meter): 89 dB SPL • Impedance: 4 Ohm • Woofer: 4 $\frac{1}{2}$ " Cone • Tweeter: 2" Cone • Mounting Depth (Flush): 1 $\frac{1}{4}$ "

## LEADING, BY FOLLOWING THROUGH

*The professional, alert with anticipation, is ready to meet the challenge, anywhere on the court, anytime. Then to respond quickly, with a fluid full-swing—from the draw to the follow through...the apparently effortless movement that is the winner's edge.*

*In cassette decks, the principle's the same—if high fidelity sound reproduction is to be achieved.*

*That winning edge is in every Harman Kardon cassette deck. It's called Ultrawideband Frequency Response—the ability to react smoothly and quickly through the total range of human hearing (from 20Hz to 20kHz  $\pm$  3dB). From the most inexpensive to the most sophisticated, every Harman Kardon cassette deck delivers this level of performance, with any tape formulation.*

*Other manufacturers simply don't follow through the entire range and therefore miss many of the hard to reach notes.*

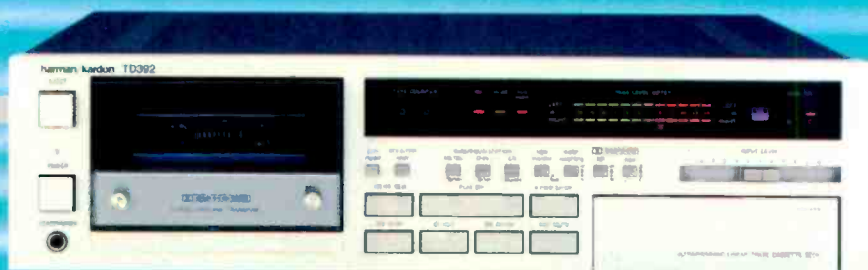
*Harman Kardon cassette decks expect the unexpected, anticipate the highs and and lows...to accurately reproduce all of the music.*

*In meeting the challenge of high fidelity, every Harman Kardon cassette deck shows the seemingly effortless superiority needed to take the title—every time.*



Shown is the new TD392 Cassette Deck featuring 3 heads, Dolby HX Professional,\* Dolby B\* and C,\* Meter Weighting, Auto Repeat, Output Level Control and Solenoid Operation.

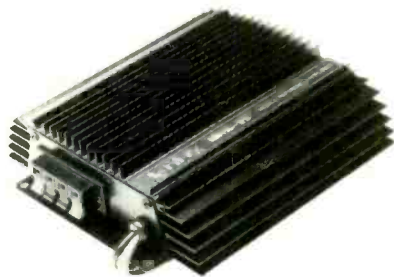
\* Dolby is a registered trademark of Dolby Laboratories, Inc.



# harman / kardon

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A Harman International Company

space is at a premium. The unit is similar to the more powerful MRA-150 in its use of only moderate amounts of negative feedback and a tightly regulated, pulse-



INFINITY'S MRA-90 45-WATT POWER AMP

width-modulation power supply. The MRA-90 also employs a quasi-complementary output stage, which, the manufacturer claims, is an optimally balanced circuit that eliminates the harsh, metallic tonal quality it says is characteristic of many car audio systems. A protection circuit shuts the amp down during extreme overload conditions without limiting output current during normal operation.

Output power is specified in two ways: as 45 watts (16½ dBW) per channel into 4 ohms at less than 1 percent THD at 1 kHz and as 35 watts (15½ dBW) per channel into 4 ohms at less than 0.25 percent THD from 20 Hz to 20 kHz. Frequency response is specified as +0, -3 dB from 2 Hz to 100 kHz. Sensitivity is adjustable from a minimum of 326 millivolts. Signal-to-noise (S/N) ratio is given as 100 dB A-weighted below 45 watts. Damping factor is 25 from 20 Hz to 20 kHz, and input impedance is 15 kilohms at maximum gain. The MRA-90 measures 2¼ by 7½ by 8½ inches and weighs four pounds. Its price is \$199. Contact Infinity Systems, Inc., 9409 Owensmouth Ave., Chatsworth, Calif. 91311.

## SONY'S COUNTRY-SPECIFIC SPEAKERS



Sony's Automotive Entertainment Division has introduced two car loudspeakers, one tailored to the mounting requirements of foreign cars and one with dimensions more suitable for American cars. A third model is billed as "universal." The two-way XS-462 (pictured) has coaxially mounted drivers and can be installed as an

exact dimensional replacement in such imports as Mercedes Benz, BMW, and Volkswagen. Only 1¾ inches deep (1½ with supplied spacer), the 4-by-6-inch speaker mounts flush in a door, rear deck, or kick panel. The grille assemblies are designed to match European car interiors, and an integral water shield protects the speaker components from moisture. The suggested price range for the XS-462 is \$90-\$100. The universal model (the XS-461, \$80-\$90) and the U.S. model (the XS-460, \$55-\$60) can be mounted in the dashboard to replace factory-installed speakers, as well as in door panels or in the rear deck. Write to Sony Consumer Products Co., Sony Dr., Park Ridge, N.J. 07656.

## TWO JENSEN HEAD UNITS



TOP-OF-THE-LINE JENSEN JXL-55



JENSEN JXL-45

International Jensen has two stereo receiver/deck systems designed to accommodate portable or permanently installed car Compact Disc players. The JXL-45 and top-of-the-line JXL-55 have audio inputs enabling easy connection of a CD player, and an inexpensive adapter providing more convenient dashboard access to the CD input jacks is available. A front-panel pushbutton switches in the CD player. The units' tuner sections feature digital-synthesis tuning and Automatic Program Control to optimize reception. The APC system is said to eliminate station-fading and to significantly reduce static and "noise blasts" caused by rapidly changing reception conditions. Each model provides six FM and six AM station presets. Permalloy heads are used in the autoreverse cassette transports. The JXL-55 adds Dolby B noise reduction and soft-touch transport controls. Both systems have separate bass and treble controls as well as separate preamp outputs. Jensen describes the frequency response, distortion, and noise characteristics of the units as "meeting or exceeding" the specs of com-

*(Continued on page 15)*

# Take A Musical Stand!

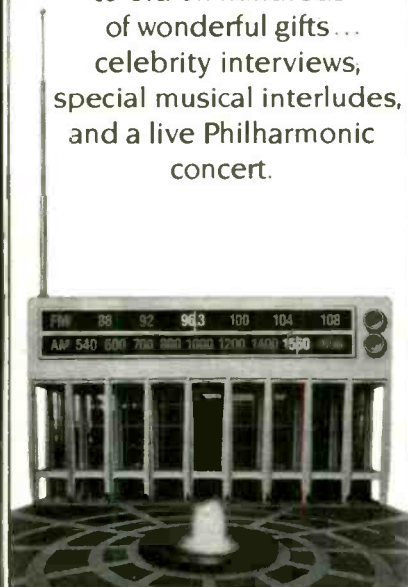
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**THERE'S NEVER BEEN A BETTER HOME MONITOR.**

With the introduction of the Pioneer® SD-25A monitor/receiver, many of the classic, previously unsolved problems of video image reproduction have suddenly disappeared.

400 horizontal lines and 450 vertical lines of video resolution.

**BOTH A TINTED FACEPLATE AND A TINTED CRT.**

Some manufacturers tint their faceplate to increase contrast. Others tint the front panel on their CRT. On the Pioneer

**ALL MONITORS ARE BETTER THAN TELEVISIONS. BUT SOME MONITORS ARE BETTER THAN OTHERS.**

You merely have to see it side-by-side with other sets, and the difference is immediately obvious to your eyes. Since we can't offer you that comparison on the printed page, the facts will have to suffice.

**A UNIQUE RED PHOSPHOR CRT.**

Red has historically been a particularly difficult color for television to realize well. With the introduction of Pioneer's proprietary Red Phosphor CRT, red achieves a color accuracy never before possible. Because it is not accomplished at the expense of other colors. Simply put, at last true red can exist in the video company of true green.

**AN EXCEPTIONAL BANDWIDTH OF 5.0 MHZ.**

Today we hear much of comb filters. The presence of one, however, does not assure exceptional detail. Great resolution requires a comb filter that delivers wide video bandwidth. The Pioneer comb filter produces a remarkable luminance bandwidth of 5.0 MHz. Which in turn results in

SD-25A, we dramatically enhance contrast by tinting both. Every bit as important, a highly regulated switching power supply and black-level stabilizer create a dramatically wider video-dynamic range.

**MORE DETAIL, LESS DISTORTION.**

A unique velocity modulation circuit assures far better transient response. And a high-quality deflection yoke combined with a highly regulated power supply deliver exceptional geometric linearity.

In all, the edges are crisper, the shapes truer, the depth-of-field greater than you've probably ever seen in video before.

**AUDIO THAT'S IN A LEAGUE WITH THE VIDEO.**

As you would expect with a monitor/receiver of this quality, the audio is quite accomplished. A robust power supply produces a stereo/audio output 3 times that of conventional television. But what may be particularly meaningful to many of you is that there are 5 separate audio outputs that allow it to become part of the most

sophisticated hi-fi system. There's a fixed output for recording; a Surround Sound output; and for your hi-fi there's a fixed output, a variable output for remote volume control, and there's even a separate sub-woofer output.

**IT'S MORE THAN A MONITOR.  
IT'S AN EXPANDABLE RECEIVER.**

Using a series of modules that are loaded into a port at the front of the set, the SD-25A is built to grow and improve with video's ever-changing technology.

A stereo TV tuner pack with built-in MTS decoder that's 139-channel cable capable, delivers the best of both cable and broadcast TV. (There are even 2 separate RF inputs.)

And there's a video-enhancer pack that increases the quality of transfers onto your VCR; an RGB control module; there's even a sing-along "Karaoke" module.

**A REMOTE THAT  
EVEN CONTROLS  
LASERDISC™**

Given a monitor of this resolution and detail, it's not surprising that we've provided for the source that delivers the greatest resolution and detail: LaserDisc. Pioneer LaserDisc can be operated by the remote control, as can the Pioneer Super Beta Hi-Fi and 8 mm PCM VCRs.

**YOU SIMPLY HAVE TO SEE IT.**

Now that you understand what makes the Pioneer SD-25A perform so well, you should see it perform. Your eyes will understand instantly. It's the not-so-subtle difference between a monitor and a great monitor.

LaserDisc brand videodisc player is a trademark of Pioneer Electronics Corp.  
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 **PIONEER®**

Video for those who really care about audio.



# What do Beethoven's Ninth, the destruction of the Death Star, Mozart's laugh and rock video's latest thriller have in common?

Uncommon sounds. Sounds that make exceptional demands on your audio system. Because from the crescendo of a massed chorale to the detonation of proton torpedos, the sounds of modern entertainment reward audio high-performance as never before. And nothing performs like Yamaha.

Yamaha's sophisticated new R-9 receiver is designed to make the most of today's home entertainment possibilities. With seven audio and three video hookups, the R-9 can serve as the control panel for your entire home audio/video system. And because it has a separates-quality 125-watt-per-channel\* amplifier with Auto Class A Power amplification, it provides the high power and wide dynamic range that add a whole new dimension to your home entertainment experience.

Now you can hear digital recordings and compact discs reproduced with the full clarity and resonance demanded by serious audiophiles. Experience the high-decibel impact of the sound effects that make your

favorite films special. And do it through a receiver so advanced it uses discrete circuitry like that found in Yamaha's finest separate components.

The R-9's AM/FM stereo tuner features digital tuning with a unique 5-digit capability that allows you to fine-tune in increments of 0.01 MHz (FM).

This is particularly helpful in obtaining maximum signal quality when tuning relatively weak stations interfered with by stronger adjacent stations.

Combined with our new Computer Servo Lock Tuning System, it gives you the best of both digital and analog tuning capabilities.

The R-9 includes a multi-function infrared remote control. And it is just one in a complete line of advanced Yamaha receivers.

Now that's entertainment.

\*125 watts RMS per channel, both channels driven into 8 ohms, from 20 to 20,000 Hz, at no more than 0.015% Total Harmonic Distortion.  
Yamaha Electronics Corporation, USA, P.O. Box 6660, Buena Park, CA 90622.

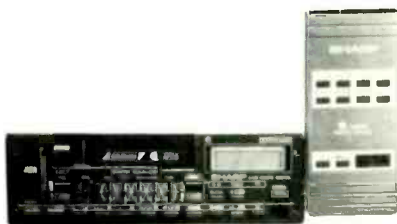




(Continued from page 11)

peting models in the same price range. The JXL-55 costs \$400; the JXL-45, \$330. More details are available from International Jensen, Inc., 4136 N. United Pkwy., Schiller Park, Ill. 60176.

## SHARP REMOTE-CONTROL RECEIVER/DECK



Among Sharp's first car stereo products is the RG-F870 AM/FM/autoreverse stereo receiver/deck. Features include a built-in five-band graphic equalizer, Dolby B noise reduction, a digital frequency-synthesis tuner, and a microprocessor-controlled cassette transport with lockable rewind and fast-forward. Five station presets are provided for each radio band, and an Auto Program Search System and key-off pinch-roller release add extra touches of convenience. An LCD frequency readout doubles as a digital clock. Rated output power is 11 watts (10½ dBW) per channel into 4 ohms from 50 Hz to 20 kHz with no more than 1 percent THD. The remote-control handset can operate wirelessly by infrared transmission or can connect to the RG-F870 by an optical fiber. The receiver/deck costs \$400. A version without the remote control, the RG-F864, is available for \$350. For more information, contact Sharp Electronics Corp., 10 Sharp Plaza, Paramus, N.J. 07652.

## ALPINE'S MID-PRICED RECEIVER/TAPE DECK



The Alpine 716 includes a Music Sensor function (to find the next recorded selection or to aid in repeating one) and a logic-controlled cassette mechanism with automatic reverse and tape-type sensing. The output can be selected to be at either low level, for connection to other equipment,

or at high level, for direct feed to speakers. The AM/FM tuner has twelve presets, and the frequency display also serves as a digital clock. Other functions include a front/rear fader and balance and tone controls. Price: \$270. Write to Alpine Electronics of America, Inc., 19145 Gramercy Pl., Torrance, Calif. 90501.

## VHS CAMCORDER ADAPTER

VDO-Pak's \$20 CLM-12 allows car-battery operation of any Matsushita-manufactured VHS camcorder-type videocassette recorder. The company says this includes units bearing the Panasonic, Magnavox, J. C. Penney, Canon, General Electric, Olympus, Philco, Quasar, Pentax, and Sears brand names. The six-foot cord terminates in a cigarette-lighter plug at one end, and at the other, in an adapter for the camcorder and in audio- and video-output pin plugs. The plugs may be used to patch the camcorder directly into a video monitor or another VCR. According to VDO-Pak, by using the CLM-12 and an external battery, you can more than quadruple the recording time available from a camcorder's internal batteries. Information can be obtained from VDO-Pak Products, 164 Howes St., Port Orange, Fla. 32029.

## HIGH-POWERED CLARION RECEIVER/DECK



At the top of the Clarion line is the 9425RT stereo AM/FM receiver/deck, a model containing an amplifier rated at 20 watts (13 dBW) per channel. The tape deck offers soft-touch transport controls and automatic selection-seeking. Other tape features include autoreverse, locking fast-wind modes, Dolby B and Dolby C noise reduction, 70-microsecond equalization, and a Permalloy head. The tuner section has both stereo AM and stereo FM capability, 12 FM and six AM memories, signal-activated stereo blending, an FM noise canceller, and automatic distant/local switching. Bass, treble, balance, volume, and fader controls are provided in the amplifier section, as well as an output-power display and a digital-clock mode for the numerical LCD. Price is \$570. For details, write Clarion Corp. of America, 5500 Rosecrans Ave., Lawndale, Calif. 90260.

## RADIO SHACK'S STEREO TV RECEIVER



The \$149 Realistic TV-100—not an adapter, but a separate stereo TV audio receiver—connects (usually via a signal splitter) to a TV antenna or cable box. Tuning is via an analog dial. Indicator LEDs show when a program is being broadcast in stereo and when a Second Audio Program (SAP) is available. A stereo-synthesizer circuit can be switched-in during mono programs. The receiver can drive speakers directly or connect to an audio system. Front-panel features include tuning, tone, balance, and volume knobs; switching for TV band, SAP, mode, stereo simulation, and an auxiliary input; and a ¼-inch phone jack for stereo headphones. Write to Tandy Corporation/Radio Shack, 1800 One Tandy Center, Fort Worth, Texas 76102.

## SANYO'S VERSATILE CAR CD PLAYER

The Sanyo FTEC2 is a combination car Compact Disc player and AM/stereo-FM tuner featuring the company's Viper security system. The CD player section has a shock resistant mechanism and automatic loading and playing, as well as the various scanning and cueing functions normally found on a home model. Added to these are an intro-scan feature (to sample each track for ten seconds) and track or full-disc repeat. To compensate for the lack of a cassette deck, the unit has a tape input that enables a portable player to be patched in, while preserving the FTEC2's



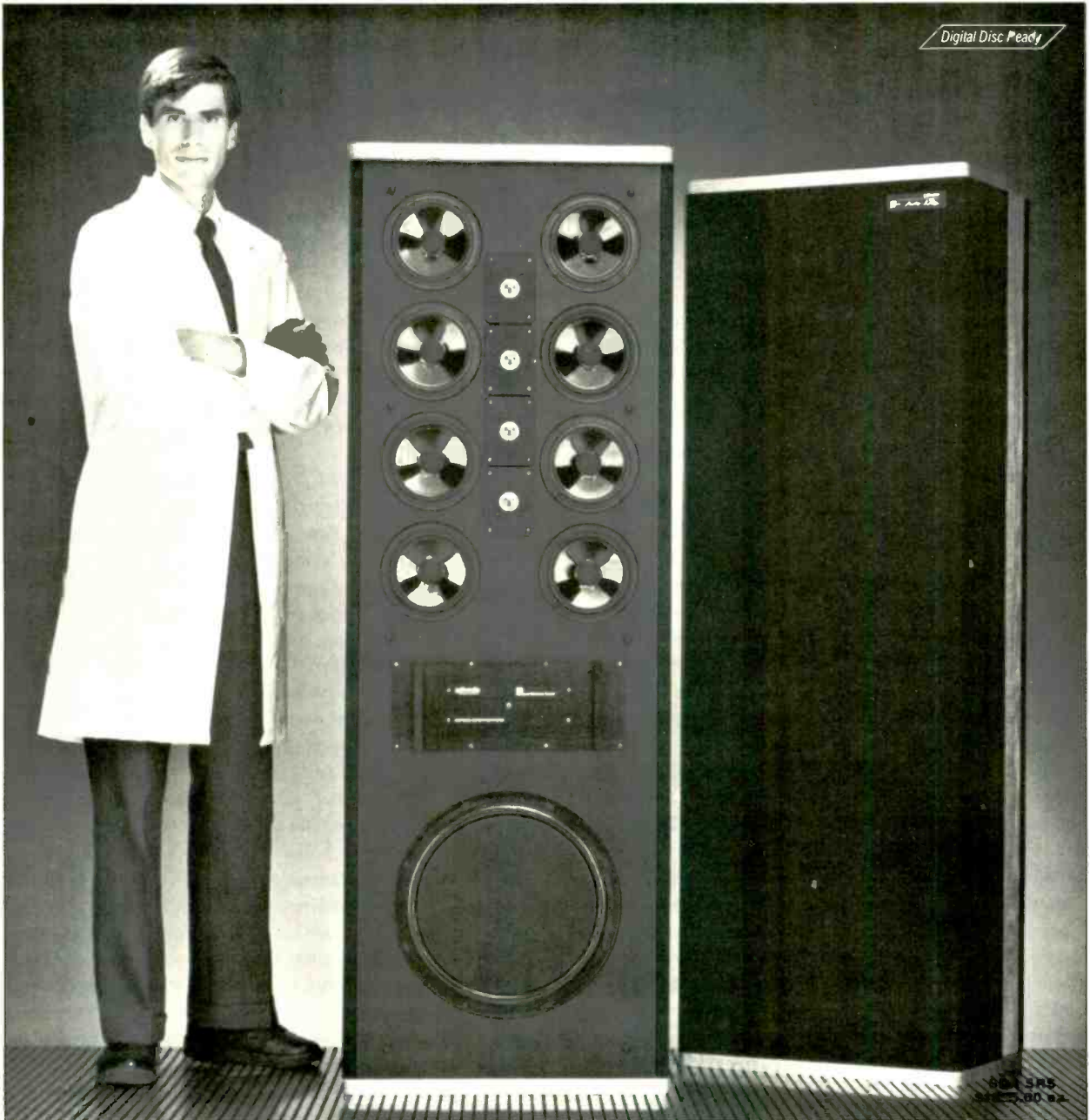
SANYO'S FTEC2 CD PLAYER/TUNER

preamp controls (bass, treble, loudness, volume, and fader). Six FM and six AM presets are offered in the tuner section, which also has distant/local and stereo/mono switching, automatic station-seek, and LCD display of frequency or time.

To protect the entire car, the Viper



Digital Disc Ready



Matthew Polk's own dream speaker can now be yours, "the best SDAs yet...impressive and worthy of Matt Polk's signature." *high Fidelity*

## "The Genius of Matthew Polk Creates the Ultimate Loudspeaker for You"

**F**or the last 4 years Matthew Polk has been driven by an all consuming passion: to develop the ultimate SDA loudspeaker. He has succeeded.

### The Joy of Owning the Ultimate

The extraordinary new SDA Signature Reference System combines Polk's patented SDA True Stereo Technology\* with phase-coherent vertical line-source topology. The result is a high efficiency, low coloration system of awesome and seemingly limitless dynamic range and bass capabilities. It reproduces music with a precisely detailed and life-like 3-dimensional soundstage which is exceptional and unequalled.

### Introducing the New Phase-Coherent Line-Source **SDA-SRS**

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#### The SDA Signature Reference System

- Exclusive Patented SDA TRUE STEREO Technology\*
- Multiple Driver Line-Source Topology
- Phase-Coherent Time-Compensated Driver Alignment
- Progressive Point-Source Tweeter Array
- Bi-Wire/Bi-Amp Capability
- 1000 Watt/Channel Power Handling

"Spectacular... it is quite an experience."  
*Stereo Review Magazine*

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In Canada: Distributed by Evolution Technology, Toronto.

\*U.S. Pat. No. 4,499,132. Other patents pending U.S. & Foreign

— For your nearest Polk dealer see opposite page.

by Robert Long



## CABLE UNREADY

My "cable ready" TV set and VCR have infrared remote controls. But now that I've had cable installed, I can no longer use the remote controls or program the VCR to record from different channels automatically. I don't subscribe to any of the premium scrambled channels, and I'm not trying to pirate programs or otherwise do anything illegal—I'm only trying to use the VCR and TV set the way they were meant to be used. What can I do?

**Gerald J. Post**  
Lanham, Md.

*Perhaps nothing. Cable systems vary a good deal, but your situation appears to be the norm, and any attempt to get around it may be viewed askance (however unreasonably) by the cable company. In certain setups it's not hard, for instance, to disconnect the converter from the cable and interpose the VCR between the two. That may enable you to record some channels while you're watching something else or while the converter is shut off altogether. You may even be able to dispense with the cable converter entirely. That's the point of "cable ready" tuners in VCRs and TV sets, though such components may not work properly with all cable systems. But the cable company may construe some or all of this as unauthorized and illegal tampering with its equipment. And some VCRs won't pass the entire signal of some cable operations—meaning that*

*you'll lose access to certain channels if the signal has to pass through the VCR on the way to the converter.*

## WILL THE REAL DBX...

Your response to Jeffrey T. Gardner in the March 1985 "Crosstalk" raises a question: What is the difference between DBX-I and DBX-II? My open-reel deck has DBX-I, the professional version, built in. I no longer have the good feelings about it that I did before you commented, "Unless you're planning to have records cut from your tapes, I would strongly recommend that you go with Type II DBX, for reasons of performance as well as compatibility." Please explain. Also, why do deck manufacturers use Type I if Type II is better?

**Howard E. Smith**  
Bangor, Maine

*All compander noise reduction systems, including DBX's, must rely on the signal to mask the noise to some degree. Careful engineering requires that circuit characteristics be optimized for the noise levels anticipated in the media to which the systems will be applied. The equalization of Type II (in part, pre-emphasis and de-emphasis in the encode/decode circuitry, the salient area of incompatibility between the two versions) is better calculated to cope with the relatively high hiss levels imposed by the narrower tracks and slower transport speeds of consumer recording. Type II also incorpo-*

*rates bandpass filtering to deal with such problems as infrasonic signals from warped records, which are not an issue in professional recording.*

*Machines intended for semipro use might benefit from built-in DBX Type I companders, but it's my strong impression that some home decks are fitted with Type I circuitry simply because it is the "professional" version, and that word has so much pizzazz. I could do a whole column on the buying public's inclination to believe that "professional" is necessarily better than "consumer" (though for home use, the reverse often is true) and manufacturers' willingness to pander to it (which DBX tries to discourage). But I won't. For one thing, it would draw attention away from an important issue in the context out of which you quote me—that Type I can't accurately decode DBX LPs or cassette tapes. Type II can, and that's an important extra in the home, in my judgment.*

## INSTANT REPLY

Your answer in the June 1985 "Crosstalk" to a question by Bill Mottram overlooks the information published in your own magazine on our Image Translator VCR ["Currents," April 1985; see also "Letters," January 1986]. The deck is made by General Electric and, with our modification, plays PAL and SECAM tapes at all speeds, as well as [the U.S. standard] NTSC. The PAL

mode plays in full color, with a 5-percent color degradation (reds and purples seem deeper); SECAM plays in black and white. All of the original NTSC functions are retained.

All you have to supply is a standard American NTSC TV set with a vertical hold or an automatic vertical adjustment feature. [Conventional multi-mode decks require special monitors.]

**Victoria O. Watkins**  
Instant Replay  
Coconut Grove, Fla.

*So the truth is out: I don't read every word in every issue of HF! Actually, the "Currents" item on your company—Instant Replay (2951 S. Bayshore Dr., Coconut Grove, Fla. 33133)—probably wasn't available to me when I wrote my reply to Mr. Mottram. If it had been, I would have suggested he look into your models, which seem to cover an interesting range of VHS capabilities and prices (\$749 to \$1,795).*

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Where can I get replacement parts for equipment from Empire Scientific Corporation?

**William A. Helfand**  
Berlin, N. J.

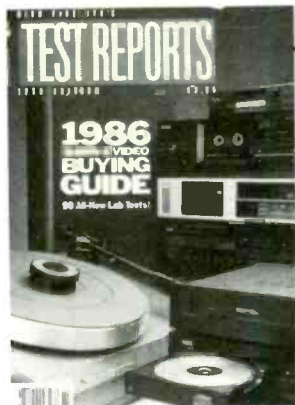
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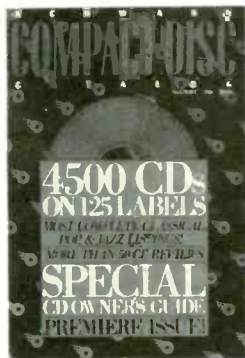
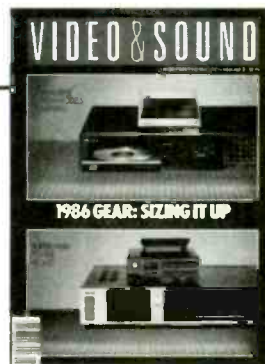
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# BASICALLY SPEAKING

by Michael Riggs



## Feedback — Threat or Menace?

Much discussed and argued about, often misunderstood, negative feedback is a cornerstone of modern amplifier design. It is no exaggeration to say that the low distortion we now take for granted in even modestly priced audio electronics would not be possible without this versatile and very effective technique. Yet in recent years, it has been surrounded with controversy—accused, in some cases, of causing distortion more serious than that which it cures.

Separating fact from fiction requires a look at how feedback works. The basic principal is very familiar: We use it to control our bodies. If you want to pick up an object, you move your hand toward it until you can see and feel that it's in your grip. If you move your hand too far or grasp the object too softly or firmly, your nervous system senses the error and tries to correct it, going back and forth (perhaps imperceptibly) until you have the item securely, but comfortably, in hand. Your body's feedback-based servo motor-control system is not capable of infinitely fine adjustments, but it is good enough that you are aware of its limitations only when doing very meticulous work, such as threading a tiny needle.

The analogy with amplifier feedback circuits breaks down insofar as an amp does not have any intermediary controller that calculates the appropriate correction signal based on the amount of error it detects. The connection is far more direct and automatic,

and the entire process occurs virtually instantaneously. A tap is taken from the output of the amplifying circuit to its input. This connection is the feedback loop. In addition to providing a route for the output signal to return to the input, the loop attenuates the feedback signal and inverts it, so that it is 180 degrees out of phase with the input.

So what good does that do? The conventional explanation here says something about the inverted distortion products in the feedback signal cancelling much of the distortion in the signal itself, which misleads and confuses anyone who thinks about it very hard, since the input signal doesn't contain any distortion. And if the feedback were introduced at a point following where the distortion is generated, it would cancel the same proportion of wanted signal as of unwanted distortion, leaving the percentage of distortion unchanged.

The way feedback really works is far more ingenious. The amplitude of the feedback signal is adjusted so that it cancels some, but not all, of the input. This reduced input signal goes into the amplifier along with the inverted distortion products contained in the feedback. The feedback distortion and the input signal proper are amplified *and distorted* together. But the feedback distortion has the effect of pre-compensating the input for the circuit's distortion characteristics, so that some (perhaps most) of the distortion cancels out, leaving the signal

cleaner than it would have been without the addition of feedback.

The cancellation is never perfect, however: We don't have some kind of perpetual-motion machine here. You could never apply enough feedback to totally remove the distortion without completely cancelling the input signal. And though the transit time required for the feedback signal to get from the output back to the input is exceedingly small, it is not zero. Consequently, there is some phase shift in the feedback, which increases in proportion to the signal frequency. The feedback signal therefore is never quite exactly 180 degrees out of phase with the input, although the difference is small enough at audio frequencies that feedback can do its job quite well.

But eventually, the phase shift becomes a problem. When the frequency gets high enough, the feedback will start to become more in-phase than out-of-phase with the signal. At this point, it starts turning on you, becoming positive feedback. If something is not done, the amplifier will become unstable and start to oscillate, giving the electronic equivalent of the shrieking howlback sometimes heard on PA systems. The oscillation probably will be in the ultrasonic range, so you won't hear it, but it will waste your amplifier power, generate heat and distortion, and perhaps damage your amp or speakers.

For this reason, the amount of feedback is reduced

at high frequencies. Its effect does not vanish altogether until well beyond the audio range, but this rolloff is one reason that distortion typically is somewhat greater at the top of the audio band than at low and middle frequencies.

The major limitation in the use of feedback is that it effectively reduces the gain of the amplifier. So the circuit must have enough gain to begin with that you wind up with adequate amplification after the necessary feedback is applied.

It sometimes is charged that feedback creates exotic forms of distortion (such as transient intermodulation distortion, or TIM) that are more serious than the ones it alleviates or that it is the equivalent of "electronic whitewash," covering up problems without actually making them go away. The latter notion seems based on a misunderstanding of how feedback works: It really does remove distortion, not "hide" it. Otherwise, the distortion would be present and measurable in the output. The former notion is better grounded, in the sense that feedback amplifiers can get into trouble with certain types of signals. On the other hand, these signals are not anything like those that occur in music reproduction. Typically, they are much, much faster, containing frequencies well up into the ultrasonic or even radio-frequency range. A low-pass filter designed to cut off above 20 kHz can shortstop any such problems without impairing performance within the audio band. ●

by David Ranada



## Loose Bits

You might think that because the Philips/Sony Compact Disc system is a *de facto* worldwide standard, digital audio engineers would have little design freedom. Think again! Aside from such commercially competitive aspects of CD-player design as output-filter technology and the number of "beams" used by the laser pickup, there are some conceptually simpler elements of digital audio that also are being approached differently by various manufacturers. But not only does execution vary: Some companies are getting it *wrong*.

For example, it would seem logical that a Compact Disc player would deliver a positive output voltage if the number fed to the player's digital-to-analog converter (DAC) were positive and a negative voltage if the number were negative. Although there is no polarity specification in the copy of the proposed IEC (International Electrotechnical Commission) Compact Disc standard I've seen—an omission that I hope is filled soon—this positive-digit/positive-output convention is followed by most of the CD test discs I've examined, including one made by Philips. And this is how all DACs, most CD-master recorders, and most CD players operate. Most players, but not all. As evidenced by downward-pointing impulse waveforms in certain HIGH FIDELITY test reports, a few players (even some of the newest) have inverted outputs.

Compounding the error is

the most popular (and considered by many the best) digital tape recorder on the market, the Sony PCM-F1 digital-audio adapter used with a videotape recorder. The adapter's analog output inverts, too. Although this has been corrected in Sony's various follow-up models, there are still quite a few F1s out there making many of the recordings that eventually end up on Compact Disc. If a record company happens to use the analog output of an F1 anywhere in the CD mastering process, instead of going direct digital-to-digital, and if no compensating phase re-inversion takes place, the resulting CD will be recorded in inverted phase relative to the original signal.

But that ain't all. A CD-master recorder is supposed to sample and encode both channels of the incoming audio signal simultaneously: Channels entering the recorder inputs at the same time should emerge simultaneously in playback. Not so with the PCM-F1 or with most single-DAC Compact Disc players using analog output filters: One channel, usually the right, emerges one-half sampling period (11.34 microseconds) "late." As a cost-saving measure, these units have but one DAC, which they switch rapidly between left and right outputs in a multiplexing scheme much like the one sometimes used to decode stereo FM. The delay corresponds to the switching rate.

Phase inversion and inter-channel time offset normally are *inaudible*, but that does

not disqualify them from being among digital audio's loose ends, nor does it prevent them from becoming important in the future. At present, one can have a Compact Disc mastered from the analog output of a PCM-F1 being played on a non-inverting, analog-filter CD player with a multiplexed DAC. A positive-going impulse originally recorded simultaneously on both channels of the F1 will emerge from the CD player as negative-going, with the right channel emerging a full 22.6 microseconds after the left. This degree of time offset can be significant in stereo broadcasting because the L-R channel-difference signal will have an improperly rising high-frequency response that might overload the stereo sub-carrier sooner. More important, the mono L+R signal will have a slowly falling response that may be audible as such.

Down the road, it's possible that a home digital signal processing (DSP) system may require standardization of phase and timing for the software to work correctly. Indeed, the Audio Engineering Society's Digital Audio Technical Committee has devoted quite a bit of labor to these very issues and how they relate to signal processing and equipment interconnection. Programs manipulating the stereo image can be particularly prone to mishaps without a phase/timing convention. And any reconversion of the signal to and from the digital domain after it emerges from

a CD player might only mix things up further.

Perhaps I shouldn't be so hard on an industry that often doesn't mount a tonearm on a turntable correctly. (For least wow with warped records, the vertical tonearm pivot must lie on the plane of the disc.) But there are conventions or standards for signal polarity for the other important transducers in the high-fidelity chain, such as microphones, phono cartridges, and loudspeakers. Besides, doing it right from the very start is neither difficult nor expensive. With a Compact Disc player, correction of phase inversion is accomplished by adding or removing one inverting-amplifier stage in the component's output circuitry, or by changing the polarity of the digits sent to the DAC. If, in an effort to eliminate inter-channel delays, the addition of another DAC should prove unduly costly, the use of oversampling digital filters would naturally lead to a reduction of interchannel time shifts in inverse proportion to the oversampling rate. Or, as is done in several CD players, an analog all-pass filter can be used to shift the undelayed channel into sync with the delayed signal. Taking such trouble to make these corrections may not produce audible differences, but in view of the still untapped resources (and unspecified requirements) of digital signal processing, I urge the industry to start tying up these and other loose bits—before it starts tripping over them.



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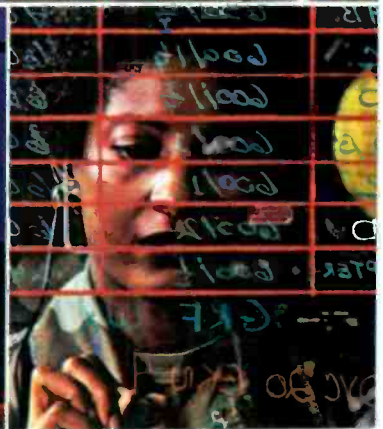
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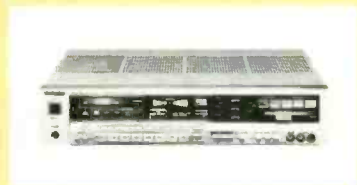
COURTESY BOSE

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

THE RADICAL NEW BOSE 8.2 LOUDSPEAKER.  
REPORT BEGINS ON PAGE 27



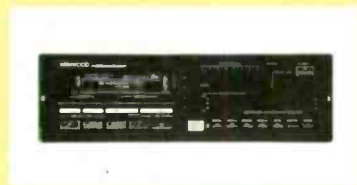
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# Bose 8.2 Loudspeaker

In a sense, the Bose 8.2 (as well as the similarly designed 10.2 and probably other forthcoming models in the Point Two Series) is a Bose speaker for the audiophile who can't find anywhere to put Bose speakers. Unlike the company's cornerstone Model 901, which is designed to be out in the room in order to obtain the Direct/Reflecting sound that is Bose's trademark, the 8.2 is intended to sit near a wall and to achieve somewhat different ends. For the Point Two Series' goal is also its own new trademark: "Stereo Everywhere," meaning, as the company says, the production of a stereo image that can be heard everywhere in the room.

To achieve this, the speakers' radiation (polar) patterns are deliberately angled toward each other (instead of directly forward, the way it's usually done). Consequently, from most listening positions, the perceived output of the speaker farther away is greater than that of the nearer speaker. This compensates for the precedence effect, so that the stereo image remains centered between the speakers instead of collapsing into the closer one, whose sound arrives first at your ears.

Bose is not the first to make this time/intensity tradeoff, and even before such speakers came on the market, it was common practice among some audiophiles to toe in conventional systems so that their axes crossed in front of the actual listening area, to the same purpose (though with less convincing results). But as usual, Bose has chosen a way of achieving the desired effect that is distinctly its own. This can be seen from a quick glance at the driver arrangement: The 8.2's woofer and dual tweeters are mounted in an array that radiates all the sound from virtually a single point close to ear level.

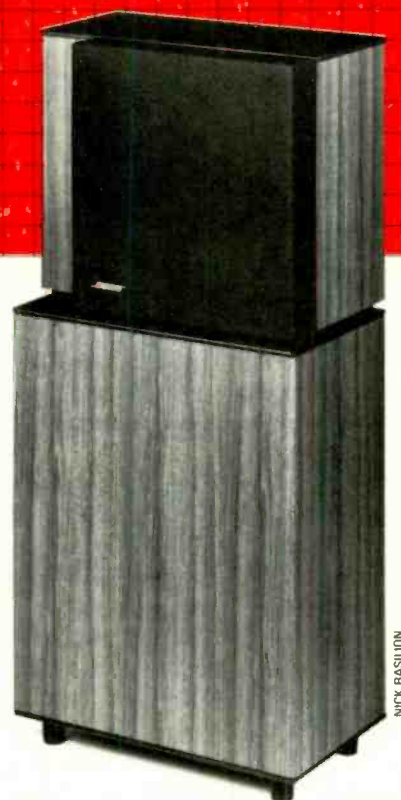
The driver configuration also shapes the speaker's polar pattern to optimize stereo imaging throughout the listening room, using different

means in different frequency ranges. The 10-inch woofer is set closer to the outside of the baffle (the left edge of the left speaker, the right edge of the right speaker), which tends to direct its energy inward between approximately 600 Hz and 1.2 kHz. And Bose says that placing the tweeters in front of the woofer directs energy between 1.2 kHz and 2.5 kHz toward the inner tweeter, which is in-phase with the woofer. (Unusually, the two 3-inch tweeters are driven out-of-phase with each other.)

In the next octave, up to 5 kHz, the design relies on the phase relationship between the tweeters to steer the sound into two lobes. One is directed inward to contribute to the formation of a stable stereo image; the other, which is out-of-phase with the overall direct-radiated sound, provides energy for side-wall reflections. Radiation from this outer tweeter is suppressed above 5 kHz by what Bose calls its Interactive Crossover. Above that frequency, where the wavelengths of the sound are less than the diameter of the tweeter, the output is directed inward by the in-phase tweeter's mounting angle.

Reflecting its skewed radiation pattern, the 8.2 itself is visibly asymmetrical, with a square, unremovable, brown cloth grille directly over the three-driver array. The back wave of the woofer percolates through an internal port into the lower part of the enclosure and then vents through a tube that opens onto the rear panel. Electrical connections also are made at the back, to recessed spring-loaded clips. The enclosure shape is pleasingly modern; vertical surfaces have rounded corners and are covered with an attractive teak-grain vinyl finish.

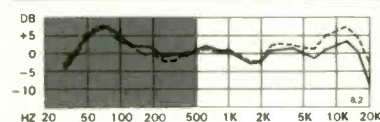
Obviously, the back vent cannot be placed right against a wall, but the speakers are designed to stand near one. Bose's recommendations in the folder that serves as an owner's manual include placing the speakers from



NICK BASTIEN

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1/2 inch to 2 inches away from the wall behind them, at least 12 inches from the walls at either side, and 3 to 12 feet apart. The ideal setup, according to the company, would be to divide the back wall into quarters and place the speakers at the 1/4 and 3/4 marks.

Diversified Science Laboratories' standard loudspeaker-measurement setup uses only one speaker but is calibrated for several possible cabinet placements in the room. For floor-standing models, the nearest available approach to the wall is 3 inches—only a little more than that recommended by Bose. When, as here, the two speakers



THE KEY TO THE 8.2'S IMAGING IS ITS NOVEL DRIVER ARRAY: A PAIR OF ANGLED TWEETERS MOUNTED IN FRONT OF THE WOOFER.

of the pair under test aren't interchangeable, only the right one is measured. "Axial" response for this purpose is that picked up straight in front of the cabinet; "off axis" response is measured from 30 degrees toward the center of the listening area (that is, to the left of the right speaker). Thus, in the 8.2, the axial response presumably is on the main output lobe of neither tweeter, while the off-axis curve is taken somewhere within the major lobe of the inward-firing, in-phase tweeter. Given the 8.2's radiation pattern, it's not surprising that our graph's off-axis curve rises so much higher at the top end than the curve taken on-axis. Conventional speakers tend to behave in the opposite manner.

Aside from the foregoing information about propagation in the various frequency bands, Bose doesn't specify a crossover frequency. And DSL's near-field measurements are problematic because it's impossible to place a microphone near one driver without having another in close proximity. But the near-field curves the lab did obtain tend to confirm that the outward-firing tweeter is cut off above 5 kHz, essentially leaving the highest frequencies to the inner-facing driver. The crossover from the woofer to the two tweeters may be a little higher than the 1.2 kHz implied by Bose, though the data essentially confirm the existence of a crossover in that region. Direct output from the woofer runs out of steam below 50 Hz. But by that time, the vent is putting out considerable energy, as it continues to do with very little rolloff right down to DSL's testing limit of 20 Hz. (Vent resonance is somewhere below 20 Hz.)

Throughout the midbass, mid-range, and lower treble, measured response stays within  $\pm 3$  dB in both on- and off-axis traces. The usual dip attributable to floor reflections is less pronounced than usual, although there is a deeper dip in the main crossover region. The rises toward both ends of the spectrum would give us pause were measured response our only gauge of performance. In our stereo listening tests, we didn't hear the colorations implied by these sections of the curves. However, when we turned off one speaker to investigate the way the other directed its output into the room, we were astonished at how it sounded: The thumpy bass, harsh highs, and shallow, muddy midrange all reflected the measured curves much more than the very good stereo we had just been hearing.

We don't altogether understand why this should be, but the one-speaker/two-speaker difference with the 8.2 struck us as much more extreme than is the case with most models, strongly suggesting that the printed curves, measured with only a single speaker, must be assessed with more caution than usual. And, as always, they must be approached in the knowledge that bass, in particular, is subject to change as a result of placement relative to room boundaries. At times, in all the positions we tried, we detected a hint of deep-bass thumpiness, though the response could be altered considerably by moving the speakers away from the wall.

The best overall results were achieved by following Bose's placement instructions. That done, the sound is fairly rich, with good detail, and the stereo image is—as claimed—unusually stable and spacious. As you move about the listening room, centered soloists stay centered, rather than seeming to jump from one speaker to the other as you cross the "sweet spot." Spatial clarity within the image is perhaps not as crystalline as it is with some other speakers, giving it a somewhat unfocused character. But the sound stage is surrounded by an exciting sense of space, one that we wouldn't expect from speakers delivering an exceptionally unequivocal image.

Conventional loudspeaker wisdom would predict a roughness or phasiness in the highs as a result of the un baffled,

out-of-phase tweeters. And occasionally we did catch a hint of these qualities, particularly when moving around the room. But we found these factors are not nearly as pronounced as the "wisdom" would predict. Another possible contributor to our perception of less-than-perfect treble smoothness is the unusually high distortion. Even at the lowest test sound pressure level (SPL) of 85 dB, measured distortion averages more than  $\frac{1}{2}$  percent across the frequency band (though it is astonishingly low in the bass). At 100 dB SPL, the average distortion is more than 1 percent, rising above 10 percent at several test frequencies, particularly in the midbass. Still, this isn't outrageously high for a loudspeaker, and this one will put out much higher sound levels with no obvious sign of complaint. When DSL's test amplifier ran out of steam in the 300-Hz pulse test, at the equivalent of 27 dBW (500 watts) into 8 ohms, calculated output was a whopping 114 $\frac{3}{4}$  dB.

The 8.2's actual impedance curve lies considerably higher than Bose's 4-ohm rating suggests. Its minimum is 5.2 ohms at a bit above 100 Hz; its maximum, in the crossover region, is 24 ohms. The impedance averages 15 ohms in our rating band and just shy of 13 ohms over the entire audio spectrum. It therefore should present solid-state amplifiers with an easier load to drive than the 4-ohm rating implies, though some amps probably wouldn't be happy with an additional, paralleled speaker pair because the combined impedance could drop below 2 or 3 ohms at some frequencies. By coincidence, the passband of the noise we use to rate speaker sensitivity coincides with the lowered range between the two maxima in the measured frequency response. Because of this and the relatively high impedance, we were not too surprised to find that the 8.2's measured sensitivity is on the low side for a speaker of its size.

What sets the 8.2 apart and keeps it from being just another loudspeaker—albeit with Bose's characteristic sonic spaciousness—is indeed the Stereo Everywhere technology. Few other models (and none at this one's price) allow you as much freedom to move about without loss or serious degradation of the stereo image. In that objective, the Bose 8.2 is entirely successful. ●

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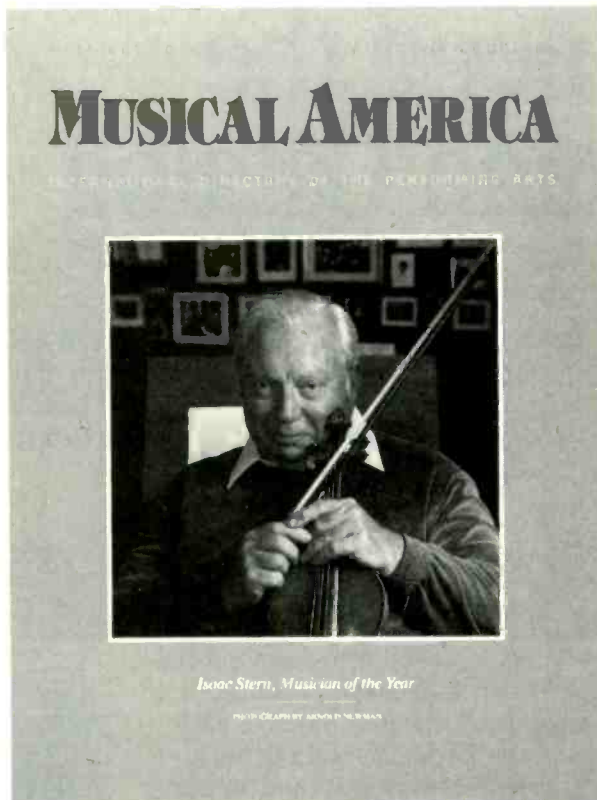
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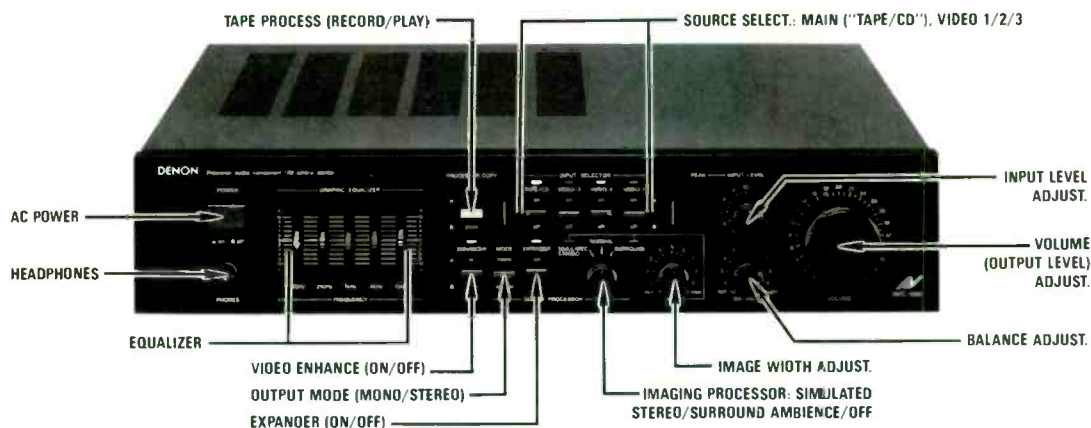
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# Denon AVC-500 Audio-Video Control Center



**A**s you add program sources to your video system, you're faced with the problem of switching among them and, perhaps, dubbing from one to the next. Although many modern monitor/receivers provide multiple direct-video inputs and some furnish video outputs for recording, there's still reason to consider a product like Denon's AVC-500 Audio-Video Control Center.

In addition to source-selection and dubbing facilities—including provisions for replacing the soundtrack of the program being duplicated with a different audio program—the AVC-500 boasts a rather complete range of audio controls, including a five-band graphic equalizer, a peak expander, a stereo simulator, and a surround-sound decoder. Its built-in stereo power amplifier, rated at 25 watts (14 dBW) per channel, can be used to drive either front or back speakers. There's even a video enhancer that can be used to snap up picture detail when either viewing or copying.

The control center has a bank of mutually exclusive pushbuttons for switching among as many as three direct audio-video program sources. A fourth pushbutton (marked "Tape/CD" and not interlocked with the others in the bank) enables you to record independent audio and video sources on

the same videotape. With the Tape/CD key in the normal released position, audio and video stem from the same source; when the key is pressed, the video you are watching (and recording) is determined by the settings of the other three switches, while the audio is taken from the source connected to the Tape/CD line-input jacks on the rear panel. This makes it possible for you to listen to and record simulcasts (if you've connected an FM tuner to the Tape/CD inputs) or to replace the soundtrack of a home video with music from a CD player or tape deck.

There are two sets of audio-video recording outputs (Video 1 and 2), a separate video monitor output, stereo and mono line outputs, a tape output (for recording on a deck you may have connected to the Tape/CD inputs), and left and right speaker outputs. With this arrangement, you can dub between Video 1 and 2 in either direction or record on both simultaneously from the Video 3 source. In all cases, the monitor displays the program you've selected to copy. Pressing ENHANCER modifies the video frequency response to both the monitor and video outputs. The setting of PROCESSOR COPY designates whether the audio program being recorded on any tape deck or VCR connected to the unit is passed through the audio signal

processors.

**DIMENSIONS:** 17 1/4 BY 3 3/4 INCHES (FRONT), 10 INCHES DEEP PLUS CLEARANCE FOR CONTROLS AND CONNECTIONS. **AC CONVENIENCE OUTLETS:** TWO UNSWITCHED (250 WATTS MAX.). **PRICE:** \$375. **WARRANTY:** "LIMITED," THREE YEARS PARTS AND LABOR. **MANUFACTURER:** NIPPON COLUMBIA COMPANY, LTD., JAPAN; **U.S. DISTRIBUTOR:** DENON AMERICA, INC., 27 LAW DR., FAIRFIELD, N.J. 07006.

processors.

A back-panel slide switch determines whether the audio program passes through the surround-sound processor on its way to the line outputs. If the AVC-500's power amp is used to drive the rear speakers (the normal arrangement), the switch is set to send unmodified audio to the external stereo amplifier that is driving the front pair. If the AVC-500's internal amp is used to drive the front speakers, the switch is set to route signals through the surround-sound circuits before delivering them to the line outputs, from which they can be fed to an external amplifier for the back speakers.

Pressing MODE parallels left and right channels to ensure that sound emerges from both front speakers when a mono source is connected to

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**New York, New York, The Listening Room, Ron Mintz – Owner.** "As one of the first dealers in the U.S. to realize the quality of the E-22, we continue to be amazed by the imaging and spaciousness of this speaker of such compact size & price."

**Hicksville, Long Island, New York, Designatron, John Thomas – Manager.** "Never before have we experienced a speaker system which exhibits the level of realism that the Energy 22 provides. The excitement generated by Energy speakers is only exceeded by the pleasure of owning them. The Energy 22 sets a reference standard by which all other speakers must be judged."

**Washington, D.C., Audio Associates, Mike Zazanis – Owner.** "The ENERGY 22 is a very musical speaker at a very inexpensive price that easily could cost a lot more money."

**Chicago, Illinois, Pro Musica, Ken Christianson, John Schwarz – Co-owners.** "The Energy 22 Reference Connoisseur & Pro Monitors simply outperform the competition. Musically satisfying to the most demanding listeners."

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**San Diego, California, Stereo Sound Co., Bob Kokley – Owner.** "Over the years we have heard many promises of new breakthroughs in speakers with disappointing results. The ENERGY 22 is one of the only products which performed beyond those promises. A job well done!"

**Berkley, California, The Sounding Board, Jeff Smith, Jim Serena Co-Owners.**

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# ENERGY 22

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either the left or right input jack. Normally the switch is kept in the released position to permit stereo reproduction either from a true stereo source or from a mono source via the stereo simulation circuitry.

A three-position rotary switch enables you to choose regular stereo (or mono) reproduction, simulated stereo from a mono source, or surround sound from a stereo source. Denon does not claim that the surround-sound circuitry conforms to the Dolby Stereo standard for encoded movie soundtracks. Rather, the effect is "created electronically by using phase-differencing coloration elements." According to Diversified Science Laboratories' investigation, both the synthetic-stereo and surround-sound effects are created by comb filters, although not the same ones. In each case, the degree of enhancement is determined by the setting of the "width" control.

The AVC-500's five-band graphic equalizer is controlled by a series of sliders on the left of the control panel. The equalizer sections are spaced at two-octave intervals from 63 Hz to 16 kHz. DSL reports that their center frequencies are very accurately marked and that the maximum boost or cut available is very close to 10 dB in every case. The linearity of the sliders is somewhat worse than average, although we have yet to test a graphic equalizer that has a truly uniform control range. About half the total range is concentrated between the first and second markings above and below the center detent, with most of the rest occurring between the third and fourth. This makes setting the sliders a bit touchy.

The control center's audio expansion circuit is engaged by pressing EXPANDER. An input level control (separate from the master volume and balance knobs) is used to prevent input overload. Normally, it is set to its maximum and turned down only if the peak LED lights up. The lab found that the LED did illuminate at the point of overload, but only when the expander was on. With the expander off and the input level control all the way up, it was possible to clip the input without triggering the peak LED, but since this required an input of almost 3.7 volts, it's not likely to be a problem.

DSL's tests show the expander to

be more of a "peak limiter" than a classic "linear" expander. With the input level at maximum, the expander had essentially no effect on signals of less than approximately 35 millivolts. The expansion factor gradually increases with rising signal level, reaching 1.2:1 at an input of 125 millivolts. The maximum expansion ratio (1.4:1) occurs at about 200 millivolts.

Strangely, the AVC-500's amplifier power specification is not based on the "standard" 8-ohm load. It is rated for use with speakers whose impedances are between 6 and 16 ohms and is said to deliver 25 watts (14 dBW) per channel into 6 ohms. Since DSL found the clipping level into both 4- and 8-ohm loads to be 28 watts (14½ dBW), we decided to use the 25-watt rating as our reference, even though at 8 ohms this ran the amplifier closer to the voltage limits of its power supply than would be the case with a 6-ohm load. Under these conditions, total harmonic distortion (THD) was less than or equal to 0.11 percent from 40 Hz to 10 kHz, rising to 0.55 percent at 20 Hz and 0.20 percent at 20 kHz. The predominant harmonics were the second, third, and fifth. At 0 dBW (1 watt), distortion was 0.12 percent or less across the entire band.

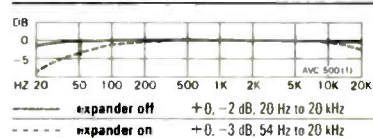
Without a power rating into a standard load impedance, it is impossible to assess dynamic headroom, but dynamic power can always be measured. For the AVC-500, it ranges from a low of 15 dBW (32 watts) into 2 ohms to a maximum of 16¼ dBW (42 watts) into 4 ohms. With 8-ohm loads, 15½ dBW (35 watts) is available on musical transients. The damping factor is adequately high at low frequencies and is fairly well maintained even out to 20 kHz, where it is the equivalent of 20 referenced to an 8-ohm load.

Input sensitivity, input and output impedances, and audio recording output level should present no problems with typical VCRs and cassette decks. The AVC-500's signal-to-noise (S/N) ratio depends upon how much audio processing you use. It ranges from an excellent 86¼ dB with no processing to a still quite respectable 69 dB with the surround-sound mode set at maximum (turning down the width control half-way improves the noise figure by almost 6 dB).

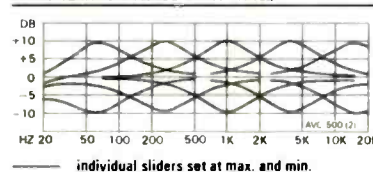
The video enhancer affects both the

|  |                               |
|--|-------------------------------|
| <b>RATED POWER</b>   | 14 dBW (25 watts)/channel     |
| <b>OUTPUT AT CLIPPING (at 1 kHz, both channels driven)</b> |                               |
| 8-ohm load   | 14 1/2 dBW (28 watts)/channel |
| 4-ohm load   | 14 1/2 dBW (28 watts)/channel |
| <b>DYNAMIC POWER (at 1 kHz)</b>                            |                               |
| 8-ohm load   | 15 1/2 dBW                    |
| 4-ohm load   | 16 1/4 dBW                    |
| 2-ohm load   | 15 dBW                        |
| <b>DYNAMIC HEADROOM</b>                                    | see text                      |
| <b>HARMONIC DISTORTION (THD; 20 Hz to 20 kHz)</b>          |                               |
| at 14 dBW (25 watts)                                       | ≤ 0.55%                       |
| at 0 dBW (1 watt)  | ≤ 0.12%                       |

#### AUDIO FREQUENCY RESPONSE



#### AUDIO EQUALIZER ADJUSTMENT RANGE



|   |           |
|---|-----------|
| <b>AUDIO S/N RATIO (re 0 dBW, A-weighted)</b> |           |
| best case [no processing]                     | 86 1/4 dB |
| worst case (surround at max.)                 | 69 dB     |
| <b>AUDIO SENSITIVITY (re 0 dBW)</b>           | 33 mV     |

|  |            |
|--|------------|
| <b>AUDIO INPUT OVERLOAD (1-kHz clipping)</b> |            |
| input level at max.                          | 3.66 volts |
| input level at min.                          | > 10 volts |

|                              |          |
|------------------------------|----------|
| <b>AUDIO INPUT IMPEDANCE</b> | 46k ohms |
|------------------------------|----------|

|   |          |
|---|----------|
| <b>AUDIO OUTPUT IMPEDANCE (to tape)</b> | 650 ohms |
|---|----------|

|   |    |
|---|----|
| <b>DAMPING FACTOR (at 50 Hz, re 8 ohms)</b> | 50 |
|---|----|

|                                      |           |
|--------------------------------------|-----------|
| <b>CHANNEL SEPARATION (at 1 kHz)</b> | 41 1/4 dB |
|--------------------------------------|-----------|

#### VIDEO FREQUENCY RESPONSE

|             | enhancer off | enhancer on |
|-------------|--------------|-------------|
| at 500 kHz  | flat         | + 1 1/2 dB  |
| at 1.5 MHz  | flat         | + 4 dB      |
| at 2.0 MHz  | flat         | + 3 3/4 dB  |
| at 3.0 MHz  | - 1/2 dB     | - 1 1/2 dB  |
| at 3.58 MHz | - 1/2 dB     | + 1 1/2 dB  |
| at 4.2 MHz  | - 1/2 dB     | + 1 1/4 dB  |

#### LUMINANCE LEVEL

|                   | enhancer off | enhancer on |
|-------------------|--------------|-------------|
| to monitor output | 3% high      | 6% high     |
| to Video 2 output | 12% low      | standard    |

|   |      |
|---|------|
| <b>GRAY-SCALE NONLINEARITY (worst case)</b> | none |
|---|------|

|                                 |      |
|---------------------------------|------|
| <b>CHROMA DIFFERENTIAL GAIN</b> | none |
|---------------------------------|------|

|                                  |     |
|----------------------------------|-----|
| <b>CHROMA DIFFERENTIAL PHASE</b> | ±0° |
|----------------------------------|-----|

|                     |            |
|---------------------|------------|
| <b>CHROMA LEVEL</b> | ≤ + 1/4 dB |
|---------------------|------------|

|                           |    |
|---------------------------|----|
| <b>CHROMA PHASE ERROR</b> | 0° |
|---------------------------|----|

### 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.

monitor and video recording outputs. With it off, there's negligible change in the video signal to the monitor output and, except for a slight reduction in luminance and chrominance levels, virtually no difference at the recording outputs either. Switching the enhancer on raises the luminance and chrominance levels at both outputs (restoring those at the recording output to nominal levels) and boosts video output between 1.5 and 2.0 MHz by approximately 4 dB.

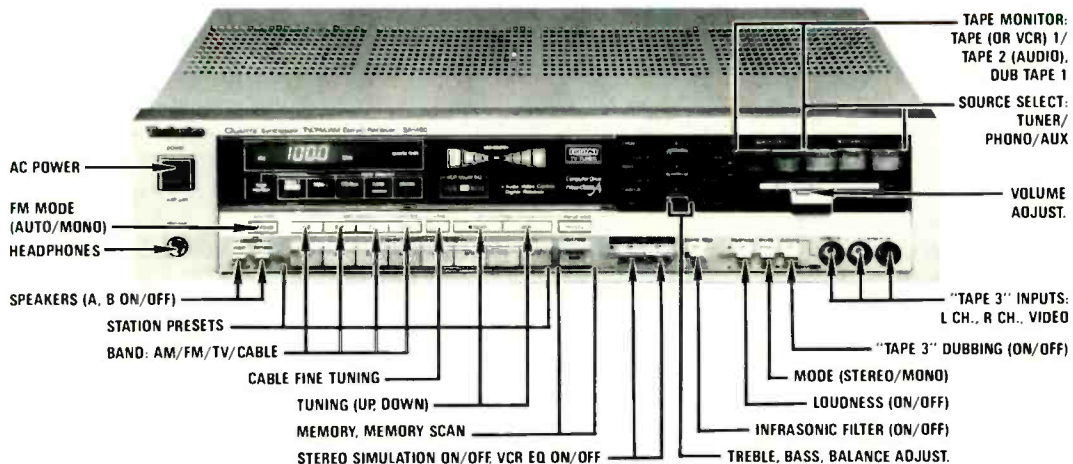
Response at 500 kHz and 4.2 MHz is lifted a little more than 1 dB, while that at 3 MHz is reduced 1½ dB.

The Denon AVC-500 is a versatile and rather unusual component. It combines many elements—video switching and dubbing facilities, a video image enhancer, stereo and surround-sound synthesizers, a peak limiter, a five-band graphic equalizer, and a fairly substantial stereo power amplifier—in a single package. Perhaps it's too much

to expect it to perform all of its functions as well as dedicated separates might. (A true Dolby Stereo surround-sound decoder produces more realistic effects; an expensive, top-of-the-line video enhancer gives you more control over video response and noise.) But if you want to get your feet wet in audio-video enhancement or to obtain all of these features without busting your bank account, the AVC-500 is a good choice. ●

T E S T R E P O R T S

# Technics SA-460 Audio-Video Receiver



DIMENSIONS: 17 BY 3½ INCHES (FRONT PANEL), 10¼ INCHES DEEP PLUS CLEARANCE FOR CONNECTIONS. AC CONVENIENCE OUTLETS: ONE UNSWITCHED (150 WATTS MAX.). PRICE: \$320; OPTIONAL SH-4090 STEREO TV ADAPTER, \$150. WARRANTY: "LIMITED," TWO YEARS PARTS AND LABOR. MANUFACTURER: MATSUSHITA ELECTRIC INDUSTRIAL CO., LTD., JAPAN; U.S. DISTRIBUTOR: PANASONIC COMPANY DIV., MATSUSHITA ELECTRIC CORPORATION OF AMERICA, 1 PANASONIC WAY, SECAUCUS, N.J. 07094.

**D**espite its moderate price, the Technics SA-460 incorporates a wealth of capabilities—more, in fact, than some costlier audio-video receivers we've covered in these pages. In particular, its tuner section will deliver high-quality television audio in mono, simulated stereo, or true stereo and from videotape, videodisc, broadcasts, or cable, depending on what's available in your area and whether you add the optional MTS adapter. The SA-460's great functionality is achieved by avoiding both the frills that appear on some competing equipment and the latest esoterica in the audio circuitry itself. The resulting performance doesn't quite match that of (for example) Tech-

nics's own best audio-only gear, but it is good enough for respectable service in practical audio-video systems.

To understand what's going on inside, let's begin by examining the back panel. There are several RF (radio frequency) inputs. An AM loop antenna plugs into a special socket (and, for some reason, must remain plugged in, according to the owner's manual, even if you add an external AM antenna). Two mounting adapters are included so that you can screw the loop to the back of the receiver or to an independent support or clip it to the pressboard back of a typical equipment-rack cabinet. Also on the back panel are screw binding posts for a 300-ohm (twinlead) FM

antenna, along with a post-plus-clamp arrangement for 75-ohm FM coax.

This last is a fairly standard fitting on Japanese audio-only gear, but it seems an odd choice for the U.S., where the more convenient and reliable F connector has come to be expected. On the other hand, Technics does use an F connector for the input from your TV antenna or cable system. There also is an RF output to pass the television signal on to your other video equipment; here, however, Technics has chosen a pin jack (commonly used for direct audio and video inputs and outputs, but not for RF) plus an adapter cable that terminates in an F fitting.

The back panel sports video pin jacks as well, intended for dubbing between videocassette recorders and entirely independent of the TV tuning section and the RF input and output. Here the owner's manual, which struggles valiantly to explain all the features in simple (if not always very idiomatic) terms, can be particularly confusing. Though it consistently refers to Tape 1 and Tape 2, there actually are connections for three decks, but they are meant primarily for two VCRs or two audio decks, or two of one and one of the other. Got that?

It works as follows. Of the two sets of deck connections on the back panel (for which monitor switching is provided on the front), only one has a video jack, and that's for recording output only. Let's call those connections Tape 1 and the ones next to them Tape 2. Both sets have a full complement of stereo jacks—for recording output and playback input. The Tape 3 connections (our designation) are on the front panel and consist of playback inputs only: two for stereo audio and one for video. Thus, you can copy video from Tape 3 to Tape 1 (using a special front-panel "dubbing" switch that interposes the front-panel jacks into the circuit that normally supplies the source signal to the back-panel recording-output jacks). Or you can dub audio from Tape 1 to Tape 2 by pushing the Tape 1 monitor button (actually marked Tape 1/VCR) to establish the source and, if you want to monitor the copy (and if your deck is equipped for it), the Tape 2 monitor button as well. So if you have two audio decks, you normally would hook them to Tape 1 and 2, while two video decks

would use Tape 1 and 3. But you can attach audio decks or outboard signal processors or the audio sections of video decks, in any mix, to all three, simply ignoring the video jacks (with the proviso that whatever is connected to Tape 3 can derive no input from the SA-460).

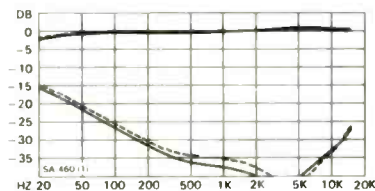
Also included among the back-panel connections is a multiplex output jack to feed Technics's optional SH-4090 stereo TV adapter (which we didn't test). Though the SA-460's manual is a little vague on the point, we gather that signal connections back from the adapter to the receiver are through the Tape 1 jacks, for which substitutes are provided on the adapter so that you can retain full use of the input.

Just ahead of the SA-460's power-amplifier section (following the other controls in the circuit and the various tape loops) are two options intended primarily for TV or VCR audio signals but available for other sources as well. One is a simulated-stereo mode, called "Stereoplex," that introduces an inter-channel phase difference to "open up" the sound. Diversified Science Laboratories measured a 180-degree disparity toward both frequency extremes, with varying phase differences (but always some) in between. Technics also refers to this option as "stereo ambience," and indeed the sound does suggest ambience simulation somewhat more than left-right stereo—which is probably all to the good for use with video, whose images could contradict a too-literal hint at lateral space or movement. As usual, purist audiophiles probably will prefer to do without the simulation, an attitude we tend to share.

More useful, depending on the quality of your video sources, is the so-called VCR-sound equalizer—actually a bandpass filter with gently sloping skirts, as our graph shows. The manual says it is intended only for playing videotapes, to reduce noise toward the frequency extremes. In working with edge-track audio, which often has an inherent frequency response similar to that of the EQ, we seldom needed it. But some broadcasts—particularly live newscasts and field reporting—contain too much audio garbage to sound pleasant on wideband equipment like the SA-460. These sources profited from the EQ, and (though we didn't specifically

## FM TUNER SECTION

### FREQUENCY RESPONSE & CHANNEL SEPARATION



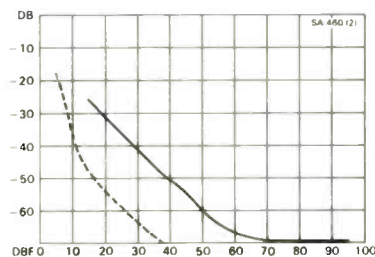
#### Frequency response

|               |                                  |
|---------------|----------------------------------|
| left channel  | +1, -2 1/4 dB, 20 Hz to 15 kHz   |
| right channel | +1/2, -1 3/4 dB, 20 Hz to 15 kHz |

#### Channel separation\*

|  |                            |
|--|----------------------------|
|  | ≥ 35 dB, 800 Hz to 7.8 kHz |
|  | ≥ 25 dB, 92 Hz to 15 kHz   |

### FM SENSITIVITY & QUIETING



#### stereo quieting (noise)

#### mono quieting (noise)

#### Stereo sensitivity (for 50-dB noise suppression)

|  |   |
|--|---|
|  | 38 3/4 dBf at 98 MHz, with 0.54% THD + N      |
|  | (40 3/4 dBf at 90 MHz, 39 1/4 dBf at 106 MHz) |

#### Mono sensitivity (for 50-dB noise suppression)

|  |                      |
|--|----------------------|
|  | 16 1/2 dBf at 98 MHz |
|--|----------------------|

|                  |            |
|------------------|------------|
| Stereo threshold | 14 1/2 dBf |
|------------------|------------|

|                              |           |
|------------------------------|-----------|
| Stereo S/N ratio (at 65 dBf) | 68 1/2 dB |
|------------------------------|-----------|

|                            |       |
|----------------------------|-------|
| Mono S/N ratio (at 65 dBf) | 75 dB |
|----------------------------|-------|

|               |          |
|---------------|----------|
| CAPTURE RATIO | 2 1/2 dB |
|---------------|----------|

### SELECTIVITY

|                   |           |
|-------------------|-----------|
| alternate-channel | 71 1/4 dB |
|-------------------|-----------|

|                  |       |
|------------------|-------|
| adjacent-channel | 11 dB |
|------------------|-------|

### HARMONIC DISTORTION (THD+N)

|            | stereo | mono  |
|------------|--------|-------|
| at 100 kHz | 0.29%  | 0.28% |
| at 1 kHz   | 0.25%  | 0.24% |
| at 5 kHz   | 1.04%  | 0.46% |

|                              |       |
|------------------------------|-------|
| STEREO PILOT INTERMODULATION | 0.15% |
|------------------------------|-------|

|                                   |       |
|-----------------------------------|-------|
| INTERMODULATION DISTORTION (mono) | 0.06% |
|-----------------------------------|-------|

|                |           |
|----------------|-----------|
| AM SUPPRESSION | 46 1/2 dB |
|----------------|-----------|

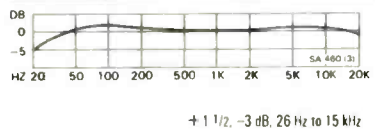
|                            |           |
|----------------------------|-----------|
| PILOT (19 kHz) SUPPRESSION | 35 1/2 dB |
|----------------------------|-----------|

|                                 |       |
|---------------------------------|-------|
| SUBCARRIER (38 kHz) SUPPRESSION | 51 dB |
|---------------------------------|-------|

\*See text.

## TV TUNER SECTION

### AUDIO FREQUENCY RESPONSE



#### AUDIO S/N RATIO (A-weighted)

|                                   |           |
|-----------------------------------|-----------|
| best case (no color or luminance) | 57 3/4 dB |
|-----------------------------------|-----------|

|                           |           |
|---------------------------|-----------|
| worst case (white raster) | 40 1/4 dB |
|---------------------------|-----------|

#### RESIDUAL HORIZONTAL-SCAN COMPONENT (15.7 kHz)

|  |            |
|--|------------|
|  | -55 1/4 dB |
|--|------------|

## AMPLIFIER SECTION

|             |                           |
|-------------|---------------------------|
| RATED POWER | 17 dBW (50 watts)/channel |
|-------------|---------------------------|

#### OUTPUT AT CLIPPING (at 1 kHz, both channels driven)

|            |                               |
|------------|-------------------------------|
| 8-ohm load | 18 1/2 dBW (70 watts)/channel |
|------------|-------------------------------|

|            |                               |
|------------|-------------------------------|
| 4-ohm load | 19 1/2 dBW (90 watts)/channel |
|------------|-------------------------------|

**DYNAMIC POWER (at 1 kHz)**

|            |            |
|------------|------------|
| 8-ohm load | 19 1/4 dBW |
| 4-ohm load | 20 3/4 dBW |

**DYNAMIC HEADROOM (re rated power, 8-ohm load)**

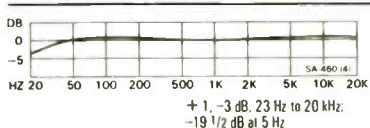
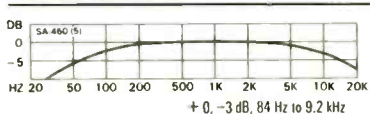
+2 1/4 dB

**HARMONIC DISTORTION (THD; 20 Hz to 20 kHz)**

|                      |          |
|----------------------|----------|
| at 17 dBW (50 watts) | ≤ 0.011% |
| at 0 dBW (1 watt)    | < 0.01%  |

**FREQUENCY RESPONSE**

+ < 1/4, -1/4 dB, 16 Hz to 34.9 kHz  
 + < 1/4, -3 dB, < 10 Hz to 95.4 kHz

**RIAA PHONO EQUALIZATION****VCR SOUND EQ RESPONSE****SENSITIVITY & NOISE (re 0 dBW; A-weighting)**

|             | sensitivity | S/N ratio |
|-------------|-------------|-----------|
| aux input   | 20.7 mV     | 78 dB     |
| phono input | 0.36 mV     | 75 dB     |

PHONO OVERLOAD (1-kHz clipping) 170 mV

**INPUT IMPEDANCE**

|             |                  |
|-------------|------------------|
| aux input   | 16k ohms         |
| phono input | 46k ohms; 120 pF |

**OUTPUT IMPEDANCE (to tape)**

|                    |            |
|--------------------|------------|
| from aux input     | direct     |
| from tuner section | 1,700 ohms |
| from phono input   | 950 ohms   |

DAMPING FACTOR (at 50 Hz; re 8 ohms) 70

CHANNEL SEPARATION (at 1 kHz) 64 dB

INFRASONIC FILTER -3 dB at 37 Hz; ≈ 6 dB/octave

**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  |

try it) Beta Hi-Fi or VHS Hi-Fi tapes of similar material should, too.

The receiver's overall frequency response is quite flat—better than  $\pm 1/4$  dB throughout the audio band. The phono section incorporates a nondefeatable infrasonic filter that attenuates output by more than 19 dB at 5 Hz (the critical frequency for unwanted output due to record warps), which is better than you get from some filters whose front-panel switchability makes them seem like a bigger deal. The rolloff does shade up into the audio band, pulling phono response down by a little more than 3 dB at 20 Hz. There also is a slight prominence in the midbass and a slight rise toward the top, but neither is of much sonic significance.

The tone controls shelve toward the frequency extremes. The TREBLE does so above about 10 kHz at its extreme settings (+10 or -10 dB at 20 kHz), but the curves remain shelved to much lower frequencies for more moderate degrees of boost or cut. The BASS shelves below about 50 Hz for almost all settings, achieving extremes of approximately +12 and -12 dB. The LOUDNESS adds about 8 1/2 dB to the bass response below 100 Hz, with respect to the response above 1 kHz, for any setting of the VOLUME. The latter we consider the least satisfactory control on the SA-460 because its taper forces you to use it very near the bottom of its range, where tiny slider adjustments create significant shifts in perceived level for any reasonable setting with typical loudspeakers.

The SA-460 receives three bands—AM, FM, and TV audio—but the last is tuned in two ways. If you select the button marked TV, the manual controls will step through all the regular VHF channels (2 through 13). But if you select CATV, the SA-460 will tune only to Channel 2, 3, or 4, and changing channels is relatively cumbersome. The idea is that you should tune to the output channel of your cable converter box and leave it there; the TV option is for the RF input from your own antenna. If the quartz-lock pilot doesn't light in CATV, you can press the fine-tuning button next to it and the receiver will home in automatically on the converter's carrier.

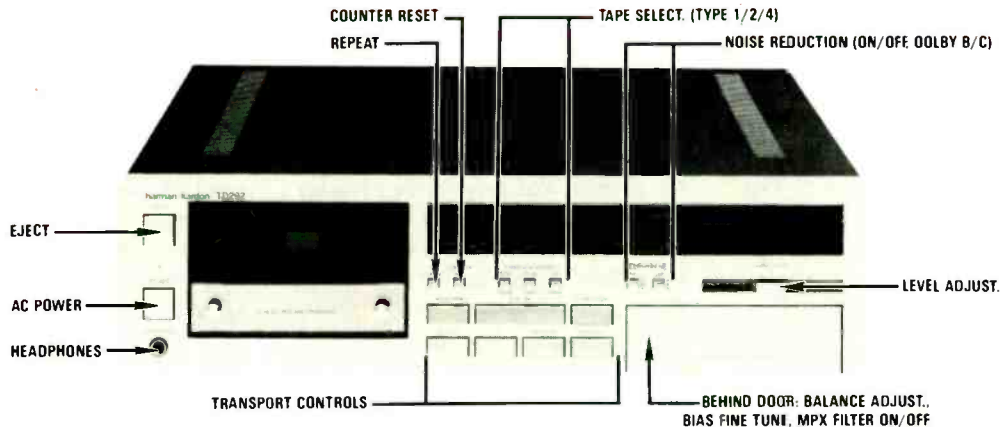
Tuning progresses by half-channel (100-kHz) steps on FM, full-channel (10-

kHz) steps on AM if you simply tap the UP or DOWN button. If you hold it in until the frequency indication changes, you'll skip to the next receivable station in the chosen direction. There are eight preset buttons that control 16 memory locations; Presets 9 to 16, occupying Buttons 1 to 8, respectively, are each selected by pressing deliberately on the appropriate button, rather than merely tapping it. The manual tells you how the machine can load these presets automatically, first scanning the FM band so that each receivable station in succession is memorized in one position, to a maximum of 16, and then beginning again on AM, whose stations start overwriting on Preset 9. How timesaving this procedure will be, compared with memorizing stations one at a time, will depend on the number of receivable stations in your area and the dial locations of your favorites. But however you load the presets, you can scan the results, sampling each station, at the touch of a button.

As we said at the beginning, the SA-460's performance is not really comparable to that of Technics's top audio-only components. You can't expect that degree of sophistication plus such a hefty list of features and capabilities at so slim a price. For instance, the lab measurements show the FM section to be respectable, but no more than that. And we might say much the same of the power amplifier, which provides for two speaker pairs but wires them in series to prevent very low impedances in the combined load. In fact, the lab couldn't measure dynamic power into 2 ohms because the protection relay tripped before a reading could be taken. But there certainly is plenty of power available (given a reasonably high load impedance) for normal home purposes.

The crux of the model is how its constituent parts work together in practical terms in today's audio-video systems. Because those systems are evolving rapidly, we can't tell exactly what they will be like tomorrow; but for now, we commend Technics for the thoughtful planning on which the SA-460 is based. It can't be all things to all users—no design can—but it can do more things more simply in more hookup configurations than perhaps any other audio-video receiver we've tested to date.

# Harman Kardon TD-292 Cassette Deck



**H**arman Kardon's consistency of physical and electronic design means that you know pretty much what you're getting when you buy one of its products, even if you have no direct experience with the specific model you've chosen. The family resemblance certainly extends to the company's cassette decks, several of which we've tested in recent years. The TD-292 is the least elaborate of that group. It is a moderately priced two-head (record/play and erase) unit with Dolby B and C noise reduction.

What sets it apart from other relatively simple decks in its price range is, above all, the very fact of its being a Harman Kardon. The company has always espoused the position that good behavior within the audio band, as measured against conventional standards, isn't enough. Relatively flat response well beyond the audio band is needed, for instance, if phase and square-wave response are to remain tidy at audio frequencies. While the audible importance of square square waves and flat phase response are the subject of some controversy, the enviable track record that Harman Kardon has been able to rack up by following this ideal is not. The TD-292 continues the tradition of wideband electronics and adds the company's fairly recent emphasis on "linear phase" tape equipment.

Beyond that, there are few features that can be considered out of the ordinary. The manually switchable multiplex filter (one of three controls behind the door at the lower right corner of the front panel) restores wideband performance when the filter isn't needed to suppress any residual pilot signal in recording with Dolby noise reduction from FM. Manual tape-type selection is a welcome touch (and an unusual one, these days), because it lets you rerecord old tapes that don't incorporate the now-standard keyways for automatic type sensing. And astonishing by its absence is the usual timer-modes switch; considering how difficult it is to find really good timers to use with such a feature, its absence here won't be mourned.

The most problematic element of the TD-292, however, is the bias adjustment (also hidden behind the door). It *can* be genuinely helpful, as we shall see. Whether it will actually be put to good use depends in part on the operator. Because the deck has no separate playback head to monitor from the tape while recording is in progress, it's impossible to make a direct comparison of source and recording as the bias is adjusted, and no instrumentation is provided to help you out. If, on playing back a tape, you suspect that the highs have been dulled or exaggerated by too

DIMENSIONS: 17½ BY 4¼ INCHES (FRONT PANEL), 12½ INCHES DEEP PLUS CLEARANCE FOR CONNECTIONS. PRICE: \$375. WARRANTY: "LIMITED," ONE YEAR PARTS AND LABOR. MANUFACTURER: MADE IN JAPAN FOR HARMAN KARDON, 240 CROSSWAYS PARK WEST, WOODBURY, N.Y. 11797.

## A QUICK GUIDE TO TAPE TYPES

Our tape classifications, Types 1 through 4, are based on the International Electrotechnical Commission measurement standards.

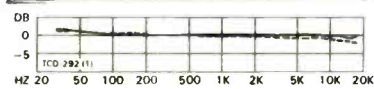
**TYPE 1** (IEC Type I) tapes are ferrics requiring "normal" bias and 120-microsecond playback equalization.

**TYPE 2** (IEC Type II) tapes are intended for use with 70-microsecond playback EQ and higher recording bias. The first formulations of this sort used chromium dioxide; today they also include chrome-compatible coatings such as the ferrico-balts and a few metals.

**TYPE 3** (IEC Type III) tapes are dual-layered ferrichromes, implying the 70-microsecond ("chrome") playback EQ. Approaches to their biasing and recording EQ vary somewhat from one deck manufacturer to another, when they are accommodated at all. Formulations of this type are no longer being made.

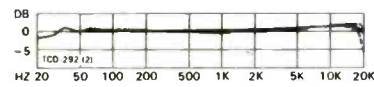
**TYPE 4** (IEC Type IV) tapes are the metal-particle, or "alloy," tapes, requiring the highest bias of all and retaining the 70-microsecond EQ of Type 2.

**PLAYBACK RESPONSE (BASF test tape; -20 dB)**



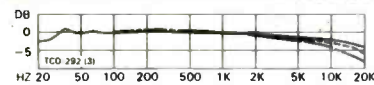
— Left channel +0, -1 1/4 dB, 315 Hz to 18 kHz  
 - - - - Right channel +0, -2 1/2 dB, 315 Hz to 18 kHz

**RECORD/PLAY RESPONSE, TYPE 2 TAPE (-20 dB)**



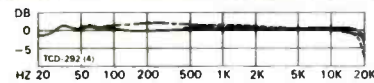
Left channel (no NR) +1, -3 dB, 20 Hz to 20 kHz  
**Right channel:**  
 — no NR +1 1/2, -2 dB, 20 Hz to 20 kHz  
 - - - - Dolby B +1 1/2, -3 dB, 20 Hz to 19 kHz  
 - - - - Dolby C +1 3/4, -1 1/2 dB, 20 Hz to 20 kHz

**RECORD/PLAY RESPONSE, TYPE 4 TAPE (-20 dB)**



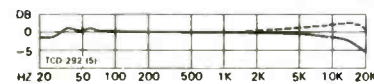
Left channel (no NR) + 1/2, -2 dB, 20 Hz to 20 kHz  
**Right channel (see text):**  
 — no NR +0, -3 dB, 20 Hz to 15 kHz  
 - - - - Dolby B +0, -3 dB, 20 Hz to 10 kHz  
 - - - - Dolby C +1, -3 dB, 20 Hz to 6.8 kHz

**RECORD/PLAY RESPONSE, TYPE 1 TAPE (-20 dB)**



Left channel (no NR) + 1/2, -2 dB, 20 Hz to 20 kHz  
**Right channel:**  
 — no NR +1, -2 dB, 20 Hz to 20 kHz  
 - - - - Dolby B +1, -3 dB, 20 Hz to 19.5 kHz  
 - - - - Dolby C +1 3/4, -2 dB, 20 Hz to 20 kHz

**BIAS ADJUSTMENT RANGE (-20 dB; Type 1 tape)**



— maximum setting  
 - - - - minimum setting  
**MULTIPLEX FILTER (defeatable)**  
 + 1/4 dB at 15 kHz, -36 3/4 dB at 19 kHz

**S/N RATIO (re DIN 0 dB; R/P; A-weighted)**

|         | Type 2 tape | Type 4 tape | Type 1 tape |
|---------|-------------|-------------|-------------|
| no NR   | 56 1/2 dB   | 55 dB       | 51 1/4 dB   |
| Dolby B | 65 dB       | 64 dB       | 60 dB       |
| Dolby C | 70 1/4 dB   | 70 dB       | 65 3/4 dB   |

**INDICATOR READINGS FOR DIN 0 DB (315 Hz)**

|             |                       |
|-------------|-----------------------|
| Type 2 tape | +3 dB (with 4.9% THD) |
| Type 4 tape | +1 dB (with 1.0% THD) |
| Type 1 tape | +1 dB (with 1.8% THD) |

much or too little bias current, respectively, you can alter the setting, do the recording again, and listen to see whether there's an improvement—a subjective, iffy, and potentially tedious process. (On the other hand, adding the features necessary to simplify the adjustment procedure would boost the unit's price considerably.)

The only practical way of assessing bias without measurement is the old when-all-else-fails standby: Record FM interstation noise at about -20 dB, then play it back and use the monitor switch on your preamp to compare tape with tuner. It's a rather slow cut-and-try process, and most users probably will elect to skip it except in rare moments of inquisitiveness or perhaps when first setting up for a new tape formulation.

Experienced recordists may find that the bias control's operation seems backward, since turning the knob clockwise reduces the bias instead of increasing it (opposite to the way most other such controls work). On the other hand, this arrangement probably is more intuitive for those innocent of how bias works, who can simply think of it as a sort of EQ adjustment: Turn it "up," and treble increases (because of the reduced bias); turn it "down," and the high frequencies diminish. But though this aspect of bias adjustment is the most obvious, it isn't the whole story. Lowering bias also raises headroom at high frequencies, while reducing it in the normally more critical mid-range. Use of the bias knob as a tone control could thus lead unsophisticated users into misunderstanding and making inferior recordings.

The owner's manual is not much help on this point. In general, however, it is vastly more satisfying than most, in that it supplies both clear, simple how-to explanations of basic functions and some background to help you understand why its dictates are what they are—all in idiomatic, if slightly stiff, English. It also includes a table of recommended tapes. The Maxell entries are encouraging because they include current offerings (many deck manufacturers have yet to catch up), although the designations do not reflect the usages of the American marketplace in all respects. Three tapes are indicated as "standard reference" formulations:

Maxell XL-I Type 1 ferric, TDK SA Type 2 ("chrome") ferricobalt, and TDK MA Type 4 metal.

Diversified Science Laboratories followed the manual's tape recommendations in measuring the TD-292, leaving the bias control at its detented center (normal) setting. As you can see in the graphs, response with the Type 2 and Type 1 tapes is superbly flat for a deck in this price range. The Type 4 curves (as always, using the right channel) are very smooth, but they gradually roll off toward the top end (particularly, of course, with the noise reduction turned on), suggesting excessive bias. The left channel is as flat as you might expect from the curves for the other two tapes: spot-on the 0-dB line right up to 10 kHz and down only 1/2 dB at 20 kHz without noise reduction and almost that good with either Dolby B or C.

Our first reaction on seeing the Type 4 curves was, "What a pity you can't correct the right-channel overbias without underbiasing the left." However, when the lab measured response in both channels with the bias at its minimum (that is, at maximum control rotation), the results were astonishingly good: only a very small rise in the left channel and a slight rolloff in the right, yielding a maximum spread of  $\pm 1$  dB at 20 kHz and of just  $\pm 1/2$  dB at 10 kHz. On checking a second TD-292, the lab found an excellent match between the two channels, though with about as much rolloff as in the right channel of the first unit. We therefore wonder whether our samples of MA, as supplied by TDK U.S. in January 1985, may differ in bias requirement from whatever samples the factory in Japan uses to optimize the deck.

This also makes comparison of the headroom figures a little questionable, at least with respect to the Type 4 tape. At high frequencies, the Type 1 does best, with no significant compression at 0 dB to above 5 kHz, particularly with Dolby C. Compression shows up a little sooner and is a little more severe with the Type 2 tape, because of its more demanding high-frequency equalization. Because of the overbias, the Type 4 is the poorest, showing at least 1/2 dB of compression throughout the frequency range, though the Dolby C curve actually is flatter (-3 dB at 11 kHz) at 0 dB



than at -20 dB. Lowering its bias undoubtedly would improve these results as well as flatten the response.

On the other hand, that also would reduce the Type 4's midrange headroom (though perhaps not significantly), which, with the current settings, is exactly where it should be for the maximum meter readings recommended in the manual for each tape type. (Why both the maximum value and the meter sensitivity should change when you switch types, we don't know, but the point is moot, because the level-setting recommendations stand up in practice.) The metering is typical of modern decks, providing a fast rise and slow decay. It registers nothing below -20 dB, but is more finely divided than average between this threshold and its +8-dB maximum: in 2-dB increments between -7 and +5 dB, except for 1-dB steps from -1 to +1 dB.

Playback response rolls off only

slightly toward the top end, where DSL gives the unit the benefit of any doubt occasioned by output fluctuations attributable (as here) to a poor azimuth match between it and the BASF test tape. With a good azimuth match, there might be no rolloff at all. Speed accuracy, with no measurable error, is exceptional. The flutter figure isn't, but it's no cause for complaint, either. Sensitivities and impedances are well within standard limits.

Overall—and despite our reservations about the bias adjustment scheme—the TD-292 is an exceptionally fine two-head cassette deck. We'd recommend it particularly to users who are methodical enough to set the tape-type and noise reduction switches correctly, but otherwise want to skirt the technological details of recording. For them, the TD-292 should make excellent tapes with a minimum of fuss (and at a relatively modest price). ●

| INDICATOR READINGS FOR 3% DISTORTION (315 Hz)  |                           |
|--|---------------------------|
| Type 2 tape                                    | +1 dB (for -1 1/2 dB DIN) |
| Type 4 tape                                    | +5 dB (for +4 dB DIN)     |
| Type 1 tape                                    | +3 dB (for +1 dB DIN)     |
| DISTORTION (THD at -10 dB DIN; 50 Hz to 5 kHz) |                           |
| Type 2 tape                                    | ≤ 0.84%                   |
| Type 4 tape                                    | ≤ 0.43%                   |
| Type 1 tape                                    | ≤ 0.53%                   |
| ERASURE (at 100 Hz)                            |                           |
| Type 2 tape                                    | 74 1/2 dB                 |
| Type 4 tape                                    | 59 dB                     |
| CHANNEL SEPARATION (at 315 Hz)                 |                           |
|  | 54 3/4 dB                 |
| INDICATOR "BALLISTICS"                         |                           |
| Response time                                  | 2.8 msec                  |
| Decay time                                     | ≈ 1,040 msec              |
| Overshoot                                      | 0 dB                      |
| SPEED ACCURACY (105 to 127 VAC)                |                           |
|  | no measurable error       |
| FLUTTER (ANSI weighted peak; R/P)              |                           |
|  | ± 0.13%                   |
| SENSITIVITY (re DIN 0 dB; 315 Hz)              |                           |
|  | 73 mV                     |
| INPUT OVERLOAD (at 1 kHz)                      |                           |
|  | > 10 volts                |
| INPUT IMPEDANCE                                |                           |
|  | 49.9k ohms                |
| OUTPUT IMPEDANCE                               |                           |
|  | 990 ohms                  |
| OUTPUT LEVEL (from DIN 0 dB)                   |                           |
|  | 0.71 volt                 |

## T E S T R E P O R T S

# Kenwood KRC-999 Car Tuner/Tape Deck

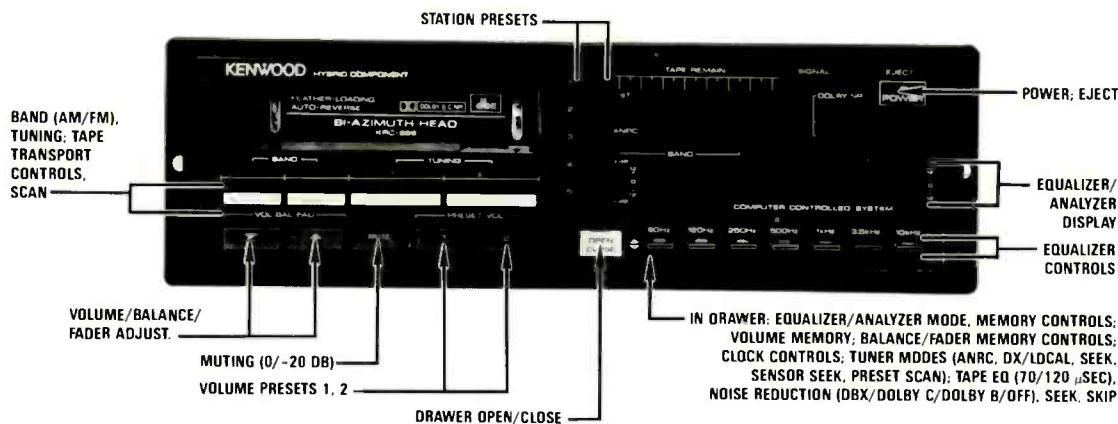
The Kenwood KRC-999 is, hands down, the most complex car stereo unit we've tested. And given its astonishing complement of features and controls, we expect it to encounter few rivals in this regard in coming seasons. It even has a motorized drawer that rolls out to give you access to the less-used controls, as in some home components. But the KRC-999, even with its *three* separate chassis, isn't a total system. That requires the addition of at least one stereo amplifier (there's also a second, back output) and speakers—plus, if you want to go whole hog, a matching Kenwood CD player.

What the KRC-999 does include is the usual front-end combination of AM/FM tuner, preamp, and bidirectional cassette player, plus a built-in seven-band equalizer. But that's not all. The most obvious ways in which Ken-

wood has managed to exceed the call of car stereo duty are some unusual (though not always very useful) display capabilities. For the tuner section, there's an LED signal-strength "meter"; for the tape deck, there's a tape-remaining display that "shrinks" as the cassette plays. And the LED array that shows the settings of the equalizer can be pressed into service as a spectrum analyzer. All of these are automotive firsts in our experience. Throughout, the designers seem to have been motivated by the question, "What *else* can we give the user?"

Such audio-visual aids are perhaps essential, in this case, because the manual is not much help. The elegant-looking 80-page tome (of which half is the English version, half the French) is abundantly and clearly illustrated, but the edition that accompanied our test sample was very poorly written and

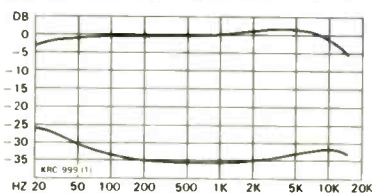
**DIMENSIONS:** MAIN CHASSIS, 7 BY 2 INCHES (FRONT), 6 INCHES DEEP; ESCUTCHEON, 7 1/2 BY 2 1/4 INCHES; CONTROL UNIT, 6 BY 1 1/2 BY 6 INCHES; POWER SUPPLY, 2 BY 1 BY 3 1/2 INCHES. **CONNECTIONS:** UNTERMINATED WIRES FOR IGNITION AND BATTERY, FLAT FEMALE FOR POWER ANTENNA, SPADE LUGS FOR GROUNDS, SEPARATE 8-PIN DIN MALE FOR OUTPUTS TO FRONT AND BACK STEREO POWER AMPLIFIERS, SPECIAL 8-PIN DIN-STYLE FEMALE FOR INPUT FROM OPTIONAL KDC-9 COMPACT DISC PLAYER, STANDARD COAXIAL FEMALE FOR ANTENNA INPUT. **FUSES:** 3-AMP IN BOTH IGNITION AND BATTERY LEADS. **PRICE:** \$1,299 TO \$1,499; OPTIONAL KDC-9 CD PLAYER, \$599 TO \$649; OPTIONAL SZ-20A TWO-AMPLIFIER POWER SUPPLY AND WIRING, \$25. **WARRANTY:** "LIMITED," ONE YEAR PARTS AND LABOR. **MANUFACTURER:** TRIO-KENWOOD CORP., JAPAN; U.S. DISTRIBUTOR: KENWOOD ELECTRONICS, 1315 E. WATSONCENTER RD., CARSON, CALIF. 90745.



## FM TUNER SECTION

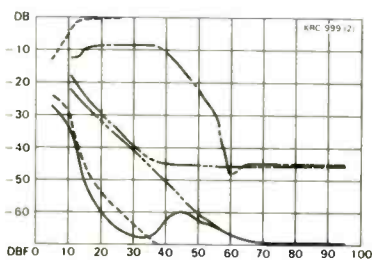
Data taken with ANRC off except as indicated; see text.

### FREQUENCY RESPONSE & CHANNEL SEPARATION



Frequency response  $+1 \frac{1}{2}$ ,  $-3$  dB, 22 Hz to 12 kHz  
Channel separation  $\geq 30$  dB, 60 Hz to 11 kHz

### FM SENSITIVITY & QUIETING



— stereo quieting (noise) & output, ANRC on  
- - - mono quieting (noise) & output, ANRC off  
- - - channel separation at 1 kHz, ANRC on  
- - - stereo quieting & separation, ANRC off

#### Stereo sensitivity (for 50-dB noise suppression)

39  $\frac{3}{4}$  dBf, with 41  $\frac{1}{4}$  dB separation at 1 kHz

#### Mono sensitivity (for 50-dB noise suppression)

without ANRC 18 dBf

with ANRC 16  $\frac{1}{2}$  dBf

Stereo S/N ratio (at 65 dBf) 68  $\frac{1}{2}$  dB

Mono S/N ratio (at 65 dBf) 73  $\frac{1}{2}$  dB

#### CAPTURE RATIO

2 dB

#### SELECTIVITY (alternate-channel)

54  $\frac{1}{4}$  dB

#### AM SUPPRESSION

64  $\frac{1}{2}$  dB

#### DISTORTION (THD+N)

at 100 Hz 0.64% stereo, 0.41% mono

at 1 kHz 0.48% stereo, 0.32% mono

at 6 kHz 0.26% stereo, 0.08% mono

squandered its space on exhaustive explanations of basics. We understand that it is being reprinted with many amendments, so we hope that audiophiles will no longer be left on their own to perceive, apply, and appreciate the significance of much of the design. If you buy a KRC-999, take a look at its manual before you leave the store to make sure it tells you everything you want to know.

The head end—that is, the chassis that contains the operating controls—is simply called the KRC-999 in the manual; the larger subsidiary one is styled the “control unit,” while the third is the “power supply unit.” The KRC-999 proper is umbilically attached to the power supply, from which emanate the DC connections and a permanent ground lead. Dual umbilicals, fitted with multipin connectors, attach the head end to the control unit, which the manual suggests you stash under a seat. The control unit provides the antenna input and has its own detachable ground and cables for all outputs. Antenna leads in most cars terminate behind the dash, so Kenwood supplies an extension about six feet long to get from the antenna to the control unit, along with a wealth of mounting hardware.

Memory functions are used liberally throughout the design. For example, the equalizer has, in effect, two separate three-address memories. One, called KBS (for Kenwood Built-in Sound), is preprogrammed at the factory. Its three options—“loudness,” “vocal,” and “flat”—are shown in one of our graphs. For some reason, Kenwood has chosen to boost output considerably in the first two of these, as reflected in the height of the respective

curves. Frankly, we weren't exactly delighted by either response, but this is a question of personal taste, and you can easily modify the curves by tapping the seven equalizer controls upward (to boost the selected frequency band) or downward (for cut). With KBS off, any three curves of your own devising can be stored in memory, using the same three KBS buttons.

The adjustment options available in each equalizer band consist of six degrees of boost or cut (nominally, in 2-dB increments, for a maximum of 12 dB). When a band is at reference (0 dB) level, an amber LED lights in its “column” of the display. Above are three red LEDs and below are three green ones, each of which represents two consecutive steps of change from flat. Thus, for instance, boosting a band by either three or four steps lights its second red LED. The nominal center frequencies and boost/cut increments are reasonably accurate, although a boost or cut of any degree in any band seems to shift the entire curve above 1 kHz about 2 dB up (for a boost) or down (for a cut) from its flat position—a minor flaw, in our view.

Two more memories are built into the preamp section. One will store three combinations of balance and fader settings for future reference; the other memorizes two volume levels. The electronic volume control steps in reasonably even increments of about 1 or 2 dB. Its setting is shown with an LED display, but because this display (like the one for the equalizer) has a total range of only seven elements, several volume steps are needed to go from one segment to the next. The KRC-999 has a mute button (which lowers output by 20 dB)—the first in any automotive

component we've tested and no doubt useful during arguments with toll-booth operators.

A control-unit switch sets the maximum output level at either "normal" (nominally, 300-millivolt) or "high" (1-volt). Both on the test bench and in listening, we used the high option almost exclusively and found even it to be a little lower than usual, requiring us to turn the volume nearly all the way up most of the time. Presumably Kenwood's own amplifiers (which we didn't test) provide the extra gain that would be needed with the "normal" output.

The tuner has five preset buttons, each capable of recalling four frequencies: three on FM and one on AM. Tuning advances in full-channel increments on both bands. Automatic tuning options include bidirectional scan (when you press a tuning key, the KRC-999 automatically stops at the closest receivable station above or below the current one), auto memory (which loads the five strongest stations into five memory positions), preset scan (which will sample five seconds of each of the five stations stored in any memory bank), and ABSS (Automatic Broadcast Sensor System, which seeks upward on the dial when the tuned station fades). To make the unit ignore all but strong stations, you can reduce the sensitivity of the seek function by pressing LOCAL, which increases the threshold signal strength by 46 dB.

Kenwood's method of optimizing performance with fading FM signals is called ANRC (for Automatic Noise Reduction Circuit), and it appears to be unusually complex. For one thing, it improves the performance of mono reception, as well as stereo. For another, it appears to be controlled by signal content as well as strength. (The more highs in the music, the better it can mask hiss, and therefore the less need for blending or other hiss-reducing measures.) Since ANRC never permits noise to rise above -50 dB until signal strength is so weak that separation is virtually nil, the only true-stereo stereo-sensitivity rating is that with ANRC off.

Basically, our quieting curves show stereo performance with ANRC on, mono with it off. Stereo quieting and separation with it off are also shown (center left in the graph), but not output

level for that input, which lies on or near the mono output curve (the dashed line at the top). Omitted altogether in the interest of clarity is the best quieting curve of all—that for mono with ANRC on, which lies on the stereo curve down to about -55 dB (lower left corner), below which it descends even more steeply to bottom out at  $-73\frac{1}{2}$  dB just above 40 dBf.

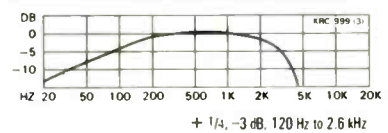
The frequency response curves (including the one for the equalizer with a mono FM input) were made with ANRC off and at the normal test input of 65 dBf (which is fairly typical of the signal strengths you might encounter in, say, a suburb that is a moderate distance from transmitters). As you can see, there's some prominence in a broad region centered on about 4 kHz and a decided rolloff above 8 kHz. With ANRC on and input reduced to 45 dBf so that the circuit is forced to work (you can see in the quieting graph that output, separation, and noise are all virtually identical at and above 65 dBf whether ANRC is on or off), the upper end of the frequency response curve bends down somewhat more so that the prominence disappears, but the relationships are too complex to permit simple predictions of behavior in any given circumstance.

Perhaps such complexity is just what has been missing in other car stereo units, since the listening quality of the FM section struck us as very good indeed. At some signal strengths we could hear the treble prominence shown in our graph, but the sound wasn't displeasing. Our tests for fluctuating signal strength and multipath produced well-controlled bursts of noise and distortion. All of the remaining FM data are, at minimum, quite respectable, and some (such as AM suppression) are distinctly better than that.

The AM section evidently makes noise removal a major priority. The response is shorn of all highs and is rolled off in the bass. But that makes it easier to listen to than the thumpiness or clatter that many AM stations' sonic affectations create through a receiver with flatter or wider response. Sensitivity is excellent; among recent models, we've measured none that is significantly better. Like many other front ends, the KRC-999 yields no meaningful figure in the standard AM selectivity test.

## AM TUNER SECTION

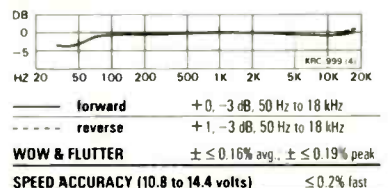
### FREQUENCY RESPONSE



|                    |             |
|--------------------|-------------|
| <b>SENSITIVITY</b> | 3.3 $\mu$ V |
| <b>SELECTIVITY</b> | see text    |
| <b>AVC RANGE</b>   | 64 1/4 dB   |

## CASSETTE TRANSPORT SECTION

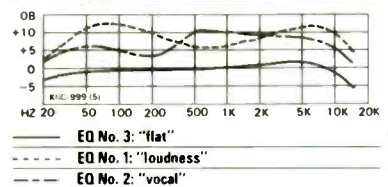
### FREQUENCY RESPONSE



|  |  |
|--|--|
| <b>WOW &amp; FLUTTER</b>                   | $\pm \leq 0.16\%$ avg.; $\pm \leq 0.19\%$ peak |
| <b>SPEED ACCURACY (10.8 to 14.4 volts)</b> | $\leq 0.2\%$ fast                              |

## PREAMPLIFIER SECTION

### PREPROGRAMMED EQUALIZER OPTIONS (mono FM input)



|  |             |
|--|-------------|
| <b>LINE OUTPUT IMPEDANCE</b>                       | 680 ohms    |
| <b>MAXIMUM LINE OUTPUT LEVEL ("normal"/"high")</b> | 0.34/1.10 V |
| from FM (100% modulation)                          |             |
| from tape (DIN 0 dB)                               | 0.31/0.98 V |

The cassette transport features individual factory adjustment of azimuth for each direction of tape travel. It not only provides a good or very good match to the azimuth of the lab's BASF test tape, as judged by the stability of the signal in the high-frequency response tests, but is unusually flat in response throughout the range. The deck is exceptionally consistent from one side to the other in all measured characteristics, in fact, which speaks well for its mechanical engineering. All three noise reduction systems (Dolby B, Dolby C, and DBX) are present, as is playback equalization switching—although, as usual, the 70-microsecond EQ for Type 2 and Type 4 tapes is misnamed "MTL."

There is a skip mode to wind the tape to the nearest interselection blank in either direction. The transport can also be programmed to skip as far as

eight tunes away. A scan function samples ten seconds of each selection before going on to the next. An automatic skip will fast-forward in search of the next number whenever it encounters 15 seconds of continuous silence—which is particularly useful when, for instance, the program on one prerecorded tape side is considerably longer than the one on the other. Incidentally, when you turn off the power, the KRC-999 automatically ejects the tape. All in all, we consider the tape section unusually competent and comprehensive.

In fact, comprehensiveness is the name of the KRC-999's game—and is, at once, its strength and its weakness. With so encyclopedic a list of features, it naturally has complex multifunction controls and some very tiny switches. A few prospective purchasers doubtless will balk at the formidable job of memorizing so many procedures, and memo-

rization is a necessity if you're to work the controls while driving. Still, we were surprised how quickly we assimilated them, and the many memory functions do help this process. Balance/fader options, for example, can be preset for the driver alone, for the driver and a front-seat passenger, and for a full load. From then on, the touch of a single button will adjust both functions to the occupancy of the moment.

In any event, the KRC-999 represents a unique sonomotive experience (if we may coin a term). In appearance, as in capabilities, it is quite unlike any model we've reported on previously, and until you see it, operate its controls, and hear what they will do, your concept of its potential will necessarily be imperfect. It certainly is not for everybody, but the enthusiast for whom it is designed will be hard put to find another front end worthy of comparison. ●

#### T E S T R E P O R T S

## Panasonic CQ-E650EU Car Receiver/Tape Deck

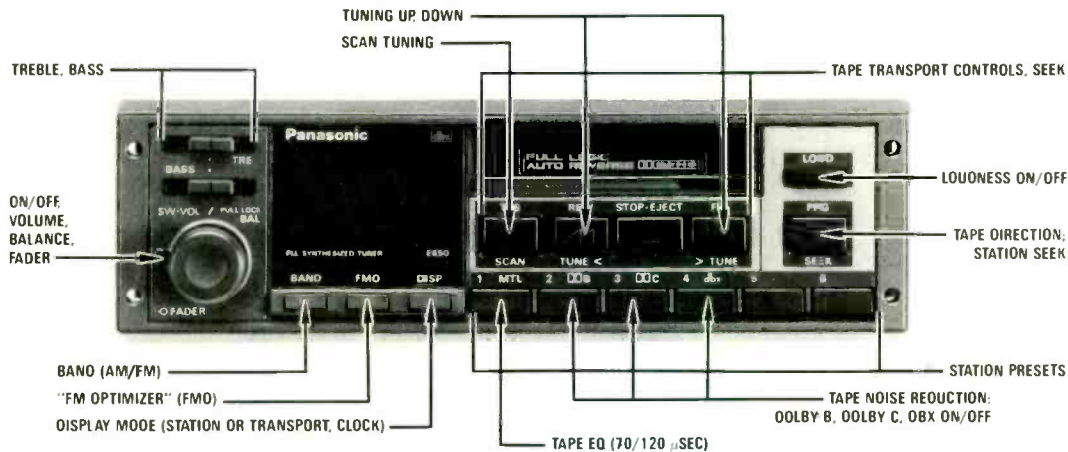
**DIMENSIONS:** MAIN CHASSIS, 7 BY 2 INCHES (FRONT), 6 INCHES DEEP; ESCUTCHEON, 7 $\frac{1}{2}$  BY 2 $\frac{1}{4}$  INCHES; BACK-SPEAKER AMPLIFIER CHASSIS, 6 BY 2 BY 1 $\frac{1}{2}$  INCHES PLUS CLEARANCE FOR MOUNTING BRACKETS. **CONNECTIONS:** BARED WIRES FOR IGNITION, BATTERY, AND SPEAKERS; SPADE LUG (PLUS CHASSIS-LUG DISCONNECT) FOR GROUND; ROUND FEMALE FOR AUTOMATIC POWER ANTENNA AND POWER TO BACK-AMP CHASSIS; PIN CONNECTORS FOR LINE FEED TO BACK-AMP CHASSIS; STANDARD COAXIAL FEMALE FOR ANTENNA INPUT. **FUSES:** 5-AMP IN BOTH IGNITION LEAD AND BACK-AMP BATTERY LEAD. **PRICE:** \$550. **WARRANTY:** "LIMITED," ONE YEAR PARTS AND LABOR. **MANUFACTURER:** MATSUSHITA ELECTRIC INDUSTRIAL CO., LTD., JAPAN; **U.S. DISTRIBUTOR:** PANASONIC COMPANY DIV., MATSUSHITA ELECTRIC CORPORATION OF AMERICA, 1 PANASONIC WAY, SECAUCUS, N.J. 07094.

**T**here is a practical appeal to Panasonic's CQ-E650EU that some people will find irresistible. The large control buttons, the unambiguous front-panel markings, the logical layout, and the easily readable characters of the liquid-crystal display (LCD) that serves as clock, frequency read-out, and tape mode/motion indicator all conspire to make the front end's many features unusually accessible, even while you're driving. In that respect, it is one of the most successful car stereo designs we have yet tested.

Key to the control system are the multiple indicator light/labels for those buttons offering double service. Because there are so many features and the buttons that oversee them are so large—a big plus even if you're only moderately fumble-fingered—the unit automatically switches both the control functions and the buttons' labeling when you alternate between tuner and

tape. Although it's true that some of the labeling is too small to read easily while you're driving (and that strong daylight completely washes out the illumination), we found the system unusually helpful in learning the front-panel functions. In addition, the most important operations have status indicators in the LCD panel (which is exceptionally easy to read, even with sunlight falling directly on it), speeding the learning process even more. A button below the LCD toggles it between frequency and clock when you're using the tuner section and, when you're playing a tape, between clock and a stylized motion display that suggests the direction of tape-wind at normal and fast transport speeds.

The unit's only knob governs both volume and, when you pull it out, balance—but not with the typical spring loading that returns you automatically to the volume mode (and that usually



makes balance setting annoyingly difficult). Instead, the knob latches into the out position, letting you adjust balance with relaxed fingers, and a tap pops it back to the normal position—a big improvement over the customary arrangement. The front/rear fader is the tab at the side of the knob. The treble and bass sliders are the smallest, stiffest, and most difficult to adjust of the controls, suggesting their set-and-forget nature. In fact, if they were larger or looser you might conceivably knock them out of adjustment when setting the volume.

All of the large buttons at the bottom-right select station presets in the tuner mode (as many as six for each radio band). In the tape mode, the left-most one doubles as the playback equalization switch (as usual, marked to indicate "metal" for the 70-microsecond setting shared by Type 2 tapes), while the next three buttons to the right double as noise reduction selectors (for Dolby B, Dolby C, or DBX, respectively). The unit's logic turns off all noise reduction if you touch the button for the currently selected system, but overrides the current system if you touch any other.

Particularly effective is the way Panasonic uses the tape transport controls for tuning the radio. The "fast-forward" and "rewind" buttons tune up and down, respectively, and in full-channel steps (200 kHz on FM, 10 kHz on AM). Doubling as the scan-tuning control is the button for the tape-peek feature (which Panasonic calls TPS and which can be programmed to skip as many as nine selections in either direction when you touch the appropriate fast-wind button). Scan tuning moves

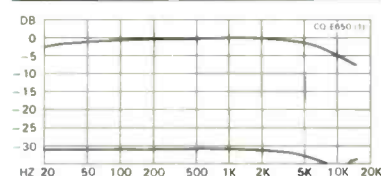
up the dial from one receivable station to the next, sampling five seconds of each, until you press the button a second time. Also included is seek tuning, which moves to the next receivable station and stays there; it shares a button with tape "program"—that is, direction reverse.

The CQ-E650EU actually consists of two separate chassis. In addition to the one behind the control panel, which includes a stereo amplifier to power the front speakers, there's a smaller chassis containing a stereo amp for the back speakers. If you plan on mounting only a single speaker pair, the latter amp can be ignored or used instead of the front-channel amp to take advantage of its slightly higher output. Both amplifiers operate in bridged configuration, precluding use of grounded speakers or any wiring that would ground either side of the amps' outputs. Like many such amplifiers, they deliver less power than you might expect from their ratings (specs for car stereo aren't derived nearly as rigorously as those for home equipment), but the front output of 11.1 watts per channel is considerably more than you'll get from a typical factory-installed radio, and the back channels provide an additional 2½ dB. It's easy to add yet more power, if you insist, because the line output to the back amp is fitted with standard pin connectors.

The tone controls offer a little more than 10 dB of cut or boost relative to their detented center positions, which were used as the reference settings for the other measurements. Our test sample required some treble boost to achieve relatively flat electrical response—which otherwise droops somewhat more rapidly in FM than in tape

## FM TUNER SECTION

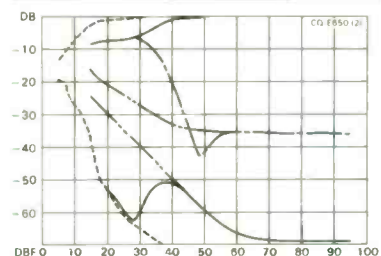
### FREQUENCY RESPONSE & CHANNEL SEPARATION



Frequency response +0, -3 dB, 20 Hz to 7 kHz

Channel separation ≥ 30 dB, 65 Hz to 12 kHz

### FM SENSITIVITY AND QUIETING



— FMO stereo quieting (noise) & output  
 - - - mono quieting (noise) & output  
 . . . FMO channel separation at 1 kHz  
 - · - stereo quieting & separation without FMO

Stereo sensitivity (for 50-dB noise suppression)\*

40 3/4 dB, with 33 dB separation at 1 kHz

Mono sensitivity (for 50-dB noise suppression)

19 dBf

Stereo S/N ratio (at 65 dBf) 67 1/2 dB

Mono S/N ratio (at 65 dBf) 73 1/2 dB

CAPTURE RATIO 1 dB

SELECTIVITY (alternate-channel) 58 1/2 dB

AM SUPPRESSION\* 74 1/4 dB

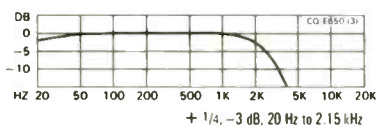
### DISTORTION (THD+N)

|           | stereo | mono  |
|-----------|--------|-------|
| at 100 Hz | 0.78%  | 0.72% |
| at 1 kHz  | 0.74%  | 0.52% |
| at 6 kHz  | 0.88%  | 0.70% |

\*See text.

## AM TUNER SECTION

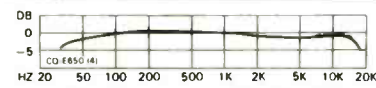
### FREQUENCY RESPONSE



|                    |             |
|--------------------|-------------|
| <b>SENSITIVITY</b> | 4.4 $\mu$ V |
| <b>SELECTIVITY</b> | see text    |
| <b>AVC RANGE</b>   | 74 1/2 dB   |

## CASSETTE TRANSPORT SECTION

### FREQUENCY RESPONSE



|  |   |
|--|---|
| <b>WOW &amp; FLUTTER</b>                   | $\pm 0.22\%$ average; $\pm 0.26\%$ peak |
| <b>SPEED ACCURACY (10.8 to 14.4 volts)</b> | $\leq 1.2\%$ last                       |

## PREAMP/AMPLIFIER SECTION

|  |                           |
|--|---------------------------|
| <b>BASS CONTROL</b>                                  | +12, -11 dB at 100 Hz     |
| <b>TREBLE CONTROL</b>                                | +11 3/4, -11 dB at 10 kHz |
| <b>LINE OUTPUT IMPEDANCE</b>                         | 550 ohms                  |
| <b>MAXIMUM LINE OUTPUT LEVEL</b>                     |                           |
| from FM (100% modulation)                            | 1.1 volts                 |
| from tape (DIN 0 dB)                                 | 0.8 volt                  |
| <b>OUTPUT (per channel into 4 ohms; at 3% THD+N)</b> |                           |
| front  | 11.1 watts (10 1/2 dBW)   |
| back   | 16.2 watts (12 dBW)       |

playback. Switching in the loudness compensation introduces a bass boost (of about 10 dB below 100 Hz with the volume lowered 20 dB from the reference setting) but leaves the treble as is, reflecting present theory as to how loudness compensation should be applied. Although you may want to touch up the compensation with the tone controls, we found the built-in curve more to our taste than those of many other car stereo models.

Mounted in our test car, the CQ-E650EU actually sounds somewhat brighter than it looks in our graphs, though the AM has no real top end by any standard. On the other hand, the AM is relatively untroubled by high-frequency interference products. It also doesn't have the boomy bottom we sometimes encounter, so we judged it relatively free of annoyances, if less than sonically stimulating.

The rolloff at the top end of the tape curves is attributable to the electronics, since the head-azimuth match to Diversified Science Laboratories' BASF test tape, which might otherwise be suspected as a cause, is proved very good by the stability of the high-frequency output during this test. Measured flutter, while not spectacularly low, is comparable to that of many competing models, and the transport's immunity to road shock is quite good. Actual transport speed is reasonably accurate (a hair closer to spot-on in the forward direction than in reverse), and overall performance in the car pleased us—in particular because we found it exceptionally easy to control. We discovered, however, that the deck doesn't automatically eject the cassette when you shut off the power.

Panasonic calls its circuitry for improving the sound of fading FM stations FMO, for FM Optimization (surprise!). It can be defeated with a front-panel button, with the results suggested on our quieting graph: As signal strength drops below 50 dBf, noise rises by about 1 dB for each dB loss of signal strength, and separation gradually starts disappearing as noise contributes to the output in the unwanted channel. Not shown is the maximum stereo output level with the FMO off, which closely approximates the mono curve down to the stereo threshold—meaning that output is reduced at very

low signal strengths (to spare you the rush of noise). All this is classic behavior for a home-style FM radio, but it can make for annoying on-the-road listening when signal strength or multipath is varying radically because of the car's motion.

The traditional solution to this problem has been to blend channels, alter frequency response, or attenuate output automatically on the basis of instantaneous signal strength or multipath. The infinite variety in which these expedients can be combined is responsible for the great differences in sonic behavior between one car radio and another. Below about 40 dBf, Panasonic's FMO rapidly decreases separation and begins attenuating output. By 30 dBf, reception no longer is stereo in any useful sense. Because of the blend, quieting remains better than 50 dB until well below this point (where reception is totally mono), so we can report stereo sensitivity only with the FMO off. But for stations to which the sensitivity figure would make a difference, the FMO mode is much the more listenable.

When we first saw the lab data, we worried that so rapid a channel blend might cause the stereo image to keep popping open and deflating, like an air bag—an effect we have noted with some competing models. On our test track, however, we found no reason to complain. And the FMO considerably ameliorates bursts of noise and distortion that also are occasioned by weak and fluctuating signal strength and, particularly, by multipath. At both frequency extremes, the sound of this "spitting" is fairly aggressive without FMO; when the FMO is turned on, the spitting isn't so much lessened as softened, making it easier to live with (no doubt at least partly because of the output attenuation at low signal strengths). With the FMO on—definitely the preferred listening mode unless you're tuned to a strong local station—we'd rate the CQ-E650EU average or better in this respect.

Overall performance is satisfyingly good, but the real star of the show is the human engineering of the front panel. We hope other companies will take to heart the lessons that Panasonic can teach them. If they do, the quality of life for automotive audiophiles will be materially enhanced. ●

# COMING TO YOU IN

# T

TO THE TYPICAL VIEWER, STEREO television seems to have appeared out of nowhere, the first evidence of it being a clever symbol shown by NBC in much the same way that the network once displayed a fanning peacock to identify its color broadcasts. But the technology has a history extending back before ABC's experimental transmissions during the 1984 Olympic Games and NBC's exploratory stereo airings of *The Tonight Show*. Indeed, the gestation of this country's multichannel TV system was a complex process that illustrates how a relatively simple concept can grow into a project involving the government and dozens of the world's top electronics experts, all to ensure the choice of the best technology possible.

Although stereo audio for television had been discussed since the 1950s, serious attention first came in 1979. By that time, two important segments of the television industry were eager for it. TV set manufacturers, seeking increased sales in an almost saturated market, wanted to incorporate high fidelity sound—including stereo—into a new generation of models. Broadcasters wanted

to provide more audio capabilities to the public to increase interest in their service, which was then facing competition from the proliferating cable systems. The year before, Japanese broadcasters had started using a single extra audio channel to transmit either stereo or bilingual information. The American television industry hoped to improve on that with a system that would transmit stereo and bilingual audio simultaneously. Thus, there was the will—and the way ran straight by the Federal Communications Commission.

Broadcasters were still smarting from the FCC's decision not to select a standard system for stereo AM radio from among five competing proposals. The confusion resulting from that "open marketplace" ruling has delayed widespread implementation of stereo AM to this day. Those pushing for stereo television wanted to prevent the same numbing fate from befalling it. They felt that MTS (multichannel television sound; see "Stereo TV Abbreviations" on page 46) would have the best chance of succeeding if the FCC were to choose a single system. But the deregulation-oriented agency was unlikely to do so unless the television industry as a whole presented a strong argument in favor of a specific method.

## A UNITED FRONT

RESPONDING TO THE THREAT OF MARKET CHAOS, THE EIA (Electronics Industry Association) formed a Multichannel Sound Subcommittee to solicit and evaluate

# STEREOCENTERS

## HOW THE U.S. FINALLY GOT MULTICHANNEL TV SOUND

BY LESLIE B. TYLER

MTS proposals. The subcommittee's ambitious goal was to find a stereo television system providing:

- a compatible monophonic channel with distortion and noise equal to or lower than that of the present audio channel,
- two-channel audio with quality approaching that of stereo FM radio,
- an almost-high-fidelity SAP (Separate Audio Program) channel to be employed for bilingual broadcasts and other related uses,
- a fourth, rather low-quality auxiliary channel, to be used as broadcasters see fit (this became known as the Professional Channel), and, if possible,
- standardized signal processing to improve dynamic range.

The subcommittee considered transmission systems from the EIAJ (Electronics Industry Association of Japan), Telesonics Systems, and Zenith Radio Corporation. All of these proposals used the present television-audio carrier signal to transmit the mono sum of the left and right channels (L+R) and added a multiplexed subcarrier to transmit stereo information as the difference between the left and right channels (L-R). There were also three proposals for noise reduction.

## TESTS...AND MORE TESTS

STUDIES WERE UNDERTAKEN TO MEASURE THE OBJECTIVE performance of the three transmission systems under various reception conditions.

Every relevant characteristic was evaluated, including frequency response, distortion, separation, noise, and interference (the susceptibility to it and the potential to create it). The tests employed both closed-circuit and broadcast transmissions, the latter to determine the effects of receiving MTS on conventional sets. Subjective tests of the noise reduction systems also were conducted.

In the summer of 1982, the results were published by the NAB (National Association of Broadcasters) in a 1,000-page report that was to serve as a basis for meaningful comparisons between the proposals. But unhappily for those hoping for speedy adoption of a stereo TV standard, the systems that had been tested were no longer the ones that were being proposed! The reason? Any time a developer got wind of unfavorable results during the evaluations, it would redesign its system in an effort to improve its standing.

So another exhaustive and exhausting round of testing was scheduled—but with two significant differences. First, the competing developers agreed to a period of reengi-

*Leslie B. Tyler is vice-president of engineering at DBX, Inc., and was active in designing the company's TV noise reduction system.*

# NI NOY OI DNIWOC

## STEREO TV ABBREVIATIONS

neering, followed by a freezing of the designs during the subcommittee's evaluations. Second, and more important from the audiophile's viewpoint, there would be even more detailed testing of improved noise reduction systems. Four such proposals came from the CBS Technology Center, DBX, Dolby Laboratories, and Straight Wire Audio. All were encode-decode companders, requiring a compressor at the transmitter and a complementary expander in the television receiver.

### IN-DEPTH SCRUTINY

LABORATORIES WERE SET UP AT THE QUASAR/Matsushita facility in Franklin Park, Illinois; the CBS Technology Center in Stamford, Connecticut; and the RCA David Sarnoff Research Center in Princeton, New Jersey. Closed-circuit testing of the originally proposed transmission systems from the EIAJ, Telephonics, and Zenith was conducted in Franklin Park, as were conventional measurements (without companding) of such characteristics as frequency response, noise, and distortion. At the same time, the four companders were evaluated in Stamford in tests simulating the noise, distortion, and interference levels of the various transmission systems. Since noise increases with distance from the transmitter, the simulations were of typical reception in which the picture is somewhat snowy, but not objectionably so. (This occurs at about 60 miles from a typical TV transmitter and is called the B-contour signal level.)

Because all companders are based on psychoacoustic principles, making them difficult to evaluate in purely objective terms, a program of double-blind subjective tests was used in Stamford. Paired A/B comparisons were made between randomly selected combinations of companders and transmission systems. Listeners were chosen from the ranks of audio equipment technicians, recording engineers, musicians, broadcasters, and editors of sound-oriented magazines, including *HIGH FIDELITY*. The listening environment, playback equipment, and sound levels were all consistent with high-quality audio reproduction. The program material—selected by the competing developers to include passages capable of generating problems with each other's companders—contained high fidelity music and speech (some of it from digital masters) as well as such typical highly processed sources as commercials.

The companders also were subjected to a complete round of laboratory bench tests in Princeton. Prior work in this field had been limited and was mostly applicable to companders for voice-grade communications, certainly not anything for high fidelity music. Therefore, in addition to conventional audio trials, the latest testing techniques were used to examine these high-quality companders, including measuring frequency response with pink noise, plotting input-to-out-

**BTSC:** The name of the stereo television system approved by the FCC, comprising the Zenith transmitter and the DBX compander. The abbreviation is taken from the EIA's Broadcast Television System Committee.

**EIA:** Electronics Industry Association. An industry lobbying group. It also collects statistics and establishes testing standards for many types of home electronics equipment.

**EIAJ:** Electronics Industry Association of Japan. The Japanese equivalent of the EIA.

**FCC:** Federal Communications Commission. The U.S. government agency that regulates the allocation of radio-frequency space to broadcast stations and their transmission methods, among other things.

**MTS:** Multichannel Television Sound. The generic name for all methods of broadcasting stereo, secondary, and auxiliary programs on the TV-audio carrier.

**NAB:** National Association of Broadcasters. The leading trade association of the broadcasting industry.

**NTSC:** National Television System Committee. A panel of television engineers formed by the EIA to prepare standards. The FCC approved the NTSC's recommendations for a monochrome system in 1941 and for a monochrome-compatible color standard in 1953. The present NTSC color system is the one used in North America and Japan.

**SAP:** Separate Audio Program. A sound-carrying channel in the BTSC system meant for program-related audio (such as a simultaneous translation). Fidelity of the SAP is restricted by its 10-kHz upper frequency limit.

put transfer functions at various frequencies, and observing responses to tone bursts.

### FINALLY, FINAL TESTS

EVERYTHING WAS THEN PUT TOGETHER IN FRANKLIN Park for closed-circuit tests of the three transmission systems with the three remaining companders (Straight Wire Audio having dropped out). A carefully chosen sequence of wide-dynamic-range music and dialogue was synchronized with various types of signal impairments, such as impulse noise, multipath, low signal strength, and video cross-modulation. The program material was sent through each compander and each transmission system in turn, while digital recordings were made of the reception on each of the three most-used types of television-audio circuits (Nyquist, quasi-parallel, and split-sound).

Each of the resulting 80 recordings represented a different combination of signal impairment, transmission system, and noise reduction. There were 44 recordings of stereo reception and 36 of SAP reception. These tapes were made available at listening rooms set up at Franklin Park and at NAB headquarters in Washington, D.C. The actual sounds of the proposed multichannel television formats could therefore be auditioned by anyone wishing to participate in the selection process.

### ZENITH+DBX=BTSC

IN THE FALL OF 1983, THE NAB PUBLISHED ANOTHER 1,000 pages of reports, this time detailing the findings from the second round of tests. Just before Christmas, selected television-industry representatives met in Washington to hear three days of presentations, lobbying, and caucusing. At last came their vote for the stereo television system to be recommended as a standard to the full EIA and, thus, to the FCC. Surprisingly, the choice was unanimous: a combination of the Zenith transmitter and the DBX compander. The selection was given the nonpartisan name "BTSC," after the Broadcast Television System Committee, parent panel to the EIA's Multichannel Sound Subcommittee.

On March 29, 1984, the FCC authorized multichannel-sound television broadcasting in what has been called a "modified marketplace" decision: Skillfully, it approved the BTSC system but did not prohibit other methods. To protect BTSC while permitting further development, the FCC merely said that it would be the only MTS system allowed to use a 15.734-kHz pilot tone. This was the go-ahead signal the industry needed: Broadcasters and television set manufacturers could get to work modifying transmitters and making stereo TV receivers for BTSC operation without fear of incompatibility. [Stay tuned to *HIGH FIDELITY* in the coming months for a detailed look at the BTSC system.]



Stereo television has spread relatively rapidly, at least compared with stereo AM. If you live in one of the top 50 television markets, the odds are one in seven that you are within reach of a stereo TV station. At the end of 1985, there were more than 200 such stations in the United States and Canada. NBC network affiliates led the list with 60 stereo outlets. PBS, ABC, and CBS were closely grouped together with 28, 27, and 23, respectively, and independents accounted for another 49. Most of these stations use MTS for stereo broadcasting, as opposed to bilingual SAP programming, with many transmitting mono material synthesized into pseudostereo.

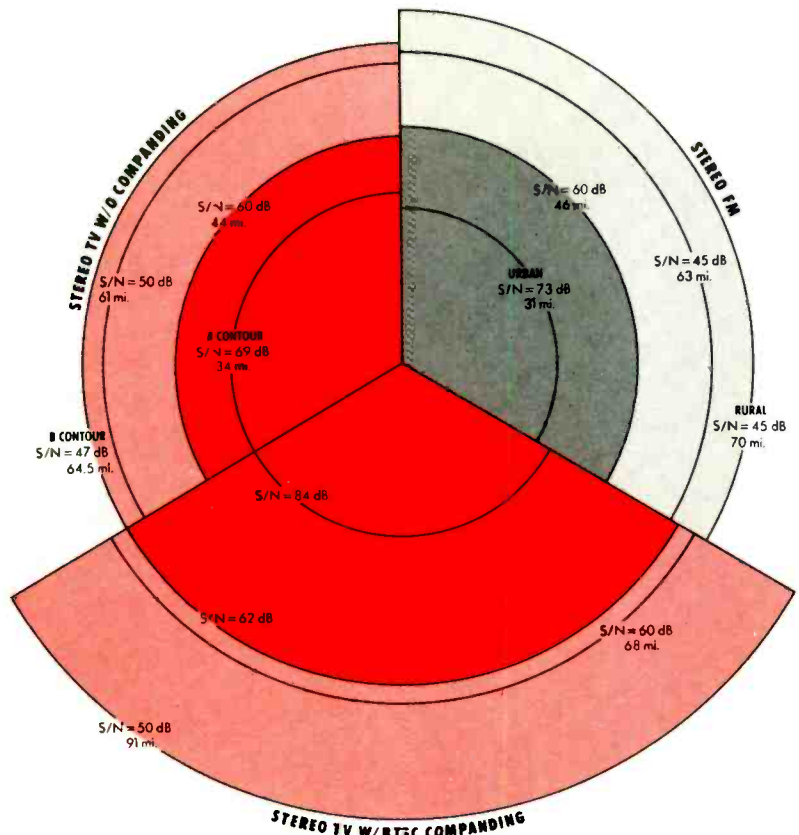
In fact, the primary limitation to the spread of MTS has been the dearth of naturally stereophonic program material. That is changing. News and sports broadcasts, music videos, and movies were among the first shows to be aired in stereo. But such leading programs as *The Tonight Show* and *Miami Vice* have paved the way for a two-channel era in television production. And commercials, always quick to adopt new technical means (such as computer graphics), are already using stereo for added impact.

Television sets capable of decoding MTS are now offered by almost every manufacturer. "MTS ready" sets were available even before the FCC ruling; to demodulate the extra channels, they need outboard adapters, most of which can be connected to an audio system to take advantage of its higher amplifier power and better loudspeakers. Older sets without MTS jacks can be upgraded with separate MTS tuners (some of which include AM/stereo-FM radios and built-in power amplifiers) or with decoders that pick up the MTS signals from stray radiation from the set. And MTS-equipped ("stereo capable") videocassette recorders have outputs to feed stereo to an audio system, as do many MTS-equipped television sets.

## HIGH QUALITY SOUND

FEEDING TELEVISION SOUND (MONO OR STEREO) through an audio system usually leads to significant improvement in fidelity because the audio capability of TV has always been nearly equivalent to that of FM radio. Though precious few broadcasts or TV tuners take advantage of it, the present monaural TV-audio channel is capable of flat response from 50 Hz to 15 kHz, a signal-to-noise ratio of better than 70 dB, and distortion of less than 0.1 percent. That this sound quality has rarely been heard by television viewers is the fault of the broadcasters and the designers of TV sets, not the system itself.

Television is at a slight disadvantage when compared with FM radio because the transmitter power must be divided between audio and video; less TV-audio signal reaches the viewer for every watt of radiated power. But one of the BTSC system's most pleasant aspects is that, theoretically, the quality of service



PROVIDING A GRAPHIC DEMONSTRATION OF THE IMPORTANCE OF COMPANDING IN EXTENDING THE REACH OF A STEREO TV SIGNAL, THIS DIAGRAM DEPICTS THE THEORETICAL SIGNAL-TO-NOISE (S/N) RATIOS OBTAINABLE AT VARIOUS DISTANCES FROM A 10-KW 88-MHz FM TRANSMITTER AND A 100-KW CHANNEL 6 TELEVISION TRANSMITTER. (THE DISPARITY IN TRANSMITTER POWERS COMPENSATES FOR THE LOWER SOUND-CARRIER POWER IN A TV SIGNAL.) COMPANDING INCREASES FROM 60 MILES (LEFT) TO 91 MILES (BOTTOM) THE DISTANCE AT WHICH A STEREO TV SIGNAL CAN BE RECEIVED WITH A S/N RATIO OF BETTER THAN 50 dB. THE FCC'S URBAN, RURAL, A-CONTOUR, AND B-CONTOUR DESIGNATIONS REFER TO STANDARDIZED RECEIVED SIGNAL STRENGTHS.

will not change when switching between mono and stereo. This is due in large part to the compander, which eliminates noise that would otherwise be added to stereo reception. Stereo television can actually outperform FM radio because the latter is inherently much noisier in stereo than in mono. The figure on this page compares the coverage areas of stereo FM and stereo TV for various noise levels.

Stereo television's sonic advantage also stands a good chance of being heard because it is shifting industry focus toward better sound with video. Both broadcasters and set manufacturers now have good reasons to provide better program material and equipment for the audio side of television. Technology is inspiring art, as video-sound engineers and producers awakened to the potential of the new medium. Stereo has already enhanced the you-are-there crowd sounds of spectacular sports events, the pop and rock songs of music videos, and the soundtracks of public-television concert and opera performances. That these telecasts can be so effective and successful is largely because stations are upgrading their audio facilities and revising their audio production values. This new attention to sound quality is perhaps the greatest benefit stereo television will have.



B Y R O B E R T A N G U S

# HAPPY HOOKUPS

"YOU CAN ENJOY THAT SATELLITE CHANNEL YOU'RE RECEIVING in every square inch of your house," the ad proclaimed. "A truly remarkable new concept gives you the ultimate use of your VCR or cable box or video camera with every TV set in the house! Imagine!" I did more than imagine: I fired off \$99 for a Video Magician. And \$69.50 for a TV Genie. And \$39.95 for a Videocaster. By the time they all arrived, the government, in the guise of the Federal Communications Commission (FCC), informed me that I couldn't use a single one of them and that to do so would be courting a fine of as much as \$10,000 for each offense and the possibility of a year in jail. Imagine!

There have always been devices that pipe the signal from the VCR in your living room to the TV in your bedroom or that enable you to watch cable in one room while the kids watch a screen in another getting its signal from a player in a third. But such arrangements traditionally have involved signal splitters, line amplifiers, and coaxial cable (with its special connectors), not to mention lots of crawling around in the basement snaking wires around the water heater. The devices on which the FCC has descended promised an end to all that. They attach to the RF (radio frequency) output of a video

A Cautionary  
Tale About  
Wireless  
Ways of  
Getting Video  
Everywhere in  
Your Home

*Robert Angus, who hasn't yet been busted by the FCC, is still intimately involved with the latest technology.*



MICHAEL KLEIN

## VDO-Pak Hawkeye

ONE OF THE FEW LEGAL CORDLESS VIDEO RETRANSMITTERS, THE HAWKEYE VTR-80 REBROADCASTS ONTO CHANNEL 14.



game or video camera, cable box or satellite receiver, or VCR or videodisc player and then retransmit the signal being fed into them to TV sets throughout the house. The other sets receive the rebroadcast signal on an "unused" VHF or UHF channel instead of through a "hard wired" hookup.

Cable subscribers thought highly of the concept and of the savings accumulated by avoiding supplementary charges for "drops" to two or three TV sets. How much nicer and easier if you needed only retransmit the signal. But you can't, the FCC concluded, because in doing so you run the risk of interfering with your neighbor's viewing pleasure and the rights of a broadcaster who's legally licensed to use the channel on which you're rebroadcasting. The Feds would say that even if you don't succeed in beaming the Playboy Channel to the elderly couple across the hall in an effort to get it on your bedroom monitor, you're likely to louse up their reception on adjacent or possibly unrelated channels.

## VAIN ATTEMPTS

THIS WHOLE TALE STARTED ABOUT A YEAR AGO, WHEN several small electronics firms introduced devices that are, in effect, miniature TV transmitters. The FCC didn't pay much attention until it received petitions from RF Power Labs, a manufacturer, and Robert Greene, an inventor, asking that it create guidelines for the manufacture and operation of such equipment. As is its wont, the agency solicited comments on the request. They were not long in coming, and they were emphatic. The National Association of Broadcasters, the Association of Maximum Service Telecasters, RCA, NBC, and MA/Com (a manufacturer of cable and satellite equipment) all responded in no uncertain terms. They opposed allowing the equipment on the market on the grounds that it would interfere not only with existing telecasters, but with any who might be licensed at some time in the future to broadcast on a presently unused channel. The FCC's response was

swift: The agency not only turned down the petitions from Greene and RF Power Labs, but it put manufacturers, retailers, and users of such products on notice that the devices are and always have been illegal and that it wants them off the market.

John Reed of the FCC's Office of Science and Technology, who issued the public announcement, says that he wasn't worried so much about the approximately 8,000 units sold before his bulletin was published in October 1985 as about a flood of such products from abroad. The FCC already has had inquiries about the concept from manufacturers in Hong Kong, Taiwan, Korea, and Japan, he reported, and one of the items against which the warning was issued was made in Canada. In addition, Konica and other manufacturers have shown tiny transmitters that clip onto the tops of their video cameras, making them wireless for field or surveillance use—a slightly different category, perhaps, and doubtless a fine idea, but nonetheless also impermissible in the United States.

But I'm getting ahead of my story. Back in October, before the FCC notice was published, there were about a dozen wireless signal distributors being offered through the pages of electronics hobbyist magazines and over retail counters. They ranged in price from \$39.95 to \$350, and in quality from wretched to superb, as I discovered. Being an avid videophile and having three TVs scattered around my home, I sampled a few to see just how well they worked.

## CAN OF WORMS

ONE OF THE FIRST PRODUCTS TO BE ORDERED OFF THE market was the Videocaster, a black and silver canister about the size and shape of a can of Dinty Moore Beef Stew. It was essentially an RF amplifier with antenna wire lining the inside wall of the can. With an RF output switchable between Channels 3 and 4, it was almost certain to create cochannel or adjacent-channel interference when used in or near a big city where one or the other of those channels is likely to be on the air already. In my location, it interfered with a signal originating 35 miles away.

I also discovered that the Videocaster's performance was highly variable, depending on how the device was positioned and where it was located relative to the three TV monitors in remote parts of my home. In one position (and with a favoring breeze), the picture on the kitchen TV was viewable, if not ideal, and the audio was intelligible, if hum-laden. In the same position, the unit produced pictures in the upstairs bedroom with diagonal color bars over a black-and-white image. With the can oriented differently, the images reversed (like photographic negatives) or simply disappeared into a sea of murk.

To see how much of what quality of signal oozed out of my house, I grabbed my battery-powered portable TV and went for a stroll around the neighborhood. The pictures outside were considerably poorer than those I'd seen indoors, but there was still a strong

# Remote Alternatives

As it happens, Federal Communications Commission restrictions don't cover all video signal-distribution units. At least three such products rely on wiring rather than over-the-air transmission and can be coupled with infrared remote-control technology to create a home distribution system even more flexible than the legal Hawkeye retransmitter. The trouble with these systems is that they all require "hard" wiring, the very thing the outlawed units were trying to get away from. Still, they offer a degree of adaptability impossible with a simple splitter, switcher, coupler, or controller. And for very big or elaborate setups, you can use them together in hybrid configurations.

For example, **Video Link's MRTV** is a modular system that costs from \$279 to \$500 or so, depending on the number of TV sets and the program sources you want to interconnect. It uses coaxial cable to carry the video signals from as many as five sources to a command center that distributes them to as many as three TV sets. You can change channels or programs from a remote location via an infrared controller and tune the TVs in the system to different program sources. The MRTV package consists of the Model XL-400 Electronic Switcher, which handles as many as four inputs and three TV receivers and has facilities for wireless remote operation in the main viewing room, and one or more Model 170 Xtra-Links, which may be placed at remote locations to relay infrared signals back to your base TV set, VCR, or whatever, from its own remote-control handset.

**Multiplex Technology's Channel Plus** does essentially the same thing as the MRTV, but without infrared remote control. However, it can accommodate as many as three program sources and deliver signals to an almost limitless number of TV sets. Like the MRTV, it receives and distributes signals via coaxial cable, which means, as Multiplex Technology President Philip Strauss explains, that the unit complies with Part 15 of the FCC rules (under which the wireless devices are being ordered off the market) because the transmission system is self-contained.

With Channel Plus, it's possible to watch two or more different program sources (cable and videodisc, for example) in different rooms and to switch back and forth among them simply by changing channels on the remote set. The reason: The Channel Plus box can retransmit on three different UHF frequencies. My sample came pretuned to Channels 25, 37, and 47, but these are easily adjustable to any between 14 and 62. Under this arrangement, it's possible to continue viewing all of the locally available off-air channels in their normal locations and to choose, say, a satellite dish on Channel 25, a VCR on Channel 37, or a videodisc player on Channel 47. Channel Plus is wired into a home antenna system ahead of any signal splitters, and it has direct inputs for the rooftop antenna and three other RF (radio frequency) video sources.

Although Channel Plus comes without remote-control capability (Strauss says that selection of program source by changing channels on the remote TV is all most people need), it's possible to add it if your living-room video (or audio) components already incorporate infrared remote control. **Radio Shack's video remote-control extender** (\$49) functions in very much the same way as the infrared portion of the Video Link MRTV. It consists of a sender, which is placed in a remote location (on top of your bedroom TV, for example), and a receiver/repeater, which is placed in clear view of the infrared sensor on your VCR, cable box, satellite receiver, CD player, or whatever. You'll need as many senders as you have remote setups.

To operate a component in the master system (a VCR, perhaps), simply aim the remote control that came with it at the sender and push the appropriate buttons. The sender relays the message to the receiver/repeater, which beams the commands at the selected component as if you were in the room with it. The system works with the command sets for a variety of recent video components or with a universal remote control like General Electric's Command Central. **Revox** now has a \$95 incarnation of this concept (the B-206 "Transceiver"), which also can be used to add remote capability to a Channel Plus system or simply to facilitate control of an individual video or audio component from another room. The unit is said to be unusually tolerant of commands transmitted from off axis, and in some applications, the sender can be placed out of sight in a cupboard or behind a glass door.

Finally, there's the **Rabbit**, perhaps the best known of all the remote controllers despite the fact that when this was written, the manufacturer hadn't shipped a single unit. The original Rabbit, introduced in January 1985, would have used house wiring to relay infrared messages from remote locations back to a central unit, which in turn would have relayed instructions to the TV receiver. But the feds scotched the idea even before the product hit the market (excessive radio frequencies radiating from the house wiring). A second version, using a control tone transmitted through coaxial cable, likewise never made it on sale. A third one is in the works, and although Rabbit isn't talking about it, the system apparently operates along the lines of the Channel Plus.

R.A.



Revox B-206 infrared transceiver system



A-3V modulator/combiner from Channel Plus



Video Link XL-400 Electronic Switcher



Radio Shack's remote control extender  
(cat. no. 15-1289)

## Addresses

### Hawkeye Industries

VDO-PAK Products  
164 Howes St.  
Port Orange, Fla. 32029

### Multiplex Technology, Inc.

251 Imperial Hwy.  
Fullerton, Calif. 92635

### Rabbit Systems, Inc.

233 Wilshire Blvd., # 290  
Santa Monica, Calif. 90401

### TV Genie

Distributed by Orion Industries  
3675 South Highland Dr.  
Las-Vegas, Nev. 89103

### Video Link

12950 Bradley Ave.  
Sylmar, Calif. 91342

enough signal at 1,200 feet to cause herringbone interference on Channel 3, even though throughout all of this the Videocaster was operating on Channel 4. The FCC seemed to have a point, at least in this case.

I never received the Video Magician, but in the ad ("You can do magic all through your entire home!") it looked suspiciously like a Videocaster. However, I did have a try at the TV Genie, which rebroadcasts on UHF Channel 14 or 27. The in-home results were better, more reliable, and more consistent than those obtained with the Videocaster, but still not of the caliber I'd like to see on my bedroom TV, much less on a high-resolution monitor. The audio quality was good, if not true high fidelity, and although the picture had a somewhat grainy texture, the colors were adequately vibrant and I could see what was going on. According to the manufacturer, this gadget's 90-milliwatt transmitter is effective to a range of about 200 feet. My portable TV found no stray signals beyond that perimeter—in fact, very little outside the house itself.

At the other end of the price spectrum is a product that closely resembles the TV Genie, but costs more than five times as much. It's the Hawkeye, a \$399 device that the FCC has not put on the proscribed list, even though it radiates its signal on UHF Channel 14, like the TV Genie. Unlike the Genie, however, it produced a clear, sharp, consistent image on all of my TV receivers, with audio to match. Although I did detect some stray Channel 14 radiation outside the house, there was no detectable interference on adjacent channels, and the signal seemed to disappear entirely 50 feet or so from the unit.

A product of Hawkeye Industries, Inc., of Port Orange, Florida, the Hawkeye is sold primarily for security and professional video use, for which Reed says it is approved. In the home, however, it would seem not to meet the FCC's criteria: use of a frequency well above the UHF band (which would require some sort of downconverter for use with a TV set) and a license to operate at that frequency. Nevertheless, as of this writing, the FCC continues to permit its sale.

The Hawkeye is the creation of Nick Messemaker, who is currently embarked on a crusade to persuade the FCC to change its mind about flea-powered retransmitters. Messemaker and other manufacturers, like Video Magician's Carl Kircher and TV Genie's Jack Riley, feel that the agency knuckled under too quickly to pressure from TV broadcasters.

Messemaker believes that it's possible to come up with a maximum-power limitation on the transmitter and other safeguards that would ensure that the instruments do not interfere with existing licensed signals. "There is a need for this class of product, as demonstrated by the enormous consumer interest in the Hawkeye," he explains. "It should be possible for the FCC to accommodate the interests both of the broadcasters and of the viewing public. But it can't be done as long as the FCC takes the position that it will protect nonexistent signals as well as those already on the air." Among the examples of how the rules can be

molded to suit the supposedly opposed groups, Messemaker points to the incursion by cellular telephone operators into the high UHF TV frequencies and the FCC approval of TV modulators (those devices in your VCR, videogame, or videodisc player that convert the composite-video output to a Channel 3 or Channel 4 signal), albeit with strict controls on their radiation levels.

## ALL TIED UP

THE FCC MAY NOT OBJECT TO THE HAWKEYE OR THE wired-in Channel Plus (see "Remote Alternatives," on page 51), but all these devices face yet another legal hurdle. Last year, the Connecticut legislature, at the behest of the state's cable industry, passed a law making it illegal to connect anything to a cable system that would have the effect of avoiding the payment of cable fees. The law was meant to apply to unauthorized line taps, decoder boxes, and hard-wire connections within the home that circumvent paying for additional drops. But that is just what Channel Plus and some of the other products do when they're connected to a cable box. Connecticut Cable Television Association Chairman Michael Dorfsman says he doesn't think the legislature had these devices in mind when it passed the law, but some other state legislatures now aren't so sure. Other states have similar laws, which means that someone using a wireless unit in conjunction with a cable box might have to worry about both Federal agents and State Troopers.

In fact, advises the FCC's John Reed, no one is likely to come pounding on your door with a warrant except in the most egregious cases, even if you have been using one of the noisy retransmitters. Instead, you're more likely to get a polite but firm request to stop using it—or else. Federal agents do have the right to seize the offending unit and may do so in the case of retail shops with several in stock. In principle, since the devices never were legal, manufacturers had no right to make them or supply them to dealers, who had no right to sell one to you.

What to do? If you can find the person who sold one of these things to you, you can force him to take it back. But some of the companies that made retransmitters (such as Video Magician and Videocaster) are now out of business, which makes returning one difficult. And a balky dealer may force you to take him to court to get your money back, if you care that much. Dealers in turn must seek reimbursement from the factory or distributor who sold them the equipment. If you haven't yet bought a video distribution system, there are several things you can do to protect yourself. One is to make sure that any prospective retransmitter is a legal device. You also can check out the range and strength of a retransmitter using a portable TV, or you can consider the wired-in remote-control alternatives. Though they may not always save you from a hands-and-knees wiring job, they are free of governmental entanglements. ●

# MEDLEY

Edited by Georgia Christgau  
and Ted Libbey



## Laughing Lily

On *Laugh-In*, Lily Tomlin's Ernestine, the acerbic telephone operator who personified the utility company's bland, corporate omnipotence, used to sign off, "We don't care. We don't have to." *Laugh-In* was the only TV I watched in college: great, subversive entertainment in the tradition of the short-lived *That Was the Week That Was*, a tradition upheld, I suppose, by *Saturday Night Live*. But by the mid-Seventies the college generation wanted less sarcasm and more slapstick; even *Laugh-In*'s Goldie Hawn traded her kinky rep as the most ticklish go-go dancer on television for superstardom and respectability.

Tomlin is wildly erratic in her screen roles. But her records consistently go gold, and they love her on Broadway, where she is currently appearing in *The Search for Signs of Intelligent Life in the Universe*, her second hit show in eight years. This one is special, though, because like a good marriage, Tomlin's fidelity—to herself and to her audience—seems more valuable the longer it lasts.

My favorite new character is Agnus Angst, a teenager who claims she and her family "have nothing in common except that we are carbon-based life forms." Like most of the people Tomlin inhabits, Agnus surfaces intermittently; either the actress can't sustain a character for long or she doesn't want to. (I heard she dropped Rick the bar cruiser from *Appearing Nitely*, her first Broadway show, because

her amazing transformation into the role made her and some of her fans uneasy.) Short sketches suit Tomlin's jumpy, staccato style. One-liners provide extra breathing space, and a soapbox: "Infinity is time on an ego trip." *Laugh-In* was good training for the rigors of a two-hour, one-woman show.

What endears Tomlin to her fans, however, is not her perfect timing or her penchant for piquant zingers or even her acutely observed cast, but rather the vitality and celebration that's implicit in her characters' struggles, as well as their creator's own graceful embrace of life. This reverence is symbolized by bag lady Trudy, who admires her outer-space friends most for their "desire to know." Even in the darkest moments, Tomlin's individuals express a kind of hope. Lynne, one of a trio of ex-radical friends who sustains most of Act II, asks her husband as they sign divorce papers, "We have made so many mistakes. I wonder if this is just another one." But Tomlin usually plays her optimism straight. As five-year-old Edith Ann used to say: "I have noticed that sometimes when I laugh I feel like crying. But when I am sad I do not feel like laughing. So I have decided that it is better to be happy than sad: You get two emotions for the price of one." How does this tough, uncompromising artist get away with such corn? To me, that mystery has always been her best-kept secret.

Georgia Christgau

## A Hardware Leader Goes Soft

"Classical music is not our main business," Denon's manager of artists and repertory, Toshibumi Ohno, announced when I visited the firm's Tokyo headquarters last summer. "But to get a good reputation with classical listeners will help our hardware sell. That's the basic idea."

Long one of Japan's most important makers of record-playing equipment, Denon (Nippon Columbia Co., Ltd.) only recently launched itself into the business of producing its own classical recordings. Because it was one of the pioneers of digital technology and because it has the ability to manufacture its own CDs, the company has amassed a large classical CD catalog in a fairly short time.

Ohno said that the Denon label's a&r division is guided by two principles. The first is "sale and profit"—no surprise there—and the second is "to establish a total image of Denon status, including that of the hi-fi product." With that in mind, Denon in the mid-1970s sought coproduction agreements with Supraphon and V.E.B. Deutsche Schallplatten, the state recording agencies of Czechoslovakia and East Germany, which have guaranteed access to their countries' best musicians and ensembles. Denon started cautiously, concentrating on chamber and solo instrumental music before moving into the symphonic and operatic repertoires.

"We want to have the repertory that Eugene Ormandy and the Philadelphia Orches-

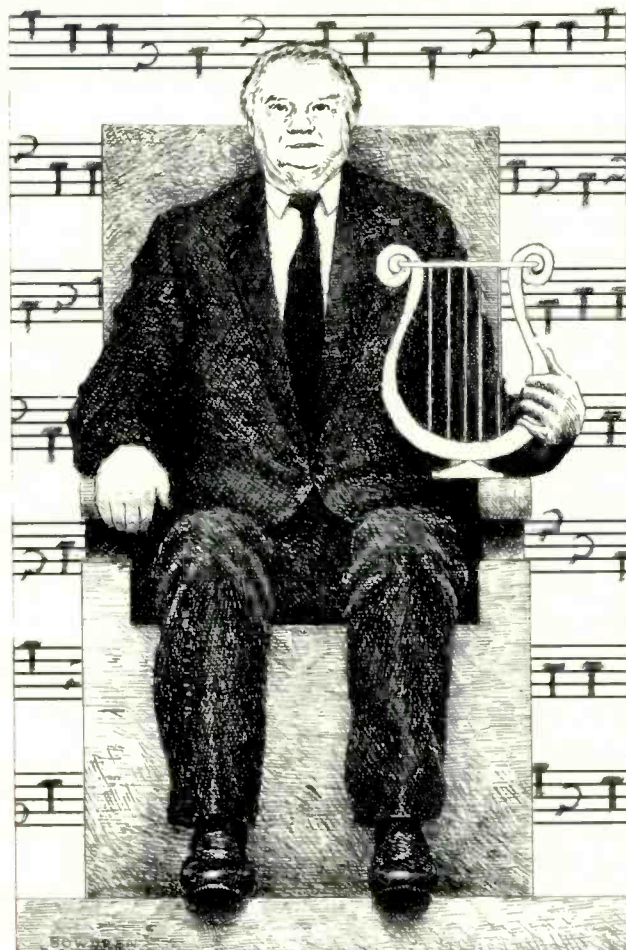
tra used to do: the big works that sell well," Ohno confided. "We are looking for the right orchestra and the right conductor. Another consideration is the star soloist."

Recently, Denon began its first major orchestral project outside the Eastern bloc: a complete Mahler symphony cycle with Eliahu Inbal and the Frankfurt Radio Symphony Orchestra (Nos. 1 and 2 are now available). To follow, the company plans a Ravel cycle with Inbal conducting L'Orchestre National de France. Meanwhile, in East Berlin, where Otmar Suitner has already recorded the symphonies of Beethoven and Schubert, work is under way on Schumann and Mendelssohn cycles.

The key to Denon's strategy until recently had been Dresden, where it recorded the Staatskapelle in both symphonic and operatic literature. But Herbert Blomstedt's departure for San Francisco and mounting competition from other labels have forced the firm's hand. "We know we need to look for balance in our repertory," Ohno said, "and to get beyond the limitations of working with Supraphon and V.E.B. Deutsche Schallplatten." It is too early to tell whether that strategy will involve American orchestras. But according to Ohno, Denon is hot in pursuit of the American listener. "The keys to the American market are distribution and promotion. We think the U.S. will eventually become our biggest market."

Ted Libbey

Tikhon Khrennikov looks back on four decades as chairman of the Union of Composers.



## The CZAR of Soviet Music

BY JOEL W. SPIEGELMAN

TIKHON NIKOLAYEVICH KHRENNIKOV IS the most powerful official in music. Since 1948, when he became chairman of the Union of Soviet Composers at the age of thirty-five, he has shaped his country's musical policy. To some Americans, he is an evil czar, enforcing Communist party ideology by putting down any new artistic trends that might waver from the doctrine of socialist realism. Khrennikov's authority is bolstered by his positions as a deputy to the Supreme Soviet, a job he has held since 1962, and as a member of the Central Committee of the Communist party.

In spite of three official visits to the

United States, Khrennikov remains an enigmatic figure here. His own music is widely performed in the Soviet Union and in many European countries, but most Americans are not well acquainted with his impressive output of operas, ballets, songs, concertos, and symphonic works. (He first came to the attention of American audiences in 1936, when Leopold Stokowski conducted his First Symphony with the Philadelphia Orchestra. Later,

*Composer and keyboardist Joel W. Spiegelman is a professor of composition at Sarah Lawrence College.*

Eugene Ormandy took up the work, and Charles Munch occasionally performed it with the Boston Symphony Orchestra during the 1950s.)

At the heart of Khrennikov's style is a combination of Russian lyricism and strong harmonic underpinning. He has a gift for spinning out an endless stream of melodies, often powered by piquant chordal progressions and bouncy rhythms. There is a dramatic flair and a bigness to much of his music; this is certainly true of the piano concertos, which Khrennikov frequently performs himself. At the age of seventy-two, he still has the technique



## The CZAR

and the sound to play them.

In November 1985, while President Reagan and General Secretary Gorbachev were meeting in Geneva, I was in Moscow holding a summit-of-a-lesser-kind in Khrennikov's living room. I had gone to the Soviet capital with Frank Yandolino, president of National Exchange Productions, Inc., a New York-based firm handling exchanges in entertainment and the performing arts. Our hope was to initiate talks that would lead to the establishment of a working relationship between our two countries' musical communities. Gideon Toeplitz, executive director of the Houston Symphony Orchestra, had asked me to explore with Khrennikov the possibility of creating an annual Soviet-American festival and symposium on music and the performing arts, to take place in both countries, the first installment in Houston with Khrennikov attending. To our delight, he agreed to come to Houston in May.

However, I was interested not only in winning Khrennikov's support for this project, but in getting to know him as both a composer and a man. He proved to be a warm and affable host: I found myself instantly at ease in his presence. Since I am fluent in Russian, there was no language barrier between us, and our talks were punctuated with humor and an occasional good joke.

During our stay, Khrennikov took us to the Stanislavsky Nemirovich-Danchenko Theater to hear his new opera, *The Golden Calf*, a comic work based on a story by the Russian humorists Ilf and Petrov (remember Mel Brooks's film *The Twelve Chairs*?) about life in Odessa and the connivances of an aspiring millionaire. Khrennikov's setting is rapidly paced, and the packed house responded to the colorful production by laughing in all the right places and giving composer and cast a rousing ovation.

Another day was spent at Moscow Television viewing recent videotapes of performances of three more Khrennikov works: the Second and Third Piano Concertos, played by the composer and the Moscow State Philharmonic, and the First Violin Concerto, played by Vadim Repin, a fourteen-year-old phenomenon from Siberia who might well be the new David Oistrakh. We also saw Khrennikov's ballet *Much Ado About Nothing* and scenes from his operas *Mother* and *Into the Storm*.

Hearing a large dose of his music, see-

ing him in action in his Union office, and being entertained by him and his wife of 50 years, Clara, left me with the impression that Khrennikov is a generous man. This was a revelation. But because there has been so much contradictory information about him over the years—especially about his role in enforcing party doctrine—I felt I had to ask for his side on a number of controversial issues. My first question dealt with his part in the censur-

considered the party of the Bolsheviks to be the most progressive force in the world. 'I have always listened to it and will continue to do so.' He said that in America. Right in Los Angeles. Well, they nearly fell off their seats.

"Volkov is simply a hooligan and an opportunist. There is not a penny's worth of truth in that book."

I retorted: "Volkov claims that Shostakovich approved and signed every chapter



"I have never acted against my comrades; perhaps that is the very reason I have been running the Union of Composers for so long."

ing of Shostakovich.

"That is nothing but a pack of lies," Khrennikov responded. "That is all Solomon Volkov and his book [*Testimony: The Memoirs of Dmitri Shostakovich*, Harper & Row, 1979]. He writes that I, together with Stalin, suppressed Shostakovich. What idiotic nonsense!"

Khrennikov roared with laughter, as though he had just heard an enormous joke. I asked him what really happened.

"Nothing happened," he answered. "Everything was fine. There *was* some criticism of Shostakovich, but at the same time he was awarded a Stalin Prize. All of us get criticized, and it can be unpleasant. But the story that he was suppressed and made a martyr was made up by people who did not wish us well.

"When Shostakovich, Kabalevsky, and I were in Los Angeles in 1959, at a press conference at the Ambassador Hotel, the journalists tried to provoke Shostakovich into arguing with me. They asked him, 'How can you even speak to Khrennikov after he criticized you in 1948 [in the Central Committee's resolution condemning modernistic trends in Soviet music]?' If you only could have seen his face and how he broke up laughing with all that business. He told them, 'Khrennikov criticized me, and I criticized him. That was the law by which we lived: mutual criticism.' But the journalists said, 'The party criticized you, too,' and Shostakovich answered with a statement that appeared in newspapers all over America: He told them that he was a Communist and that he

of the memoirs himself and that they are held in safe-deposit in a Swiss bank."

"Go ahead and try to find them," Khrennikov said. "Shostakovich would never sign his name to such rot. The only thing is that sometimes he would sign an interview without reading it. He couldn't stand interviews; he had no patience for them. . . .

"How could Volkov say that Stalin telephoned me every day telling me to suppress Shostakovich? Stalin never called me, and I never put any pressure on Shostakovich. On the contrary, we were friends. Why should I put him down when I revered him just like I revered Prokofiev, who was a God to me? I have never acted against my comrades; perhaps that is the very reason I have been running the Union of Composers for so long. It is just a shame that people believed Volkov. But that is all in the past."

I wasn't quite finished with the past, though. I wanted to know more about the Central Committee's 1948 resolution.

"The party was worried about what our composers were writing," Khrennikov explained. "When the Central Committee reviewed the work of some of our great composers, beginning with Muradeli's opera *The Great Friendship*, it decreed that they were writing [trash]. True, there was some rough language [against the composers], but after the death of Stalin in 1953, it stopped. The crudeness was canceled, as it was said to be a result of Stalin's Cult of Personality. Yet it is terribly

(Continued on page 76)

# THE CD SPREAD

Mini-reviews of the latest Compact Discs

## SCHUMANN AND CHOPIN CONCERTOS

András Schiff's performances of Schumann's Piano Concerto in A minor and Chopin's Piano Concerto No. 2, in F minor, are extraordinarily sensitive; he is as comfortable with the Romantic repertory as he is with Bach and Bartók. The Chopin is particularly imaginative, with Antal Doráti and the Concertgebouw Orchestra of Amsterdam sensitively mirroring Schiff's rubato. The engineering is acceptable but not outstanding: Bass is not well defined, and the solo piano lacks brilliance in the upper octaves. Playing time: 65:08. (London 411 942-2.) *R.E.B.*

## SCHWARZKOPF REISSUES

Historic performances by Elisabeth Schwarzkopf have been issued on two new Compact Discs. The original analog recordings have not been digitally remastered, but the sound is cleaner on CD, without the distortion that occasionally marred the LPs. Complete texts are provided, and the rather thick booklets barely slide into the plastic CD cases.

*Elisabeth Schwarzkopf Sings Operetta* can be highly recommended. Dating from 1959, it offers works of Heuberger, Lehár, Millocker, Strauss, and other composers, all sung in the soprano's inimi-

table style. This may not be exceptional value in playing time, but it is worth owning and will be cherished by collectors of vocal music. Playing time: 43:43. (Angel EMI CDC 47284.)

The other CD, featuring music of Richard Strauss and much more generous in playing time, was recorded too late in Schwarzkopf's career to show her at her best, although her artistry and intent remain. Included are the *Four Last Songs* and five Lieder with George Szell directing the London Symphony Orchestra (all from Angel EMI S 36347), as well as seven Lieder with Szell and the Berlin Radio Symphony Orchestra (from S 36643), recorded in 1966 and 1969, respectively. Schwarzkopf fans of course will want to have this, but it's unfortunate that Angel did not opt to release her 1954 monophonic recording of the *Four Last Songs*, which is far superior to the one offered here. Playing time: 63:41. (Angel EMI CDC 47276.) *R.E.B.*

## DEFINITIVE DELIUS

A superb CD, with splendid performances and natural, wide-range sonics. These are the premiere recordings of the Suite for Violin and Orchestra and the *Légende* for Violin and Orchestra. The Violin Concerto, though previously

recorded, also will be new to most listeners; it is more of an extended idyll than a concerto, far removed from the virtuoso writing of most standard violin concertos, and it has rich rewards for those with the patience to explore its depths. These were the final recordings of violinist Ralph Holmes, and they form a fitting memorial to his artistry. Vernon Handley and the Royal Philharmonic Orchestra provide committed accompaniments. Playing time: 53:57. (Unicorn-Kanchana DKP CD 9040. Distributed by Harmonia Mundi, U.S.A.) *R.E.B.*

## MAGNIFICENT "MAOMETTO"

Gioacchino Rossini's 1820 opera *Maometto II* is the most ambitious work of his Neapolitan period. Considering the vocal demands, it is even more ambitious than his later rewrite of the score for Paris, *Le Siège de Corinthe*. It's fortunate, then, that the first complete recording of *Maometto* is so accomplished, in both performance and sound. These days, of course, chief listening interest is directed toward Samuel Ramey, whose dramatic authority and command of Rossinian fioritura are virtually unchallenged by any other contemporary operatic basso. As *Maometto*, he surely doesn't disappoint: He runs the exhausting gauntlet of his

role (and I mean "his" role now) with frequently incredible aplomb, making his performance one of the greatest pieces of singing to be heard in the postacoustic era.

Ramey's colleagues in *Maometto* (June Anderson, Margarita Zimmermann, Ernesto Palacio, and Laurence Dale) don't possess his prodigious vocal gifts, but they all are in near absolute control, if occasionally (and forgivably) in awe of Ramey's magnificence. Claudio Scimone's scholarly, uptempo conducting is most satisfying, as are the playing of the Philharmonia Orchestra and the singing of the Ambrosian Opera Chorus. This CD shares the virtues of the best recordings in the new format, although there is some bass deficiency in spots. Perspective is remarkably good, and the big explosion heralding *Maometto's* arrival toward the end of Act I is a potential lease-breaker. All in all, this is a stellar-sounding *Maometto* that should defy any successor for some time to come. Playing time: 187:18. (Philips 412 148-2.) *B.Z.*

## DVOŘÁK QUINTETS WITH RICHTER

Two of Antonin Dvořák's most ebullient chamber works—the Piano Quintets in A (Opp. 5 and 81)—are given truly festive performances on a single Philips CD. Taped at the 1982 Prague Spring Festival, these recordings feature Sviatoslav Richter and the Borodin Quartet in superlative form. Richter's pianism is the sort that catches fire when he has an audience—an ironic situation, considering his reportedly crotchety personality. In vigorous song and full of sentiment, Richter is in peak condition here, and the Borodin players, obviously inspired, contribute to renditions reserved for only the most spe-

cial occasions.

The warmly resonant yet forwardly detailed sonics (no doubt largely the product of the Prague Rudolphinum's acoustics) provide an ideal reflection of Dvořák's joyful genius, as they do for the joyous applause at the conclusion of each work. Playing time: 57:67. (Philips 412 429-2)

B.Z.

### SCHIFF PLAYS SHOSTAKOVICH

Dmitri Shostakovich's two Cello Concertos receive knowledgeable if not entirely successful presentations from Heinrich Schiff and the Bavarian Radio Symphony Orchestra under Maxim Shostakovich. Despite the fact that the conductor is the composer's son, the First Concerto's performance lacks the fluidity and the forward motion heard in some other recordings (cf. Yo-Yo Ma with Eugene Ormandy and the Philadelphia on CBS). Moreover, the orchestral tone, and at times that of Schiff's cello, seems rather harsh—though this must be partly the fault of the problematic acoustics of Munich's Herkules-Saal, where these live performances were taped in April 1984.

Things are markedly better in the brooding, lesser-known Second Concerto, a work I personally prefer and one whose introspective nature isn't betrayed as much by acoustical faults. Furthermore, the overall reading is a convincing one, by all participants. Since the later, better, and longer concerto fares so well in this issue, the CD is worth at least a guarded recommendation. Playing time: 62:54. (Philips 412 526-2.)

B.Z.

### MOZART FROM MAIER

Two items attract attention to this release featuring the Col-

legium Aureum directed by Franz Josef Maier. One is the use of original instruments; the other is the promise, made prominently on the cover, of 64 minutes of music.

As far as sound is concerned, the Symphony No. 40, in G minor, is recorded in a fashion that is clearly typical and unfussily appropriate. However, the Symphony No. 41, in C ("Jupiter"), is inadequate. As for length, the promise is kept—but on a recent Deutsche Grammophon CD (413 776-2), Mozart's Symphonies Nos. 39 and 40, played by the Vienna Philharmonic with Leonard Bernstein, total 60 minutes without any particular mention. Playing time: 64:50. (Pro Arte CDD 233.)

I.K.

### CHANDOS OFFERS ENGLISH MUSIC

Well worth investigating is Chandos's *English Music for Strings*, featuring George Hurst and the Bournemouth Sinfonietta in digitally remastered analog recordings of Holst's *St. Paul's Suite*, Elgar's *Serenade in E minor*, Warlock's *Capriol Suite*, and John Ireland's *Concerto Pastorale*. Playing time: 54:10. (Chandos CD 8375.)

Another collection, also worth having, includes Granville Bantock's *Pierrot of the Minute* (a comedy overture); Frank Bridge's *Summer*, *There Is a Willow Grows Aslant a Brook*, and *Suite for Strings*; and George Butterworth's *The Banks of Green Willow*. Here the Bournemouth Sinfonietta is led by Norman del Mar. Playing time: 58:09. (Chandos CD 8373.)

There are many musical treasures on these two CDs, and the dedicated performances are very capably engineered. Although there is occasionally a touch of background noise, possibly from

the analog source, it is not enough to be disturbing.

R.E.B.

### TCHAIKOVSKY: TWO FINE FIFTHS

The Oslo Philharmonic Orchestra (led by Mariss Jansons) plays Tchaikovsky's familiar Fifth Symphony with a commitment one would expect only from some of the top orchestras in the world on a good day. There are a few minor inaccuracies, but this is a dynamic performance that pleases. Playing time: 43:14. (Chandos CD 8351.)

André Previn's new version of the Fifth with the Royal Philharmonic Orchestra is on the same high standard, and for some collectors the determining factor will be the bonus that Telarc offers: the March from Rimsky-Korsakov's *Tsar Saltan*. Playing time: 50:57. (Telarc CD 80107.)

R.E.B.

### PREVIN'S "PLANETS"

This recording of Holst's *The Planets* was made more than a decade ago, but the analog sound is superior to what digital techniques have yielded on several contemporary releases. Sound buffs will delight in the massive bass, which has plenty of impact. The overall pickup is distant: Woodwinds and brass are too remote for my taste, but doubtless many listeners will enjoy this perspective. The engineers have been very successful with the soft fade at the conclusion of "Neptune," an evocative episode not always effectively handled on competing versions.

André Previn's performance (with the London Symphony Orchestra and the Ambrosian Singers) is rather tame. "Mars" should have more dynamic impulse, "Jupiter" more majesty. Still, I find this release preferable to

those by Herbert von Karajan and Alexander Gibson. But why didn't Angel, while going into the archives, instead issue on CD the near definitive and beautifully recorded Adrian Boult/New Philharmonia Orchestra version (from S 36420)? Playing time: 50:56. (Angel EMI CDC 47160.)

R.E.B.

### LIVE "LIBUŠE"

This account of Bedřich Smetana's *Libuše* was taped at the reopening of the Prague National Theater on November 18, 1983, and it is a resounding success in almost every department. No current operatic recording exudes more striking immediacy of sound, and the balances between voices and orchestra are amazingly good, particularly considering the huge scale of the work. Moreover, the lack of background noise on the three CDs shows that the Czech audience was well behaved that evening—though as is customary, it couldn't resist cheering as the chorus took up the final refrain just before the curtain: "*Český národ neskoneá*" ("The Czech people will overcome").

In the main, the performance of this glorious paean to a people is done justice, especially by the orchestra and chorus under Zdeněk Košler. The soloists are a mixed bag, however: Soprano Eva Děpoltová and mezzo Věra Soukupová are the best, but they seek subsidiary roles. Gabriela Beňačková-Cápková's lyric spinto soprano is rather overmatched by the heroic demands of the title role; at times she is forced to revamp the vocal line to suit her abilities. Nevertheless, an imposing presentation given to one of the noblest monuments of Czech art. Playing time: 166:16. (Supraphon CDS 7438/39/40.) B.Z.

# A SALUTE TO SALIERI and other news

BY BÁLINT ANDRÁS VARGA

**BUDAPEST**—It took Hungaroton nearly three years to produce a rather unusual Bach record—but it did, almost in time for the tercentenary, and the disc looks like quite a hit. The Hungarian lutenist Gergely Sárközy has reconstructed what in German is called a *Lautenklavecimbel*, or lute-harpsichord—a cross of the two instruments that retains and combines the characteristics of both. (Bach's estate included as many as five lute-harpsichords, and although none have survived, descriptions of what they looked like have come down to us.) Sárközy has recorded two pieces that were apparently meant by Bach for the unusual instrument. The LP features the Suite in E minor, B.W.V. 996, and the Suite in C minor, B.W.V. 997, as well as three chorales. The latter serve didactic purposes, throwing into relief the special qualities of the lute-harpsichord by affording the listener a chance to compare its sound with that of the harpsichord, the lute, and the lute register of the harpsichord, all of which have figured in previous recordings of these works.

László Dobszay and Janka Szendrey have followed up their exploration of Hungary's musical past by recording with their ensemble, Schola Hungarica, a program of medieval Hungarian sacred music connected with the festivities after Christmas. They call the new disc *Epiphany*.

Hungaroton's new release of Antonio Salieri's *Falstaff* may well be the first recording of a complete opera by that composer. Interest in Salieri's music has shown a marked increase, thanks to Milos Forman's film *Amadeus*, and Hungaroton unashamedly wishes to capitalize on it. When the label got wind of the indignation being expressed by inhabitants of Salieri's birthplace, Legnano, at the way their illustrious son is treated in the film (reputedly the citizens now wish to put up a statue to honor his memory), its executives wrote a letter to the town councillors and made them a present of the *Falstaff* album. The title role is sung by József Gregor; the chorus and chamber ensemble, both named for this occasion after Salieri, are conducted by Tamás Pál.



ÁDÁM FISCHER CONDUCTS MENDELSSOHN ON A NEW HUNGAROTON RELEASE.

The Hungarian label hopes to persuade Zoltán Kocsis and Dezső Ránki to turn into a series their recordings of Mozart's piano concertos. They released one disc each last year (K. 414 and K. 488, both in A, by Kocsis; K. 453, in G, and K. 450, in B flat, by Ránki), and a new LP by Ránki (K. 271 and K. 449, both in E flat) was just making its way into the shops as of press time. The accompaniment on all three records is provided by the Franz Liszt Chamber Orchestra led by János Rolla. As of yet, no other concertos have been committed to tape; apparently the two pianists share favorites and are hard put to divide the spoils. Hungaroton is ready to go down on its knees to persuade the young stars to continue with the series.

The brothers Fischer—Iván and Ádám—have recorded some Mendelssohn favorites with the Hungarian State Orchestra. Iván, whose rendition of the *Italian* and the *Reformation* Symphonies sold out in a matter of months, has now tackled the *Scottish* Symphony and the *Hebrides* Overture. Ádám, who took the orchestra on an extensive tour of the Unit-

*Bálint András Varga works in Budapest at Editio Musica, the state music-publishing agency.*

ed States in November–December 1985, has recorded the incidental music to *A Midsummer Night's Dream*, omitting only the melodrama sections. Magda Kalmár (soprano) and Jutta Bokor (mezzo) are the two soloists. The chorus is that of the Jeunesses Musicales of Hungary.

Leó Weiner, the legendary teacher of chamber music at the Budapest Academy of Music between 1918 and 1957, was born in 1885. The centenary of his birth was remembered in a book by his many pupils—among them Sir Georg Solti, Antal Doráti, Andor Foldes, Louis Kentner, János Starker, and György Sebök. Hungaroton has now released two of his string quartets recorded in 1960 and 1962 by a group he coached that bore his name and that has since disappeared from the scene.

On the lighter side, cellist Miklós Perényi and pianist Kocsis have let their hair down and recorded an album of encores: pieces by Paganini, Schubert, Mendelssohn, Chopin, Fauré, Saint-Saëns, Rimsky-Korsakov, Debussy, Tchaikovsky, Popper, Granados, Davidov, Rachmaninoff, and Kodály. The Franz Liszt Chamber Orchestra has followed suit with popular compositions by Vivaldi, Bach, Handel, Rameau, Mozart, Berlioz, Brahms, Kodály, and Johann Strauss the elder—and even some rags by Scott Joplin, arranged for strings by Péter Wolf.

The Budapest Festival Orchestra under the baton of Iván Fischer has produced a rather unusual recording of Brahms's *Hungarian Dances*. Without altering the three orchestrations that were done by the composer himself and the five by Antonin Dvořák, Fischer, with the help of composer Frigyes Hidas, has edited some of the remaining arrangements in an attempt to be more faithful to the spirit of Brahms and the melodies that inspired him. The result: more colorful, livelier *Hungarian Dances* than one has been used to hearing (even a cimbalom part has been added). The quasi-improvisatory character of the revisions lends the dances something of the atmosphere that must have captivated Brahms in the performances of gypsy bands. ●



HIGH FIDELITY ARCHIVES

# "GUNTRAM"

## made in Hungary

### STRAUSS, R.: Guntram.

Ⓞ Tokody, Goldberg, Sólyom-Nagy, Gáti, Bándi, Gregor, others; Hungarian People's Army Male Choir, Hungarian State Orchestra, Queler. David Mottley and Jenő Simon, prods. CBS Masterworks 12M 39737 (D, 2). □ (2).

CONDUCTOR EVE QUELER (ABOVE) HAS RECORDED STRAUSS'S FIRST OPERA WITH THE SAME PRINCIPALS THAT PERFORMED IT UNDER HER DIRECTION IN 1983.

In general, the only thing most opera buffs know about Richard Strauss's first opera, *Guntram*, is that one of its themes is quoted during the "Works of Peace" section of *Ein Heldenleben*. The latter composition was written in 1898—four years after *Guntram* was an abject failure at its premiere, purportedly because the tenor singing the title role had not learned the music. The experience was so traumatic for Strauss that he waited almost ten years before attempting another opera (*Feuersnot*), and he harbored an almost pathological (and eventually much-parodied) antipathy to tenors for the rest of his life.

However, Strauss deserved to share the blame. Imagining himself to be another Wagner, he wrote his own libretto—a doggerel-ridden script about medieval codes of honor that seems a parody of equal parts *Tannhäuser* and *Lohengrin*. In addition, his original score ran three-and-a-quarter hours (not two-and-a-half, as implied in the pro-

gram notes for this recording). This was far too much for the fledgling opera composer to handle.

Yet Strauss eventually realized there was music in *Guntram* worth saving beyond that quotation in *Heldenleben*. In 1940, he created a new edition, pruning 70 minutes from the manuscript, transposing sections (both in placement and in range—particularly for the tenor), and excising some of the most ridiculous passages of the libretto. The rewrite proved successful, and it is this version that Eve Queler conducts in CBS's new recording.

The libretto remains a serious liability, but the music—especially in the later pages—is choice if not always prime-cut Strauss. The trademarks are already here: a unique gift for ecstatic melody, challenging yet rewarding vocal lines, luxuriant orchestration, and a sure feel for musical drama that nearly always transcends the mundane words. While *Guntram* occasionally glances

backward (for instance, there's a quote from *Tod und Verklärung* in Act I), it also looks forward, with its hints of *Die Frau ohne Schatten*, *Arabella*, *Daphne*, and other masterpieces to come. Whether or not *Guntram* itself is a masterpiece isn't as important as the fact that it is one of Strauss's seminal works.

Queler's admirably chosen tempos and the Hungarian State Orchestra's fine playing help make a generally good case for the opera. The exponents of the two lead roles, Reiner Goldberg (Guntram) and Ilona Tokody (Freihild), are the same as when Queler led the American premiere in concert form at Carnegie Hall in early 1983. The boon of amplification makes both singers sound more high-powered than they did back then, though neither has the true heroic timbre their assignment requires. Nevertheless, Goldberg and Tokody never try to make their voices any more than what they are—pleasing lyric spintos—and both deliver text and phrase with intelligence.

With the exception of János Bándi's arresting performance of the quirky, high-lying role of the Duke's jester (a tenor Rigolotto?), however, the other singers are notably below the level of those that Queler used in 1983. Was she forced into some sort of Procrustean bed in exchange for Hungaroton's willingness to bankroll this recording? Veteran baritone József Gregor's singing of the important role of Friedhold, for example, sounds just too old for comfort.

The recording has optimum clarity and a specially potent bass line, though voices are at times too prominent in relation to the orchestra, as so often is the case with Hungaroton-made issues (I haven't heard the Compact Disc version yet). Surfaces and packaging, however, are excellent. Flaws of performance and recording aside, *Guntram* gets an exposure capable of making the listener stand in admiration of the early yet already-well-formed genius of Strauss. CBS need fear no competition in the foreseeable future.

Bill Zakariassen

#### CHOPIN:

**Impromptus: in A flat, Op. 29; in F sharp, Op. 36; in G flat, Op. 51; Fantasie in F minor, Op. 49; Berceuse in D flat, Op. 57; Barcarolle in F sharp, Op. 60.**

Perahia. Andrew Kazdin, prod. CBS Masterworks IMT 39708 (D). ◉

Murray Perahia is a distinguished interpreter of Chopin, and his performances of the Impromptus and the Berceuse on this new recording are just about perfect: warmly lyrical, technically secure, completely free of

stylistic mannerisms. Many listeners will find Perahia equally convincing in the greater Chopin of the Barcarolle and the F minor Fantasie, though his very beautiful performances of these remarkable pieces will sound a shade too expansive in spots for those accustomed to the simpler, more classic approach of Dinu Lipatti in the Barcarolle (Odyssey 32 16 0369) or Van Cliburn in the Fantasie (RCA LSC 2576). Andrew Kazdin's digital sound is plummily resonant; Philip Ramey's liner notes are riddled with easy platitudes ("Despite its title, [the Fantasie] is nothing less than a full-blown though concise sonata movement, and one of considerable breadth with a corresponding wealth of ideas").

Terry Teachout

#### DEBUSSY:

**Préludes, Bk. 2.**

Rodriguez, S. Natasha Rodriguez, prod. Élan 1206 (D). (P.O. Box 748, Adelphi, Md. 20783-0761.)

#### GINASTERA:

**Three Argentinian Dances, Op. 2; Rondo, Op. 19; Piano Sonata No. 1, Op. 22; Piano Sonata No. 2, Op. 53.**

Rodriguez, S. Natasha Rodriguez, prod. Élan 1202 (D).

Santiago Rodriguez, a brilliant and incisive Cuban-born pianist who was nosed out of first place at the 1981 Van Cliburn Competition by André-Michel Schub, has been consistently ignored by the record companies—it takes first place or a scandal to get a contract these days—and he has responded by starting his own label, a cassette-only shoe-string operation called Élan. Judging from the two releases at hand, the major labels have missed a good bet: Piano playing like this is hard to find.

Rodriguez's performance of the second book of Debussy's *Préludes*, which was recorded live at the University of Maryland (where Rodriguez is on the faculty), is an exceptional achievement by any standard. Cool, rather objective, and technically flawless, Rodriguez's Debussy is full of vivid pedal effects and wonderfully adroit voice-leading; though some of the slow pieces are occasionally a shade brisk, the more explicitly virtuosic ones like "*Les Tierces alternées*" and "*Feux d'artifice*" make a terrific impression. One would like to hear Rodriguez in the Debussy *Études*—or *Gaspard de la nuit*.

Alberto Ginastera's piano music is frankly derivative, mostly of Bartók and Prokofiev, but quite appealing all the same. The First Piano Sonata, in fact, has become something of a warhorse for up-and-coming

virtuosos since Johana Harris introduced it in 1952; the Second Piano Sonata, written 30 years later and receiving its premiere recording here, is more original but less inspired. Rodriguez gives both sonatas powerful, slightly dry performances (his playing in concert is more colorful) and is equally winning in the shorter folk-derived pieces that fill up each side.

The homemade digital sound is excellent in the Ginastera, serviceable in the Debussy. Somebody at Élan was asleep at the switch when mastering Side 1 of the Debussy: "Général Lavine—eccentric" is abruptly followed by two of the *Argentinian Dances* from the Ginastera tape. Highly recommended, particularly the Debussy.

Terry Teachout

#### GERSHWIN:

**Works for Piano.**

Thomas; Los Angeles Philharmonic, Thomas. Steven Epstein, prod. CBS Masterworks IM 39699 (D). ◉

*Rhapsody in Blue* (orch. Górfé); *Préludes for Piano* (3); *Short Story*; *Violin Piece* (arr. Thomas); *Second Rhapsody for Piano with Orchestra*; *For Lily Pons* (realized by Thomas); *Sleepless Night*; *Promenade* ("Walking the Dog").

The idea of a Gershwin *Gesamtausgabe* may sound like a misguided exercise in the worst kind of academic pedantry. Not so. George Gershwin's "serious" music is full of editing problems that, at their worst, are as bad as anything Rimsky-Korsakov ever did to Mussorgsky. This recording, the first of a series, isn't exactly a critical edition, but it is the next best thing; in it, Michael Tilson Thomas has attempted to establish *Urtexts* for *Rhapsody in Blue* and the less familiar *Second Rhapsody*. Furthermore, Thomas claims for his own piano-playing a special authenticity, based, we are assured, on an "oral tradition" of correct Gershwin style passed down by his father (a piano student of Gershwin) and his uncles, all close associates of the composer. This "tradition" has been supplemented by the close study of Gershwin's surviving recordings and by consultations with the composer's brother, Ira. [For a detailed discussion of this project, see David Patrick Stearns's interview with Thomas in "Disc-covering Gershwin," June 1985.]

Musicologically speaking, the most important performance on this recording is that of the *Second Rhapsody*. For the last three decades, New World has published a hopelessly corrupt text of the piece, completely reorchestrated by Robert McBride, while Gershwin's 1931 original gathered dust in the Library of Congress. Thomas is apparently the first person since the days of

Oscar Levant to perform the superior original version; he gives it a brilliant performance, too, full of excitingly idiomatic playing from soloist and orchestra alike. While none of this can quite shore up the work's low melodic profile, Thomas's efforts will surely encourage other pianists and conductors to take a fresh look at Gershwin's engaging and unfairly neglected sequel to *Rhapsody in Blue*.

The problems facing anyone who seeks to establish an *Urtext* for *Rhapsody in Blue*, much less to perform it in a truly authentic style, are a good deal more formidable. Gershwin, of course, did not orchestrate *Rhapsody in Blue*. Ferde Grofé's first version, scored "on" the Paul Whiteman band of 1924, cannot be played by a normally constituted orchestra; his later arrangements gloss over the crude banjo-and-saxophone flavor that is an essential part of the work's character. Thomas, here as in his 1976 recording (in which Gershwin's 1925 Duo-Art piano roll of *Rhapsody in Blue* provided the solo part), has correctly opted for Grofé's original with a few new editorial emendations aimed at restoring "all the details of the original score as they were played at the 1924 premiere."

Once again, Thomas and the Los Angeles Philharmonic play with enormous gusto; on the whole, this is probably the single best modern recording of *Rhapsody in Blue*. But a close comparison with the heavily abridged 1924 Gershwin/Whiteman performance (available on RCA AVM1-1740) suggests that Thomas's "Gershwin gyroscope," as he

## FORMAT KEY

- Ⓛ LP
- Ⓜ Cassette
- Ⓛ Compact Disc
- Ⓜ Videocassette
- Ⓛ Videodisc
- Ⓛ Open reel

## RECORDING INFORMATION

(A) analog original

(D) digital original

Large symbol beneath title indicates reviewed format. Small symbols following catalog number of reviewed format indicate other available formats (if any).

Catalog numbers of all formats of a particular recording usually are identical except for differing prefixes or suffixes. 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. Unless otherwise indicated, all multi-LP sets are in manual sequence.

calls it, needs some minor adjusting. His generally convincing interpretation of the solo part contains occasional rhythmic exaggerations not to be found in Gershwin's own straightforward and unmannered reading. (William Bolcom, oral traditions notwithstanding, plays Gershwin rather more credibly than does Thomas. A Bolcom *Rhapsody in Blue* would definitely be worth hearing.) And the highly distinctive, old-fashioned sounds of such Whiteman players as Henry Busse and Ross Gorman are only hinted at by their latter-day Los Angeles counterparts. The listener is always aware that these are classically trained musicians play-

ing at "jazz"; many dated period techniques like slap-tonguing are either de-emphasized or left out altogether. As good as this *Rhapsody in Blue* is, it is certainly possible to imagine an even more evocative performance.

The remainder of the album is largely given over to solo piano music, much of it unpublished. The popular *Preludes* of 1926 receive an attractive but distinctly self-indulgent performance from Thomas, who adds over two minutes, all of it in the second *Prelude*, to Gershwin's 1928 running time. Of the four solo premieres, *For Lily Pons* and *Sleepless Night*, a pair of pensive, lyrical miniatures, are best; Gershwin's own witty salon orchestration of *Promenade*, a charming piece of background music from the 1936 Fred Astaire/Ginger Rogers movie *Shall We Dance*, is a particularly welcome find.

Steven Epstein's digital production is very realistic, almost too much so in the orchestral recordings (made in Los Angeles's Dorothy Chandler Pavilion); *Rhapsody in Blue* would have benefited from a drier, more mundane acoustic. The anonymous liner notes fail to give the specifics of what Michael Tilson Thomas actually did in "realizing" the scores of *For Lily Pons* and *Violin Piece*; they also misleadingly assert that Ferde Grofé orchestrated *Rhapsody in Blue* "following the composer's indications for instrumentation." In fact, Gershwin's contribution to the scoring of *Rhapsody in Blue* was exiguous—he didn't even specify a clarinet glissando in the opening bars.

Terry Teachout

## C R I T I C S ' C H O I C E

The most noteworthy releases reviewed recently

### BACH:

**Partitas Nos. 1-6, B.W.V. 825-30.**

Schiff. Ⓛ London 411 732-1, Jan.

### BLOCH:

**Piano Quintet No. 2.**

### LERDAHL:

**String Quartet No. 2.**

Karp; Pro Arte Quartet. Ⓛ Laurel LR 128, Dec.

### BRITTEN:

#### Choral Music.

Chance, Coxwell, Hayes, Salmon, Seers, Unwin; Westminster Cathedral Choristers, Corydon Singers, Best. Ⓛ Hyperion KA 66126, Jan.

### ELGAR:

**Cello Concerto in E minor.**

### WALTON:

#### Cello Concerto.

Ma; London Symphony Orchestra, Previn. Ⓛ CBS Masterworks IMT 39541, Dec.

### KHACHATURIAN:

#### Piano Concerto\*.

### PROKOFIEV:

**Piano Concerto No. 3, in C, Op. 26\*\*.**

Kapell; Boston Symphony Orchestra, Koussevitzky\*; Dallas Symphony Orchestra, Dorati\*\*. Ⓛ RCA Gold Seal AGM 1-5266, Jan.

### MONTEVERDI:

#### Vespro della Beata Vergine.

Kirkby, Rogers; Taverner Consort, Players, and Choir, Parrott. Ⓛ Angel EMI 4D2S 3963, Dec.

### PISTON:

#### String Quartets Nos. 1 and 2.

Portland String Quartet. Ⓛ Northeastern NR 216, Feb.

### SCHÜTZ:

**"St. Matthew Passion," S.W.V. 479.**

Hilliard Vocal Ensemble, Hillier. Ⓛ Angel EMI DS 38167, Jan.

### SIBELIUS:

**String Quartets: in A minor; in B flat, Op. 4.**

Sibelius Academy Quartet. Ⓛ Finlandia FAD 345, Dec.

### VERDI:

#### Don Carlos.

Raimondi, Domingo, Nucci, Ghiaurov, Ricciarelli, Valentini Terrani; Chorus and Orchestra of the Teatro alla Scala, Milan, Abbado. Ⓛ Deutsche Grammophon 415 316-1, Jan.

### VERDI:

#### Rigoletto.

Gruberova, Fassbaender, Shicoff, Bruson, Lloyd, Rydl; Accademia di Santa Cecilia Orchestra and Chorus, Sinopoli. Ⓛ Philips 412 592-2, Feb.

### RECITALS AND MISCELLANY

#### GLENN GOULD:

**The Glenn Gould Legacy, Vol. 2: Haydn, Beethoven, Mozart.**

Gould; Columbia Symphony Orchestra, Golschmann; Leningrad Philharmonic Academic Symphony Orchestra, Slovak. Ⓛ CBS Masterworks M3T 39036, Jan.

**STRAUSS, R.:****Elektra.**

Ⓞ *Vinzing, Rysanek, Forrester, others; Orchestre National de France, Perick. Philippe Pelissier, prod. Rodolphe Productions RP 12420/21 (A, 2).* □ ● (Distributed by Harmonia Mundi, U.S.A.)

To attempt a live recording of one of the most strenuous operas ever written is to tempt fate. Performed without intermission, *Elektra* pushes singers to their limits and forces them, in all sincerity, to sound desperate. The preservation of this "sincerity" on the present recording has led to both positive and negative results.

On the positive side, Ute Vinzing triumphs in the title role. To be sure, her voice lacks the metallic cut that Birgit Nilsson made synonymous with it. But her middle range is like molasses, while her high notes are thrilling and, unlike those of most Elektras, never strident. She can also sing softly and seductively, especially when Elektra tries to flatter Chrysothemis into helping her kill Klytemnestra and Aegisth. Vinzing seems to be saving herself at the beginning of the opera, but this is easily forgiven.

Leonie Rysanek and Maureen Forrester, on the other hand, give histrionic performances that, though electric in places, are vocally uneven. Rysanek sings Chrysothemis with a feverish excitement that is misplaced on the timid sister. In the first half of the performance, her voice seems to whine, her low tones are weak, and her middle register—where she has always sung too heavily—sounds worn. By the time Rysanek makes her second entrance, she has warmed up and her high notes are thrilling, if occasionally out of control.

Unlike Rysanek, Forrester (as Klytemnestra) sings so opulently at first that she sounds tired and ravaged by the end. Her low register is wonderfully rich and dark, but she has trouble moving up into the middle part of the voice. She also has the annoying habit common to non-Germanic singers of overemphasizing the final consonant of a word.

The small roles are rather poorly sung, and the orchestral playing is unsatisfying. One misses the rich string sound of a first-rate orchestra (such as the Vienna Philharmonic, heard to advantage on Sir Georg Solti's recording). Christof Perick's conducting is mostly two-dimensional and unexciting; toward the end, though, he is able to bring out the opera's lyrical passion, reminding us that *Elektra* belongs on the same family tree as *Ariadne*.

With such uneven results, one wonders

if the intention of this unedited recording was to capture the thrill of a live performance or merely to cut costs.

Michelle Krisel

**STRAUSS, R.:****Four Last Songs; Final Scene from "Capriccio."**

Ⓞ *Schwarzkopf; Philharmonia Orchestra, Ackermann. Walter Legge, prod. Angel EMI 4XS 38266 (A).* □

Elisabeth Schwarzkopf's exquisite mono recording of Richard Strauss's *Four Last Songs* and the final scene from *Capriccio*, which has been turning up on countless desert-island-disc lists for the past three decades, is now available on both LP and cassette in a digitally remastered version. There have been more vocally opulent recordings of the *Four Last Songs* (though not by much), but none anywhere as vivid as Schwarzkopf's first: *This* is what critics mean when they talk about "singing with a face." Dennis Brain finally receives cover credit for his matchless horn solos. Otto Ackermann accompanies sympathetically, and the Philharmonia Orchestra is captured at its early-Fifties peak. The liner notes are by Andrew Porter. If you don't have this, you should.

Terry Teachout

**RECITALS AND MISCELLANY****JUSSI BJÖRLING:****Opera Arias.**

Ⓞ *Björing; various orchestras and conductors. John F. Pfeiffer, reissue prod. RCA Gold Seal AGM 1-5277 (A).* □

*BORODIN: Prince Igor: Vladimir's recitative and cavatina. FLOTOW: Martha: M'appari. GIOR-DANO: Andrea Chénier: Come un bel dì di maggio. MASCAGNI: Cavalleria rusticana: Siciliana. PUCCINI: Manon Lescaut: Donna non vidi mai; Tosca: Recondita armonia; E lucevan le stelle; O dolci mani; Turandot: Non piangere, Liù; Nessun*



*dorma. VERDI: Aida: Celeste Aida; Rigoletto: La donna è mobile; Parmi, veder le lagrime.*

**JUSSI BJÖRLING:****Songs and Opera Arias, 1939-51.**

Ⓞ *Björing; various musicians, orchestras, and conductors. Frank Hedman, prod. Bluebell 187 (A).* (Distributed by Ad Lib, Box 52, S-162 11 Vällingby, Sweden.)

*ALFVÉN: Skogen Sover. ALTHÉN: Land, Du välsig nade. BIZET: Carmen: Flower Song. EK-LÖF: Morgon. NORDQVIST: Bön i ofredstid; Bist Thomas' frihetssång. PONCHIELLI: La Gioconda: Cielo e mar! PUCCINI: La Bohème: Che gelida manina. SCHUBERT: An Sylvia; Ständchen; An die Leier. SIBELIUS: Svarta rosor; Säv, säv, susa. VERDI: Aida: Celeste Aida.*

There is no question of the greatness of Jussi Björing: After Gigli there is still no one but this Swedish tenor. His placement was the most perfect I have heard, and the honeyed gold of his tone was balm to one's soul. RCA has done him no particular favor with its reissue, however. There is no information on the dates of these recordings, and the conductors are listed only in tiny print in a corner. Most of the arias are taken from Björing's complete opera sets instead of the legendary single 78s that preceded them.

The sound of the remastering is honest: Where the original was dry, this is dry. Indeed, comparison shows almost no difference, with an infinitesimal edge of presence to some of the originals. Best all around are the cuts made with the tenor's longtime conductor, Nils Grevillius, but this record is all Björing and thus a necessity.

The full warmth of Björing's voice can be heard on the Bluebell disc, a compendium from several sources and already a best-seller in Sweden. There are the usual Schubert songs, the usual Sibelius (from 1940), four patriotic songs (1939, '40, and '44), the *Bohème* and *Carmen* arias from Sweden's Radio (1941), and the Victor 78s of the *Aida* and *Gioconda* arias (1941). No digital machinations here, just clean surfaces and the clean sound of Björing, plus his irrefutable artistry and commitment. Bluebell has also released the 12 popular songs he recorded in 1932-33 under the name of Erik Odde, and they are great fun. To listen to Björing sing again after a passage of time is like going home for a vacation: The ear relaxes and one exults.

Bert Wechsler

**FOLLIES—IN CONCERT.**

Ⓞ *Music and lyrics by Stephen Sondheim; book and new continuity by James Goldman. Various singers; New York Philharmonic, Gemignani. Thomas Z. Shepard, prod. RCA Red Seal HBC 2-7128 (D, 2).* □ (2). ● (2).

Thomas Z. Shepard explains that he decided to record a new version of Stephen Sondheim's



heim's *Follies* before an audience, instead of in a studio, because "I've never liked the 1971 original-cast album, and I realized that if I went into a studio and brought in the cast from scratch, I would never have enough time to get that real ensemble feeling."

Shepard rounded up some of the biggest names in the musical theater for the project. He hired Avery Fisher Hall for two performances and persuaded the New York Philharmonic to serve as pit orchestra. It took almost two years to put the concerts together, and many hours of editing afterward to get the recording into shape. (Shepard estimates that there are approximately 200 splices in the master tape.) The result is one of the best show albums ever made, and it should prove to be a steady delight even for those who don't think Sondheim is the greatest thing that ever happened to theater music.

In the unsentimental story, the four principals—two ex-Follies girls, well past their prime, and their aging husbands, former stage-door Johnnies—confront their earlier lives in encounters with their young alter egos, and the RCA dials have been twisted to provide smooth transitions between past and present. The real thrills, though, are provided by the top-notch singing stars, who seem to have responded to the audience with extra jolts of energy, managing somehow to turn almost every big number into a showstopper.

Perhaps the biggest moment of all comes when Elaine Stritch, as Hattie, sings "Broadway Baby," the plaint of a Ruby Keeler-like aspirant for stardom who is "pounding Forty-second Street to be in a show." Or maybe it's when Carol Burnett, playing Carlotta, belts out the ultimate ballad of showbiz survival, "I'm Still Here." Another great moment, blazing with characteristic Sondheim wit and acidity, finds Lee Remick, as Phyllis, reviling her tired husband with the tongue-lashing tirade, "Could I Leave You?" Still another comes along when veteran diva Licia Albanese proves the perfect Heidi, applying her still viable soprano to that sneak attack on the sugary excesses of Viennese operetta, "One More Kiss."

Then there are Betty Comden and Adolph Green as the Whitmans, delivering "Rain on the Roof" in their own wry style; Barbara Cook as Sally, putting over the closest thing in the score to a hummable love song, "Losing My Mind"; and Liliane Monteverchi as Solange, chanting "Ah, Paree!" a devastating pastiche almost as lethal to Francophilia as the "Paree" that Beatrice

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Lillie once sang from her perch above the Moulin Rouge in *At Home Abroad* (I had hoped to get through an entire review of a Sondheim score without using the word "pastiche," but I guess it can't be done). Phyllis Newman shines, too, as Stella in "Who's That Woman?" And Mandy Patinkin and George Hearn, portraying the over-the-hill husbands, are not the least bit disappointing in the many bright moments entrusted to them.

Considering that Sondheim, the master lyricist, has always been something less than a master melodist, the whole production makes a better impression musically than it

might have in the hands of a less gifted or less glamorous cast. Whatever the reasons, hearing *Follies* on this new recording is as satisfying an experience as it was a letdown on the old one; even the Philharmonic seems to have succumbed to the enthusiasm, providing idiomatic playing that lives up to the spirit of the occasion.

In sum, this package, which comes with the complete text, is a thorough success and might even pave the way for a revival on stage. Cassette and CD versions are also available; the cassettes sound good, and they, too, come with the full text.

Paul Kresh

## ERMANNO MAURO:

### Great Tenor Arias.

⊙ *Mauro; Edmonton Symphony Orchestra, Mayer. Anton Kwiatkowski, prod. CBC Enterprises SM 5046 (A).* ☐ (P.O. Box 500, Station A, Toronto, Ontario, Canada M5W 1E6.)

*BIZET: Carmen: Flower Song. GIORDANO: Andrea Chénier: Improviso. GOUNOD: Roméo et Juliette: Ah! Lève-toi, soleil. LEONCAVALLO: Pagliacci: Vesti la giubba. MASSENET: Le Cid: O Souverain; Werther: Pourquoi me reveiller? PUC-CINI: La Bohème: Che gelida manina; Tosca: E lucevan le stelle; Turandot: Nessun dorma. VERDI: Un Ballo in maschera: Ma se m'è forza perdeti; Otello: Niun mi tema; Il Trovatore: Ah si, ben mio.*

### LOUIS QUILICO:

#### Great Verdi Arias.

⊙ *Quilico; Edmonton Symphony Orchestra, Mayer. Anton Kwiatkowski, prod. CBC Enterprises SM 5043 (A).* ☐

*Un Ballo in maschera: Eri tu, che macchiavi. Falstaff: È sogno? O realtà? La Forza del destino: Urna fatale. Macbeth: Pietà, rispetto amore. Otello: Credo in un Dio crudel. Rigoletto: Cortigiani. La Traviata: Di Provenza il mar. Il Trovatore: Il ballen del suo sorriso.*

Canada sometimes celebrates its artists overmuch, but these two recordings out of Edmonton are on all accounts worthy of praise. They also fill two gaps: Heretofore, neither singer has been represented on disc to any degree.

Ermanno Mauro has been a resident of Canada since 1958. At his New York stage debut he was noted as being an extremely promising tenor, and the fear was that, being useful, he would go too far too fast. Subsequent live performances have not been world-shaking, so it is good to hear such relaxed, substantial vocalism in all 12 arias on his record. The repertoire is French and Italian, from lyric to dramatic. Mauro does not have a finished style throughout: He prefers to be an all-purpose tenor with a healthy voice. There are some strange choices. The *Ballo* aria is recorded here without the cabaletta, and "Ah si, ben mio" is not followed by "Di quella pira." What is here I've listened to several times, and always with great pleasure.

Montreal native Louis Quilico, in his prime, had a baritone voice that never quit. Had his record been made ten years ago, we might have gotten the full meat of that voice; as it is, we hear more careful singing (he teaches now), though Quilico still stands with all but the very great. He remains on top of the music and gives more than basic acting.

Accompanying both singers is Uri Mayer (who was born in Romania but now lives in Canada), and the Edmonton Symphony responds sympathetically to his lead. The recorded sound is near spectacular for analog.

Bert Wechsler

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# Country's Future Days

BY JOHN MORTLAND

RETIRED MAVERICK FLOYD TILLMAN: EVERYTHING THAT'S GOOD AND TRUE IN AMERICAN MUSIC



STEPHANIE CHERNIKOWSKI

Nashville's pop lunge, "new traditionalists" on the rise, and some great reissues

DESPITE THE OCCASIONAL WILD CARD LIKE Willie Nelson, there are three main currents in modern country music—which, for better or for worse, has become part of the pop record business. Country has always had an ambivalent attitude toward pop, wishing to share in the rewards of mainstream success without compromising its own essence. If country has succumbed to the lure of pop, it is largely the result of evolution. This is the first time major country stars (Dolly Parton, Kenny Rogers, and the Oak Ridge Boys), who are clearly the wave of the future, have no direct musical ties to prewar country and the culture that spawned it (though this wasn't always so for Dolly).

A few traditionalists—those with enduring images—continue to hold their ground, which is an increasingly small cor-

ner of an increasingly large market. Merle Haggard turns out well-crafted country singles, freewheeling performances, and, every five years or so, even a compelling album (1983's *That's the Way Love Goes* is his most recent, by my count). But his popularity is equally dependent on his reputation as "the poet of the working man." Johnny Cash sells himself as "the man in black" as much as he sells his records, which are terribly erratic these days. And George Jones perseveres as the tortured heir to Hank Williams, while on vinyl his definitive voice usually fights pedestrian material to a standoff. Others aren't so lucky: Charley Pride has learned that being a classy stylist is no longer enough, Mel Tillis can't get by on his songwriting and stagecraft alone. Even Loretta Lynn gropes for a new sound [see Mark Moses's

review of her album *Just a Woman*, page 70]. It's hard to picture the old guard returning to fashion, because it's hard to picture traditional country remaining a force; it is now simply the music of a handful of exceptional artists.

Meanwhile, the biggest names of the last year or so make up a third strain: the "new traditionalists," self-styled throwbacks to the era Williams symbolizes. But they sound less like the real thing than like revivalists, with all the distance from the source that that word implies. Without questioning sincerity or integrity at all, it's worth pointing out that John Anderson's past is as much in rock groups playing "Purple Haze" as it is in country bands. And that George Strait and Ricky Skaggs approach their material more like folkies than like gutbucket country singers. These guys have become the exception that proves the rule: They sound wonderful next to Rogers and Partron, but thin and calculated compared to the originals.

The good news is that such artists have generated, in turn, a consumer interest in historical reissues. There's great stuff out there—by Williams, Roy Acuff, Floyd Tillman, and Patsy Cline, at the moment—and it's beautifully packaged and intelligently annotated, too. This batch covers a 20-year period beginning in the late 1930s, when country was first sensing its wider appeal and expanding from its rural base.

The Columbia Historic Edition, which released the first installment of its 16-volume series in March 1982, currently offers an erratic trio consisting of mountain songster Roy Acuff, honky-tonk hero Floyd Tillman, and hillbilly-boogie masters the Maddox Brothers and Rose. Hank Williams fans will be happy to add a previously unreleased set of demos to their collection, as well as the first two double albums in a chronological series that will ultimately restore (or bring into being) everything

"the Hillbilly Shakespeare" ever did—and usually as he first did it, which matters because so many of his original recordings have been available before this only with posthumous overdubs.

Like the others in the Columbia series, *Roy Acuff* mixes hits with rarities and anomalies in a bid to please everyone. In tandem with his *Greatest Hits* (also on Columbia) or the three-record set *Roy Acuff: Country and Western Classics* (Time-Life), the album offers a crucial glimpse of country in transition. Acuff is not, as he has always claimed, the genre's first star vocalist, but he certainly consolidated the status of the country singer.

Most of his early repertoire was traditional—songs about God, Mother, and trains—and he had a limited vocal range and melodic sense. But he made the most of his limits, and in the late '30s and the '40s, when country was tentatively seeking to make sense of the industrial world, Acuff upheld the old ways and became the Grand Ole Opry figurehead and self-styled "King of Country Music" in the process. Even the most recent cut here—"I'll Be Alone," from 1951—shows him straddling the line between modern and archaic, and doing so uncomfortably enough that there's little doubt about where his loyalties lie. *Roy Acuff* includes two important curiosities: the 1936 version of "Wabash Cannonball" with Sam Hatcher singing (the tune didn't become Acuff's calling card until he cut his own vocal on it in 1947) and the also previously unreleased "The Heart that Was Broken for Me," which proves to be one of Acuff's most stirring spirituals.

This artist's unabashed cries so moved Williams that he described his own style as a cross between Acuff and Ernest Tubbs, though he turned them so far inside out that the formal influence is hard to detect. Born in 1923, Williams was of the first generation to grow up entirely with vocal

country music. He was also one of the first to work with a producer. Fred Rose was a Northern sophisticate who wound up in Nashville almost by accident—a genteel, teetotaling Christian Scientist in a culture of rough, hard-drinking Southern Baptists. His substantial contributions, from choosing instrumentation to polishing lyrics, were designed to make Hank more palatable to the burgeoning audience in the urban South and elsewhere if possible. Each man seemed to have a clear idea of what a gold mine he had in the other, but there must have been some exasperating studio standoffs between them, just the same.

Hence the fascination with *Just Me and My Guitar*, 12 demos that have been greeted like the hillbilly Holy Grail. In print, this album has already been favorably compared to the recordings of Robert Johnson, the solo acoustic Mississippi Delta bluesman of the '30s whose life was as doomed as Hank's, but this correlation overlooks rather obvious mitigating factors. We hear Johnson's small output exactly as he meant it to be heard; it was conceived for voice and guitar only, and his two albums on Columbia represent complete performances. *Just Me and My Guitar* is demos: raw and passionate, true, but incomplete. Consider the vocal on "Your Cheatin' Heart," which is tentative and plain, no more than a rough sketch, compared with the harrowing version ultimately released.

That said, *Just Me and My Guitar* is mandatory for country fans. "Jambalaya," "Help Me Understand," and "Honky Tonk Blues" all contain verses not on the final releases. Hank never even commercially recorded seven of these tracks, though in some cases versions by other artists exist. "The Log Train," a tribute to his father, is probably the last thing he put on tape before his death in 1953. How iron-

(Continued on page 79)

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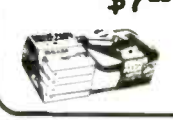
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# Great Expectations



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JONES'S MORE CONTEMPO BIG AUDIO DYNAMITE: CUTE

We can go at it in depth some other time, but one thing that made the Clash's first record so great was the audience it forged. The group imagined a little community, the "we" that would finally get its kicks, then purify the planet and knock it off its feet. *The Clash* discovered fans everywhere, and instantly a lot of people who had been talking to themselves in their bedrooms or shouting at voices on the radio—people somehow like the band itself—were tied together on one party line. The Clash created their utopia with its revolutionary rules and then demanded to see it happen now, which also made them great. Nobody since has made such a claim on the world.

Well, egos, junk, a posturing manager, and so forth blew it apart—wait for the Avon paperback. But the end didn't make the beginning matter less, or predict the failure at hand: From the Clash's guitarist/frontmen, two guys who once fantasized a mass movement and who currently are not speaking to each other, come albums that don't speak to anybody. *Cut the Crap* is, mostly and lastly, a nearly unlistenable punk-by-numbers exercise from Joe Strummer, who kept the name and bassist Paul Simonon and hired a new band. *This Is Big Audio Dynamite* offers Mick Jones a chance to assert the personality that made Strummer wary. And it's surely more contempo—kinda like ice cream made from bean curd.

The more depressing failure is *Cut the Crap*, since it always seemed that Strummer was the more interesting songwriter, the one more likely to see through just such shallow gesticulations as this. Oh, it has it all for rallying the kids: solidarity-with-the-urchins football cheers everywhere, a street-credentials-in-order grubby mix, liner notes exhorting us to remember that the system can be licked "with your participation . . . so cut the crap and get out there!" This kind of loud guitar punk isn't out of style, exactly, but every brick of this record, every move, seems cemented with nostalgia. Pick up the single of "This Is England," which is the one (okay, maybe "North and South," too) glorious, unforced moment here, a fine blue howl that stands with Strummer's past successes. Then do the dishes or something.

A first hearing of *Big Audio Dynamite* seems to dismantle the old comparison of Strummer/Jones with Lennon/McCartney; if anything, Jones is the less sentimental of

the two. There are some unhackneyed ideas percolating in this pop funk, and one is heartened by the news that Jones plays more guitar on tour and that a Rick Rubin mix of the whole record is in the works. Both suggest Jones doesn't trust the limits of this perky disc. It might be good for doing aerobics to. The lyrics, though, are the final blow: lots of little political-sounding references and pseudoconfessional snippets, too obscure to be confessional, too safe to matter, all wiggling down the slipstream of easygoing dancebeats. "Stone Thames," a horrible song about AIDS, is probably the most egregious (sample line: "iron undies back in style"). Not helping matters any is the irritating, "hip" singsong voice Jones uses on every tune, whether he's talking about a plague or, as in "E=MC<sup>2</sup>," the entire Nicholas Roeg oeuvre (he's kidding, right?).

Oh, but Mick has got something (obvious) to say: We are *bad*. The Clash romanticized themselves overmuch, but at least when they called themselves the Four Horsemen of the Apocalypse, they sounded the part. Cute references to cool outlaws and tough guys dot this LP (lyrics and musical nods to Clint Eastwood, combat and samurai movies, too), but it all boils down to Mick trying on his buckskin jacket and six-shooter in front of the mirror. He likes how he looks.

Mick, when you tear yourself away from the vanity, give us a ring. Hey, Joe, where you going with that gun in your hand? (Since the release of *Cut the Crap*, everyone but Simonon has split.) I'm wishing they'll heed the (very paraphrased) words of a smart French guy sometime soon: Last year the blood of the prisoners, next year the blood of the tormentors. This year—well, this year the boys took it very easy. *R.J. Smith*

**THE REPLACEMENTS:**

**Tim.**  
 Ⓞ Tommy Erdelyi, prod. Sire 25330-1. Ⓜ

After first hearing *Tim*, longtime fans of the Replacements might guess that these trash-rock heroes had interpreted their major-label debut as the opportunity to clean up their ragtag act, and in a way, they'd be right. The angry, obvious jokes of 1984's *Let It Be*, as well as that album's roiling, juiced-up guitars, don't leap out at you now. But after a while, you realize that honcho Paul Westerberg is slipping his mordant wisecracks into, dare I say it, mature songs, just as the band is condensing its guitar clamor into coiled hooks and riffs. In every way, this is the richest, most complex record these

American underdogs have made, and even if the prominence of Westerberg makes this seem less a bunch of equals than an auteur with inspired sidemen, the acuity of the compositions validates *Tim*. "Little Mascara," for example, is a tough, sympathetic lament for a woman saddled with a marriage whose only bond is its children; "Bastards of Young" links being afloat in the music scene to estrangement from family.

The sense of being the self-conscious inheritors of a rock 'n' roll tradition that no one seems to care about anymore is the audacious theme of this record. As blunt about their defiance as they are about their self-

pity, the Replacements come up with a doomed anthem to college radio called "Left of the Dial." Desperate and road-weary, cushioned by neither pop success nor pop glamour, they stand as the logical heirs to the skeptical, screwed-up, romantic tradition of Mott the Hoople, proclaiming rock as a loser's game even as they continue to play it with zest. But as Westerberg suggests in the two quiet statements that close out each side with a hush, all the young dudes carry the news to an audience that is barely listening—absent even. A "Swingin' Party" is where scared, dissolute true believers "hang side-by-side." "Here Comes a Regular" of-

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J. Gordon Holt *Stereophile* July, 1985.

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Mark Moses

#### **LOUDON WAINWRIGHT III: I'm Alright.**

⊙ Richard Thompson and Loudon Wainwright III, prods. Rounder 3096. □

Few performers set up antagonistic relationships with their audiences as successfully as Loudon Wainwright III. The lanky, brooding black-humorist who withdraws into himself in private practically spits challenges from the stage. His fans respond quickly, catcalling and barking requests for old favorites like "Dead Skunk" and "The Swimming Song" and more recent narratives like "The Acid Song." Unlike a lot of more tractable artists, Wainwright obliges, often changing tunes midstrum, drawing in the bloodlust of the crowd to fuel his mugging, aggressive, taunting stance. But as his stage presence grows more mannered and predictable (he has been at this 17 years), his writing grows more acute, sensitive, calmer. Of course, *I'm Alright*, Wainwright's first collaboration with guitarist Richard Thompson and perhaps his finest LP, is not a gentle, sweet reminiscence. Sidestepping what his public expects, Wainwright concentrates on his softer side (he credits Thompson with encouraging him) and fashions a portrait of the artist as a gloomily hopeful fellow; the anger and disdain of so many of his earlier songs is gone. By toning down his negativity, he has discovered a more complicated and effective level of humor, though his old fans may find some of the new material hard to swallow: There are no easy laughs like the descriptions of dog caca in "Colors."

"Not John," about the death of John Lennon, has no laughs, though audiences find a nervous giggle in the first verse's "... Lennon and his wife Yoko/Oh no." Side 2 starts and stops with odes to the performing life, one wry, one plaintive. There's a Noah's Ark feel to the "Animal Song," a kid's rhyme as good as any by Woody Guthrie or Pete Seeger. One song's about a grumpy father ("Daddy Take a Nap"), another about daughter Lucy ("Screaming Issue," written with her aunt Terre Roche). Two sad-sack self-put-downs look for sympathy, but I find more poignance in "Cardboard Boxes," a deceptively simple catalog of packing and moving. In a few verses, Wainwright lists the de-

tritus of years and relationships, then sets them to a cattle roundup rhythm complete with snapping lassos. I laughed, I cried. Then I decided to come home.

Leslie Berman

#### **ARTISTS UNITED AGAINST APARTHEID: Sun City.**

⊙ Little Steven and Arthur Baker, prods. Manhattan ST 53019. □ (Distributed by Capitol.)

By now you've probably heard "Sun City," the rousing single by Artists United Against Apartheid, a coalition gathered by former E Street Band guitarist Steve Van Zandt (a.k.a. Little Steven) and producer Arthur Baker. With its taunting na-na-na-na chorus, grungy guitars, and crossover-dream lineup of singers at their angriest (Bruce Springsteen, Rubén Blades, Bonnie Raitt, Run-D.M.C., to name a few), "Sun City" was last year's most ambitious melding of mainstream pop and social activism. As an album, *Sun City* sustains its message—a boycott of South Africa's most lavish resort—and momentum all the way through, thanks to the savvy concept of Van Zandt and Baker. Six songs are based on the same thundering-drum rhythm track; as each group of performers adds its own words and music, that rhythm track stands as a thread of unity, the musical counterpart to the anti-apartheid sentiment the participants share. (Artists' royalties are being donated to a United Nations-sponsored African aid fund.)

Of the two versions of the title cut, I'll take the original for the peerless fury of its rap contingent. But the album offers many other spine-tingling moments. Peter Gabriel's joyous trilling and violinist Shankar's birdlike shrieks entwine on "No More Apartheid," a celebratory companion piece to "Biko," Gabriel's eerie eulogy for the black activist who died in police custody. On "Revolutionary Situation," Keith LeBlanc and Danny Schechter piece together authentic street-riot sounds and the news-report voices of jailed resistance leader Nelson Mandela, South African President P. W. Botha, and our own President into a tumultuous collage of unyielding positions. On the rap "Let Me See Your I.D.," Gil Scott-Heron, Peter Wolf, and Melle Mel conjure ominous scenes of life under apartheid. Miles Davis leads Stanley Jordan, Herbie Hancock, and talking-drum player Sonny Okosun (among others) through "The Struggle Continues," a sinuous piece that's both chilling and euphoric.

The only cut not based on the "Sun City" rhythm track is the finale, "Silver and Gold," an acoustic blues by Keith Richard, Ron

Wood, and U2's Bono; it was a last-minute addition, reportedly taped in a jam session right after Bono heard Robert Johnson records for the first time. While Bono's slurred vocals are too stiff an homage, the song nevertheless makes a fitting coda: two old Stones and a new blues student reminding us that rock 'n' roll's debt to black culture can never be repaid in full.

Joyce Millman

#### **LORETTA LYNN: Just a Woman.**

⊙ Jimmy Bowen and Loretta Lynn, prods. MCA 5613. □

When Loretta Lynn starts off her new, long-awaited return to recording with a swift romp called "Stop the Clock," which stops the clock at under two minutes, the song serves as both an attention-getter and a brief testing of the waters. It's an appropriate entrance, both brash and demure, a reminder that what makes Loretta Lynn such a pivotal c&w performer is the way she balances contradictions. She delights in the security of tradition and still understands the way it hems in people, especially women. On this fine album, which contains her toughest material in a long while, she makes the demand for the love of a husband who's too dependent on the bottle (in her own "Wouldn't It Be Great") and the demand for the love of a one-night stand (in the title track) seem equally crucial. After all, the question she asks the man in the second song, "Is it me or just a woman you need tonight," would be just as appropriate in the first.

Coproducer Jimmy Bowen incorporates the spare, new-breed rootsiness that has been making itself felt in recent c&w (Lynn has given her maternal approval to Reba McEntire) with an unobtrusive pop glossiness. Loretta's a sucker for the big slow one, but even when the ballads flirt with schlock, as do "I'll Think of Something" and "Heart Don't Do This to Me," her unsparing voice, with its drawn-out quaver and grainy tone, is there to cut through the murk. At her insistence, each tune depicts characters faced with some moral choice, even in a comic skit like "I Can't Say It on the Radio," about a woman moved to broadcast the news that her husband is a jerk. And the LP's common-sense truths are bolstered by the presence of Lynn's first two originals in ten years: "Wouldn't It Be Great" and the feisty "Adam's Rib." The latter argues, in typically rousing fashion, that mutual fidelity is a prerequisite for maintaining equality in a marriage, which is to say that Lynn believes the



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old institutions like monogamy (and country music) can still afford her the freedom she requires. Listening to *Just a Woman*, it's tough to argue with her. *Mark Moses*

#### ZZ TOP:

##### Afterburner.

Ⓢ Bill Ham, prod. Warner Bros. 25342-1. Ⓜ Ⓛ

In business since 1970, ZZ Top has prudently taken more than two years to follow up *Eliminator*, an album so accessible and well marketed it is now Texas-size sextuple platinum. Such success is all the more impressive because this hirsute, superannuated, blues-bred power trio looks like it's down to stems and seeds. If this still doesn't sound like *The Next Big Thing to you*, turn on your TV and watch these Fabulous Furry Freak Brothers cavort in Tim Newman's hysterical videos ("Gimme All Your Lovin'," "Legs," "Sharp Dressed Man," and the new "Sleeping Bag"). Hip, self-mocking star power that, like their guru-length facial hair, just won't quit.

And vinyl is even kinder than videotape because ZZ has, you'll pardon the expression, roots. Blues and its derivatives adhere to such strict formal limitations that, paradoxically, they offer considerable freedom, particularly from the onerous puffery of creating something new under the pop sun each time out. Having outlived the late-Sixties horde of psychedelic white boys as well as its own overblown use of cowpie shtick, ZZ has spent the last three years fine-tuning a blues-based pop that benefits from just such freedom, leaning heavily on technologically souped-up instrumental skill and wit.

Nothing on the new LP would have been out of place on *Eliminator*, which is a genuine compliment. "Dipping Low (in the Lap of Luxury)" is a very close relative of "Gimme All Your Lovin'," while "Rough Boy" is yet another tip of the ZZ Stetson to Anglo blues specter Peter Green. And a liberal lend-lease policy allows guitarist Billy Gibbons to append the wonderful "Boys of Summer" lick to the back end of the pop chord changes of "Stages," only the most obvious of the several hits on *Afterburner*. The trademark song structure remains unchanged: Most tracks are at least 60 percent spare, rhythm-driven instrumentals that showcase Gibbons's tonal mastery as *los tres hombres* steam toward the fade. And the trademark glandular obsessions descend directly from Bo "Pig Meat Is What I Crave" Carter, the Thirties master of the single entendre. My current fave is "Velero Fly," a drum-heavy dance ("Do the

### FORMAT KEY

- Ⓢ LP/EP
- Ⓜ Cassette
- Ⓛ Compact Disc
- Ⓜ Videocassette
- Ⓛ Videodisc
- Ⓢ 12-inch single
- Ⓛ Open reel

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Velero fly") that uses the sound of the fly ripping open as lesser mortals might use a tambourine. Technology made timeless—just my kind of innovation. *Jeff Nesin*

#### ELVIS COSTELLO AND THE ATTRACTIONS:

##### The Best of Elvis Costello and the Attractions.

Ⓜ Various dirs. and prods. CBS/Fox Video 7092-20 (Beta), 7092-30 (VHS); \$24.98.

Twenty-two videos for about a buck apiece, and as the ads say, "Many never before seen on MTV." When you combine this with the fact that the featured artist is probably the most interesting rock star of the past decade, *The Best of Elvis Costello and the Attractions* is a bargain, a must-have, a major event. Or maybe I feel this way only because the music is so damn great. You could play "Oliver's Army" behind Duran Duran's "Girls on Film" video and it would still be a moving experience. (Actually, I suppose "Pump It Up" would make better accompaniment for "Girls on Film.")

Over the course of these chronologically shuffled videos, Costello shifts back and forth between his early-period, pigeon-toed Avenging Dork persona and his latter-day, intellectual Smoothie Crooner image. Apparently it's hard to find a visual equivalent to his knotty language. In fact, the best-known directors—Chuck Statler, Allen Arkush—fare worst, coming up with literal-minded stuff that attempts to locate plot lines in Costello's convoluted, punning scenarios. Pop music is supposed to be so primitive, so simple-minded, yet this cassette proves you can't reduce it to High Concept.

Only once do form and content coincide. In 1983's "I Wanna Be Loved" (director's credit to "The Rich Kids"), Costello stares

glumly at the camera as a tape of the song is played. Very occasionally, he half-heartedly sings along with himself for a line or two; it's as if we've caught him listening to an unseen radio. But as he stares at us balefully, various people enter the frame to give him quick kisses on the cheek. Costello never turns to look at them—all sorts of men, women, and children—as they peck and vanish. He just groans "I wanna be loved" once in a while. I never liked the song until I saw this clip. Its effect is extraordinary: desolating, scary, and witty all at the same time, precisely what Costello achieves on his best records. Too bad he never made a video for "Alison."

*Ken Tucker*

#### BOB DYLAN:

##### Biograph.

Ⓢ Various prods. Columbia C5X 38830 (5). Ⓜ (3). Ⓛ (3).

The cover of this five-LP collection—a 1961–81 retrospective with the last five years neatly excised to make the time since he's made a significant difference to anyone but the born-again seem shorter—is dominated by the striking, baleful countenance of Bob Dylan c. 1965, surrounded by the specters of '70s and '80s Dylans, relegated to the edges of the box like whispering *consiglières* or a couple of sidemen in a very unequal yoking. Which, for me, accurately reflects the contents.

From 1965–67—years in which the competition was heavier than it has ever been—Dylan was the most potent creative force in Western popular culture. Since then, he has generally held that his importance was unimportant to him, nothing more than an exaggerated projection of the needs and fantasies of fans and critics. With the scrambled history and aesthetic disinformation of *Biograph*, Dylan now embraces his own importance with a vengeance.

The set's aggressively antichronological track-sequencing and pages of self-serving reappraisal posit Dylan like Yahweh: He is what he is, will be what he will be, will be what he has been. Consider: "Contrary to what some so-called experts believe, I don't constantly reinvent myself—I was there from the beginning. I'm also not any seeker or a searcher for God-knows-what; I had it all together a while back and can go any kind of way." Revisionism begins at home. Being protean is forever... and certainly means never having to say you're sorry.

On record, revisionism means filling a manufactured gap between the original 1965 studio versions of songs that ran back to

back on *Highway 61 Revisited* (the incandescent "Tomestone Blues" and Dylan's first Top 10 hit, "Like a Rolling Stone") with "Groom's Still Waiting at the Altar" (a 1981 non-LP B-side of minimal nostalgic consequence) and a 1974 live recording of "Most Likely You Go Your Way," from a depressing tour with the Band, his first as a Dylan impersonator. I would never argue for the immutability of Canon, but there ought to be some point to tinkering with brilliance. I cannot believe that anyone considers these performances to be of equal significance, or even complementary. The sole purpose of such jarring juxtapositions—the above are only the most obvious of several on *Biograph*—is to shed some reflected glory on recent lesser product.

If you're trying to figure out who the Jeremiah that closed Live Aid was, this intentionally misleading miasma is not the place to start. If you're a completist, be advised that the 17 unreleased tracks are mostly just unreleased. I wouldn't trade my *Royal Albert Hall Concert 1966* bootleg (which I consider one of the ten greatest rock 'n' roll

records ever) for this entire package. This is one book you can judge quite well by its cover.

Jeff Nesin

**PHRANC:**  
**Folksinger.**

Phranc, Ethan James, and Craig Lee, prods. Rhino RNL 856. □

There have been a few crossovers from punk to folk, all to the latter's advantage. New ears hear old songs, new songs get written, and the folk scene gets a little electric jolt, even if only temporarily. It's unclear, though, whether Phranc, an ex-punker from L.A., is advancing or retreating. Her visuals—flattop haircut, western shirt, cowboy boots—are a setup, intimating a toughness and a masculinity that her delicate voice and deferentially questioning semipolitical lyrics belie. Her crossover embraces more than punk's edge and folk's narrative, adding a lesbian-feminist ethic to songs about women and women's images, but the result is a confused and ultimately tepid statement.

A few of Phranc's subjects are, or should be, good for laughs. There's "Caped

Crusader," a funny fantasy about the Pope as a comic-book character, and "Noguchi," which puts down the L.A. coroner of dubious work habits. But the rest sink into oversimplistic pronouncements. "Ballad of the Dumb Hairdresser" ("It's not easy to be/A good hairdresser"), "Female Mudwrestling" ("I don't like female mudwrestling/It's stupid, it's embarrassing"), and "Handicapped" ("Unless you are disabled/Go and find your car another stable") are featherweight social commentary. Phranc's affirmations—a love song to "Carolyn," listing reasons for her crush, and "One O' the Girls," about being on the swim team and sticking out but still fitting in—should be the best songs here, but they too are prosaic. Instead it's Bob Dylan's "The Lonesome Death of Hattie Carroll" that stands out, perhaps because it's the most articulately sensitive statement she has to work with.

If Phranc has a stylistic correlative, it's Jonathan Richman. But Richman, permanent adolescent that he is, drags himself believably through his frailties, ringing us in as conspirators. Phranc cares about things, but

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leaves weak lyrics and three-chord melodies to do her emotional dirty work. Faced with the breadth of her confessions, they just don't stand up to the job. *Leslie Berman*

**DOC WATSON AND MERLE WATSON:**

**Pickin' the Blues.**

Merle Watson and Mitch Greenhill, prods. Flying Fish FF 352. ☐

A handful of stylish guitar virtuosos dominated the Northern uprising of the folkling '60s. City slickers in particular latched onto the sounds of the South, imitating each other's imitations if the real thing was hard to find. In the case of Doc Watson, blind flat-picker from the Blue Ridge Mountains noted for his gentle, clean, and undecorated style, it wasn't. Admired as much for his catholic tastes as for his graceful arpeggios, Doc toured for more than a dozen years with son Merle, a rhythm guitarist whose leanings toward rock amplified and complemented his father's work, while retaining a distinct voice for his own rare leads and solos.

Merle's sudden and unnecessary death last fall turned *Pickin' the Blues* into an epitaph. Although it is a slight record, surprisingly narrow in focus, Merle's rhythm, slide, lead, and finger-style playing add depth and invention to Doc's favorite blues tunes; on a duet version of "Windy and Warm," their lead, rhythm, and counterpoint lines intertwine so closely, they're virtually impossible to pry apart. "Stormy Weather," stripped down and plainspoken, strikes just the right mournful note. A swinging "Freight Train Blues," propelled equally by Doc's vocal, Merle's slide, and guest Sam Bush's fiddle glissando, and a fat cover of Brownie McGhee's "I'm a Stranger Here," fleshed out with harmonica and Merle's lead, are the other standouts. There are no definitive performances on *Pickin' the Blues*, but this sturdy, accurate portrait of father and son, and a few good friends, is a fitting farewell.

*Leslie Berman*

**JAZZ**

**YANK LAWSON:**

**That's a Plenty.**

Bob Thiele, prod. Doctor Jazz FW 40064. ☐

This recording of mostly Dixieland and blues was made more than 40 years ago by a mixture of still familiar and almost forgotten musicians. Pee Wee Russell, James P. Johnson, and Eddie Condon sound great, but it is the lesser-known jazzmen who come vividly to life: virtuoso trombonist Miff Mole,

engaging pianist Dave Bowman, spirited clarinetist Rod Cless, and unorthodox valve trombonist Brad Gowans. Leader Yank Lawson, the onetime Bob Crosby trumpeter, plays at the peak of his fiery, exclamatory drive—Muggsy Spanier with imagination.

*John S. Wilson*

**DAVE FRISHBERG:**

**Live at Vine Street.**

Dave Frishberg, prod. Fantasy F 9638. ☐

No jazz pianist since Nat King Cole has made the switch to singing as effectively as Dave Frishberg. Not that there's any particular resemblance. Unlike Cole, Frishberg writes his own material to suit his small, flat-accent Midwestern voice. His songs are rarely overt jazz, but jazz is always hanging around the edges. "You Would Rather Have the Blues" isn't really a blues, but Frishberg makes it feel like one. "Eloise," he proudly points out, is a ballad based on the chord changes of "Ain't Misbehavin'." And he remembers Johnny Hodges with an affectionate solo medley. Frishberg is funny, charming, and totally disarming; even when he comes up with as pointless a song as "Zanzibar," he can almost justify it.

*John S. Wilson*

**CHICK WEBB AND HIS ORCHESTRA:**

**Stompin' at the Savoy—1936.**

George H. Buck, Jr., prod. Circle CLP 81. (3008 Wadsworth Mill Pl., Atlanta, Ga. 30032.)

Some of Benny Goodman's biggest hits when he was the King of Swing in the '30s came from other bands. The radio-transcription recordings on this LP include three tunes that Goodman got from Chick Webb—"Don't Be That Way," "Stompin' at the Savoy," and "If Dreams Come True," all composed by Webb's alto saxophonist, Edgar Sampson—and one that both Webb and Goodman got from Fletcher Henderson, "Big John Special." Trombonist Sandy Williams personalizes another cut usually associated with Goodman's orchestra, "Nit Wit Serenade." The quality of these recordings is superior to Webb's Decca releases, as well as subsequent reissues based on them. As a bonus, the band features a then new member, Ella Fitzgerald, who was seventeen years old. Her assurance shows in her skillful phrasing of "Shine" and especially "Darktown Strutters Ball." In impeccable stop-time, Fitzgerald sings the lyrics on the chorus, saving the scat syllables for a couple of excellent codas. She sounds young, and impressive.

*John S. Wilson*

**BETTY O'HARA AND JOHNNY VARRO:**

**Horns A'Plenty.**

Dan Grant, prod. Magnagraphics Jazz MJ 103. (8600 Louise Ave., Northridge, Calif. 91325.)

Betty O'Hara, a Los Angeles studio musician, plays trumpet, flugelhorn, slide and valve trombone, and double-bell euphonium and sings on this album (she also has cornet and piccolo trumpet in reserve). All that, plus overdubbing, raises anticipations of gimmicks on parade. But O'Hara adapts her approach to the potential of each instrument and has organized *Horns A'Plenty* tastefully and logically. With Johnny Varro on piano (and further backed by bass and drums), she plays a swinging euphonium solo on "It Don't Mean a Thing"; a warm, floating trombone solo on "Star Dust," built on Jack Jenney's classic turn; and a skillfully overdubbed flugelhorn-and-trombone duet on an exuberant "You Stepped Out of a Dream." Then there is the eight-track euphonium ensemble of "Euphonics," which, incredibly, swings with the lightness of the Basie band. The three vocal performances, however, are no match for O'Hara's horn exhibitions.

*John S. Wilson*

**THELONIOUS MONK WITH JOHN COLTRANE:**

**Thelonious Monk with John Coltrane.**

Orrin Keepnews, prod. Jazzland FCD 634-946. OJC 039. ☐ (Distributed by Fantasy/Prestige/Milestone.)

**JOHN COLTRANE:**

**Coltrane.**

Bob Weinstock, prod. Prestige FCD 635-7105. OJC 020. ☐

**Soultrane.**

FCD 626-7142. OJC 021. ☐



HIGH FIDELITY ARCHIVES

These three Compact Discs, remastered from the original late Fifties recordings, find John Coltrane emerging from a long apprenticeship. The Thelonious Monk quartet was his finishing school. *Thelonious Monk with John Coltrane* combines two of the six num-

bers they recorded (in stereo) in June 1957 with three pieces from the following year and adds a ringer, Monk's long solo blues, "Functional." The selection on this CD, which duplicates an earlier Riverside issue, is illogical, especially since everything the two artists did together, barring alternate takes, could fit on a single disc. But the music is grand.

In some ways, these two giants were opposite musical personalities. Monk was terse where Coltrane was garrulous; Monk accented heavily and stuck close to the original melodies of his tunes, while Coltrane played long, billowing lines with a kind of sweeping grandeur. But Coltrane was also a great ballad player (as he shows here on "Ruby, My Dear"), which allowed the two to meet halfway. You can hear him warming to the spiky accents of Monk's "Trinkle Tinkle" and "Epistrophe."

Recorded on May 31, 1957, Coltrane (once issued as *The First Trane*) was the saxophonist's debut as a leader. His sextet plays solid if unoriginal hard bop; Coltrane himself seems to sag midsolo on "Straight Street." His quartet is more rewarding, especially on "Violet for Your Furs," which he approaches up high with an affecting, almost nasal sound. *Soultrane*, a 1958 quartet date (with a slightly different lineup), features more ballads getting more solid and coherent. Pianist Red Garland, with his light, Teddy Wilson- and Hank Jones-derived style, is an effective foil. Coltrane would get more experimental later, but performances such as the masterpiece "I Want to Talk About You," with its almost restful statement of the theme, show that he was already extending the ballad tradition established by Coleman Hawkins and Ben Webster. The monophonic sound on all three CDs is quite similar to that of their LP counterparts, which is all to the good; I'm beginning to realize that the late Fifties was an unrecognized golden age of recording, characterized by striking presence, clarity, and balance.

Michael Ullman

**CECIL TAYLOR SEGMENTS II (ORCHESTRA OF TWO CONTINENTS): Winged Serpent (Sliding Quadrants).**

Giovanni Bonandrini, prod. Soul Note SN 1089. □ □

Fashions change, the Zeitgeist registers another turn of the screw, but Cecil Taylor's music remains apart from it all, unaffected. When his *Winged Serpent* orchestra (two trumpets, four saxes, one bassoon, rhythm section, and percussion) comes on full



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(Continued from page 55)

force—reeds and brass crying ecstatically, rhythm churning, the piano prancing, dancing through the firestorm—for one of those breathtaking extended episodes that are the centerpiece of any Taylor performance, one knows that this is energy music at its peak: disturbing, exhilarating, and fearlessly anachronistic. While the main thrust of improvisational music today is concerned with reinvestigating and recycling existing structures, Taylor persists in striking loud, fast blows for freedom—blows bereft, in these less than revolutionary times, of the sociopolitical and cultural resonances they once had. For long stretches of the music, this diminished context may leave one wondering what, if anything, it all means, while still marveling at the sheer volcanic grandeur of the sound itself.

Not that this is all stampeding amphetamine free bop devoid of (rather subtle) structures. Two of the album's four compositions, "Taht" and "Womb Waters Scent of the Burning Armadillo Shell," have simple opening themes that are repeatedly referred to both in the improvs and in those occasional written parts that emerge from the thickets like helpful signposts. Taylor uses textures that are carefully predetermined: The woodwind sound is especially rich, making good use of the darkly sensual intertwining of Karen Borca's bassoon and Gunter Hampel's baritone sax. Some sections are almost conventional. Alto saxist Jimmy Lyons has a lovely balladic feature at the end of "Womb," with a somewhat jittery Taylor adding the proper modern touch, and the tittle cut comes close to conventional song form, but never quite coheres. "Cun-Un-Un-An" pretty much defies classification, being a chant piece divided into seven sections, some urgently dramatic, some comical.

Throughout the album (except for the chanting), Taylor's piano dominates, prodding and commenting, alternately within and without the various layers of sound. In his solo finale, bombastic bass chords and arcs of sound dart by so quickly, it's as though the tape had been speeded up. What all this means may be more elusive than ever, but what is apparent is a celebration of the creation of music, a mysterious and irrepressible ritual.

Richard C. Walls

## STEVE COLEMAN GROUP: Motherland Pulse.

Ⓞ Stefan F. Winter, prod. JMT 850001. (Distributed by Polygram Special Imports.)

The veneration of jazz tradition that has be-

come the touchstone for this generation's most popular artists tends to be a smoke screen for deep-rooted conservatism. Mired in appropriated nostalgia, these young players avoid taking risks; consequently, their sound is sterile, safe, and all too familiar. For me, the most stimulating musicians of the past few years have been the over-thirty crowd, who, weathering the excesses of both the free jazz era and the experiments in restrictive formalism that followed, have survived—tousled, but mature.

*Motherland Pulse* blows this pet theory out of the water. The key members of this ensemble—alto saxophonist Steve Coleman, drummer Marvin Smith, and pianist Geri Allen (all of whom were unknowns five years ago)—have individual, nonderivative instrumental voices. Their contributions, along with Coleman's refusal to back his group into any stylistic corner, make this record an event: It announces a new breed of players finally thinking for themselves.

Coleman has a sweet, but never treacly, tone and a cerebral approach to improvising that give his solos a rounded, symmetrical shape, even at a breakneck pace, as in "Irate Blues" or "Cüd Ba-Rith." His lovely plum tone also helps him carry off more reflective moods like "Another Level" (a duet with Smith) and the ballad, "On This." Neither is much of a composition, yet Coleman, whose beautiful sound and emphasis on melodic design suggest shades of Benny Carter, makes them riveting.

I'm positive I'll be writing about Smith for many years to come, so I will be brief: The man has no peers. And the best new pianist is Allen, who looks past the Herbie Hancock/McCoy Tyner/Chick Corea axis in order to mine the more astringent terrain of Cecil Taylor and Thelonious Monk. Her "The Glide was in the Ride," with its funk/bop/pop line, is the most memorable tune here. (And to show his respect, Coleman gives her the only solo.) It's also a lesson in how to avoid the strings of long, evenly placed neo-bop runs that tend to slide mechanically out of today's technically adroit but unimaginative pianists.

Trumpeter Graham Haynes (son of Roy) and bassist Lonnie Plaxico do a lot with the little space they are given. *Motherland Pulse* is fresh, rather than revolutionary, jazz—Steve C. doesn't try to take on Ornette C. While this group may not be leaning off the avant-garde cliffs, it flatly rejects the generic prisons that have become today's mainstream. That alone is cause for rejoicing.

Steve Futterman

interesting that things that are happening now [in contemporary music] were written about in the decree; the whole world is coming back full circle."

And specifically how does the chairman of the Union of Soviet Composers look upon the various trends of new music appearing in his country?

"Very calmly," he answered. "You must understand that it is completely natural for composers to be attracted to different things. We have, for example, composers who are drawn, perhaps even too much so, to the New Viennese School. But that is their own business. There are also people who think in a more cosmopolitan manner, like Edison Denisov and Alfred Schnittke. And there is a whole younger set with its own audience. Denisov and Schnittke have many fans, and, thank God, their music is played here all the time. They often travel abroad, sent by the Union of Composers; their music is both performed and published in the West, and that is perfectly okay with us. In fact, Denisov has written an opera [based on Boris Vian's *L'Écume des jours*] that will be performed in Paris this March.

"As the head of the Union of Composers, I am very patient and understanding toward my colleagues. We have absolutely no regimentation, and there are no creative 'rules': Everyone writes the way he or she wants. The composers themselves will eventually see what goes and what doesn't go with the public."

What, I asked him, should be the chief goal of the Soviet composer today? Khrennikov's answer came directly to the point: "To write music that addresses itself to the heart. All of the great musicians had that intent. A work that excites and moves the heart is what people can grasp. . . ."

"Most composers in the world strive to write music that will be liked by the largest number of people possible, and that is only natural. But music that no one needs? I ask you! There are composers who want their music to resemble no one else's—John Cage, for example. But I don't consider him a true composer, although he is a most intelligent and pleasant person.

"Our music enjoys worldwide authority," Khrennikov concluded. "This probably comes from our late comrades Prokofiev and Shostakovich, not to speak of the greats of the last century. A good Soviet composer can create a stir in any part of the globe."

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## Future Days

(Continued from page 66)

ie that after seeing several of his tunes cut by New York pop singers, Hank's own final shot was what can only be described as an Appalachian folk song.

*I Ain't Got Nothin' But Time* and *Lovesick Blues* begin the task of finally putting Hank's recording career in order. The former is weighted with spirituals and novelties, while the latter starts moving into more bluesy material. But both show Williams and Rose evolving toward a honky-tonk sound for the postwar years. Gradually, the rhythms are closing up; the guitar is more percussive, and the steel whines louder and higher. As the sound is refined, the band becomes both tighter and thinner (this is the effect new traditionalists are after), until early in the second album, on "Rootie Tootie," we hear Hank's hillbilly boogie pointing the way toward rockabilly. The progression is equally apparent in his lyrics, which are as likely to invoke slang phrases of the day as they are to echo the stilted language of prewar country. They are also highly personal, unlike those of his predecessors, who spoke vaguely in the third person. These two double albums should be cornerstones in any country library. (*Rare Takes and Radio Cuts* [Polydor 823 695-1] and *On the Air* [Polydor 827 531-1] are odds and ends for collectors only.)

Because Floyd Tillman seldom leaves Texas, he goes largely unsung. Though Williams is acknowledged as country's first crossover writer, Floyd beat him by a decade. Ernest Tubb is perceived as the founder of honky-tonk, but Tillman was midwifing the form years earlier. His infectious blend of that style and Western swing is echoed today by George Strait; his note-bending, slurred tones, and behind-the-beat phrasing, by Willie Nelson.

Tillman is a classic "bad" singer; he sounds like he slipped on a bar of soap on his way to the mike, but his warmth and conviction are overwhelmingly intimate, magnetic. Just listen to his tour de force cover of "I Almost Lost My Mind," as he breaks on the word "almost," sings high in the middle of each line, and then goes even higher or drops down low at the end, his lazy drawl a foil for his prickly blues guitar.

With "Slipping Around," which in 1949 became the first blatant cheating song to dominate country charts, and "Drivin' Nails in My Coffin," a lost-love lament drenched in whiskey, Tillman spoke for

displaced rural Southerners who had moved to urban centers to work and build new lives in the war years, and instead found a whole new set of crushing social problems: alcoholism, divorce, bad jobs, big-city wives. With "Each Night at Nine," he spoke for the soldiers themselves. He was also a timely phrasemaker, as heard on the weary "Sentenced to a Life (Without You)." Floyd Tillman represents what's good and true in American music, and *Floyd Tillman* (which covers 1946-50) is easily the most indispensable album in the entire Columbia series.

The Maddox Brothers and Rose are not as well served, unfortunately. Alabamians who grew up in California during the Depression, Rose (vocals), Fred (bass), Don (fiddle), Cal (rhythm guitar), and Henry (lead guitar) created the most raucous, anarchistic brand of hillbilly boogie. Though they dabbled in spirituals, sentimental love songs, and Western ballads, they were at their most striking when the boys were flailing away wildly as singer Rose brayed on, breaking into horselaughs at a moment's notice. Despite "I've Got Four Big Brothers (To Look After Me)," Rose always gives the impression she can hold her own. Two Arhoolie reissues capture the group at its hottest, boldest, and corniest: *Maddox Brothers and Rose 1946-1951*, Vol. 1 (Arhoolie 5016) and Vol. 2 (5017). When they moved to Columbia, they simultaneously retreated from and chased after the new rock 'n' roll they helped spawn. They lost their bite, and the group broke up in 1956, with Rose pursuing a solo career.

Thanks to Jessica Lange and *Sweet Dreams*, Patsy Cline, whose original recordings have been tampered with as badly as those of Williams, appears to be next for the Serious Reissue Treatment. The movie's soundtrack is barely an introduction, but if Cline's work is restored properly, it will reveal what the on-screen Patsy only hinted at: a heartbreaking stylist of unsurpassed finesse who recast country music in much the same way Billie Holiday did the blues. After her, the possibilities are many, but surely Don Gibson, Johnny Horton, Bill Monroe, Buck Owens, Jimmie Rodgers, Hank Snow, Webb Pierce, Ray Price, Tex Ritter, the Delmores, Ernest Tubb, and Kitty Wells (some of whom are already represented on specialty labels or on perfunctory major-label greatest-hits items) rate special attention. With any luck, much of the best is yet to come. ●

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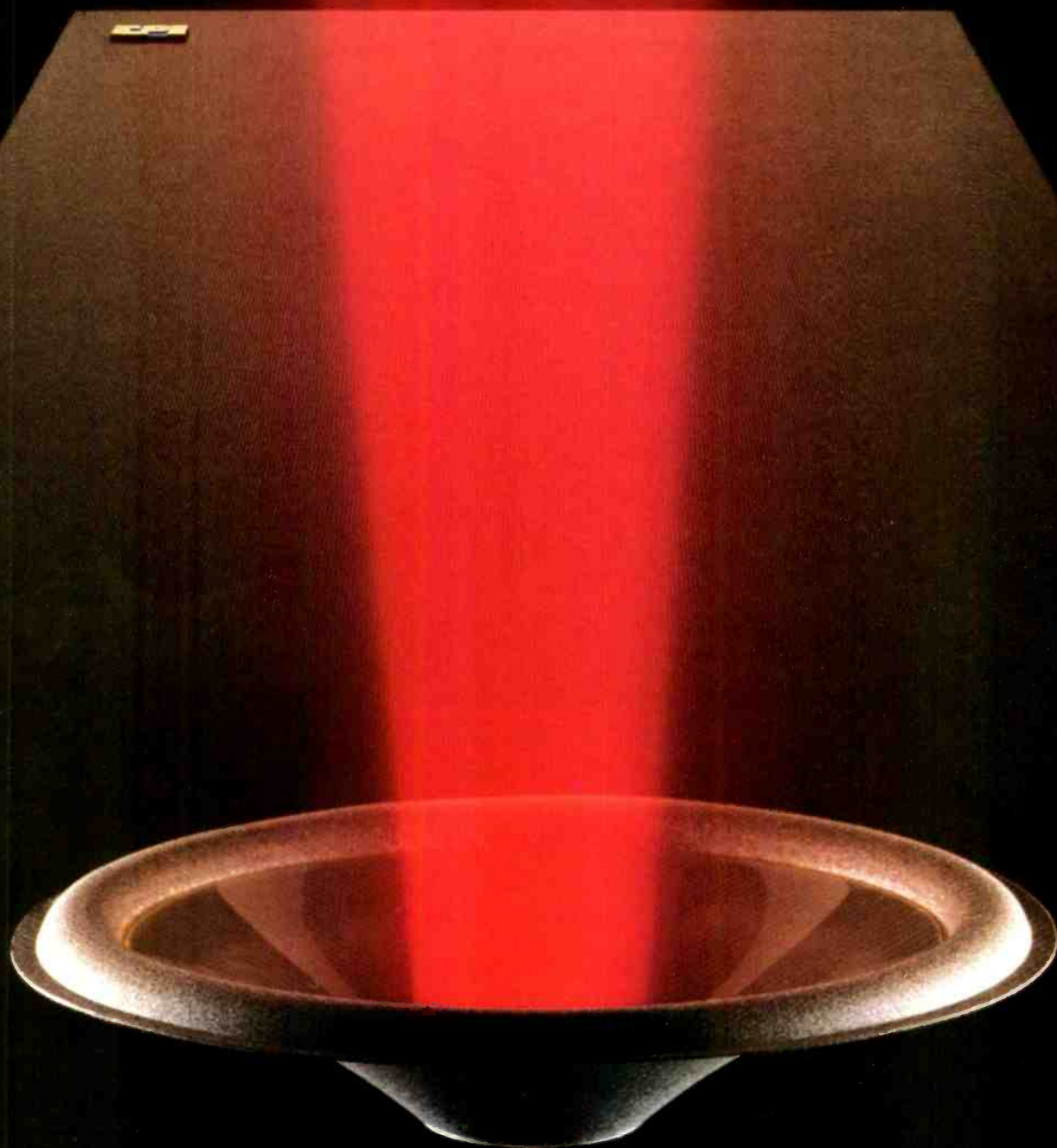
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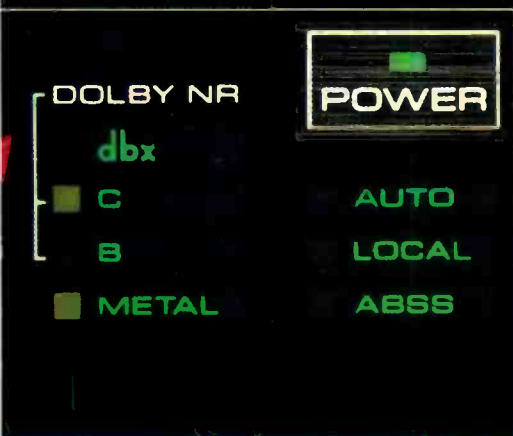


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