CAR STEREO: What are minicassette and stereo-AM prospects?

NEW AUDIO PRODUCTS: Turntables, headphones, accessories

INTERVIEW: Songwriter Karla Bonoff

EQUIPMENT TEST REPORTS:
- Aiwa AD-3800U Cassette Deck
- McIntosh MC 2255 Power Amplifier
- Ohm Walsh 2 Speaker System
- J.C. Penney Model 3260 AM/FM Stereo Receiver
- Shure V15 Type V Phono Cartridge

DISC SPECIALS:
Gordon Lightfoot • Paul McCartney
Marshall Crenshaw • Bunny Bergan
Lou Reed • Wynton Marsalis
ALKAN & GRIFFES: Piano Roundups
BACH: All-star Brandenburgs
RODRIGO: Two Concertos
raw critical praise, shock the
non value for the money.

one else in the business is doing it.
Common sense and uncommon engineering have been a
hallmark of our company since its beginning.
We still do things a little differently than most. The
result is high performance, exceptional value and
very often a limited supply.
You won't find Sherwood everywhere. It
might be smart to start looking now.
For the location nearest you, please
call toll free: 1-800-323-1717 (in
Illinois 1-800-942-8881),
Operator #441.
How Sherwood receivers manage to do competition and still provide uncommon

While the creation of music is an art, the re-creation of music is a science. But it's not a pure science. For better or worse (typically worse) a delicate balance has to be struck between the passionate desire for sonic purity, and the reality of a paycheck. A little too much in one direction and phenomenal statistics are exceeded only by phenomenal price. Too much in the other direction and the price is right but the sound is wrong.

Tricky business making choices. But something we've been doing with quiet success for more than 25 years. When in doubt, we opt for performance. And the critics seem to think we do it right. We're Sherwood.

GOOD ENOUGH ISN'T GOOD ENOUGH.

A little over a year ago, America's leading consumer research magazine rated a Sherwood stereo receiver first in a field of fifteen better known pieces of equipment. Our competition was probably shocked. We were obviously pleased. Because it seemed to prove that we'd been going about our business the right way after all. And because favorable reviews are good for sales.

Despite that, we phased out the winning receiver almost immediately and replaced it with something better.

The continuing evolution of Sherwood receivers brings us now to the 9000 series. Our best to date.

THE BALANCE OF POWER.

Stereo manufacturers typically promote the receiver in their line that offers the biggest power rating, theory being bigger is better. Here's what the November 1981 Stereo Review Equipment Test said about one of the smallest receivers in our line:

"Not only did it comfortably surpass many of its key performance ratings, but some of those ratings are well above the norm for receivers in its price class. For example the FM S/N we measured on the S-9200 CP was among the best we have yet found in a receiver at any price."

"Under practical listening conditions it can deliver far more power than its very conservative ratings would suggest.

"Aside from sheer power, the S-9200 CP could more than hold its own against receivers selling for several times its price."

However, our 20 watt receiver does face stiff competition. From our 30 or 40 or 60 watt receivers. In each case the additional power is accompanied by additional features, additional finesse and improved pleasure.

The S-9600 CP, for example, is rated 60 watts RMS per channel with no more than .05% THD into 8 ohms. An eight-stage discrete phono pre-amp section filters out subsonics and prevents transient distortion. The discrete DC power amp section is stable into 2 ohm and reactive loads. The tuner section has 1.6 uV usable sensitivity, 75 dB stereo signal to noise ratio, and Touch Lock Tuning.

Beyond that, Sherwood virtually guarantees its performance.

EVERY SHERWOOD YOU BUY, IS USED.

Before you open the carton on a Sherwood receiver, you'll know the exact performance characteristics for that unit. We call that Certified Performance. It's the result of testing each piece, one at a time, then adjusting, and testing again. That seems to be the only reasonable approach to testing, but no
Sherwood: A series of intelligent choices.
Radio Shack's New Tower System Brings Great Music to You ... 

Magnificent reproduction at a moderate price! The new Realistic Optimus®-T-300 is designed to bring you clean, well-defined sound with a tremendous 150 watt power handling capability. A powerful 10" woofer working together with a 10" high-compliance passive radiator delivers deep, rich bass response you can "feel" as well as hear down to a solid 44 Hz. Its 5" midrange driver is in an airtight, acoustically treated sub-enclosure that gives you excellent transient response, minimizes unwanted resonances and prevents sound coloration. The original performance is reproduced with stunning accuracy and clarity. The 1" soft-dome tweeter is positioned at ear level and provides controlled dispersion characteristics for excellent stereo imaging to 20,000 Hz. Ferrofluid damping prevents "ringing" and contributes to the system's superior overall transient response. The crossover provides optimum separation of each speaker element. High-frequency and midrange level controls let you adjust the sound the way you want. An oiled walnut veneer finish wood enclosure makes it look as good as it sounds. Visit Radio Shack today and hear this superb speaker yourself—there's nothing else like it for the money. 259.95 each.

... Beautifully!

Built and Sold exclusively by
Radio Shack
A DIVISION OF TANDY CORPORATION

Retail price may vary at individual stores and dealers. 5-Year Limited Warranty—see 1982 catalog 341, page 25.
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COVER: Design by Borys Patchowsky; photo by Bruce Pendleton.
Introducing TDK AD-X.
The normal bias tape with Super Avilyn technology.

New TDK AD-X is the first normal bias audio cassette to use TDK’s Avilyn magnetic particle-based formulation that has kept TDK the leader in audio and videotape technology.

The Avilyn advantage offered in AD-X is demonstrably clear. You now can record and play back—in the normal bias/EQ position with complete compatibility for any cassette deck over a wider dynamic range and with far less distortion. Even at higher recording levels, the increased headroom in new AD-X can easily handle strong signal input without over-saturation.

When you hear the brilliant playback resulting from the higher MOL and lower bias noise you won’t believe that your deck can “improve” so much. The new AD-X has truly versatile applications. Its higher sensitivity makes it ideal for all-round home entertainment use and also suitable for any cassette player.

To ensure years of reliable use, AD-X is housed in TDK’s Laboratory Standard Mechanism, and protected by TDK’s lifetime warranty. With its distinctive packaging, you won’t miss it.

So for high quality recordings in the normal bias/EQ position, snap in the new TDK AD-X. You’ll discover that the Avilyn advantage means superior overall performance for you.

TDK®
THE MACHINE FOR YOUR MACHINE

CIRCLE NO. 49 ON READER SERVICE CARD
OVER $2.85 BILLION WORTH OF MUSIC and other entertainment was taped at home in the United States in 1980, according to a consumer survey made by Warner Communications Inc. The survey indicates that more than $600 million worth of blank tape was used for this purpose by home tapers, most of whom are adults (20-34 years old) from upper socio-economic levels. Copies of the fifty-two-page report, "A Consumer Survey: Home Taping," are available free from Information Dept., Warner Communications Inc., 75 Rockefeller Plaza, New York, N.Y. 10019 or from Warner Special Products, 4000 Warner Boulevard, Producers Bldg. #4, Burbank, Calif. 91522.

AN OPERA GALA SALUTING GEORGE LONDON will be seen on Kennedy Center Tonight on most PBS stations on June 16 from 8:00 to 10:00 p.m. A bass-baritone who sang with major opera companies in Europe and America, London has been incapacitated by illness for several years. The TV show is derived from a benefit staged to raise money for his medical care. Beverly Sills will be host to such artists as Nicolai Gedda, Marilyn Horne, James McCracken, and Joan Sutherland. RCA is planning an album of excerpts from the show with proceeds going to the benefit fund.

EARTH WIND & FIRE, touring France, England, Germany, and Holland in the spring, broke a number of attendance records previously held by Fleetwood Mac, ABBA, and Elton John. Although they played six sold-out concerts in Wembley Stadium in England, more than 200,000 requests for tickets had to be returned unfilled. After this great success, the group agreed to another, even more extensive, European tour starting in July. Earth, Wind & Fire records for Columbia, and their current album "Raise!" has been certified platinum by the RIAA.

THIS YEAR'S PULITZER PRIZE IN MUSIC has been awarded to Roger Sessions, 85, for his Concerto for Orchestra. Sessions, who received a special Pulitzer Prize eight years ago, is on the faculty of the Juilliard School of Music in New York, where his opera Montezuma was produced this year.

CAUTION IN INTRODUCING STEREO AM has been called for by the Electronic Industries Association. Following the Federal Communications Commission's decision to permit several stereo AM formats, the EIA voiced its fear that this would cause consumer confusion. Jack Wayman, senior vice president of the EIA's Consumer Electronics Group, said, "The successful history of U.S. broadcasting is due in no small part to the adoption of standardized technical formats." Wayman pointed out that in the past multiple formats have had "a negative impact" on such promising technologies as four-channel sound. For more information on stereo AM see page 58.

CONDUCTORS: Lorin Maazel takes up his position as general director of the Vienna State Opera in September of this year. The position of music director of the Cleveland Orchestra, which Maazel is vacating, will go to Christoph von Dohnányi, who assumes office in the season of 1984-1985.... Pinchas Zukerman has just extended his contract as music director of the St. Paul Chamber Orchestra into 1986.... Starting next year horn player Barry Tuckwell will be music director of the newly organized Maryland Symphony in Hagerstown. Back home, Tuckwell leads the Tasmania Symphony Orchestra, which is Australia's third largest.

MIKE OLDFIELD, whose "Tubular Bells" sold more than twelve million copies worldwide, has been given the Freedom of the City of London by the Lord Chancellor. The privileges that go with this award include the right to drive his sheep across London Bridge. The only hitch is that London Bridge has been taken apart, shipped to the United States, and reassembled in Lake Havasu City, Arizona. Oldfield, who owns a country home near London, said, "My sheep will be delighted." His new album, "Five Miles Out," has just been released by Virgin Records.
Speaking of Music...

By William Anderson

VIDEO SPRING

Spring it appears, will be a little late this year, but I did see the season's first robin in mid-April getting high on fermented bittersweet while waiting for a thaw to wake up its usual diet of earthworms. There may be a metaphor in that relating to the long-awaited business recovery: progress will be made, for a while at least, in peripheral market areas rather than in the main ones. Take, for example, TV. According to Electronic Industries Association statistics, the first two months of this year saw a decline in shipments of TV sets to retailers and a marked increase over last year in shipments of video cameras, videocassette recorders, and projection TVs; the numbers are small, but the percentage increases are not.

But since practically everybody in this country already owns at least one TV set, what the TV industry needs to spark some real forward movement is an infusion of new technology. Such a technology is, in fact, waiting in the wings: stereo sound. Japan has been enjoying stereo-sound TV for over three years now while the FCC (with help from the EIA) has been mulling over the matter with its usual ponderosity. Three possible systems for broadcasting stereo TV in the U.S. have been proposed, and an early decision has become imperative because it is increasingly evident that we are being offered a golden opportunity to establish, with one neat stroke of technology, the common foundation of high-quality audio that discriminating ears will soon be demanding from all home-entertainment media.

The advent of stereo-TV broadcasting will mean not only two-channel sound but hi-fi sound as well, encouraging fuller use of the frequency range and improvement in the signal-to-noise ratio. Metropolitan-area audiophiles who have been tuning in to FM simulcasts of some TV specials are already familiar with the extra dimension of pleasure that quality sound gives them. They are more than ready to add improved TV sound to their present lineup of broadcast, tape, and disc program sources, so they will be the first to see the advantages of picking up TV, FM, or AM broadcasts with a universal tuner, the first to want a simple “monitor” TV screen to complete the picture.

As long as TV sets remained mono, there was little incentive for most manufacturers of videocassette machines to “go stereo.” There will be such an incentive once stereo-TV broadcasts start: time-shifters and video-camera buffs alike will want stereo, and even more passive types know that many prerecorded “old” movies once had stereo soundtracks.

The promising videodisc now sits dead in the water thanks to the public’s sensible refusal to gamble on incompatibility and recycled software, but stereo TV could be the catalyst to break down these problems as well. The Philips/MCA laser-read disc is a stereo system already and might well experience a sales boost if there were playback-ready stereo-TV sets on the market. The RCA stylus-read system has apparently suffered from two market miscalculations: it plays in mono only (stereo not available as of this writing) and its sales message was addressed to an unsophisticated and apparently apathetic audience; stereo TV might just sink it. With the bugaboo of incompatibility gone, a reawakened interest in the format might inspire the production of more exciting software, a must for the success of the videodisc. The division of labor between videotape and videodisc in fact parallels that of audio tape and audio disc: tape for dubbing, disc for original programming. The claim that the videodisc is inferior to videotape because it doesn’t record is a red herring for the naïve. More to the point: videodiscs and digital audio discs may one day share the same turntable.

---

STEREO REVIEW
Because Sony redesigned the car stereo, the auto makers don’t have to redesign the car.

The interior of an automobile is designed with a lot of purposes in mind. Unfortunately, great stereo sound reproduction isn't one of them. Fortunately, Sony did more than just tackle this problem. They actually solved it. By designing a stereo system that meets the acoustical challenges inherent in a car.

INTRODUCING THE SONY SOUNDFIELD™ SYSTEM.

As the very name of our system indicates, we started with the acoustical sound field itself by treating the entire front of the car as a stage. The very directional high-end and mid-range frequencies emanate from this stage in an accurate stereo image.

Two Super Woofers in the rear create deep, dramatic bass.

CONVERT WITH COMPONENTS.

The optimum SoundField System consists of a powerful amplifier (XM-120) driving a pair of 8" Super Woofers (XS-L20), along with a medium-powered amplifier driving the front speakers. This means full-range speakers can be used without risk of modulation distortion.

But you can begin to enjoy the SoundField System simply by adding one of our lower powered amplifiers and the Super Woofers to the car stereo you already have. Then you can slowly build up your system, adding a higher powered amplifier, more speakers, and an equalizer.

A SOUND THAT TAKES A BACKSEAT TO NONE.

Although the technology of the Sony SoundField System is complex, the reason for it is simple. It will give you high dB levels with very low distortion, extremely precise stereo imaging, and an amazingly broad frequency response. In addition, you'll be pleasantly surprised at just how easily a SoundField System can be installed in your car.

So come into your local Sony dealer and ask to hear the next generation in autosound systems.

One listen and you'll know why the auto makers don’t have to redesign the car.

SONY

THE ONE AND ONLY

So the highs come across clear and soaring. The midrange, natural and accurate.

The bass frequencies below 100Hz actually are directed from the rear of the car, where the Super Woofers are placed. However, since these frequencies are omnidirectional, they seem to be coming from the proper "stage" location.

The result is richer, fuller, and more dramatic bass.

CONVERT WITH COMPONENTS.

The optimum SoundField System consists of a powerful amplifier (XM-120) driving a pair of 8" Super Woofers (XS-L20), along with a medium-powered amplifier driving the front speakers. This means full-range speakers can be used without risk of modulation distortion.

But you can begin to enjoy the SoundField System simply by adding one of our lower powered amplifiers and the Super Woofers to the car stereo you already have. Then you can slowly build up your system, adding a higher powered amplifier, more speakers, and an equalizer.

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So come into your local Sony dealer and ask to hear the next generation in autosound systems.

One listen and you'll know why the auto makers don’t have to redesign the car.

SONY

THE ONE AND ONLY
THE NEW WORLD, RENEWED

These classical albums are now available on dbx discs:


SAINT-SAENS: “Organ” Symphony. Tjeknavorian, Royal Liverpool Phil. Orch. (Chalfont) PS:1033

THE FOX TOUCH: Organ Showpieces by Bach and Jongen. Virgil Fox (Ultragroove) PS:1020

MIKLOS ROZSA: Symphonic Suites From Epic Films – Ben Hur, King of Kings and El Cid. (Nones Sarabande) GS 2025

ROSSINI/BERLIOZ: Overtures and Marches. Rosznayai, Philharmonic Hungarica (Real Time) PS:1005

MORTON GOULD: Latin American Symphonette; Festive Music; Philharmonic Waltzes; Gould, LSO (Nones Sarabande) PS 1028

DANZAS FANTASTICAS: Spanish Music of Turina, Albéniz, De Falla, Granados, Gould, LSO, Chalfont) PS 1028

HOLST: The Planets. Suskind, St. Louis Symphony (Vox) SS 3002

MOZART: Eine Kleine Nachtmusik and other Mozart Serenades. Winschermann, German Bach Soloists (Argos) SS 5024

DIGITAL HITS OF 1740: Pachelbel’s Canon and Famous Works by Bach and Jongen. Smedvig, German Bach Soloists (Chalfont) PS 1028

MORTON GOULD: Symphony of Gershwin’s American Music. The Fox Touch (Nones Sarabande) PS 1037

dbx discs give you the full dynamic range of a live performance with none of the surface noise of conventional records. The result is clarity, impact, and sonic realism like you’ve never heard before—even on digital “audiophile” records.

dbx discs. Demand them by name.

Letters to the Editor

Barbra Streisand

• Thanks to Peter Reilly for his continued efforts to promote what some of us still feel is wonderful music. His full-page treatment of Barbra Streisand’s Memory in April brought tears! I know right where I was when I first heard it—I was so struck by it that I pulled off the busy street and stopped to listen. I’m proud to say that I guessed it was by Andrew Lloyd Webber, but I couldn’t explain the wonderful old Art Nouveau feeling of the lyrics until I saw T. S. Eliot’s credit on the label.

Oakley Davidson

Jazz at Carnegie Hall

• In April “Letters,” Ken Darby mentions that “the first jazz concert in Carnegie Hall was given by Paul Whiteman in 1925.” According to the Carnegie Hall program I have, the date was November 15, 1924. Subtitled “An Entertainment in Modern American Music,” the concert included several numbers in which it is reasonable to assume that jazz was prominently displayed: (1) “An early discordant jazz tune” followed by “A similar tune with modern score.” (2) Eastwood Lane’s Persimmon Pucker, “An Afro-American elaboration of the Major Triad,” (3) Gershwin’s Rhapsody in Blue, (4) Ferdie [sic] Grofe’s “Flavoring a Selection with Borrowed Themes” and Broadway at Night, and (5) such “Popular Compositions with Modern Score” as Gershwin’s Somebody Loves Me, H. Tierney’s Adoring You, J. Spitalny’s Dreamy Eyes, and Vincent Rose’s Maytime and Linger Awhile.

At the time Whiteman made his Carnegie Hall debut, his band included several excellent musicians, among them Harry Perrella (piano), Henry Busse (trumpet), Wilbur Hall (trombone), Kurt Dieterle (violin), Mike Pingitore (banjo), Chester Hazlett and Charles Strickfadden (reeds), and Ferdie Grofe (piano and arranger). Whiteman’s greatest jazz assembly—with Bix Beiderbecke (cornet), Frank Trumbauer (C-melody saxophone), Bill Rank (trombone), Steve Brown (string bass), and Bill Challis (arranger)—was just four years in the future.

Norman P. Gentieu


George Jones

• I was pleased to read Noel Coppage’s review of the album “Same Ole Me” by “the great George Jones” in the March issue. I’d sell my Phase Linear equipment, Grado G-2+, and ADS 910s to help keep singers like George Jones and critics like Mr. Coppage around for a long, long time. Keep up the good work. I highly recommend “Same Ole Me” for listening and Mr. Coppage’s reviews for reading.

A. D. Gritton

Hoopeson, Ill.

Videodisc Software

• The reason audiophiles are not opting for the laser-videodisc medium is the material being shoved onto the public, not the hardware or its cost. What we desire on videodiscs is the same kind of recordings we purchase for our stereo systems, but enhanced by the addition of video. Conversely, what we don’t want is hashed-over movies we can see anytime at the theater or on cable TV. After all, audiophiles are quality-minded (some are perfectionists), and digital reproduction of a movie can be no better than the film print and soundtrack from which the videodisc or tape is copied. Too often that leaves much to be desired.

The way to go is to utilize digital technology to its fullest: record live musical performances both visually and sonically directly into a master digital recorder to be reproduced (for the first time) unaltered for home use. Imagine sitting at home watching, on your widescreen projection television, and hearing, from quality speakers on each side fed by a quality sound system, a world-class symphony orchestra playing your favorite classical works, the camera’s vantage point being the best seat in the house.

(Continued on page 10)
The next step in turntable technology: Technics linear-tracking with plug-in cartridge capability made affordable.

Utilizing the same linear-tracking concept featured in the renowned Technics SL-10 and SL-15, Technics now introduces both the album-sized SL-5 and the compact SL-DL5. Each of these two new models offers you the same incredible performance and uncanny accuracy of Technics linear-tracking at prices equal to many of today’s conventional turntables.

Both feature Technics plug-in cartridge system, so installation is always easy, exact, and precise. Best of all, the music won’t be distorted by improper mounting. Each model also offers Technics direct-drive motor.

Technically balanced linear-tracking tonearm with gimbal suspension. Aluminum die-cast platter. Tonearm position indicator LED and scale to show the precise location of the tonearm on the record. A built-in muting circuit to eliminate “clicks” and “pops” when the stylus makes contact with the record surface. Plus convenient front panel controls.

Technics new linear-tracking SL-5 and SL-DL5. Just place the record on the platter, close the cover and press START. Everything else is automatic. Including the pleasure.
Three Incredible, Affordable New Speaker Systems From Polk Audio

Are you looking for the best sound but afraid you can't afford it? Read On...

Polk Audio loudspeakers have earned a worldwide reputation for delivering the best sound for the money. The new Polk 4, RTA 11 and SubSat 4/14 systems continue and expand on this tradition. The 4 ($99.95 ea) brings Polk quality to a new low price and is already achieving a reputation as the best value in hifi today. The amazing SubSat 4/14 system ($500 total) offers superb sound in a three piece package that allows easy, unobtrusive and optimum placement in any room. The mirror imaged RTA 11 ($399.95 ea) offers most of the features and performance of the Grand Prix Award winning, top of the line RTA 12 at an even lower price. All of these systems utilize Polk trilaminate-polymer drivers and isophase crossover networks for the most highly defined, lifelike, musical reproduction. And best of all, you can easily afford them.

Polk Moniter 4 — $99.95 each

Polk RTA 11 — $399.95 each

Polk 4/14 System — $500 total

*May vary with dealer

Classy Cover

- As an audio enthusiast, amateur photographer, and avionics technician, I suggest a "Special Merit" tag for Art Director Bobys Patchowsky and photographer Bruce Pendleton's impressive and outstanding March STEREO REVIEW cover. I admire a "class act" such as yours. Please keep up the excellent work.

R. Bruce Erwin
Evansville, Ind.

Jussi Bjoerling

- The Jussi Bjoerling Memorial Archive is a non-profit educational organization that was founded in 1974 by several professional men and women interested in preserving the heritage of a great artist. The Archive has just published a limited-edition two-hundred-page Jussi Bjoerling Discography. Copies are $15 each, plus $2.50 for shipping and handling. To order, or for more information about the Archive, write to: Jussi Bjoerling Memorial Archive, Inc., P.O. Box 2638, Indianapolis, Ind. 46206.

Jack W. Porter
Executive Director
Jussi Bjoerling Memorial Archive

Home Music Store

- I concur with Music Editor James Goodfriend's reservations concerning the "Home Music Store" in his January column. The "Home Music Store" aspires to become part of the American media all of us know and love, the same media that give us Porgy and Bess and take away the lowest common denominator and force mediocrity on those who want something better. People have come to expect mediocrity and to pay for nothing else, as most advertisers can attest.

Drew Daniels
Los Angeles, Calif.

Credit Correction

- The April review by George Jellinek of a disc of Schumann vocal and chamber music on the Musicmasters label (page 97) inadvertently failed to identify the artists involved as members of the Chamber Music Society of Lincoln Center. We regret this omission.
Introducing the
VI5 Type V

A Step Beyond
Extraordinary
No other cartridge, at any price, offers so many benefits.

Featuring
MICROWALL/Be™ Technology

Masar-Polished
Hyperelliptical
Stylus Tip
Assures accurate, distortion-free tracking — plus reduced record and stylus tip wear.

Beryllium
Microwall/Be™ Stylus Shank
Unprecedented high frequency trackability due to this revolutionary new high stiffness, low mass stylus shank.

Plus!
As an extra bonus, you get a certificate good for a copy of the new TTR117 Trackability Test Record — a $15 value — FREE!
Send for our fact-filled brochure. Ask for AL694.

Side-Guard Protection System
Protects stylus from accidental breakage by withdrawing shank assembly into stylus housing.

Dynamic Stabilizer/Destaticizer
Exclusive! Functions like a miniature shock absorber to eliminate warp-related problems such as signal wow, groove skipping, and cartridge bottoming. Simultaneously discharges surface static electricity and sweeps away microdust.

Shure Brothers Inc., 222 Hartrey Ave., Evanston, IL 60204
Circle No. 33 on Reader Service Card
Yamaha’s newest separates—the T-70 tuner, the C-70 control amplifier, and the M-70 X-power amplifier featuring our unique Zero Distortion Rule. Zero Distortion Rule for distortion so low, it can’t be measured. Here, in a nutshell, is how the Zero Distortion Rule circuitry works: Sophisticated circuitry measures any difference between the output signal and the input signal, and feeds back only this difference 180 degrees out of phase. This, in effect, completely cancels distortion.

How completely? Laboratory research has found that the only distortion test instruments can detect in the M-70 is the distortion generated by the instruments themselves. Which is why we have to estimate the M-70’s Total Harmonic Distortion (arrived at by computer extrapolation) at no more than 0.002% at 200 Watts RMS per channel, both channels driven into 8 ohms, from 20 Hz to 20 kHz.

But the only test instruments you’ll be using to measure the M-70’s sound are your ears. So you’ll hear only the most breathtakingly clear, accurate music reproduction possible.

To complement the phenomenal M-70 amplifier, we created the equally phenomenal T-70 computer servo-locked synthesizer tuner; and the C-70 control amplifier complete with two-band parametric equalization and full-logic function switching. Nothing less would measure up. Yamaha’s new separates. Immeasurable in performance, beauty, versatility, and musical listening pleasure. Visit your Yamaha dealer now and measure for yourself.

For more information, write to Yamaha Electronics Corporation, USA, P.O. Box 6660, Buena Park, CA 90622.

For the music in you.
Quad's FM Tuner
Has Microprocessor

- Designed primarily for use with the Model 44 preamplifier (bottom in photo), Quad's new FM4 tuner (top) has no controls except station-preset buttons, a power switch, and a tuning knob. The unit's built-in microprocessor automatically performs all other tuner functions, including preset tuning, muting, and AFC. The FM4 unit will memorize up to seven station frequencies and hold them in memory for up to five years even if disconnected from a power source. A combination signal-strength/channel-center meter is adjacent to the station-frequency readout.

- Specifications include an IHF sensitivity of 1 microvolt (µV) and a stereo 50-dB-quieting sensitivity of 25 µV. Signal-to-noise ratio with a 1-millivolt antenna signal is 70 dB in stereo. Selectivity is 53 dB, capture ratio 2.5 dB, AM suppression 60 dB, and image rejection 80 dB. Frequency response is 20 to 20,000 Hz ± 1.5 dB (metal tape, -20-dB recording level), wow and flutter of less than 0.045 per cent wms, and signal-to-noise ratio of more than 80 dB (chrome tape, Dolby-C). Dimensions are 20¾ x 5¼ x 11¾ inches. Price: kit, $69; assembled, $109. Phoenix Systems, Dept. SR, 91 Elm Street, Manchester, Conn. 06040.

Circle 120 on reader service card

Bang & Olufsen's
Computer-optimized Cassette Deck

- The automatic tape-matching feature of the B&O Beocord 9000 compensates for variations in tape sensitivity and adjusts bias (separately for each channel), equalization, and meter sensitivity. For the meter adjustment the deck measures the third-harmonic distortion of a 333-Hz tone, thereby defining the recording level for 5 per cent third-harmonic distortion. The peak-reading meters' sensitivity is then set to give a 0-dB indication at about 2 per cent distortion at 333 Hz; the +5-dB indicator will then light when distortion exceeds 5 per cent. Calibrated setting for the four standard cassette-tape categories can be stored in the Beocord 9000's memories, where the information is protected from loss for up to five years by a battery.

- The record and play heads in this three-head deck have a single housing with an azimuth-alignment deviation between the two sections of less than 0.06 degree. Besides Dolby-B and Dolby-C noise-reduction circuitry, the deck is equipped with the Dolby/B&O HX Professional system, which dynamically adjusts bias levels for maximum high-frequency capability with minimum low-frequency distortion. The real-time tape timer can be used not only to display elapsed time but also to indicate time remaining on a cassette and as a built-in 24-hour recording or playback timer control.

- Specifications include a frequency response of 20 to 20,000 Hz ± 1.3 dB (metal tape, -20-dB recording level), wow and flutter of less than 0.045 percent wms, and signal-to-noise ratio of more than 80 dB (chrome tape, Dolby-C). Dimensions are 20¾ x 5¼ x 11¾ inches. Price: $1,800.

Circle 122 on reader service card

Phoenix Systems' CX-decoder Kit

- Phoenix Systems' Model P-82 CX decoder provides the necessary 1:2 playback expansion for decoding CX-encoded records. As a result of the expansion, preamplifier and record-surface noise are reduced by as much as 20 dB while dynamic range is increased by 26 dB. In high-speed circuitry along with a low-distortion variable-gain element is said to deliver uncolored repro-

3D Acoustics' Cube-shape Speaker

- Measuring 9¾ inches on an edge, 3D Acoustics' "Cube" loudspeaker has a cloth grille on three sides and walnut caps on top and bottom. The Cube is a two-way system with a 6-inch woofer and a ¾-inch polycarbonate-dome tweeter. Crossover frequency is 3,000 Hz. For maximum power-handling ability, the tweeter is damped with ferronfluid. Minimum amplifier power is 15 watts and nominal impedance is 8 ohms. Frequency response is given as 70 to 20,000 Hz ± 3 dB. Price: $195 per pair. 3D Acoustics, Dept. SR, 175 Heritage Avenue, Portsmouth, N.H. 03801.

Circle 123 on reader service card

Phase Linear's Parametric Equalizer

- Said to be the first five-band parametric equalizer in a 1¾-inch-high rack-mounting chassis, the single-channel Phase Linear E51 is intended mainly for professional use. The unit has five filters, each adjustable in degree of attenuation or boost (± 12 dB), in bandwidth (0.14 to 1.5 octaves), and in cen-
New Products  latest audio equipment and accessories

Flew Products  latest audio equipment and accessories

The filters cover ranges of 21 to 190 Hz, 83 to 750 Hz, 330 to 3,000 Hz, 1,300 to 12,000 Hz, and 2,500 to 22,000 Hz. The highest and lowest filters can be switched to peak, dip, or shelving responses.

Other features include automatic matching of balanced and unbalanced inputs with outputs, a +20 dB gain system for low-level inputs, an overall level control, and a bypass switch. LEDs indicate bypass operation, signal presence, power on, and system overload. Specifications include total harmonic distortion and noise at a 1-volt output level of less than 0.009 per cent, frequency response of 20 to 20,000 Hz +0, -1 dB, and a signal-to-noise ratio of 111 dB below maximum output. Dimensions are 19 x 1 3/4 x 7 1/2 inches. Weight is 5 pounds. Price: $549.

Circle 124 on reader service card

Floor-to-ceiling Electrostatic Speakers From Acoustat

Acoustat's Professional Series Models Six (right) and Eight (left) stand 7 feet, 10 inches tall and incorporate the same full-range electrostatic elements used in the firm's Slimline Series speakers. The new models are said to offer improved vertical dispersion, increased maximum output level, and extended low-bass performance. Both have a nominal impedance of 6 ohms. Frequency response is given as 26 to 20,000 Hz ± 2 dB for the Model Six, 24 to 20,000 Hz ± 2 dB for the Model Eight. The Model Six is 28 inches wide, the Model Eight 36 inches; the panels are both about 4 inches thick. Both models are available in a choice of base finishes and with either a black or off-white grille cloth. Prices per pair: Model Six, $3,750; Model Eight, $4,750. Acoustat Corp., Dept. SR, 3101 Southwest First Terrace, Ft. Lauderdale, Fla. 33315.

Circle 125 on reader service card

Fidelity Research's Moving-coil Cartridge

Fidelity Research's new MC-202 "Gold" moving-coil cartridge incorporates a nude-diamond tip whose shape increases the contact area with the record-groove walls without riding deep in the groove. Specifications include an output voltage of 0.17 millivolt with a 5-cm/sec groove velocity. Cartridge impedance is 8.5 ohms, recommended load impedance 9 ohms or more. Tracking force is 1 to 1.3 grams. Price: $350. Fidelity Research, Dept. SR, P.O. Box 5242, Ventura, Calif. 93003.

Circle 126 on reader service card

Floor-standing Speaker from Snell Acoustics

Snell Acoustics' Type E speaker is a floor-standing design with an adjustable-height base. The system uses an 8-inch woofer with a polymer-treated cone in a "precision-tuned" 2-cubic-foot enclosure. A 1-inch soft-dome tweeter handles frequencies above 2,300 Hz. The drivers are positioned at the upper portion of the enclosure for superior imaging characteristics. The ten-element crossover is individually adjusted to the drivers for unit-to-unit consistency. Specifications include a frequency response of 39 to 22,000 Hz ± 2 dB (measured in a home environment), nominal impedance of 8 ohms, and sensitivity of 90 dB sound-pressure level measured at a 1-meter distance with a 1-watt input. Minimum recommended amplifier power is 15 watts per channel; maximum is 150 watts. Dimensions are 33 x 14 1/2 x 11 inches and weight is 48 pounds. Finishes include oak with dark brown grille or walnut with black grille. Price: $749 per pair.

Circle 127 on reader service card

Loran's New High-bias Cassettes

Featuring heavy-duty Lexan cassette shells, Loran's High Bias Type II cassette tapes are said to offer extremely flat frequency response (with a -3 dB point of 21,500 Hz). Other specifications include a sensitivity of -0.45 dB at 330 Hz (referred to a reference tape), signal-to-noise ratio of 64.5 dB with Dolby-B, and high-frequency headroom of -3 dB at 10,000 Hz. The tapes are available in C-60 and C-90 lengths. Prices: LHB-60, $3.75; LHB-90, $7.95.

Circle 128 on reader service card

Record Cleaner From Stanton

Stanton's RC5 Plus all-in-one record-cleaner kit contains a special fluid that is said to dissolve oily films, microscopic dust, and other debris safely while leaving no residue. The fluid has antistatic ingredients for removing static charges during record cleaning. A "polarized" brush with a conductive handle is included in the kit's... (Continued on page 16)
MAXELL IS PLEASED TO PRESENT AN EVEN HIGHER PERFORMANCE TAPE.

If you're familiar with Maxell UD-XL tapes you probably find it hard to believe that any tape could give you higher performance.

But hearing is believing. And while we can't play our newest tape for you right here on this page, we can replay the comments of Audio Video Magazine.

"Those who thought it was impossible to improve on Maxell's UD-XL II were mistaken. The 1981 tape of the year award goes to Maxell XL II-S."

How does high bias XL II-S and our normal bias equivalent XL I-S give you such high performance? By engineering smaller and more uniformly shaped epitaxial oxide particles we were able to pack more into a given area of tape. Resulting in a higher maximum output level, improved signal-to-noise ratio and better frequency response.

To keep the particles from rubbing off on your recording heads Maxell XL-S also has an improved binder system. And to eliminate tape deformation, XL-S comes with our unique Quin-Lok Clamp/Hub Assembly to hold the leader firmly in place.

Of course, Maxell XL II-S and XL I-S carry a little higher price tag than lesser cassettes.

We think you'll find it a small price to pay for higher performance.
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Plan. protected by our 2+2 Protection equalizer/amplifiers,
All units, including our graphic auto sound for under $100.

26 more models to choose from. Designed to meet your needs, whether you want a CENTERPIECE of a $1,000 system or your first experience with fine auto sound for under $100.

All units, including our graphic equalizer/amplifiers, are protected by our 2+2 Protection Plan.

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Circle No. 28 for information on Lear Jet products.

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A-15 High Power AM & FM, MPX Cassette featuring: full electronic tuning, seek, scan, 12 pre-set stations, digital frequency display, digital quartz clock, Lo/Dx, switchable DNR, fader, F.F., metal tape, separate bass/treble and more!

A-25 Pushbutton AM & FM, MPX Cassette with auto reverse, 15 watts RMS per channel, locking F.F./rewind, Lo/Dx, switchable DNR, loudness switch, fader and more!

A-31 FM & AM MPX, Cassette 5 Band Graphic Equalizer, features 25 watts RMS per channel, mono, Lo/Dx, locking F.F., and more!

AND

A-31 Denon Headphones
"Pocket" mini headphones come in a cassette-size box. The case provides attachments to hold the headphones, cord, and connecting plugs. When removed from the case, the AH-P5s are entirely flat. A 90-degree turn moves the earpieces parallel to the ears. The headphones use high-flux-density samarium-cobalt magnets and low-mass diaphragms. They are supplied with a 3-foot mini-phone-plug/phone-plug adaptor cord in addition to the attached 3-foot mini-phone-plug cord. Rated impedance is 32 ohms. Sensitivity is 100 dB sound-pressure level with a 1-milliwatt input. Frequency range is given as 20 to 22,000 Hz. Weight is 1 ounce. Price: $39.95. Circle 130 on reader service card

Kenwood's Portable Audio System

■ Designed "specifically for the hi-fi fan," the Kenwood DC-20 XP is said to be the only complete audio system with a cassette/amplifier/tuner section that can be separated from its main amplifier and speakers and used as a high-quality, self-contained portable recording or playback unit. The system consists of the DC-20P power amplifier and the portable DC-20X cassette/amplifier/tuner (shown). The DC-20S vertical loudspeaker system with 4-inch woofers/midrange drivers and 1-inch dome tweeters can be purchased separately. The full system can operate on house current or, with the aid of an optional adaptor (AD-15), from a car or recreational-vehicle battery. Output power of the DC-20P power amplifier is 20 watts per channel into 8 ohms with no more than 0.1 per cent total harmonic distortion from 40 to 20,000 Hz. Two speaker systems may be connected, selectable by a front-panel switch.

The tuner section of the DC-20X has digital-synthesis tuning and up to five FM and five AM station presets. Usable sensitivity is 2.5 microvolts; alternate-channel selectivity is 55 dB. Stereo separation is given as 36 dB at 1,000 Hz. The cassette transport is controlled by light-touch microprocessor-activated switches. A Direct Program Search System automatically locates the beginning of chosen selections and starts playback. The cassette section also has three-position tape-type switches, timer standby switching, a head "specially designed for use with metal tape," Dolby-B noise-reduction circuits, and a muting switch. Wow-and-flutter is given as 0.05 per cent (wrms), and signal-to-noise ratio is 61 dB (CrO2, and metal tape).

The portable section of the DC-20 XP contains phono and auxiliary inputs, bass and treble tone controls, a loudness switch, and an "Accusonic" control said to improve stereo imaging when one is listening to the built-in 3 x 5-inch speakers at close range. Prices: DC-20 XP, $700; DC-20S speakers, $250 per pair. Circle 131 on reader service card

For more New Products see page 62

NOTE: All product descriptions and specifications quoted in these columns are based on materials supplied by the manufacturers, who will respond directly to reader requests for further Information. Domestic inflation and fluctuations in the value of the dollar overseas affect the price of merchandise imported into this country. Please be aware that prices quoted in this issue are therefore subject to change.
Empire introduces an improvement so dramatic you can not only measure it, you can hear it.

THE NEW EMPIRE GOLDEN TOUCH SERIES.

Exclusive Anti-Static Stylus eliminates static build-up without the added mass of brushes. Using an exclusive Empire process, each new cantilever and our new and exclusive Diamond tip in both our new cantilever and our new Golden Touch cartridges 1000GT and 900GT Golden Touch cartridges are micro-plated with one of the most conductive materials known to man...

Our exclusive Anti-Static Stylus act almost like miniature lightning rods, attracting static electricity then discharging it through our Micron Neutralizer™ before any build-up can cause annoying "pops" and "clicks." Amazing! You're right, but what's even more impressive is the fact that, unlike competitive solutions incorporating brush devices, both the 1000GT and 900GT achieve this incredible feat while simultaneously reducing mass by a stunning 70%.

An improvement particularly noticeable on warped and uneven records.

Para-Line™ Tip. Six times the contact area of conventional tips. The Golden Touch 1000GT, our limited production model, offers listeners the ultimate in Empire tip technology—our Para-Line™ tip. Capable of tracking musical signals way beyond the limits of availability (6Hz to 50KHz!), this superb diamond also boasts the lowest tip mass (and that means the lowest record wear) presently available... an astonishing 0.18mg!

Empire eliminates distortion with Zero Error Alignment System. A lateral alignment error as little as 2° can more than double cartridge distortion! That's why Empire developed the Zero Error Alignment System for elliptical and parabolic stylus. A unique manufacturing process that allows Empire to precision cut and polish the diamond tip after it has been mounted in the cantilever. Look at the comparison.

The Zero Error Alignment System's accuracy reduces distortion, caused by lateral alignment error, to measurable levels. The Empire Golden Touch cartridges... awesome!

Empire Scientific 1055 Stewart Avenue, Garden City, New York 11530

CIRCLE NO. 17 ON READER SERVICE CARD
Two Types of CX?

Q I have heard that the CX encoding system adds 20 dB to the dynamic range of records by compressing the top 40 dB of the dynamic range (the loudest parts of the recording) by 20 dB in the encoding process and then expanding it back to 40 dB in the decoding process. Unlike Dolby noise reduction, which compresses only the high frequencies, the CX system affects the entire audio band. When Pioneer and others investigated the CX system for encoding the audio signal on videodiscs, they decided that somewhat different parameters would best serve the specific needs of videodisc audio. The videodisc CX standard calls for 14 dB of compression/expansion versus 20 dB for phonograph records. Specifically, the top 28 dB of the dynamic range (the loudest parts of the recording) by 20 dB in the encoding process and then expanding it back to 40 dB in the decoding process. Unlike Dolby noise reduction, which

Weak Link

Q I understand that any stereo system is only as good as its poorest component. Is there an easy method of determining the "weak link" of a given system without expensive testing equipment? This would be extremely helpful when the time came to upgrade.

A Wouldn't the "weak link" in your system depend on what you were experiencing as a deficiency? If your speakers can't be driven to the volume you desire without rattling or blowing their drivers, or if your amplifier can't supply all the power your speakers need to play as loud as you would like, or if your tape deck won't make a (to your ears) satisfactory copy of a record, or if your FM tuner won't deliver noise-free reception of your preferred stations, then you have located a problem or two in your system—if not a "weak link."

Not everyone has the same hi-fi needs and therefore not everyone would focus on the same inadequacies in a given system. If, say, you have a taste for flute solos played at low level, then a low- to medium-power (12- to 30-watt) amplifier is more than likely to be adequate, and upgrading to a higher-power unit will not serve your purposes. But other listeners with other musical tastes, low-efficiency speakers, and large rooms may find 200 watts per channel barely adequate.

In general, the very best way to determine which, if any, component in your system is not doing the kind of job you would like it to do is to substitute another component for that one that is not doing the kind of job you would like it to do and see if the overall quality improves. If it does, then that component is the "weak link."
When it comes to the performance of sound, Jensen® Car Audio is stiff competition.

Take the Jensen Quadrax® four-way speaker system for example. Naturally it delivers rich, full bass and crisp clear highs.

But, to add to its superb performance, it also features two separate drivers to define the upper and lower midrange signals, where most vocals are reproduced. The result is a clearer, more realistic sound across the entire midrange spectrum.

And the Quadrax handles power superbly, to push that sound even further—55 watts per speaker. So if it's the sound that moves you, consider installing a Jensen Quadrax speaker system. That way, you can go far... just staying in your car.

JENSEN CAR AUDIO

When it's the sound that moves you.

© 1982, Jensen Sound Laboratories, Schiller Park, Illinois 60176
CIRCLE NO. 26 ON READER SERVICE CARD
Quality is the principle.

Stereo Review says it for us.

The GFP-1 can obviously be considered, for all practical purposes, distortionless. The GFP-1's preamplifier noise rating exceeds our measurement capability (Sept. 1980).

They continue: "It's a no frills preamplifier, one without the unnecessary gimmicks. At its modest price, this is one of the better preamplifier values on today's market."

Amp Sandwich

Q Some of my friends have told me that it is beneficial to the sound of an amplifier to weight it down with bricks or other heavy objects. Is this true?

GERALD MOSER
Brooklyn, N.Y.

A One of the unfortunate side effects of advanced audiophilia is a tendency to develop auditory hallucinations. Various subjective acoustic effects are perceived and reported as having an objective existence despite conflicts with the laws of electronics, physics, and psychoacoustics—or even logic and common sense.

But although advanced audiophilia may lead to behavior suggesting a mental disease, it more closely resembles a primitive, magic-based religion. Through the ritual application of any of several totem objects (special braided wires, mysterious liquids, massive weights, or even vacuum tubes) to their sound systems, true believers are able to experience wonderful acoustic effects not always audible to those without equal faith.

For reasons unknown to me, but probably related to the philosophical roots of their culture, the Japanese have become the source or inspiration for many of the magical totem devices found in the U.S. hi-fi marketplace. For example, during my last visit to Japan I encountered several instances of high-end amplifying equipment being operated atop concrete building blocks. I was told that this mounting provided a considerable improvement in tonal quality. Another company I visited went one better and provided expensive magnetic-suspension feet between the concrete blocks and the amplification equipment for further improvement. And the very latest step, as reader Moser was told, is to put concrete blocks on top of the amplifier—making a sort of amp sandwich—for even greater tonal enhancement.

Countering all this are those who are, if not atheists, at least agnostics on the question of the wondrous improvements wrought by the magical whatevers. Unfortunately, it is in the nature of the game that those who claim to hear some positive effect ascribable to the totem objects have far more credibility in the eyes of true believers than do the skeptics, who are obviously too insensitive, dull, or deaf to perceive the magical differences. In short, the question of audible improvement is very much subject to the ENC Effect: ENC can stand for Excellent New Component or Emperor's New Clothes, depending on which way you prefer to look at it.

Because the number of questions we receive each month is greater than we can reply to individually, only those letters selected for use in this column can be answered. Sorry!
Here's how we kiss the hiss goodbye.

**BASF Chrome. The world's quietest tape.**

With BASF Chrome, you hear only what you want to hear—because we “kissed the hiss goodbye.”

In fact, among all high bias tapes on the market today, only PRO II combines the world’s lowest background noise with outstanding sensitivity in the critical high frequency range for superior dynamic range (signal-to-noise ratio).

PRO II is unlike any other tape because it's made like no other tape. While ordinary high bias tapes are made from modified particles of ferric oxide, only PRO II is made of pure chromium dioxide. These perfectly shaped and uniformly sized particles provide a magnetic medium that's truly superior—so superior that PRO II was chosen by Mobile Fidelity Sound Lab for their Original Master Recording™ High Fidelity Cassettes—the finest prerecorded cassettes in the world.

And like all BASF tapes, PRO II comes encased in our new ultra-precision cassette shell that provides perfect alignment, smooth, even tape movement, and consistent high fidelity reproduction.

So when you want to hear all of the music and none of the tape, turn on to BASF Chrome. It's the one tape that kissed the hiss goodbye.

**PRO II—a tape so superior, a cassette so reliable, that it was the one chosen by Mobile Fidelity Sound Lab for their Original Master Recording™ High Fidelity Cassettes.**

For the best recordings you'll ever make.

BASF Audio/Video Tapes

CIRCLE NO 5 ON READER SERVICE CARD
Tape Talk

By Craig Stark

Mike Placement

Q. I am interested in doing live recording and want to know whether microphones should be placed as close to the performers as is practical or farther away, where they will pick up more background noise. Also, are there any benefits from locating the mikes as close to the recorder as possible?

DOUGLAS BROEHL
Madison, Wis.

A. Proper microphone technique is really as much an art as it is a science, for mikes "hear" differently than ears do. Their job, however, is to help fool us into thinking that we are actually present at a live performance.

The first practical rule of microphone technique is that the fewer you have to use, the better your results are likely to be. Years ago, before stereo, Mercury Records used a single omnidirectional microphone to cover an entire orchestra, and the clarity of those recordings is impressive even by today's standards. The principal reason for the proliferation of microphones (I've heard of seven being used on a single drum set!) is the view held by some recording engineers that anything can be "fixed in the mix."

Stereo, of course, requires at least two microphones, for part of the sonic information the brain processes as indicating breadth and depth results from our two ears picking up the same signal at slightly different times, since they are located at slightly different distances from the sound source(s).

One way of making absolutely stunning stereo recordings of live music is to place miniature microphones in a "dummy" head located in a good seat in the audience. This is generally called the "binaural" technique, and I can personally testify that if the resulting recordings are played back through headphones, the sense of realism is unsurpassed—as long as you don't move your head. If you do, the whole orchestra moves with it!

Two, occasionally more (but best not), microphones can be placed so as to fool our normal hearing "program" into thinking we are hearing the real thing in a listening room that is acoustically very different from the original concert hall. Fortunately, we're not all that hard to fool—as musicians, advertisers, and even performing musicians well know! My suggestion, therefore, is to begin with a single pair of the usual cardioid (unidirectional) microphones taped together (plastic electrical tape will do very nicely) so as to form an X with an approximate 90-degree angle (for a little less). Pull back sufficiently so that neither mike has to "scan" more than a 45-degree angle to cover the performers. In most auditoriums I've worked in this is a good rule of thumb, for the resulting distance from the sound source will bring in enough hall reverberation for the recording to sound realistic when played back in a typical home listening room.

To get the hang of live recording, what you should do is put on your headphones (use the sealed type that shut out all sounds other than what the mikes pick up) and practice, practice, practice, just as a musician does. You want to be able to "feel" an acoustic space almost palpably when you walk into it and clap your hands a couple of times to get its "ring." That's when you can start modifying my rule of thumb to suit particular circumstances, and it's where you begin to become a real recording engineer. [See the article on "Microphoning" in the October 1981 issue.]

As for your second question, you should keep mike cables as short as possible to minimize noise pickup and high-end rolloff. You'll need professional low-impedance, balanced-line gear for long distances.

Modulation Noise

Q. In several tape-deck test reports I've encountered the term "modulation noise." Manufacturers don't seem to have a specification for it, so what is it?

G. PURCHASE
New York, N.Y.

A. In general terms, "noise" is any undesired addition to a signal. Unlike tape hiss, which is a relatively constant background factor, modulation noise increases or decreases with the variation—"modulation"—of the signal itself.

There are two main types of modulation noise commonly encountered in recording: FM (frequency modulation) and AM (amplitude modulation). Modulation noise in FM is related to wow and flutter, for which there are standard measurements. Modulation noise in AM manifests itself as a kind of "gritty" quality, a noise "behind" the desired signal, and is more difficult to isolate and measure. Its origins are related to the tape-coating process and to magnetic inhomogeneities among the particles used in the coating.

The easiest way to spot modulation noise is to record a mid-frequency tone at a moderate level on a three-head deck. When you switch between "source" and "tape" you'll hear the grit (unless you have a digital recorder!), and as you alternately raise and lower the record level the grit will track the signal. To my mind, modulation noise is probably the most serious signal-quality problem confronting analog recording.

Test Tapes

Q. You and Julian Hirsch always mention the specific test tapes you use in checking a tape recorder. Why? And where can I get a set?

RODNEY SPODE
Madison, Wis.

A. It does seem silly to keep on mentioning the test tapes we use, but the unhappy fact of the matter is that with test tapes, just as with the regular tapes you record and play, the numbers you get when you measure depend on the tape you measure upon. More than twenty years ago, before I became professionally involved in hi-fi, I noticed that test reports on the really good open-reel decks seemed always to show a rising high-frequency response with Ampex test tapes. Ultimately that company admitted (in AES papers by J. McKnight and J. Morrison, subsequently reprinted and distributed by Ampex) that their test tapes had indeed been slightly "hot" on the high end in order to compensate for losses that might occur during use.

McKnight and Morrison have since left Ampex to form their own companies to make test tapes. McKnight operates Magnetic Research Laboratories (229 Polaris Avenue, Suite 4, Mountain View, Calif. 94043), and I use the MRL test tapes for open-reel testing. Morrison operates Standard Tape Labs, Inc. (26120 Eden Landing Road, Hayward, Calif. 94545), and he also has a line of fine test tapes available.

Over the years I have used any number of cassette test tapes. Nortronics (8101 Tenth Avenue North, Minneapolis, Minn. 55427) produces two test tapes that are available in some retail stores, and both TDK (755 Eastgate Boulevard, Garden City, N.Y. 11530) and Teac (7733 Telegraph Road, Montebello, Calif. 90640) make commercially available test tapes which I have relied upon for years. Their calibrated response is not as good, however, as the new HEC-standard BASF test tapes (write R. Piselli, BASF, Crosby Drive, Bedford, Mass. 01730) which I now use in my test reports for STEREO REVIEW. Don't be shocked by the prices quoted for the test tapes; they are all precision recordings done in real time, and that's an expensive way to go.
ADS 300i
The ADS 300i is designed and built from the ground up to be the most thoroughly thought-out and most carefully manufactured automotive speaker system available.

The 300i is musically accurate. Its power handling ability makes it possible to achieve high sound pressure levels even over engine and road noise. The basic configuration of the 300i allows it to be mounted where it sounds best yet take a minimum of space. It extends only one inch above the mounting surface. The combination of efficiency and high power handling make the 300i compatible with a wide range of amplifiers.

ADS P100
The ADS P100 uses digital technology to deliver 100 watts continuous power. The Power Plate meets the FTC and IHF home component standards for its claimed performance. Built-in equalization achieves the best possible bass performance with different types of speakers. Protection circuitry for both the amplifier and the speakers assures reliability without sonic compromise. The compact, functional shape of the P100 takes little room and facilitates mounting.

Considering its high power output, bass equalization and clean sound, the P100 is an outstanding example of State-of-the-Art performance.

We have only covered the basics of these ADS Automotive Components, and we have not even mentioned the CS400 Subwoofer System. If you would like all the details call toll free 1-800-824-7888 (in California 1-800-852-7777), ask for operator 483, Dept. SR 6. We will send you a complete kit of technical information and a list of ADS Automotive Dealers near you.

You owe it to yourself to visit your ADS Dealer and listen to the 300i and P100. Hear how ADS Automotive Components earned their reputation for quality and pace setting performance.
One cannot measure the performance of a tone arm, a turntable, or a phonograph cartridge individually; you can measure any one of them only while it is in use with the other two. To date, there are no industry-wide standards (in this country) covering the performance rating or testing of these record-playing components. Most measurements are therefore made using more or less obvious general procedures, with the specific test conditions established by the person or organization doing the testing. For practical reasons, I prefer to combine the tests for a record player and a cartridge rather than maintain a "standard tone arm" for all cartridges or a "standard cartridge" for testing all record players (given the rapid changes in cartridge and record-player performance, such "standards" would be short-lived anyway).

The key performance characteristics of a turntable are its speed (accuracy and constancy), flutter, rumble, and immunity to external vibration. The important parameters of a tone arm are its effective mass, tracking error, accuracy of tracking-force and antiskating scale calibrations, damping, and, not least, the ease of mounting and aligning a cartridge on it. In the case of a separate tone arm, its own ease of installation, its own ease of installation, and the cartridge have no important effects on performance (such as tracking error). The performance rating or testing of these record-playing components, we are also concerned with how easy it is to install the cartridge in a headshell or other carrier.

What about the sound of these components? Obviously, the cartridge has an effect on sound quality, though this is usually much less dramatic than many people prefer to believe. This aspect of its performance must be judged by listening tests. Despite the often vehement statements to the contrary from some quarters, the turntable and tone arm have no important effects on phono-disc sound reproduction other than those that can easily be inferred from measurements. For example, a severe case of rumble or flutter can have a profound effect on the sound, to the point where it can make the end result completely unlistenable. Even a much milder flutter condition can be most offensive to some listeners, since people differ greatly in their sensitivity to (and tolerance of) flutter. A turntable with poor isolation from its surroundings can give rise to acoustic feedback (howling) or perhaps simply "muddy" the sound when the feedback level does not reach the point of actual oscillation. Tone arms do have internal resonances, but they are usually of very high "Q" (narrow bandwidth) and thus unlikely to modify the sound substantially.

As for the cartridge, it must be checked for frequency response, crosstalk, squarewave response, output voltage, tracking ability (as a function of frequency and vertical force), distortion, vertical stylus angle, and sensitivity to load variations (particularly capacitance, which can vary widely among installations). As with the other two components, we are also concerned with how easy it is to install the cartridge in a headshell or other carrier.

What is the sound of these components? Obviously, the cartridge has an effect on sound quality, though this is usually much less dramatic than many people prefer to believe. This aspect of its performance must be judged by listening tests. Despite the often vehement statements to the contrary from some quarters, the turntable and tone arm have no important effects on phono-disc sound reproduction other than those that can easily be inferred from measurements. For example, a severe case of rumble or flutter can have a profound effect on the sound, to the point where it can make the end result completely unlistenable. Even a much milder flutter condition can be most offensive to some listeners, since people differ greatly in their sensitivity to (and tolerance of) flutter. A turntable with poor isolation from its surroundings can give rise to acoustic feedback (howling) or perhaps simply "muddy" the sound when the feedback level does not reach the point of actual oscillation. Tone arms do have internal resonances, but they are usually of very high "Q" (narrow bandwidth) and thus unlikely to modify the sound substantially.

Actual turntable speed is generally indicated directly (and very accurately) by stroboscope markings or similar display systems, and no separate measurement is really needed. To check the effect of line voltage on speed, we play a record with a constant-frequency tone (such as the 3,000 Hz of a flutter test record) and monitor the output on a frequency counter as the line voltage is varied between 95 and 135 volts. Interestingly, it has been years since we have found a measurable change (for example, 1 Hz out of 3,000 Hz) in this test.

For flutter measurement we feed the pickup output into a Meguro MK667C flutter meter and measure both the JIS (weighted-rms) and either the CCIR or DIN (weighted-peak) flutter, depending on the frequency of the test record we are using (the two are very similar except that they use 3,000 and 3,150 Hz, respectively). We use CBS BTR 150 and DIN 45 545 test records for this purpose. Unlike most measurements, flutter readings require a somewhat subjective interpretation of an irregularly swinging meter pointer and may therefore differ according to who is making the reading—even on the same test setup. The lowest flutter frequencies (wow) are caused by record eccentricity, which usually determines the minimum flutter reading obtainable with a particular test record. Unfortunately, test records in general do not appear to be made with any greater care than typical music records, making measurements of less than about 0.05 per cent flutter nearly impossible. Lower readings,
as published by some turntable manufacturers, imply a direct optical or magnetic reading of the turntable's rotation or a measurement made in the turntable's feedback servo loop which corresponds to the fluctuation speed variations.

The demodulated output of the flutter meter (which is essentially an audio-frequency FM receiver) is connected to our H-P 3580A spectrum analyzer to obtain a frequency analysis of the flutter rates. Often this is a random band of non-resolvable signals in the range from less than 5 Hz (the spectrum analyzer's lower limit) to perhaps 315 Hz (where there is little to begin with). In my view, DIN-B curves are of little value for expressing the true audible rumble content of a turntable.

After the meter reading is taken for the reference signal, the record is replaced by a silent-groove disc which is played through the same equalization and weighting networks. The meter shows the total rumble, which is expressed in decibels below the reference level. The ARLL measurement discriminates somewhat against the sub-audible components arising from certain types of warps and eccentricities, and it gives a more valid picture of the audibility of the rumble. However, the unweighted measurement (usually 25 to 30 dB higher than the ARLL reading) helps assess the possibility of overload of an amplifier or speaker cone by infrasonic rumble components that are never heard as such. Like flutter measurement, rumble measurement involves a considerable degree of art because of the (usually) widely oscillating meter pointer.

We have several records that are suitable for rumble measurement, including the DIN 45 544, but as a rule the final reading is made with a silent-groove lacquer disc specially cut for us for this purpose. It has 30 or 40 Hz. If peaks are found at certain frequencies, they may provide a clue to the source of the speed irregularity.

Rumble measurement presents a somewhat similar problem, since all test records have some built-in rumble (from the cutting lathe) plus other noise that may cover a good part of the audio spectrum. The measurement is made in two parts. First the system is calibrated to the cartridge sensitivity by playing a standard-level tone and reading the cartridge output after RIAA equalization and amplification. The reference level is 1.4 cm/sec at 100 Hz for an NAB (unweighted) measurement and 3.54 cm/sec at 1,000 Hz for an ARLL (Audible Rumble Loudness Level) measurement. The ARLL spec, which is designed to reflect the ear's sensitivity to sounds of various frequencies, is measured through a filter that rolls off the low frequencies at 6 dB per octave below 500 Hz. The filter also attenuates the high frequencies (which have little effect on the final reading in any case). The very low rumble ratings of some turntables are almost always based on the use of DIN-B weighting, which essentially measures the rumble only in the vicinity of bands near both the inner and the outer diameters, and these usually give somewhat different rumble readings. We use the better (lower) reading of the two as the turntable's rumble rating. A spectrum analysis of the rumble also shows the presence of any discrete peaks that might indicate an out-of-balance rotating component.

The effectiveness of the turntable's base isolation is measured, at least qualitatively, with the aid of a small "shake table" using four small dynamic loudspeaker drivers whose voice coils drive corks instead of cones. The turntable is supported on the four corks under its mounting feet, and the drivers are driven in phase from a power amplifier with a sine-wave signal sweeping from 20 to 1,000 Hz. The pickup is placed on a stationary record, and its output, after RIAA equalization, is plotted on a chart recorder synchronized with the sweeping frequency. The result is a rough plot of the vibration transmitted through the mounting feet as a function of frequency. The chart scales are corrected to allow for the output sensitivity of the specific cartridge used for the test, so charts for different turntables can be compared using a simple overlay. The results, though entirely qualitative, are reasonably valid for comparing the base-isolation effectiveness of different turntables. Small differences (a few decibels) are meaningless because of the many uncontrolled variables in the process, but fortunately we find that the really outstanding turntables are often 20 or 30 dB better than the "run-of-the-mill" type in this test.

In addition, the turntable is evaluated for ease of use, freedom from groove jumping due to jarring when in normal use, accessibility of controls, and so forth. Its automatic features are also timed, since some turntables take a very long time to start playing after the start button is pushed, while others go into action almost instantly.

These tests are not likely to determine absolutely which of two competitive turntables anyone should buy; such tests probably do not exist. However, they do provide a good overview of the turntable's performance and of any weaknesses that might show up on the bench or in actual use. Our reports do not indicate, aside from the test data, which turntables "sound better," but those who believe in the sonic importance of unmeasured qualities are free to buy whatever pleases their ears.

Test reports begin on page 28
The new Harman Kardon CD series of cassette decks.
THE FIRST LINE OF DECKS TO EQUAL THE RANGE OF HUMAN HEARING.

It's been known for nearly a century that the range of human hearing extends from 20 to 20,000Hz. And for at least the last 15 years, every stereo component has had to meet that standard in order to be considered high fidelity.

Yet until now, only a handful of the most expensive cassette decks—often costing more than the rest of your system—have been able to accurately reproduce the entire frequency range.

Now Harman Kardon introduces the CD Series of cassette decks.

Every deck in the line matches or exceeds the frequency range of human hearing to an accuracy of ±3 dB.*

From the deepest bass reverberations at 20Hz, to the highest shimmering overtones at 20,000Hz.

And every deck achieves this with any tape formulation, not just costly metal tape.

Perhaps most important of all, the entire line is priced like ordinary decks, from $299 to $749.**

Which means that anyone who is serious about stereo systems can now afford a cassette deck with true high fidelity performance.

Trade up to our least expensive deck.

The CD101 costs only $299.** Yet its frequency response is so faithful to the original music that many people will undoubtedly trade-up from their present $400 and $500 decks. The CD101 also gives you features like solenoid transport, bias fine trim, and auto repeat.

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Harman Kardon helped make cassette tapes a serious recording medium when we introduced the first decks with Dolby B† in 1970. Then in 1980, we were first with Dolby HX.†

Now, with the CD Series, we've made the cassette deck a true high fidelity component.

Of course, there's only one way to appreciate these revolutionary new decks. And that's to go hear them.

Ask your audio specialty dealer for a demonstration today. You'll hear what few people have ever heard before. Everything.

For your nearest dealer, call toll-free, 1-800-528-6050, ext. 870. Or write Harman Kardon, 240 Crossways Park West, Woodbury, NY 11797-2057.

In Canada, Gould Marketing, Montreal H4T 1E5.

* Other manufacturers may quote seemingly similar upper and lower frequency response specifications, but without the ±3 dB tolerance. Without the tolerance specified, these limits can be greatly exaggerated and therefore misleading.

† Manufacturer's suggested list prices.

‡ Dolby B, C, HX and HX Professional are registered trademarks of Dolby Laboratories, Inc.
Shure V15 Type V Phono Cartridge

- **Shure V15 Type V Phono Cartridge**
- **Tracking Force:** 1 gram
- **Weight:** 6.8 grams
- **Price:** $250

**SHURE** coined the term "trackability" some time ago to describe a key criterion of cartridge performance. It is the ability of the stylus system to trace the groove modulation accurately, neither gouging the soft vinyl nor losing contact with it, over the full range of recorded frequencies and groove velocities likely to be encountered when playing records.

Different aspects of a cartridge's electromechanical design affect its trackability in different frequency ranges. Compliance of the moving system is the controlling factor at low frequencies, and effective tip mass ultimately limits the ability of the stylus to follow very-high-frequency groove modulation. The damping of the moving system is the key to tracking in the midrange frequencies.

In planning a successor to the V15 Type IV, Shure gave high priority to further improvement of high-frequency trackability, and this required a radical reduction in effective tip mass. The key to this was in the design of the cantilever, or stylus shank, which accounts for a large part of the effective tip mass. Shure engineers concluded that a thin-wall hollow tube was the ideal configuration for the cantilever because it would provide the highest ratio of stiffness to mass.

Tubular cantilevers have been used in many cartridges, but the tubes have had relatively thick walls. Shure's thin-wall stylus shank has a diameter of 18 mils and a wall thickness of only 0.5 mil. Not every material can be formed into a thin-wall tube of these proportions. An analysis of available materials, from the prosaic aluminum to the exotic diamond, showed that beryllium was the optimum choice. Using a proprietary process, Shure created the "Microwall/Be" stylus shank with an effective mass less than half that of the shank in the V15 Type IV. The result is a 50 per cent higher stylus-resonance frequency (33 kHz).

The hyperelliptical diamond stylus tip, whose contact surfaces are highly polished, is nudge-mounted on the end of the cantilever. The generating system of the cartridge is basically the moving-magnet type used in other Shure cartridges, with high-efficiency laminated pole pieces to provide a flat frequency response through the midrange (the older and less efficient core and pole structures tended to give a "sway-backed" response curve). Another feature carried forward from the Type IV is the dynamic stabilizer, which combines the functions of an arm-resonance damper, static discharger, record brush, and stylus guard. The V15 Type V also has the side-guard stylus protector previously offered in Shure's professional cartridges. It retracts the stylus and cantilever safely into the cartridge body during rough handling (the standard factory test of the efficacy of this feature involves scrubbing a test pickup one hundred times across a record).

The 0.2 x 1.5-mil-long contact stylus is designed to track at 1 gram. Unlike most cartridges, the Type V is not rated for use over a range of stylus forces, since the 1-gram force is necessary to establish the rated 20-degree vertical stylus angle (there is, however, a maximum rating of 1.25 grams). To compensate for the stabilizer, the tracking force of the tone arm must be set to 1.5 grams in normal operation.

The frequency-response limits of the cartridge are specified as ±1 dB from 20 to 8,000 Hz, gradually increasing to ±2 dB at 20,000 Hz. The rated channel separation is at least 25 dB at 1,000 Hz and 18 dB at 10,000 Hz; recommended cartridge load is 47,000 ohms and 250 picofarads. The trackability of the V15 Type V is specified as 30 cm/sec at 400 Hz, 46 cm/sec at 1,000 Hz, 80 cm/sec at 5,000 Hz, and 60 cm/sec at 10,000 Hz.

**Laboratory Measurements.** We tested the Shure V15 Type V in a relatively massive S-shape tone arm (about 18 grams effective mass). The installation of the cartridge was by far the easiest we have yet experienced (barring, of course, pre-mounted cartridges or those integrated with headshells). The body of the cartridge holds plastic insert nuts, and, with the cartridge firmly mounted in the installation fixture supplied, it was a simple matter to attach it to the low-mass headshell we used. The two-step overhang and offset-angle adjustment took perhaps a minute to make and resulted in a perfectly mounted cartridge. With the special plastic alignment "stylus" replacing the regular stylus assembly, it took but a moment to set the cartridge-reference surface exactly parallel to the record surface. We used the recommended 1-gram tracking force (a total applied downward force of 1.5 grams) for our measurements, decreasing it temporarily to 0.75 gram when check-
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CIRCLE NO. 7 ON READER SERVICE CARD
Shure V15 Type V
Phono Cartridge

**Comment.** Our tests show that the Shure V15 Type V not only lives up to the claims made for it, but in virtually every respect outperforms the best cartridges we have previously tested. In its record-playing performance the Type V is a surpassingly fine cartridge, in every way a worthy successor to the Type IV. We doubt that any commercially pressed record could tax the tracking abilities of this cartridge. Any distortions or other unpleasant sounds can safely be assumed to originate in the record or other part of the system.

The V15 Type V also has several features not directly related to sound that make it a more nearly ideal pickup. These include the highly effective Dynamic Stabilizer (which dramatically enhances the warp-tracking ability of the pickup system) and the relatively unpublicized but nonetheless important Side-Guard protective system. Those who have never made a careless mistake and ruined an expensive stylus may feel no need for such a feature, but for the majority of the record-playing public it could be as important as a foolproof amplifier or speaker-protection system.

I must admit to being most impressed by the installation gauge supplied with the Type V, since I have always found cartridge installation to be one of the most exacting chores in setting up a music system. Trying to position a cartridge in the headshell with an accuracy of perhaps 1/32 inch or better is an exercise in frustration. The importance of this degree of mounting precision is usually exaggerated by audio purists (or manufacturers of mounting and alignment accessories), but there is no doubt that it is desirable if one is to realize the full potential of a record-playing system.

The Shure gauge is a flat plate that slips over the turntable spindle and contains a precision-machined metal block into which the cartridge body fits snugly (Shure refers to it as a “nest”). It takes longer to describe the alignment process than to do it (only a minute or two), but the end result is a cartridge aligned and positioned for perfect tangency at radii of 2.6 and 4.76 inches, which are usually considered to be the optimum points for this adjustment. Best of all, the process requires no squinting at the stylus or its cantilever (the stylus is not even installed in the cartridge during the procedure) or even at the edges of the cartridge body or headshell. The precision and accuracy of the installation are determined by the dimensional tolerances of the cartridge and stylus assemblies themselves (and, of course, of the gauge), which are far “tighter” than could be achieved by eye.

If I sound enthusiastic, it is only because I am. At this time, it is hard to imagine how the V15 Type V could be improved significantly. It offers the most performance in the most areas, plus the most convenience and safety in installation and operation. What more could one ask for? Only a lower price, perhaps, but good things rarely come cheap. It is reasonable to expect that some of the Type V’s features will eventually appear in lower-price Shure cartridges, as has already occurred with the Dynamic Stabilizer and the hyperelliptical stylus, both originally developed for earlier models in the V15 series.

—Julian D. Hirsch

In the graph at left, the upper curve represents the frequency response of the cartridge. The distance (measured in decibels) between it and the lower curve represents the separation between the two channels (anything above 15 dB is adequate). The inset oscilloscope photo shows the cartridge’s response to a recorded 1,000-Hz square wave, which indicates resonances and overall frequency response (see text). At right is the cartridge’s response to the intermodulation-distortion (IM) and 10.8-kHz tone-burst test bands of the TTR-102 and TTR-103 test records. These high velocities provide a severe test of a phonograph cartridge’s performance. The intermodulation-distortion (IM) readings for any given cartridge can vary widely, depending on the particular IM test record used. The actual distortion figure measured is not as important as the maximum recorded-signal groove velocity that the phonograph cartridge is able to track before a sudden and radical increase in distortion takes place. There are very few commercial phonograph discs that embody musical audio signals whose average recorded groove velocities are much higher than about 15 centimeters per second.
Any car designed for extraordinary performance should also be equipped for extraordinary sound. This Lamborghini is equipped with the high technology of Alpine Car Audio Systems. Clean, powerful sound that extends to the limits of human hearing. Reproducing everything from a whisper to a crescendo with vanishingly low distortion.

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Body by Lamborghini. High fidelity by Alpine.
signals of the CBS STR 112 test record. The final measurement was of tracking distortion, using Shure's TTR-102 and TTR-103 test records. With the Type V, it is probable that we were reading the residual distortion levels of the record and test fixtures. The 400- and 4,000-Hz intermodulation-distortion readings from the TTR-102 varied randomly between 1 and 1.7 per cent for velocities from 6.9 to 27.1 cm/sec. The 10.8-kHz tone-burst distortion from the TTR-103 was a constant 0.7 per cent for test-disc velocities from 15 to 30 cm/sec. Shure's new TTR-117 record (available free to purchasers of the Type V cartridge) contains complex three-tone test signals, rather than music, to test the trackability of a cartridge. We found it less easy to interpret than the earlier "Audio Obstacle Course" records, in part because the Type V steadfastly refused to distort audibly at its rated 1-gram force. By reducing the force to 0.75 gram, we were finally able to detect mistracking at level 6, the highest on the record. We tried the TTR-117 test record with several other good-quality cartridges and found that some would play level 6 and others would mistrack audibly at level 4 at their rated forces. Thus the TTR-117 is effective in distinguishing between cartridges of a very high quality level. The record also contains an excellent antiskating-adjustment band that is easy to use and unambiguous in its results.

Circle 140 on reader service card

Ohm Walsh 2 Speaker System

Ohm Walsh 2 Speaker System
Rated Frequency Response: 45-16,000 Hz ± 4 dB
Size: 11½ inches square (bottom), 9¾ inches square (top), 32½ inches high
Weight: 30 pounds
Price: $700 per pair

The late Lincoln Walsh, a pioneer in hi-fi some thirty-five years ago, invented a loudspeaker unlike any other in its principle of operation. It creates a coherent cylindrical sound field that is omnidirectional in the horizontal plane. All frequencies, from bass to treble, are radiated from a single cone in time (and phase) synchronism, with the intention that the speaker will create an acoustic waveform that is a close analog to the electrical input signal.

Walsh's speaker patents are now owned by Ohm Acoustics. Some years ago the company developed the Ohm A and Ohm F, both very large, heavy, expensive, and inefficient speakers that could indeed generate an omnidirectional sound field that preserved the waveform of the driving signal to an unprecedented degree.

Ohm has now incorporated much of the Walsh technology in a much more affordable and practical product with a much broader market appeal. The Ohm Walsh 2 is a compact floor-standing system using a Walsh driver to handle the frequencies from low bass through most of the treble range, augmenting it with a more conventional dome radiator in the uppermost audible octave. The Walsh 2 system is a gently tapered truncated pyramid in shape. The enclosure is covered in veneers of genuine oak or walnut (teak or rosewood are available at extra cost). The upper part, which contains the drivers, is covered by a removable black cloth grille, and the drivers themselves are completely hidden by a cylindrical, nonremovable perforated metal cage.

The Walsh driver's specially designed and tapered cone radiates the highest frequencies from its top (near the voice coil). (Continued on page 36)
Nobody does it better.
LIGHTS: 11 mg "tar", 0.9 mg nicotine.
LIGHTS 100's: 12 mg "tar", 0.9 mg nicotine, av. per cigarette, FTC Report DEC. '81.
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As the acoustic wave propagates down the cone, the lower frequencies are radiated from the lower portions of the cone. All parts of the acoustic waveform pass the outer circumference of the driver at the same time (in phase), forming a coherent cylindrical waveform in the air. This is a highly oversimplified description of the action of the Walsh driver, which is capable of propagating a very wide range of frequencies without the usual limitations of cone breakup and other effects that make conventional single-driver systems unsuitable for full-range operation.

The Walsh 2's cone (about 6 inches in diameter) faces down into the speaker enclosure, which is reinforced internally with six 2 x 3-inch wooden crossbraces and contains acoustic absorbing material. The bass system is said to be a sixth-order Butterworth Thiele alignment with additional filtering in the crossover network to convert it to an optimized fourth-order response. (The network also rolls off the response below 30 Hz to protect the speaker against high-level infrasonic inputs.) On the bottom of the cabinet are the port opening, spring-loaded connectors, and a pair of three-position slide switches that permit limited adjustment of the system's frequency response.

Unlike the Ohm F, the main radiator of the Walsh 2 is not designed to radiate omnidirectionally at all frequencies. Absorbent blocks around the driver's voice-coil region limit its rear-radiating high-frequency output to make the overall sound less dependent on the speaker's placement in the room. Just above them is the dome tweeter, facing toward one front corner of the speaker cabinet and filling in the highest treble frequencies. The Walsh 2 speakers are designed to be used in pairs, with their tweeters angled in toward the listening area. The Ohm Walsh 2 is recommended for use with amplifiers rated between 30 and 120 watts output, and it has a nominal (as well as minimum) impedance rating of 4 ohms.

- **Laboratory Measurements.** The averaged and smoothed room response of the Walsh 2 speakers was quite uniform through the midrange, sloping gently downward above 5,000 Hz and more rapidly above 12,000 Hz. The high-frequency response curves from the left and right speakers were very nearly identical, showing that the dome tweeters had adequate dispersion for full room coverage.

  The low-frequency response was measured with the microphone as close as possible to the metal cage surrounding the drivers. The Walsh driver response (not including the port output) was flat within ±1.5 dB from 90 to 1,300 Hz. A separate measurement at the port, when combined with the cone radiation, yielded a total bass response of ±2.5 dB from 40 to 1,200 Hz, with a broad, somewhat controllable maximum between 70 and 100 Hz.

  Splicing the low-frequency and room-response curves was easy because of the considerable overlap between them. The composite response curve was a smooth line sloping slightly downward from a maximum at 70 Hz. With the mid frequencies used as a reference, response was down 3 to 5 dB at 10,000 Hz and another 2 dB at 15,000 Hz. The INCREASE setting of the HF switch raised the output about 2.5 dB over most of the range from 3,000 to 12,000 Hz.

  Using the FFT analysis program on our Apple II computer to measure a quasi-anechoic response of the entire speaker, we found its output to be flat within ±3 dB from 200 Hz (the analyzer's lower limit) to about 7,000 Hz, rising an additional 3 dB at 9,000 Hz and falling off somewhat above 12,000 Hz. The response curves measured at distances of 1 meter and 2 meters were very similar.

  Our measurements of the speaker's sensitivity (its acoustic output at 1 meter for an input of 2.83 volts) did not confirm Ohm's rating of 89 dB. We found that the speakers were very appealing loudspeaker both visually and auditorily.

  —Julian D. Hirsch
...and then came Super Feedforward.

Not many years ago a "high fidelity" amplifier delivered 5 watts with 5% harmonic distortion. Today, distortion levels of 0.05% — or even 0.005% — in amplifiers with hundreds of watts and a much wider frequency range are almost routine.

Reducing harmonic distortion has usually been achieved by using negative feedback. But too much negative feedback can introduce a new kind of distortion, TIM (Transient Intermodulation Distortion) that audi- bly degrades the musical sound.

To reduce TIM and other forms of residual distortion, Sansui developed its DD/DC (Diamond Differential/ Direct Current) drive circuit. Then, to eliminate the remaining vestiges of high-level, high-frequency distortion in the amplifier's output stage, Sansui engineers perfected a unique circuit which, though proposed years ago, has now been realized in a practical amplifier design. Super Feedforward, the new Sansui technique, takes the leftover distortion products present in even an optimally-designed amplifier, feeds them to a separate, error cor- recting circuit that reverses their polarity, then combines them so they cancel themselves out against the regular audio signal. What's left is only the music, with not a trace of distortion.

While Super Feedforward circuitry puts Sansui's AU-D 11 and AU-D 9 amplifiers in a class by themselves, all our amplifiers are renowned for their musicality, versatility, and respect for human engineering. Add a match- ing TU tuner to any of Sansui's AU amplifiers and you'll appreciate the difference 35 years of Sansui dedi- cation to sound purity can produce.

For the name of the nearest audio specialist who carries the AU-D 11 and AU-D 9 or other fine components in Sansui's extensive line of high fidelity products, write: Sansui Electronics Corp., 1250 Valley Brook Avenue, Lyndhurst, NJ 07071.
er's mid/high-frequency output was much greater on a vertical axis above the unit than it was anywhere around the periphery of the symmetrical speaker cage on the level of the speakers. We measured a sensitivity of 81 dB in the horizontal plane and 86 dB at a point 1 meter above the speaker. The system impedance was slightly below 4 ohms between 36 and 60 Hz, but it remained above 4 ohms elsewhere in the audio range.

Low-frequency distortion was measured with inputs of 2.83 and 8.94 volts (corresponding to 1 and 10 watts into 8 ohms, or 2 and 20 watts into 4 ohms). Since most of the output below 100 Hz was radiated from the port, our distortion plot was based largely on measurements made at the port. At 2 watts, the distortion was about 0.5 per cent or less above 70 Hz, 2.5 per cent at 40 Hz, and only 3.2 per cent at 35 Hz. A tenfold power increase resulted in distortion readings of 1 per cent at 100 Hz, 2.5 per cent at 70 Hz, and 11 per cent at 40 Hz, all fine results.

Circle 141 on reader service card

McIntosh MC 2255 Power Amplifier

- McIntosh MC 2255 Power Amplifier
- Power Rating: 250 watts per channel
- Size: 16¼ x 14¾ x 7½ Inches
- Weight: 82 pounds
- Price: $2,750

The McIntosh MC 2255 basic power amplifier is rated to deliver its output into loads of 1, 2, 4, or 8 ohms, from 20 to 20,000 Hz, with no more than 0.02 per cent harmonic or intermodulation distortion. Its stereo outputs may be paralleled or bridged to drive a mono load with a maximum output of 500 watts at 0.02 per cent distortion. Depending on the connection used, the mono load impedance can be from 0.5 to 16 ohms.

The unusual load capabilities of the MC 2255 derive from the use of large autotransformers to match the output transistors to their loads. Like vacuum-tube amplifiers, the MC 2255 has output terminals designated for 1, 2, 4, or 8 ohms. Thus, regardless of the speaker impedance, the output transistors are optimally loaded and can deliver their full power without excessive distortion or overheating.

The output stages of the MC 2255 operate in class-B, but a unique biasing system completely eliminates the crossover distortion usually associated with class-B operation. This being the most efficient mode of linear amplifier operation, the total power consumption of the MC 2255 from the 120-volt a.c. line is only 0.7 amperes at idle (or normal playing volume) and 12 amperes at full output. The input and driver stages form a complete class-AB low-power amplifier which drives the front-panel headphone jack as well as the power stages. Switches connect the input sections for mono operation. In the MONO/PARALLEL mode the right-channel input drives both output sections in phase, and for the MONO BRIDGE mode the other input section is used as a phase inverter so that the outputs can be driven 180 degrees out of phase.

The power stages are protected by a novel Power Guard circuit that makes it impossible to clip the amplifier output by overdriving it. A waveform comparator monitors the input and output signals of the amplifier, and if the output waveform differs from the input by an amount corresponding to about 0.5 per cent harmonic distortion, a red LIMIT light glows on the panel (there are separate lights for the two channels). Any further increase in the drive level causes the signal to be attenuated ahead of the output section. This prevents the output from ever exceeding its linear operating range (according to McIntosh, the amplifier can be overdriven by 20 dB before distortion reaches 2 per cent).

Internally, the McIntosh MC 2255 is a very complex amplifier, containing some eighty-five transistors, forty-seven diodes, and fourteen integrated circuits. Many of its components are involved in the protective systems and in its novel self-test feature. Each time the amplifier is turned on, an automatic seven-step test sequence checks the key operating voltages for correctness. As each step is executed, the corresponding numeral lights up on a front-panel display and a green light signals that it has been passed. If any stage of the test is not satisfactory, its number remains lit to indicate the problem area. Two different test speeds can be selected, and one can choose to have a "beep" sound after each step or to have the tests proceed in silence.

Two large meters are calibrated logarithmically from less than 2.5 milliwatts to 500 watts output (because of the output transformers, these readings are equally applicable... (Continued on page 42)
DESIGN INTEGRITY:
The Tape Tension Servo technology developed for our 24-track recorders...

...can be found on our $1350. DH-510
Open-Reel, Half-Track
High Speed Tape Deck...

...and our $500. DR-F7
Three-Head, Discrete Dolby-C Cassette Deck.

Many cassette manufacturers compare their sound quality to open reel. Rather than making such inflated claims, Denon chose to incorporate the transport technology developed for our studio and \( \frac{3}{4}'' \) mastering machines into our cassette decks.

Proper tape-to-head contact, absolutely critical for the highest quality tape recording and playback, is controlled by outboard tension sensing arms on studio machines. On the DR-F Series cassette decks, this is accomplished by Denon's Tape Tension Servo Sensor system. Working in concert with the DR-F Series' Non-Slip Reel Drive Motors, which eliminate belts and clutches (the principal source of maintenance problems on conventional cassette decks), Denon's decks offer a literal miniaturization of a studio-type transport.

An equally important example of Denon's design approach for the DR-F Series is the use of DC (capacitorless) electronics throughout, a principle developed for Denon's Advanced Engineering Series.

Denon products share more than name alone.
Nobody listens to audio equipment. They listen to music.

A small distinction to make, but the very thing that distinguishes a Pioneer receiver from a receiver. A Pioneer car stereo from a car stereo. A Pioneer portable from a portable. And so on.

Because at Pioneer, we're convinced...
that what really matters can't be measured in watts per channel, or total harmonic distortion, or wow or flutter.

What matters isn't just cassette decks with three direct-drive motors, linear tracking turntables or quartz-lock tuning.

What matters isn't that we make more audio equipment than the next guy. Or, for that matter, that we've sold more in the last five years than any other audio manufacturer.

When all is said and done, plugged in and switched on, what matters, is the music.

PIONEER
Because the music matters.
ble to any of the load impedances for which the amplifier is designed. Another scale reads in decibels from -20 to +2 (the latter corresponding to about 250 watts output). Knobs below the meters control left gain, right/mono gain, meter range (-20 dB, -10 dB, 0 dB, watts, hold), the speakers outputs, and power. The hold position of the meter range switch causes the meters to retain their highest readings. The meter-driving circuits allow them to respond to very short program peaks, although they are calibrated in average watts.

At the right side of the panel are the two indicator groups. The power guard display shows the number of the system test sequence step as it is executed, and pairs of red and green LEDs show either that the limit (of output power) has been exceeded or that the amplifier operation is normal. Above this group, a meter group illuminates the words watts, hold, or decibels, according to the setting of the meter range switch.

On the rear of the chassis are two sets of barrier terminal strips for the speaker outputs, a single unswitched a.c. outlet, and the holder for the 15-ampere line fuse. A three-position mode switch selects stereo, mono bridge, or mono parallel operation. Next to the two input phone jacks is a switch that sets the input sensitivity to either 0.75 or 2.5 volts for full output depending upon the associated equipment. (The latter is the normally preferred setting for most setups.)

The MC 2255 is a handsome and rugged amplifier, following a long-standing McIntosh tradition in its styling and construction. The panel and most of the top metal work are finished in black, with front accents of silver and softly lit blue-green meters. The chassis is chrome-plated. Also furnished with the amplifier are side brackets and hardware for the McIntosh Panloc system for custom installations.

**Laboratory Measurements.** Preconditioning the MC 2255 at one-third rated power made the heat sinks very hot, but the rest of the amplifier remained comfortably cool throughout our tests. In normal operation the MC 2255 is no more than faintly warm and has no need of a cooling fan or any unusual ventilation precautions.

With both channels driving 8-ohm loads at 1,000 Hz the distortion was undetectable (well below the noise level) until we reached 10 watts output, when it measured 0.0035% per cent. It increased very gradually with higher power to 0.0032% per cent at 250 watts and 0.0045% per cent at 300 watts. The maximum power (corresponding to "clipping power," except that the waveform could not be made to clip) was about 357 watts, with distortion reading 0.24 per cent at the limiting point. The output into 4 ohms (using the appropriate output terminals) was also 357 watts, and we were able to develop 420 watts per channel into 2-ohm loads.

At the rated 250 watts output into 8 ohms, the maximum distortion was 0.01 per cent at 20 Hz. Over most of the audio range it was about 0.004 per cent, rising to 0.009 per cent at 20,000 Hz. At lower output powers the distortion was substantially lower. The amplifier sensitivity (using the 2.5-volt switch setting) was 0.15 volt for a 1-watt reference output, and the A-weighted noise and hum level was 86 dB below 1 watt. The frequency response of the amplifier was within +0.01 per cent from 20 Hz to 20,000 Hz and was down 0.9 dB at 5 Hz and 3 dB at 150 kHz.

The amplifier rise time was about 3 microseconds, and its IHF slew factor was about 10. The IHF intermodulation distortion, measured with 18- and 19-kHz signals, was -94 dB for the second-order component at 1,000 Hz and -67 dB for each of the third-order products at 17 and 20 kHz, all being referred to a 250-watt level. The clipping headroom of the amplifier (Continued on page 44)
Creating great music has never been simple.

Now recreating it is.

Audition the AD-3800 3-head cassette deck and you will witness a display of technical sophistication. In 16 seconds, the AD-3800 will automatically record test tones, check playback, then set bias, sensitivity and equalization. It's impressive! Mechanically, the AD-3800 is just as outstanding. AIWA's patented dual capstan tape transport has reduced wow and flutter to just 0.025% (WRMS)! Add to that Dolby C, auto-demagnetizing, 32 section tri-color bar meters, digital tape/time remaining display and the optional remote control. Now you know why it's the top-of-the-line. CIRCLE NO. 2 ON READER SERVICE CARD

The AIWA AD-3800's DATA microcomputer assures unsurpassed compatibility between tape and deck.

* Dolby is a trademark of Dolby Laboratories
AIWA American Inc., 35 Oxford Drive, Moonachie, New Jersey 07074. In Canada, Shwa (Canada) Ltd.
was 1.55 dB for 4- and 8-ohm loads and 2.55 dB for 2-ohm loads. The dynamic power output was 455 to 466 watts, depending on the load impedance, giving dynamic-headroom ratings of 2.65, 2.7, and 2.5 dB for loads of 8, 4, and 2 ohms, respectively.

Headphone volume was limited by switching off the speakers. We found the headphone volume to be only marginally useful with 600-ohm phones. It was adequate with conventional-impedance phones.

The J.C. Penney Model 3260 AM/FM Stereo Receiver features:

- Power Rating: 60 watts per channel
- Size: 19 x 12 x 5 inches
- Weight: 25 pounds
- Price: $479.95

The Model 3260 offers a digital-synthesis AM/FM tuner, stereo receiver line of J.C. Penney's Modular Component Series (MCS). The Model 3260 has a digital-synthesis AM/FM tuner with an amplifier section specified to deliver its rated power into 8-ohm loads from 20 to 20,000 Hz with no more than 0.02 per cent distortion. It is a full-feature receiver with six memory buttons (each usable for one AM and one FM station), a digital frequency display whose large (1/2-inch) green numerals can be read from a considerable distance, and LED indicators for signal strength, input source, operating mode, and the audio power output of each channel. The displays occupy the upper half of the panel behind a full-width window.

Small buttons just below the display window select the program source (AM, FM, PHONO, AUX) and increase the sensitivity of the power display by ten times or switch it off entirely. Larger buttons across the bottom of the panel control two sets of speaker outputs, the audio filters (SUBSONIC and HIGH), AF MUTE (a 20-dB volume reduction), LOUDNESS compensation, mono/stereo mode, FM muting, and the MPX FILTER (to remove the FM-multiplex pilot carrier from the audio outputs when recording).

Lever switches control POWER, TAPE DUB-BING from either of two decks to the other, and the TAPE MONITOR functions. The treble, mid, and bass tone-control knobs have center detents, and there is a pair of large concentric knobs for volume and balance. The rear apron of the receiver contains the signal input and output jacks, two a.c. outlets (one switched), and antenna binding posts plus a hinged, pivoted AM ferrite-rod antenna. The two sets of speaker connectors are the insulated spring-loaded type. The receiver's front panel is finished in satin silver, with the top and sides covered in walnut-grain vinyl.

Laboratory Measurements. The J.C. Penney Model 3260 receiver is fairly large for its power rating, so even though it is ventilated only by a small grille, it became no more than moderately warm during the pre-conditioning period and the subsequent high-power testing (except during 2-ohm operation).

Driving 8-ohm loads at 1,000 Hz, the outputs clipped at 73.8 watts per channel (IHF clipping-headroom rating of 0.9 dB). The clipping output into 4- and 2-ohm loads was 94 and 82 watts, respectively. Driving the amplifier with the pulsed dynamic-power test signal, we measured a power output at clipping of 89, 96, and 84 watts per channel for 8-, 4-, and 2-ohm loads, respectively. This corresponds to an IHF dynamic-headroom rating of 1.72 dB at 8 ohms.

The 1,000-Hz distortion was very low, being masked by noise below 10 watts, where it reached 0.001 per cent, and climbing to 0.0036 per cent at the rated 60 watts. Into 4-ohm loads, the distortion was only 0.004 per cent at 10 watts, 0.011 per cent at 70 watts, and 0.04 per cent at 80 watts. The 2-ohm distortion was roughly the same as the 4-ohm readings, but at the maximum output of about 80 watts the amplifier became very hot, causing us to abandon the distortion test.

Across most of the audio-frequency range the distortion was well below 0.002 per cent at or below rated power output. At high frequencies it began to increase, to a maximum of 0.01 per cent at 20,000 Hz. The IHF intermodulation distortion was measured with equal-amplitude 18- and 19-kHz signals whose combined peak value was equal to that of a sine wave of 60 watts. The second-order distortion component at 1,000 Hz was barely detectable at -95 dB, and the third-order products at 17 and 20 kHz were each -91 dB (all referred to 60 watts). The IHF slew factor exceeded our measurement limit of 25.

The amplifier sensitivity for a 1-watt reference output was 20 millivolts (mV) through the AUX input and 0.3 mV through the PHONO input. The A-weighted noise levels for these inputs were -78.4 and -76 dB, respectively. The phono preamplifier overloaded at a very good 220 to 230 mV at frequencies of 1,000 Hz and below but at a... (Continued on page 46)
Come to where the flavor is.


Marlboro Red or Longhorn 100's—you get a lot to like.

Kings: 16 mg "tar," 1.0 mg nicotine—100's: 16 mg "tar;" 1.1 mg nicotine av. per cigarette, FTC Report Dec '81
J.C. Penney Model 3260
AM/FM Stereo Receiver

Comment. Most of the features of the J.C. Penney Model 3260 are not unique in today's receivers, but we were nevertheless impressed by its exceptionally smooth and "bug-free" operation, conservative ratings, and ability to withstand considerable electrical abuse on our test bench.

In our tests, the tuner memories were retained (thanks to a built-in NiCad battery) for several weeks even with the plug removed from a powered outlet. Also, each time the receiver is turned on, it comes on at the frequency to which it was tuned when last operated.

The Model 3260 is one of the few receivers (or amplifiers) with really usable "loudness" compensation. Its moderate bass boost ensures a pleasant, non-tubby sound at low listening levels, with enough added "body" to the program to justify the use of the feature.

Excellent as the Model 3260 is, we were probably even more impressed by its origins. J.C. Penney is certainly not the usual hi-fi dealer or manufacturer, and this unit is obviously aimed at a broad mass market of consumers. Most earlier attempts to market component hi-fi to a mass market have emphasized flashy "space-age" cosmetics rather than the level of performance that most readers of STEREO REVIEW would expect from a quality stereo component.

The Model 3260 (and presumably its companions in the MCS line) is a very different matter. This receiver could be placed on the shelf by any audio dealer, and it would look perfectly "at home" in the company of any others that happened to be there. Furthermore, it can hold its own (and then some) against some of the products of the most prestigious names in hi-fi in the same price range. The Model 3260 is the third generation of Penney MCS receivers to pass through our hands, and we are glad to see that it has evolved into a product of which any hi-fi manufacturer (or consumer) could be proud. It is a nice piece of work in every way.

—Julian D. Hirsch

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Within 0.5 dB overall from 20 to 20,000 Hz. When measured through the inductance of a typical phono cartridge, the high-frequency phono response rose slightly above 2,000 Hz to a maximum of 1.5 dB at 20,000 Hz. This is unlikely to be audible.

The FM-tuner section of the Penney Model 3260 was unusually sensitive, with a usable sensitivity of 9.9 dBf (1.65 microvolts, or µV) in mono. The standard threshold was 20 dBf (5.5 µV), at which level the distortion was 1.8 per cent. The 50-dB quieting sensitivity was 13 dBf (2.4 µV) in mono and 15 dBf (30 µV) in stereo. At 65 dBf (1,000 µV) the tuner noise level was —75 dB in mono and —70 dB in stereo, with corresponding distortion readings of 0.066 and 0.19 per cent. The IHF intermodulation distortion of the tuner (with 14- and 15-kHz modulating signals) was —72 dB for the second-order product at 1,000 Hz and —57 dB for the third-order distortion at 13 and 16 kHz. In stereo, the third-order distortion was about the same, but the second-order increased to —57 dB and a number of additional spurious products appeared on the spectrum-analyzer display (this is typical of stereo tuners).

The FM frequency response was virtually flat from 30 to 10,000 Hz and up 1.7 dB at 15,000 Hz. The channel separation was

(Continued on page 48)
THE V-95RX.

YOU CAN'T EVEN HEAR ITS BEST FEATURE.

This is the Teac that's quicker than the ear. It features Real Time Reverse. When your cassette comes to its end, a miniature infra-red sensor activates either the independent forward or reverse capstan (as appropriate). Its unique four-channel permalloy record/play head is repositioned. And the tape reverses course. All in an astoundingly swift 0.15 seconds. So quick, the gap is virtually inaudible. In record or play. And you'll never have to flip a cassette again.

Yet this is just one feature of an extraordinary deck which also offers the unusual option of both Dolby NR* and dbx** noise reduction. Plus Computomatic. So you can program in advance the exact cuts you want. Along with a three-motor transport system. And an optional full-function remote control.

The V-95RX. You won't know if it's coming or going.

TEAC  MADE IN JAPAN BY FANATICS.

* DOLBY  "A REGISTERED TRADEMARK OF DOLBY LABORATORIES, INC.  ** dbx  "A TRADEMARK OF dbx, INC.

CIRCLE NO. 51 ON READER SERVICE CARD
The tuner's muting threshold was 17.2 dBf. The FM capture ratio was 1.25 dB and the AM rejection was 60 dB at a 65 dBf input. Image rejection was a good 90 dB. Alternate-channel selectivity was 71 dB and adjacent-channel selectivity was 5 dB. The frequency response of the AM-tuner section was more or less typical of the performance found in receivers: down 6 dB at 90 and 2,500 Hz.

Circle 143 on reader service card

Aiwa AD-3800U Cassette Deck

- Aiwa AD-3800U Cassette Deck
- Price: $595
- Size: 16 5/8 x 4 3/4 x 10 1/2 inches
- Weight: 11 1/4 pounds
- Specifications:
  - Recording heads: 4-micrometer gap
  - Playback heads: 1-micrometer gap
  - Frequency response: 31.5 Hz to 18 kHz
  - Distortion: less than 2 seconds
  - Head demagnetization: accomplished by an automatic circuit that operates when the deck is turned on or when the ADMS button is pressed.
  - playback section to increase high-frequency resolution.
  - Electronic four-digit counter can be switched to read out minutes and seconds when recording or playing back, but not during fast-winding operations.
  - Pushbuttons with LED indicators are provided for Dolby-B or Dolby-C noise-reduction systems and for tape-type selection.
  - Additional buttons and switches permit muting the recording during commercials, activation by an external timer, and memory rewind and/or play. The rear panel of the AD-3800U contains the usual input/output jacks, a DIN-type connector for a remote-control accessory, and the microphone-input phone jacks. An optional wireless remote control costs $95.

Laboratory Measurements. The material provided with my sample of the Aiwa AD-3800U indicated that it had been set up for use with TDK MA (metal), TDK SA (CrO2-equivalent), Sony Duad (ferric), and TDK D (ferric). Because of the ease with which the machine could be adapted to any tape, I tried a variety of additional formulations, including BASF Pro I, 3M Master I, Loran ferric, Sony HFX (Type I), Memorex High Bias, Fuji FX II, Maxell UD-XLI (CrO2-types), and Sony Metallic, from all of which I obtained essentially equivalent frequency-response curves. My only departure from Aiwa's recommendation was to substitute Maxell XLI-S for the less expensive TDK D in the ferric position, as it gave a better signal-to-noise ratio.

Playback response was measured with the new IEC-standard BASF test tapes, which cover the range from 31.5 Hz to 18 kHz. The slight bass rolloff below 100 Hz shown in the graph on page 50 is not a characteristic of the AD-3800U, but results from using a full-track test tape on a quarter-track stereo deck. The 3.7- and 4.7-dB 18-kHz rolloff is principally the consequence of a

(Continued on page 50)
The Kyocera Series D-801 Cassette Deck with 3 motors and a direct driven dual capstan...

With only 0.02% WRMS wow and flutter.

If you think 3 motors impress you, think of what they can do for tape performance. One drives our dual capstans to insure constant and highly accurate speed with remarkable low wow & flutter of 0.02%. A second motor drives both the take-up and feed reels while the third motor gently positions the record/playback head against the tape surface. An innovative approach resulting in accurate head-to-tape positioning and optimal head azimuth alignment.

But motors alone do not insure top performance. That's where both Dolby* B and C noise reduction circuits come in, along with a Sendust alloy tape head; electromagnetic braking on both take-up and feed reels; selectable bias and equalization for all types of tapes; 30-20,000 Hz response range; full LED function indication; feather-touch controls; APMR for automatic program search; auto stop, auto repeat, memory and a full bank of operational controls concealed behind a flip-down access panel; plus the convenience of a 4-digit LED electronic timer/counter for precise elapsed time, remaining time, stopwatch and memory stop and registering time and/or counter reference of recorded programs... and more.

But our most impressive feature awaits at your local audio retailer... a demonstration of the D-801... it's just one of a very impressive list of distinguished audio components and systems from Cybernet... where the future is now!

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*C. Dolby is a reg. t.m. of Dolby Laboratories, Inc.
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CIRCLE NO. 10 ON READER SERVICE CARD
Aiwa AD-3800U Cassette Deck

The upper curves indicate overall record-playback response at the manufacturer’s indicated 0-dB recording level using the tapes designated on the graph. In the center are the same measurements recorded at –20 dB relative to the upper curves, a level conventionally used for tape-deck frequency-response measurements. Bottom curves show playback response from calibrated test cassettes and indicate the deck’s ability to play prerecorded tapes.

Small modification in the new IEC standards. Overall record-playback response was extremely uniform among the tape types at the normal –20-dB measurement level. The “knee” in the curves was between 16 and 18 kHz. Predictably, the ferrichrome formulation dropped off in its high-end response with a 0-dB input, but TDK’s SA was very close to matching the company’s metal-particle tape.

Using a 315-Hz input at the indicated 0-dB record level, I measured only 0.4 per cent third-harmonic distortion with Maxell XLI-S, 0.5 per cent with TDK MA, 1.2 per cent with TDK SA, and 1.8 per cent with Sony FeCr. To reach the 3 per cent distortion reference point required increasing the input signal level by 8.6, 7.4, 3.3, and 3.5 dB, respectively. On an unweighted basis, without noise reduction, the better-than-average signal-to-noise ratios (S/N) of the four tapes measured 56 dB (XLI-S and MA) and 53 dB (SA and FeCr). With CCIR weighting and Dolby-B noise reduction these figures improved to 66.3 dB for the Maxell XLI-S and the metal TDK MA, to 63.7 dB for TDK SA, and to 65 dB for Sony FeCr. Dolby-C reduced the noise still further, producing excellent S/N figures: 74.5 dB (Maxell XLI-S and TDK MA), 74 dB (Sony FeCr), and 72 dB (TDK SA).

Wow-and-flutter, using a TDK MTT-111 test tape, measured only 0.018 per cent wrms and 0.03 per cent on the DIN peak-weighted basis. The Dolby-level marking was admirably exact, and frequency-response tracking was within ±1 db with Dolby-B and ±2 db with Dolby-C up to 15 kHz at a –20-dB input level. At a –30-dB level the high-frequency error increased only slightly to ±1.5 dB (Dolby-B) and +3 dB (Dolby-C) at 15 kHz.

At 1,000 Hz a signal level of 44 mV (0.044 V) at the line-level inputs and 0.3 mV at the microphone inputs was sufficient to produce a 0-dB indication and 350-mV output level. The microphone inputs accepted up to 640 mV before overloading. Fast-forward and rewind times were just under 80 seconds for a C-60 cassette.

Circle 144 on reader service card

ZX-7...Maximum Performance through Complete Control

With the Nakamichi ZX-7 you command and optimize the vital record parameters—bias, level, and azimuth—which bring to life the true potential lying dormant in every cassette. This kind of control, plus the most advanced technology and features in cassette history, make the ZX-7 a serious recordist’s dream-come-true.

Maximum Performance... The ZX-7 awaits you now at your Nakamichi dealer.

Nakamichi For more information, write Nakamichi U.S.A. Corp., 1101 Colorado Ave., Santa Monica, CA 90401.
Once again, JVC harnesses higher tech in the pursuit of higher fidelity.

The power of higher tech, harnessed by superior engineering. Once again, it's the mark of JVC's leadership. Even in the realm of moderately priced components like these.

The intricacy of JVC turntable design.
You see it, and hear it, in attention to subtle, yet significant details. Like a straight, low-mass tonearm with tracing hold to stabilize tracking. And quartz control to insure virtually perfect platter rotation.

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A JVC innovation called Super-A removes subtle forms of distortion. So musical overtones and transients are amplified intact for a pure, musically natural sound. Add graphic equalization and quartz tuning, and you have receivers unsurpassed for performance and versatility.

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The sound of this diminutive speaker is nothing less than astonishing.

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BUYING FRUSTRATION

No communications I receive as Music Editor at STEREO REVIEW bother me more than those that tell of the difficulty, or the impossibility, of the correspondent's purchasing a record we have just reviewed. They bother me so much — though they are rarely critical of the magazine or my part in it — because there is so little I can do about them. And they bother me because they are symptomatic of the near-moribund state of this business I once used to love and have, over the years, grown almost to hate.

The classical record business, yes, and the popular record business too, was once made up of music-minded people notable for their enthusiasm, their knowledge, and their taste. Of course, there were always individuals whose sole concern was financial, or some sort of ego gratification that had nothing to do with music, or who had no concerns at all other than having a job, but the mesh of musical and non-musical people was a working one, and everywhere one looked one saw musical and record people, in decision-making positions. They may not have had ultimate authority, but they made most of the musical decisions. With only a few exceptions, they were also greatly interested in how their productions were received. The thought that someone who wanted one of their records was finding it literally impossible to buy it and that nobody with the job of selling those records was taking the matter very seriously would have driven them up the wall.

And yet, to the surprise of no one, least of all readers of this magazine, that seems to be precisely the case today. I cite only two recent examples. First, a reader in the Midwest called to tell me that he had been trying, completely without success, to buy a brand-new London digital record, a record that had received from us a "Best of the Month" designation. He had begun his attempt immediately upon reading the review and was calling me two months later. He had already made the usual rounds — that is to say, first the record store that doesn't know anything, then the special order, then the information that the disc is back-ordered, then the canard that it isn't available, then the lack of concern of someone at the record company, and finally the confession of the local distributor that while he has forty-eight orders for the record, they are too few for him to bother with. Really? Why put out the record at all?

I gave the gentleman the names and addresses of a couple of stores in New York and a couple in Chicago that I thought might be able to help him. One of those stores just happened to call me later about something else, giving me example two. Did I know, asked the gentleman at the store, that RCA has just instituted a new policy that allows stores to order Red Seal records only quarterly (instead of as they need them) for delivery one month afterward? No, I didn't know. Did I understand, continued the gentleman, that even a store such as his, which sells a lot of classical records, could stock only one or two of most items (because of the sheer number of different records they have to stock), and, therefore, if they sold a record in December they might not have another copy of it to sell until April? Yes, I understood it. What did I think of it? I told him I thought that RCA, if such was their attitude, ought to sell their Red Seal division to someone who wanted to be in the classical-record business.

And that is one of the main roots of the problem. The business is almost entirely controlled these days by people who don't want to be in the classical-record business. As a field of economic endeavor it has its inherent difficulties: a small audience geographically spread out, low unit prices, a product that needs and cannot get proper quality control, too much direct competition. With the best of intentions there are bottlenecks. With less than the best, the whole affair is one big gridlock. Records are deleted because they don't sell; records don't sell because people are unable to buy them. It has the ring of one of Kafka's minor musings.

The classical-record business is the mess it is today not because of new technologies (in fact, technology bails it out every once in a while), but because a suicidal management system preoccupied with numbers rather than the product, with markets rather than customers, is driving it lemming-like into the sea.
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For more information, write: Atari, Inc., Dept. A140, PO. Box 16525, Denver, CO 80216
Estimated product availability of Pac-Man, Caverns of Mars and Home Filing Manager, mid-1982
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CIRCLE NO. 3 ON READER SERVICE CARD
Manufacturers are playing it cool for now but getting ready for two fascinating new developments: microcassette players and stereo-AM broadcasting

By Ivan Berger
Fore work on any program material, including both FM and tape, and it needs no encoding in advance.

Besides Autotek's in-dash unit with DNR (and Dolby-B) announced last year, there are in-dash units with DNR here or coming soon from Blaupunkt, Boman (in its Carrera series), FAS (the company's first in-dash unit), and J.I.L. Concept (not to mention Jensen's micro prototype). The feature will also show up soon in Audiovox, ARA-Motorola, Sparkomatic, and others—about fifteen manufacturers this year.

Last year, FAS announced an equalizer with dbx (so did Rockford Fosgate, but I didn't see it this year), and dbx itself introduced a separate decoder. A newly announced low-voltage dbx decoder chip is likely to help make the system popular. There are no in-dash systems with dbx yet, but Concord now has a separate dbx decoder and two in-dash units with connections for it.

The Schotz tuner circuit, which uses a signal-responsive variable-bandwidth FM detector, is making its entrance in Proton's car-stereo line this year. It is said to provide better than state-of-the-art specs for capture ratio, sensitivity, and multipath rejection. There will be two models initially: the Model 202, with full tone controls, analog tuning, Dolby-B, a preamp output, and a built-in 5-watts-per-channel amplifier, will be $189. The Model 201, with auto-reverse, digital tuning, station presets, and Dolby-B, will be about $300 to $330. Fancier models are planned, but they probably won't appear this year.

Marantz's IMS (Interference Management System), another FM-cleanup technique introduced last year, will be on two new Marantz models, the CAR 312 ($200) and CAR 320 ($170). Both have reversible face plates which incorporate the molded-in "hex nuts" which have become a Marantz trademark, but not the Marantz gold finish (they're wood-grain on one side, black on the other).

ARA-Motorola has another circuit, the FM Exteder, in a line that runs from $189 to $400. It's apparently an automatic high-bend circuit. ARA-Motorola's new one-year warranty includes removal and re-installation costs—a new idea, and a very good one.

Blaupunkt's emphasis on "Night Illumination" (it's in at least five of the company's in-dash units and one equalizer) is being echoed by other companies. For example: Kenwood's KRC-1022 illuminates most controls and has an automatic dimmer; Audiobahn's AB-1000-ETX Series II has LEDs on the station-selector buttons; Alpine's illuminated-button Model 7136 has been joined by four other models with this feature (the 7135, 7140, 7146, and 7337); Metro Sound's Blue Sapphire EQ-330 seven-band equalizer ($133) has green, backlit controls; and Kenwood's new KGC-447 equalizer ($139) has moving LED spots instead of moving slide controls to show where you've set it. Settings are made by pressing buttons to raise or lower the response in each band. (A similar equalizer is built into Kenwood's latest home receiver.)

Alpine's new Model 3316 ($200) is a preamp-level, seven-band equalizer with subwoofer output; it has a bypass switch and LEDs marking its slider positions, plus flashing-LED input-level meters which, happily, can also be bypassed. Metro Sound's Blue Sapphire line includes a twelve-band graphic equalizer, the EQ-370, with 50 watts per channel ($210). Lear Jet also has a graphic-equalizer/booster, the Model 6854, with seven bands and 30 watts per channel (W/ch) at $130. Pioneer's newest seven-band equalizer, the BP-520 ($170) has "IC" echo; without echo, it's the BP-520 ($110). Both versions are designed to deliver 10 W/ch at 5 per cent distortion.

Audiovox has a very compact "paragra-"graphic equalizer, the AMP-775; it's about 1/2 inches high, has seven control bands, and delivers 13 W/ch at 1 per cent distortion. Zapco has a different type of paragraphic unit for about $375. Its four control knobs act like those on a standard graphic equalizer; however, its filter frequencies and bandwidths can be adjusted as in a "parametric" equalizer. The difference is that you plug in each of the needed filter modules rather than turning knobs to get the characteristics you want. A typical setup might have 35- and 160-Hz filters with a "Q" (sharpness) of 2, a 1-kHz filter with a Q of 0.7, and a 16-kHz filter with a Q of 2.5, all with the intention of flattening your car's acoustics.

For Porsche owners, Spectron has a preamp/equalizer with a special faceplate for Porsche installations. Classic Research at Engineering's unit has a "Z-Box" speaker enclosure shaped and finished to match the interiors of Porsches (and of Corvettes and BMWs too).

Getting back to in-dash units, Boman...
CAR STEREO...

"...a car horn which can play seventy-six preprogrammed tunes..."

offers "Rideman" (note the play on "Walkman") stereo-headset jacks on two of its new Carrera models—fine for passengers, but unsafe (and in many places illegal) for the driver to use.

Alpine has a functional styling change, the "SelectTouch Switch," on its new Model 7146 ($500). Instead of pressing four tiny buttons to set tape equalization, the music sensor, Dolby, or local/distant sensitivity, you press the appropriate corner of a large rectangular switch plate. And Lear Jet has introduced a new, economically priced auto-reverse in-dash unit, the A-68 ($170).

Most of the other details I noticed on in-dash units were matters of styling: the introduction of a dark, soft, metallic-grey tone on J.I.L. Concept units, a very clean appearance on the Metro Sound Blue Sapphire line, and a new black version of the (Fujitsu) Ten "Mini-Wizard" (its optional remote control is still finished in brushed aluminum, though).

SEPARATE-COMPONENT tuners rarely have the conveniences found on in-dash units, but Sony's new XT-11 ($350) is an exception. It has auto-scan tuning, presets for six AM and six FM stations, and a three-LED signal-strength indicator. A matching auto-reverse component tape deck, the XK-25, is the same price. Craig also had a component player, the T104, with auto-reverse, Dolby, and preamp-level output.

Aside from these, though, there are few new separate components save amplifiers, but they are in abundance. Audiomobile has an "amp rack" for high-end installations; it includes two high-power amplifiers and an electronic crossover premounted on one easily installed panel. Prices range from $1,400 to $1,900 per rack. Mini-Amp has modules that make similar but lower-priced and lower-power systems, while Spectron's Amp Rack seems to fall between the two.

Linear Power has redesigned its Model 300, at 150 W/ch and 0.15 per cent distortion "the most powerful production car amplifier in the world." Concord is going the opposite direction with its slim, almost tubular (1 1/2 x 1 1/8 inches) HPA-25 monophonic amplifiers, each delivering 12 W/ch at 0.8 per cent distortion. Both Panasonic and Sanyo offer extra-compact amplifiers, too: Panasonic's is the CYSB25 booster amp ($80), 12 W/ch (EIA rating) and only 1 1/2 inches high, which can be turned on by a car-stereo unit's power-antenna switch. Sanyo's is the PA6030 "palm-size powerhouse," an $80 unit only an inch high; it delivers 15 W/ch from line- or speaker-level signals.

Alpine also showed a new high-power model, the 3502 ($350); it's rated at 50 W/ch (EIA) in stereo, but its channels can be bridged to make a 150-watt mono amplifier. Other versions deliver 20 + 20 watts (60 mono) for $200 and 30 + 30 watts (90 mono) for $250. Thanks to Class-D output technology, Spectron has a larger but equally low-slung amplifier with much higher power: 30, 60, or 90 W/ch.

Panasonic introduced its new CQ-S747 stereo ($250) at CES by demonstrating its amplifier with concert-size music-instrument speakers. Considering that such speakers are fairly efficient and that the amp delivers 14 W/ch (EIA), it was no surprise that the demonstration worked, but it was an attention-getter nonetheless.

Proton has a $250 amplifier that will deliver 50 watts into 4 ohms or 72 watts into 2 ohms. It's the first car-stereo amplifier I've seen with a "soft-clipping" circuit (and button) like those on the NAD home, amplifiers; it also has curved-fin heat sinks. JVC has decided to get into the car-stereo business and will shortly be introducing three in-dash cassette/receivers and four speakers. The top-of-the-line JVC receiver has digital tuning, six presets, scanning, Dolby, solenoid tape controls, and 10 W/ch at 1 per cent distortion for $379.

In speakers, the most talked-about development is ADS' new Model 3201 separates, available soon at about $350 to $370 per pair. The two-way system's woofer is totally waterproof, and its frame (of non-corroding Ultramid plastic) has six hold-down points instead of the usual four to minimize air leaks and mounting stress when it is mounted on a flexible surface. It has a 1-inch soft-dome tweeter that bayonets onto an easily attached base, but since it is surface-mounted, you can move it about to find where it sounds best before fixing it in place.

On March 5, 1982, after five years of deliberation and one aborted decision, the FCC finally decided not to decide on one of five competing stereo-AM systems (Motorola, Harris, Kahn, Belar, and Magnavox, the winner until the FCC changed its mind). Instead, they ruled that broadcasters can use any stereo-AM system as long as it doesn't interfere with the present mono-AM system, so it is quite possible that we could even end up with a sixth system from Japan.

The FCC says that this "free-market" solution will "yield the greatest net benefit to the public." If they are referring to the possibility of having a stereo-AM selector switch with five or more positions added to all receivers, tuners, and car-stereo units, it is difficult to see just where that "benefit" might lie. In any event, at press time all parties concerned were rushing full speed in several directions, and one industry pundit has commented that "we would have been better off if the FCC had made their decision by drawing straws."

BECAUSE of the intense competition among broadcast-equipment manufacturers, it is probable that there will be stereo-AM broadcasting by the end of this year. The availability of receiving equipment will not lag far behind, especially in the car-stereo field. So, whatever happens, stereo AM will soon be upon us in one or more forms, in time perhaps even in (would you believe?) hi-fi.
There’s a growing trend toward “plate” systems: two or three round drivers mounted together on rectangular plates that can fit over 6 x 9-inch holes. Many of these are derived from minispeaker boxes, such as Infinity’s new “i-car” (which is basically the front panel from the Infinitesimal box). Several other new plates have no box ancestors that I know of: Boston Acoustics has one coming (another home-sounder company hitting the road); Genesis has two new plates, the AM-135 and the larger AM-165 (apparently derived from the AS-165 separates). Isophon has about the largest plate I’ve seen, a three-way about 8 x 12 inches. Spectron has a two-way plate with polypropylene drivers; the speakers are also available as separates.

Pioneer’s rear-deck speaker with a forward-facing “periscope” tweeter has started a mini trend. Among the latest are Isophon’s “CARonetta” with rotating tweeter and a Clarion unit with dual tweeters that resembles Mickey Mouse ears.

The most unusual new subwoofer design is Linear Power’s Bass Vent. All that shows above your deck is a small, rectangular grille plate with a 1½ x 6-inch hole. Below the deck, two large drivers face each other across a rectangular tube’s narrow axis; the only other opening is that top grille. The fearsome-looking system weighs 12 pounds. An optional amp, the Model 2601, combines a 30-W/ch stereo amplifier for the main speakers with a 100-Hz electronic crossover and a 60-watt mono amp for the subwoofer. Xaxis Transducer Co. has the RAN woofer system. It’s a 10-inch woofer with dual voice coil, and it installs in a box in the trunk. (At the CES, Blaupunkt showed a system with multiple small woofers instead of one big one, but I didn’t get to hear it.)

Alpine now has subwoofers too in 8-inch ($100), 10-inch ($140), and 12-inch ($160) models. In addition to their equalizer with subwoofer output, they now offer an electronic crossover ($130) with switch-selected crossover frequencies of 125, 250, and 500 Hz.

Blaupunkt is introducing a new antenna, the Bosch Autoflex. It has a short, flexible shaft (like a CB “rubber ducky”) with reverse-wound coils on the shaft. According to Blaupunkt, it’s as good on AM as Blaupunkt’s similar-size amplified antennas and better on FM than the amplified models (not as much signal strength, but lower noise). It’s said to cause less wind noise than conventional types and to be unaffected by weather or car washes.

Calfax’s Horn-a-Plenty II is a car horn which can play seventy-six preprogrammed tunes (plus two you program in yourself), sound effects (an oceanliner horn, for instance), and vocal effects (an evil laugh, for example, or an imitation of Cagney calling out “You dirty rat”). If that’s not enough, it doubles as a PA system, alarm clock, and ultrasonic burglar alarm. I like the idea of turning a Rabbit into the Queen Mary, but I’d hate to be at a corner where two Horn-a-Plenty owners were conducting an argument over the right of way via PA.

JUNE 1982
Speaker manufacturer Roy Allison finds a logical flaw in Consumers Union's test methods

**LOUDSPEAKER** design, testing, and evaluation are the subjects of more controversy than anything else in audio. If we agree that the large amount of subjectivity in these activities is the source of most of the disagreement, then the addition of any measure of objectivity ought to be helpful, right? Not necessarily.

To take but one recent example, Consumers Union's letter to Julian Hirsch (in STEREO REVIEW's April "Technical Talk") defending their rating system for loudspeakers provides proof that objectivity and freedom from commercial bias do not guarantee good judgment, for it fails to make a convincing case for several frequently criticized aspects of CU's test methods. The procedure CU uses to generate loudspeaker "accuracy scores" is still flawed seriously enough to render these scores almost meaningless. That is most unfortunate, because it need not be so.

Rather than argue against every point in CU's letter with which I disagree, I would like to examine one fatal logical flaw in CU's rationale, specifically, the reason given for not considering loudspeaker performance in the significant frequency region below 110 Hz in their scoring of accuracy. This stems, I believe, from a basic misconception about the behavior of loudspeakers, a misconception shared by a large number of people.

Consumers Union's criteria for judging loudspeaker performance have changed slowly over the years, but for at least a decade their basic measurement has been of total radiated acoustic power vs. frequency in an anechoic chamber—the power response, as it is called. This information has been interpreted and processed by CU in various ways at different times, but the underlying assumption has remained the same: that the most important aspect of a loudspeaker's performance (certainly the most clearly audible aspect) is how its acoustic-power output varies as a function of frequency. There is wide, but certainly not universal, agreement with CU on this point. I am among those who agree.

It is simpler to test speakers in anechoic chambers than in living rooms because there are no sound-energy reflections from room surfaces to confuse the measurements; only the direct out-
put from the speaker is picked up by the microphone. That is why CU, like most other institutions engaged in loudspeaker testing, tests them under anechoic conditions. But a far more important effect is traceable to sounds reflected from nearby room surfaces, for these sounds actually change the power output of the speaker substantially, augmenting or reducing it at different frequencies according to a complex pattern which changes as the speaker's location in the room is changed.

If the loudspeaker is placed close to at least one room surface (as it is in most listening rooms), these room-boundary effects, although more pronounced at low frequencies, extend upward to about 500 Hz. Thus, when CU was setting up their speaker-test program a decade ago, they had to face the uncomfortable fact that loudspeaker performance in living rooms would be accurately predicted by their anechoic-chamber tests only in the frequency region above 500 Hz. The lower four octaves (40 per cent of the audible range) would be unpredictably related to the anechoic-chamber tests because there would be no way of knowing where speakers would be placed in users' listening rooms. How, then, could they be rated on the basis of the anechoic-test results?

At that point CU, attempting to impose some order on what was then a virtually unmanageable task, made a giant leap of faith, a blanket assumption about the listening habits and living-room decor of loudspeaker users. They decided to assume that speakers would be placed in users' living rooms at least 3 to 5 feet away from any room surface—not only the walls, but the floor and ceiling as well. With that assumption, the room-boundary effects would be limited to the frequency region below 110 Hz, and the anechoic-chamber test results could therefore be applied down to that frequency. Ignoring the lowest two octaves in the rating process was at least more acceptable than eliminating four octaves. However, CU did not tell its readers that an unrealistic room location for speakers had to be assumed in order to validate the "accuracy scores" even down to 110 Hz, though they did point out that changing the speakers' location would affect the bass response.

Since CU began using accuracy-score ratings, there have been two developments that have changed the way speaker designers deal with the question of a loudspeaker's low-frequency performance. These changes ought to have simplified CU's rating system tremendously. The first was the quantification of the room-boundary effect on a speaker's low-frequency output. If we know where a speaker will be located with respect to nearby room surfaces, we can now (using a simple algebraic formula) determine precisely how its acoustic-power output will be modified over the entire bass range relative to its anechoic-chamber response. Knowing a speaker's anechoic-chamber response and its recommended (or assumed) position in a room relative to walls and floor, we know what its real bass performance will be. We also know that this performance will be independent of the room's size, proportions, and absorptive characteristics, and that it will be unaffected by standing waves or room furnishings. It is a response that is a fixed property of that particular loudspeaker when placed similarly with respect to the surfaces of any room.

The second change, following quickly upon the first, was in the design of loudspeaker systems intended for use in certain general room locations so that their performance could be predicted and optimized. Manufacturers began to recommend fairly specific room locations for their loudspeakers; not all do so even now, but a reasonable preferred location can generally be assumed.

Having been made aware of these developments, CU has included room-boundary corrections in their most recent loudspeaker tests and published the resulting response curves extended down to about 22 Hz. Nevertheless, in an inexplicable failure to follow through on this change, CU still continues to exclude speaker response below 110 Hz from its accuracy-score calculations! They claim that the accuracy scores based on their preferred limited frequency range correlate well with the results of double-blind music-listening tests. But the report doesn't tell us that, for the listening tests, they filter out all music energy below 110 Hz. In other words, the subjective-test signal is artificially limited to the same frequency range as is used for the "objective" accuracy-score calculations! No wonder, as Julian Hirsch pointed out, that the correlation is so good.

What is CU's justification for this? That, below 110 Hz, "we believe the effects to be quite variable from room to room." But this is consistent neither with observed facts nor with CU's own practice of applying room-boundary corrections to anechoic-test results. If the information is not (in CU's opinion) valid, why do they publish the corrected curves? And if it is valid, why is it not incorporated in the testing procedure?

Listening rooms do, of course, have standing waves at low frequencies, and the perceived frequency response will, of course, change with a listener's location in the room. But this is true no matter what hi-fi component is being evaluated. It makes no more sense to say that the low-frequency response of a loudspeaker is not significant for that reason than it does to say that a tape machine's (or an amplifier's) low-frequency response doesn't matter because the listening room will change it anyway. CU is using an odd double standard here.

The proof that these accuracy-score ratings are invalid is to be found in CU's own publication. In the September 1981 issue of Consumer Reports there were reports and ratings on mid-price loudspeakers (priced from $400 to $598 per pair) and also on minispeakers (mostly of shoe-box size). The report condemned all the miniature speakers for woefully inadequate bass performance while commenting favorably on the bass performance of the mid-price systems. The median accuracy score for the "minis" was 83.5; for the larger, more expensive speakers, 85.5. That difference of two percentage points in accuracy scores certainly does not adequately describe the vast difference in accuracy between the two groups, as would be easily perceived by anyone who knows what live music sounds like, primarily because CU has eliminated two octaves of low-frequency performance from the scoring process.

But there is no reason to ignore those octaves. The power response of a loudspeaker can be specified exactly (if we know where it will be placed in a room) down to the lowest audible frequency. Its acoustic-power response is therefore no longer an unknown variable—no more so than is the frequency response of an AM tuner or a power amplifier. Let us hope that CU will soon find it possible to correct the methods they use to prepare future loudspeaker reports so as to make them reflect relative performance capability more realistically—in other words, to make the accuracy scores more accurate.
Turntables

One of the principal trends in the turntable market is an increasing proliferation of models with good performance in the middle price range. Typically, these have front-mounted controls that can be operated with the dust cover down, a straight aluminum arm tube, an offset headshell, and a lightweight composite plastic base that resists ringing. Sanyo's TPQ5 fully automatic direct-drive unit ($170) includes a straight tone-arm tube and low-mass headshell, a high-density platter mat, and a floating suspension that isolates the platter and arm from the turntable base. NAD's Model 5025 semi-automatic belt-drive turntable ($148) features a relatively low-mass arm (9.5 grams), a 5-mm-thick soft-rubber platter mat for resonance absorption (this will also be marketed separately as an audiophile accessory), and vibration-absorbing feet. Akai has a new belt-drive semi-automatic turntable for $135 and quartz-lock direct-drive fully automatic models at $175 and $250.

Onkyo's new CP-1017A direct-drive semi-automatic turntable for $160 includes pitch adjustment over a 3 per cent range and three-part vibration-absorbing feet (rubber, coil springs, and felt), while the CP-1028R direct-drive fully automatic model at $260 adds a factory-installed moving-magnet cartridge and microprocessor programming to play up to eight cuts on a record side in any order. Toshiba showed three new turntables with bases made of a nonresonant high-density molding compound: the SR-B150 (a belt-drive semi-automatic at only $115), the SR-D350 (a direct-drive semi-automatic with adjustable pitch at $180), and the SR-Q650 (fully automatic quartz-locked direct-drive, $230). Vector Research has added a two-speed semi-automatic belt-drive, the VT-150 at $120.

Garrard, one of the classic names in turntables, introduced a complete new six-model line, three belt-drive and three direct-drive units all equipped with a straight low-mass 9.5-gram tone arm whose horizontal and vertical pivots are in the plane of the record, thus minimizing warp-induced wow. The top model of each type is fully automatic with a headshell that permits adjustment of the vertical tracking angle.

Another major trend is the growing variety of compact, low-profile turntables occupying only about 1 square foot of shelf space, typically offering fully automatic operation with a radial-tracking arm. Hitachi's first radial-tracking turntable, the L70 ($370), is barely larger in area than a record jacket and has a "digital random program selector" that allows the bands on a record side to be played (and replayed) in any desired order. It is a two-speed model that detects the size of the record on the platter and sets its speed accordingly. Sansui's first entry into the radial-tracking derby, the $350 P-M7, boasts similar features (playing up to seven bands in programmed order), and its microprocessor also provides control signals to drive a companion Sansui D-M7 cassette deck so that, when dubbing, the recorder's starting and stopping is synchronized with the record's. Technics has
added two more models to fill out its line of compact radial-tracking record players: the $200 SL-5 is about the size of a record jacket, while the $250 SL-DL5 has a wider chassis.

JVC's QL-Y7 turntable ($750) features an "electrodynamic servo" tone arm in which the counterweight and anti-skating spring have been replaced by miniature controlled linear motors that control the tone arm's horizontal and vertical movements, virtually eliminating the arm's inertia and allowing tracking force, anti-skating, and resonance damping to be controlled electronically—even altered during play by the front-panel dials.

Dynamic servo control of tracking force and infrasonic arm resonance is also featured in three new Denon turntables, the DP-51F ($425) and DP-52F ($525) fully automatic microprocessor-controlled direct-drive units and the budget-price record-jacket-size DP-11F at $200. This feature stabilizes the arm's vertical motion in response to disc warps, thus maintaining constant tracking force, unlike conventional tone arms whose tracking force varies during play because of the inertia of the arm and cartridge.

Kenwood introduced one new turntable at the show, the KD-670 ($375) with a high-inertia 13-inch aluminum platter driven by a coreless and slotless d.c. motor, a fully automatic tone arm driven by a completely separate motor, and an antiresonant resin base.

Sony has a new turntable that is aimed primarily at owners of Walkman-type stereo tape players with headphones who would like to use them to listen to records, but it also makes a nice "starter" unit for anyone who isn't ready to invest in a complete stereo-component system. The $175 PS-155 has a built-in phono-preamp circuit and a headphone amplifier that allow stereo headphone listeners to be plugged directly into it. Sony's other new turntable is a front-loading design that can be stacked with other audio components; virtually the entire player slides forward from its case, like a drawer opening, to receive the record, then retracts for play. The $400 PS-F1.5 has a microprocessor control system and three motors: one to spin the turntable's platter, one to cycle the tone arm, and a third to operate the loading system.

At the low-cost end of the market, Mesa introduced two fully automatic multiple-play record changers, the Models 100c ($85) and 200c ($90), as well as two semi-automatic single-play models, the 500s ($80) and 600s ($85), all factory-equipped with Audio-Technica AT70 pickups. BSR added four models to its Quanta line, each equipped with an ADC cartridge: the 75MX ($110) and 72MX ($100) are automatic changers, while the $250 SL-DL5 has a wider chassis, and the 500s ($80) and 200c ($90), as well as two semi-automatic single-play units.

Of greater interest, perhaps, are the state-of-the-art products that explore the frontiers of performance—or at least do something different. For instance, Cybernet is a division of Kyoto Ceramic, so its PL-901 belt-drive turntable is equipped with a high-density ceramic spindle, a ceramic thrust bearing, and even a dense 6-pound ceramic platter riding on a brass subplatter. The 60-pound turntable has no rubber platter mat; the record rests directly on the nonresonant ceramic platter, and Cybernet is also marketing a separate 3-pound ceramic platter mat intended to replace the rubber mats on other turntables.

Onkyo's effort at all-out high-end design is the PX-100M, weighing a solid 88 pounds and sporting a suggested price of $2,500 without tone arm. This visually striking unit has a black base and a 13-inch polished copper platter driven by a peripheral linear-induction-drive system that uses the solid electrolytic 22-pound copper platter itself as the rotor. (Current flowing in the large copper coils beneath the rim induces eddy currents in the platter that cause it to be pulled in the direction of flow.) Since there are no "poles," the driving torque is smooth and continuous with no cogging, and in consequence the residual wow-and-flutter of the turntable is specified as under 0.01 per cent rms.

Sansui's XR-Q7 direct-drive turntable features a "Silent SynchroMotor" counter-rotating subplatter—actually the flywheel of a second motor mounted coaxially with the main motor and driven by the latter's servo-control speed-correcting pulses, thus producing equal and opposite torsional forces. The purpose is to eliminate any effect that unbalanced torsional forces might have on the turntable's performance, and the system yields a DIN B-weighted rumble specification of better than 80 dB. This $500 turntable also incorporates the "dynamically balanced" tone arm Sansui introduced last year, a design in which the arm's mass distribution is calculated to ensure that vibrations reaching the tone arm through its base will not produce any net motion of the stylus tip.

Luxman has three new turntables. The PD-289 ($400) is a fully automatic single-play direct-drive model that uses an optical sensor to control arm liftoff at the end of play, while the PD-284 ($300) is a semi-automatic unit. The $1,000 PD-300 belt-drive unit features Luxman's vacuum disc-stabilizer system in which a two-stroke manual vacuum pump temporarily bonds the record to the vibration-absorbing rubber platter mat, flattening out warps.

Nakamichi is known for its cassette decks, including some very exotic and costly models, but the company has come up with a turntable design that is even more exotic.
Accessories

ACCESSORIES are rarely revolutionary; it's not in their nature. But one revolutionary accessory was unveiled at the Winter CES (or rather in a hotel suite on the show's periphery): the Adaptive Digital Signal Processor (ADSP) from Acoustic Research. The ADSP is completely automatic. Its handheld control unit contains a microphone and a control button. Press that button, and a test signal is fed through your system while ADSP checks the response at your listening position through the mike. Then it's up to you to filter (adjust) the signal to compensate for speaker-response variations, room acoustics, and other factors in the overall response.

What distinguishes the ADSP from such automated equalizers as the dbx 20/20 and Sansui's SE-9 is the way the sound is measured and the adjustment performed. The measured response is used to generate a digital filter program to correct system errors below 1,000 Hz. This program can create "filters" as numerous and as wide or narrow as need be; AR cites filter bandwidths of "only a few hertz and corrections for "more than fifty peaks and dips in a 1,000-Hz span" as examples of what it can do. It can also separately correct errors in the direct speaker response and the reflected room response. AR expects to deliver the ADSP unit in mid-1982 at a price somewhere between $1,500 and $2,000.

Audio Control has added CX decoding to its D-10 equalizer and $10 to its price, making it the D-10X. Kenwood showed the GE-1000, a twelve-band, $440 graphic equalizer with built-in time-delay and a visual display of time-delay "depth." Similar displays are found on other Japanese delay units, including Pioneer's $195 SR-9 reverb amp, now anodized in "champagne gold" to match the rest of the Pioneer line; the RG-9 dynamic processor (also $195) has received the same treatment.

I noticed only one new accessory CX decoder, a Kenwood prototype with moving-coil and moving-magnet phone inputs (which means it could also be used to add an extra phone input to a system). However, Toshiba showed two CX-equipped receivers, Audionics and Sherwood showed preamps with CX, and Soundcraftsmen announced a $15 plug-in adaptor for its 4000-series preamps.

Elsewhere on the noise-reduction front, dbx showed its first combination noise-reduction/expansion unit, the Model 228 ($499). As a noise reducer, it allows simultaneous encoding and decoding for three or two-head tape decks and decoding for dbx discs (of which there should be about a hundred and fifty titles by the time you read this). It also offers variable expansion up to a 1:1.5 expansion ratio. If all you want is expansion, the three-band 3BX has now been replaced by the 3BX Series Two, slimmer (13\(\frac{1}{4}\) inches high, 19 inches wide) and considerably less expensive ($549 instead of $750). Quadraphony reared its controversial head again with the Tetrasound decoder in both home and car versions. The home version, with remote control, will be $1,200, but Tetrasound units will eventually be available at lower prices.

Not all the boxes you can pass a signal through are signal processors like those mentioned above. Perhaps the most elaborate exception to debut at the show was Russound/FM-P's modular speaker-level control system. Instead of resistive L-pads, the Russound units use autotransformers. These waste less power than L-pads. The standard module ($80) has two autotransformers, one per channel. An alternative $100 version for high-power systems has two transformers per channel. For complex, multispeaker audio setups, an impedance-matching module ($150) signals you to turn its transformer switch when overall system impedance drops below a safe 4 ohms. Also new from Russound is the VS-1 headphone junction box ($80) with speaker switching and headphone level control.

Audiovisual Systems' patch bay made its CES debut. Like most patch bays, this has two or three inputs and two or three outputs. The places you insert a patch cable. Despite the winds of digital change, new accessories for analog record players keep appearing. Most, as usual, are devoted to record care and cleaning. Allsop's Orbitrac rotates around the record's center: it includes a pad on which to lay the disc while cleaning to avoid any possible strain on the turntable. Audio-Tecnica's Techni-Clean is a handheld pad with one-way fibers, built-in fluid reservoir, and a conductive body to drain static from the disc: its storage base suspends the pad so its fibers won't mat or pick up dirt. Both cleaners are $25. The Nitty Gritty machines are more expensive but more spectacular. Picture an oak-and- walnut box with a spindle and two Teflon tips on top. You rest the record on the spindle and clean it with the brush and fluid supplied, then you flip it over and rotate it; a vacuum below the soft, non-scratch lips sucks off all dirt and fluid. There's no supporting platform to spread dust back to the recorded surface—it touches only the lips and brush. The smaller Nitty Gritty II is $299, the Model III, with storage compartment for the brush and fluid, is $399. Another way to keep record surfaces from contamination is to handle them with Discwasher's new Disc-Handler. It clamps to the edge of a 12-inch LP so you can grasp and flip the disc without hand contact; it also opens the plastic wraps around new albums.

Clamping of a different kind is provided by two vacuum turntable mats designed to hold all but the most horribly warped records flat and to damp record resonances—a technique pioneered by recent Lux turntables. Audio-Tecnica's AT66 stabilizer replaces the turntable mat and includes a manual vacuum pump with vacuum indicator. The suction holds the disc down with 55 pounds of force but without adding any mass to the system. The vacuum is said to last an hour, which is more than enough for any LP side, and the unit will carry a suggested price of $275. Reference Monitor International showed a prototype of a simpler vacuum stabilizer called Vac Mat ($99). You place the record on a mat with a raised rim, then squeeze a gasketed bellows over the spindle to create the vacuum.

Gruv-Glide announced that its record-care formulation (a dry, antifriction, antistatic chemical) has been endorsed by Sheffield Laboratories, of direct-to-disc fame. A kit to treat two hundred LPs is $22. And if you need replacement shells for one of the new straight-arm turntables, Audio-Tecnica now has a shell that will fit most of them, though its offset angle will be optimum only for arms of certain lengths. Radio Shack has such shells too.
There were surprisingly few new developments in tape care this year. Allsop has a new tape cleaner, with replaceable felt, for both regular and auto-reverse tape decks. Discwasher has added a C.P.R. (capstan pinch-roller) cleaner to the Perfect Path head cleaner it introduced last year. And LC Engineering Lab has new test tapes (including ones for microcassette use), each dubbed directly from test-tone generators.

—Ivan Berger

**Headphones**

Most of the emphasis in headphones this year was on the ultra-lightweight, miniature phones made popular by personal portable tape players and radios. This year the phones were even more portable: Aiwa, Mura, and Technidyne showed models with folding headbands. The even more collapsible Sound Partner from Koss has now been redesigned as the KSP-S1 “with improved coupling between its transducers and the ear”; the $35 price is unchanged. Denon’s new AH-P5 Pocket phones fold small enough to fit into a cassette box. They’re rivaled by phones that have no headband at all but hang directly from the ears, introduced by Sony last year, such phones are now available from Mura and Technidyne as well.

Different companies dealt differently with the conflict between the 3.5-mm headphone jacks of portable equipment and the 1/4-inch jacks of home gear. Aiwa has joined Sony in offering convertible plugs like those on their microphones. Some others, such as Mura, Sansui, Denon, and Audio-Technica, offer their miniphones with short cables having 3.5-mm plugs plus long cable adapters for 1/4-inch jacks. (Audio-Technica also sells such adapters separately.) Pioneer’s newest lightweight phones have interchangeable cords with muting switches in the junction boxes the cords plug into. You can partially mute Mura’s Red Set V too—it has sliding volume controls for each ear, despite its 2-ounce weight.

Not all new phones are ultralight. Beyer introduced the DT660 with ducted-port reflex enclosures ($95). Pioneer offered the SE-L15 ($110) with “Variable Chamber” passive-diaphragm enclosures. Fostex showed several “Regular Phase” phones with flat, printed-ribbon diaphragms. And Stax introduced two new models of its electret EarSpeakers.

Headphones aren’t the only reproducers sold for personal portables. AudioSource, Mura, and Technidyne also offered pocket-size speaker systems with 3.5-mm-plug cables for the purpose.

—Ivan Berger

**Cabinets and Furniture**

If the much-discussed “marriage of audio and video” has been consummated, it is in wood and vinyl rather than in electronics. Many audio components at CES were shown in simulated home settings that included video equipment (Sony’s component Profeel TV was most prominent). Cabinets designed for such mixed systems were shown by Barzilay, Bush Industries, Mariani, Pulaski, Ridgewood Industries, and SDI Wood Classics. Matching audio and video cabinets were shown by Ashley Arcadia, Bush, Custom Woodwork & Design (“Woodmore”), Gusdorf, Mariani, and SDI. CWD Woodmore accessories now include video as well as audio tape drawers (and accessories for stacking two of their 30-inch-high cabinets together). Kenmark’s expanded range of multiple-drawer tape cabinets now also includes models with drawers for both types of tape.

In pure-audio storage, Sonrise showed rotating tape cabinets for tabletop and floor as well as combination tape/disc racks for the floor. Nous’ Discollectors are wall-mounting picture frames that hold one 12-inch record jacket apiece and interlock for multiple-album display.

In styling, the trends continued toward the use of real wood or veneer rather than vinyl or laminates and toward rounded corners. There is also a growing variety of finishes in both real and pseudo wood. Oak is gradually wresting dominance from walnut, with such companies as Fournier and CWD offering both dark and light oak; Gusdorf showed a new “hickory” finish with “cane” inserts and new “burled-walnut” inserts for their walnut-vinyl cabinets. SDI used angled panels of mirror-image wood veneers for a distinctive, arrowhead-like effect. Ashley Arcadia showed “tambour-style” cabinets framed in concentric moldings.

Audio racks with glass that wraps around to the sides instead of confining itself to the front doors were also popular, less among independent furniture makers (though Ridgewood Industries showed some) than among audio-component makers such as Pioneer, Onkyo, and Sansui. Sansui’s new GX-155 was notable for having a headphone jack on its exterior so you can listen privately with the rack’s doors closed. It is finished in oak-grain vinyl and has a suggested retail price of $220. The styling of the Xylophile by Raymond Lepper Works was simple and conservative, but the level of craftsmanship was well above average. So, naturally, was the price: $520 for a 32-inch cabinet, $749 for a 64-inch model. Available accessories for the unit include a cassette drawer, sliding turntable shelf, and an under-shelf light.

—Ivan Berger

**One-brand Systems**

The first one-brand “rack” systems were introduced in the U.S. about two years ago at the CES. They were intended primarily to broaden the audio market by simplifying the process of buying a home stereo. The theory was that if hi-fi were made
should be auditioned carefully before buying. One-brand systems are highly variable in quality and cabinets that come with them are one-brand systems have adequate electronics but advisors to friends and relatives. Them better to fulfill their function as audio systems introduced.

At the Winter CES this year there were almost no new one-brand systems introduced. STEREO REVIEW’s readers have already been advised (December 1981) of the advantages and pitfalls of one-brand systems, not so much for themselves but to enable them to fulfill their function as audio advisors to friends and relatives. Briefly, one-brand systems have adequate electronics with lots of modern features, and the cabinets that come with them are handy.

But the loudspeakers supplied with these systems are highly variable in quality and should be auditioned carefully before buying. (To attract rack-system customers who would prefer more familiar loudspeakers, Kenwood and JBL announced a joint marketing agreement under which the Kenwood Spectrum and Audio Purist series will be available with speaker systems from the JBL Radiance line.)

There are some very elaborate rack systems from companies such as Fisher and Rotel that cost over $2,000. Judging from the few new systems at the show, however, most of the buyer interest is in the $1,200 and-under bracket, especially in the more compact packages that can be bought either with a cabinet or without. Without a unit cabinet, the stack of components is known as a “shelf system.”

Aiwa’s new M-808 minicomponent system has a 50-watts-per-channel (W/ch) direct-coupled power amplifier and a separate preamp with a moving-coil phono input. The M-808 also contains a digital tuner with a circuit whose function is to keep digital noise out of the audio section. Options include a cassette deck with Dolby-C, a front-loading turntable that fits into the bottom shelf of the optional cabinet, and a digital tuner that can record two events per day, make changes between tuner station presets, and keep track of the time remaining on a cassette. Also available as an accessory is an infrared remote control, an increasingly popular feature in medium-size shelf systems.

Another wireless-remote unit is Rotel’s new RCX-860 cassette/receiver, or cassette receiver. Its rated output is 40 W/ch at 8 ohms, 60 W/ch at 4 ohms. The full 860 system ($995) includes a turntable, also remotely controllable, and a rack.

Optionica showed four new systems priced from $650 to $1,000. At the top of the line is the System 5400, which has a 60-W/ch amp, a moving-coil preamplifier, a direct-drive turntable with a separate motor to control the tone arm, and a pair of three-way speaker systems.

The only major new line of one-brand systems at the show came from the German firm of Schneider, which introduced fourteen rack and shelf systems ranging in price from $550 to $1,600. Many of the Schneider systems come either in racks or as groups of shelf components; the rack systems are bolted into their cabinets so that all the buyer has to do is connect the speakers and the power cord. Schneider’s turntables are made by Dual; many of their cassette decks have the mechanism in a sliding drawer for compactness. The most interesting of the Schneider systems is the DCS 8025 (for Direct Contact Series). Each component in the 8025 system has four eleven-pin connectors built into the chassis: male on the top and right sides, female on the left and bottom. Each pin in the connector is uniquely assigned to an input or output function, so the user can stack the components in any order, either vertically or side by side, and all signal connections are made automatically. The basic 8025 system ($1,150) comes with a 25-W/ch power amp, a separate preamp, an AM/FM/LW analog tuner with five station presets, a sliding-drawer cassette deck, and a pair of three-way speakers.

The line between minicomponents and portables grows ever more blurred. Aiwa, Rotel, Telefunken, and Kenwood now offer mini systems that can be operated from a 12-volt d.c. source. The Kenwood DC-20 system has a dual identity: it is both a portable and a shelf system. The self-contained portable section has its own battery pack and contains a preamp, tuner, cassette deck, small power amp, and self-contained speakers. There is also a larger power amplifier with a 20-W/ch output on which the portable unit sits when it’s at home and an optional pair of separate speaker systems with 4-inch woofers/midrange drivers, 4-inch passive radiators, and 1-inch dome tweeters. The larger system will operate on house current or, with an optional adaptor, from a car’s, recreational vehicle’s, or boat’s electrical system. The DC-20 sells for $700 without the separate speakers, which are $250 per pair.

Almost everyone expects that the next few years will see immense growth in the home-video industry. It is already so large that an exhaustive survey of every new television set or videocassette recorder at the CES would confuse more than it would enlighten. But there is much that is worth talking about, especially from a sonic point of view. The audio in present-day video equipment has a great deal of room for improvement, but much development work has been done.

It is all too easy to conclude that just because people are watching a lot of TV, they will be eager to buy video recorders, videodisc players, and large-screen sets. While most of the attention at a CES is paid to the more glamorous new technologies, the mainstay of the market is still the conventional television set. However, an increasing proportion of TV sets are designed to be integrated into an audio/video home entertainment system.

The growing trend toward component video will help improve TV sound quality. The heart of these systems is the video tuner, which takes the signal from the antenna and converts it to line-level audio and video. The audio is sent to a stereo system and the video signal to a video monitor whose sole function is to reproduce the picture. Sony’s Profes series of video components is the best-known of this new genus; the Profes 19- and 25-inch monitors alone cost $850 and $1,500, respectively.

The Japanese firm of Teknika has introduced its ATV-25 audio/video system, which comprises either a 19- or 25-inch monitor, a low-power stereo FM receiver with built-in cable-ready TV tuner, and (as options) an audio cassette deck, a turntable, a pair of speakers, and a choice of racks to
hold it all. The entire system can be operated by remote control. And although they plan no formal introductions until the June CES, the well-known NAD audio firm held private showings of a high-performance 19-inch monitor with a separate video tuner. NEC showed a basic video tuner and a pair of monitors.

JVC, carrying an old idea to its logical limit, issued engraved invitations to "The Marriage of Audio and Video." Each of the six display areas in their booth offered both kinds of technology. In one, there was a conventional stereo audio system plus a VHD videodisc player and the new AV-2000U monitor/receiver with three sets of audio and video line inputs. The AV-2000U contains a cable-ready tuner, and all functions can be wireless remote controlled.

In the battle of the new video technologies there seems one obvious winner: the videocassette recorder, with its equal ability to record off the air, make home "movies," and play commercially duplicated material. To record off the air, make home "movies," and play commercially duplicated material, the VHS contingent has not been sitting on its hands either. The new Beta units with Dolby-B and Dolby-C noise reduction. The VHS contingent has not been sitting on its hands either. The new Beta units with Dolby-B and Dolby-C noise reduction. Of more interest to the audiophile is the machine's stereo sound with Dolby-B noise reduction. Of more interest to the audiophile is the machine's stereo sound with Dolby-B noise reduction.

Another new VHS home deck, the Hitachi VT-9710, also has Dolby-B.

The sound from these machines is surprisingly good considering the slow tape speed and the narrow (0.1-mm) track width. Judging from a brief sampling, there is distinctly more tape hiss than from an audio cassette deck as well as more audible dropouts. But jazz and popular music were quite listenable, and bass performance is good. There will be prerecorded software for these machines: Paramount and 20th Century-Fox Video (formerly Magnetic Video) both have stereo VHS duplicating machines, and one pundit predicted there will be two hundred stereo videocassettes released by this year's end. If that happens, the selection will be larger than the entire optical-disc catalog at present. In a related development, Mobile Fidelity demonstrated startlingly good stereo sound from master tapes dubbed on a $2,500 professional VHS deck; they plan to release some of their music albums in stereo VHS form with added picture programming.

The greater demands placed on video tape by the public's desire for better sound, especially at the very slow (less than 0.5-ips) 6-hour VHS speed, have prompted the tape manufacturers to produce another, improved generation of blank tape. Sony's Dynamicro High Grade, Fuji Super HG, and Maxell HGX all offer improved audio and video signal-to-noise ratios.

The prerecorded-tape rental market continues to grow and prosper, and this has attracted the attention of the motion studios, who initially wanted nothing to do with the whole enterprise but have now claimed a piece of the action. As a result, more recent releases will be available for rental, but fees will go up. Another controversy rages over a California court decision that home taping off the air is a violation of copyright (see "Taping and the Law" in March Stereo Review). The consensus at the show was that the matter will be taken care of by legislative means sooner or later (see April's "Bulletin"), and no one seemed to be worrying much except the people who ran the "Defend Your Right to Tape" booth.

The most exciting piece of news at the show for the audio buff was unquestionably the introduction, a little earlier than expected, of the Sony PCM-F1 digital adapter. This device turns two channels of audio into digital form and then disguises the resulting "stereo" stream as an NTSC video signal. Any videocassette recorder, whether Beta, VHS, or U-Matic, can be used with the PCM-F1, and the combination gives results superior to any analog recorder in distortion, noise, and flutter. The breakthroughs here are in size and price; last year's model was the PCM-10, which weighed over 50 pounds and cost $5,200. The PCM-F1 weighs less than ten pounds and costs $1,900. It has a rechargeable battery pack and an optional car adaptor, and it matches in size and appearance the very small Sony SL-2000 Betapak. Combining this with a small Sony SL-2000 two-track studio machine slung over your shoulder. The PCM-F1 uses EIAJ fourteen-bit encoding and has switch-selectable sixteen-bit encoding as well.

Push has come to shove in the videodisc market. The CED disc player from RCA has sold well, and there are mass-market releases of several thousand with mass-media advertising. The CED disc player from RCA has sold well, and there are mass-market releases of several thousand with mass-media advertising.

Despite predictions that VCRs and videodisc players could coexist peacefully, both the CED and LaserVision catalogs suffer in comparison to the tape rental market in both variety and depth. Disc manufacturers are accordingly scrambling madly to provide new programs. Some of these are interesting, especially the optical titles, which have an increasing emphasis on sound. At CES, Pioneer played stereo videodiscs with CX noise reduction using new machines with built-in decoders. Among the offerings were Michael Nesmith in Elephant Parts, Dragoslayer, a Covent Garden production of The Tales of Hoffman, and a live Ray Charles concert, the last two in CX-encoded stereo.

The third videodisc format, the VHD from JVC, made a surprisingly strong showing, with claims that by the end of this year one hundred and twenty-five titles will be available. JVC too is planning a number of stereo music programs on videodiscs.

To summarize: the video market is, at the moment, built around broadcast TV, cable TV, and tape rentals. A lot of attention is being paid to better sound, and in the next few months we will see more of a trend toward video components, with a VCR and perhaps a disc player as accessories. But for now, if all you do with your TV set is turn it on and watch it, you're not outdated quite yet.

—E. Brad Meyer
Gordon Lightfoot’s “Shadows”: a Rare Craftsman at Work

Is Gordon Lightfoot the best songwriter of modern times? He has written and recorded upwards of one hundred and fifty songs, of which at least ninety are not only “keepers” but demonstrably superior, in one way or another, to most of their contemporaries. I know of no one else who has lately produced such quality in such quantity. He’s at it again in his just-released “Shadows” with eleven new ones, and ten of them are beauties as engrossing as they are elegantly structured.

What makes Lightfoot great, I think, is his believability, a quality that probably explains also his successful and graceful assumption of the role of No. 1 post-commercial folkie. He is amply equipped with the credentials to Cole Porter his way through life, being one of the few pop stars who are comfortable reading music, one of the few with a background as an orchestrator, and one of the few with such command of the English language that he can use word play as an end in itself. And so he writes with the folkie’s sense of what is real even as he writes with the trained musician’s awareness of the many possible ways of expressing it.

Of course, he’s also inordinately gifted. His melodies are so natural-sounding you find yourself thinking there’s no excuse for their not having existed before. How could a tune so right as the one to Triangle not have been thought of already? A New York newspaper reported not long ago that we are, according to some smart-ass computer, running out of melodic possibilities. If so, Gordon Lightfoot doesn’t know it yet. But if you’ve ever tried to invent a tune yourself, you know that the possibilities don’t come easy; the melody of Thank You for the Promises, for example, is pulled by minor chords into a downward spiral and might make you think, perhaps, of Jacques Brel. It may sound now as if it had been just hanging there in the air all the time, but it took a special ear to seize it and write it down.

“Shadows” is full of these nice touches, full too of songs for which there are precedents—but only in the earlier work of Lightfoot himself. Heaven Help the Devil, whose forerunners include Too Late for Praying, is the kind of generalized, generally pessimistic social commentary Lightfoot occasionally writes: “We have been captured by the thieves of the night/Held for ransom, if you please.” Lightfoot’s two other approaches to making social comments, both as nonspecific in their own ways, involve work songs such as Cotton Jenny or what he calls “topical” songs such as Circle of Steel or Cherokee Bend. Similarly, the title song here is a throwback to another, softer kind of song Lightfoot has written before.

But each new invocation of any of these composing modes has its own sound and its own special qualities. Shadows, while fitted with quite an active melody, has a whole slew of seven-syllable lines followed by an eleven-syllable “resolution” that paradoxically leaves things still about halfway up in the air. But I don’t have to go into detail to show you there’s a rare craftsman at work here; you’ll hear that right away. And if you can listen to Triangle just once without lifting the stylus back for a quick second helping, you must be one of those perverts who can eat just one chocolate-chip cookie. The song is about the Bermuda Triangle, and the words are the imaginings of a sailor who’s about to sail through it. It isn’t quite as striking as its recent precedent, Ghosts of Cape Horn, but it is much more infectious.

I’ll Do Anything is almost as strong, although the sentiment it expresses strikes me as uncomfortably close to masochism. As I suggested before, only one song, Blackberry Wine, shows any real weaknesses. It and In My Fashion (bailed out by a nifty lyric) are variations on the droning kind of thing Lightfoot experimented with during the Old Dan’s Records days, when he was fascinated with what he called the “E-drone position” on the guitar (he once showed it to me, but I still can’t describe it). So is their livelier, catchier
Troubadour Gordon Lightfoot
(Photo: Andy Freeberg/Retna Ltd.)
Wynton Marsalis: if you have not heard the name before, be prepared to hear it many times again, and for a long time to come. Columbia’s new “Wynton Marsalis” is one of the most impressive debut albums I have ever heard, a grand entrance that will undoubtedly give jazz a healthy boost at a time when some of its best practitioners have strayed from the field. What makes the advent of Wynton Marsalis even more impressive is the fact that he is a mere twenty years old, yet he plays with the assurance, articulation, and self-possessed originality of someone who has been performing for at least that many years.

Ironically, Herbie Hancock, one of the first and most prominent of the jazz defectors, played a major role in bringing Marsalis to this stage of his career, including acting as producer of this album. But rest assured that a talent as big as this would soon have emerged without anybody’s help. Prior to Hancock’s involvement, Marsalis (then a Juilliard student) worked in the pit band for the Sondheim musical *Sweeney Todd*, and he spent the summer of 1980 with Art Blakey’s Jazz Messengers, which is a school in itself. From Blakey, Marsalis moved on to tour with the Hancock quartet. He was in fast company with Hancock, Ron Carter, and Tony Williams, but he held his own. Soon there was a great deal of talk about Wynton Marsalis, just as sixty years before there had been talk about another young New Orleans trumpeter named Louis Armstrong.

Will Marsalis be the force Armstrong was? Probably not. But only because the times are different: it is not likely that any jazz musician can ever again make the kind of impact Armstrong—or, for that matter, Parker and Coltrane—did. Nevertheless, “Wynton Marsalis” is an extraordinary album about which much will be written, and I predict that Marsalis’ contribution to jazz will go far beyond his own music, for he will surely inspire other young players to consider the jazz route. And who knows? He might even inspire some integrity in older defectors.

As for the album itself, there is not a blemish on it. Four of the seven selections were made in a Tokyo studio, with the Hancock group and Marsalis’ twenty-one-year-old brother Branford in various combinations. The other three feature a quartet, again with Branford, who plays the saxophone with an eloquence to match that of his younger brother. It promises well for the future of jazz that this breath of fresh air seems to be coming practically from the cradle.

—Chris Albertson

**Wynton Marsalis**

*Wynton Marsalis* (trumpet); Branford Marsalis (saxophone); Herbie Hancock, Kenny Kirkland (piano); Ron Carter, Charles Fambrough, Clarence Seay (bass); Tony Williams, Jeff Watts (drums). *Father Time; Hesitation; Twilight; Sister Cheryl; I'll Be There When the Time Is Right; RJ; Who Can I Turn To (When Nobody Needs Me).* COLUMBIA FC 37574, © FCT 37574, no list price.

The Piano Works of Griffes: a First-rate Survey of American Music at the Crossroads

Though his life was cut short at age thirty-five, Charles Tomlinson Griffes (1884-1920) had time to become the most important transition figure in the period that marked the entry of American art music into the modern age. Though our greatest pioneer,
Charles Ives, had already written far more radical music than Griffes was ever to produce, he remained essentially unknown at the time (1915-1920) Griffes was making his impact; it was only with a later generation that Ives was to make his mark.

Listening to the twenty pieces contained in New World Records' four-disc survey of Griffes' piano music, we can observe the composer's evolution from a gifted eclectic deeply influenced by the French impressionists to the powerful creator of the Piano Sonata and the Three Preludes, music in which he put to his own use the quartal intervallic practice of Scriabin. Missing here only is any sign of the German influence (Griffes studied in Berlin from 1903 to 1907), but that is displayed chiefly in the early songs.

If one were to attempt a capsule summation of the Griffes style as it is documented here, one might speak of a highly effective amalgam of Gallic sensuousity and a Germanic feel for line and structure, for close listening reveals how Griffes, for all his reveling in what was considered (in his day) outre harmonic textures, was also intent on establishing clear melodic lines. He did not, in fact, have any hesitation in using time-honored academic devices to underpin his structures, as witness the canon element in the Barcarolle from Op. 6.

Together with the three unpublished "pieces" and the dance included here, the Legend and the De Profundis are first recordings. And, as a special bonus, we have a transfer of Griffes' own Duo-Art piano-roll recording of his most popular work, The White Peacock. Denver Oldham's performances are scrupulous in their dedication and sensitivity, and his reading of the great Piano Sonata takes its place among the several fine previous recorded versions that begin with the Harrison Potter 78s for the Friends of Recorded Music label back in the Thirties.

It is unquestionably fascinating to hear the two performances of The White Peacock—the Griffes piano roll and Oldham's live one—in immediate succession. Though a Duo-Art piano roll played back on a perfectly adjusted reproducing piano of the same type can give us virtually all the nuances of the original performance, it must be admitted that Oldham's exquisite reading is several degrees more subtle than what comes out of the piano roll, even though, as the comprehensive liner-note essay by Gerald Stonehill attests, no effort was spared to achieve the finest possible results. Indeed, no effort has been spared to make all of this Griffes album a first-rate documentary musically, sonically, and historically. It is an important release.

—David Hall

GRIFFES: Collected Works for Piano.

"The Alkan Project": One of Music's Great Eccentrics Has Found A New Champion

CHARLES-VALENTIN ALKAN (1813-1888) is represented more in anecdotes and legends than in performances of his music. Just to mention his name is to call up the scene of his bizarre death (crushed beneath a falling bookcase when he reached for a volume of the Talmud on the top shelf), his reclusiveness, his Satie-before-the-fact titles, the phenomenon of his having composed an Allegro Barbaro before Bartók did, the composing style that...
moved Hans von Bülow to call him "the Belioz of the piano," the virtuosity acknowledged by Liszt as "the finest technique I've ever known." There are two reasons for our not hearing much of Alkan's music in live performance: its difficulty and its unusual dimensions, factors which may have been consequences of the reclusiveness that permitted him to indulge his whims and fantasies without regard for the practicalities of the recital hall. The most striking illustration, surely, is the set of Twelve Studies in All the Minor Keys, Op. 39, which, in its first complete recording, sprawled over five of the six sides in Ronald Smith's Arbasque set called "The Alkan Project."

Now, a "study," or étude, is usually a brief piece; the average playing time for the twenty-four études that make up Chopin's Opp. 10 and 25 is about two minutes. The average time for Alkan's studies is more than ten minutes, and one of them takes a full half-hour. That one, No. 8, is the first in a sequence of three that constitutes a "Concerto for Solo Piano"; Nos. 4 through 7 add up to a "Symphony for Piano Solo"; No. 11, similarly orchestral in concept, is a grand "Overture" running more than a quarter-hour; and the last in the set is a little tone poem titled Le Festin d'Espe. It has been suggested that, in view of the dimensions and difficulty of this music, the phonograph may be its ideal medium. While it is unlikely that any pianist would undertake to perform the twelve studies of Op. 39 in recital, Ronald Smith makes the two-hour sequence a fascinating listening experience on records.

Smith has been championing Alkan's cause for some time. About nine years ago the Musical Heritage Society issued his Oryx recording of a shorter Alkan program (OR 174), three pieces from which—Le Festin d'Espe, La Chanson de la Folle au Bord de la Mer, and the aforementioned Allegro Barbaro—are repeated in the Arbasque set (an EMI recording that was unaccountably passed up by Angel), which also includes the Trois Petites Fantaisies, Op. 35. Smith has also published a short biography of the composer, Alkan, the Enigma, and he supplies his own annotations for his recordings, which make his understanding of and enthusiasm for the music abundantly clear. More to the point, he seems to be equipped with everything he needs to put his case across musically. This music, after all, is not merely "eccentric," but is packed with both originality and substance. It is as elegantly pianistic as Chopin, as wildly visionary as late Liszt, and yet it shows Alkan to have been as much his own man as either of those colleagues—between whom and himself there was a great deal of mutual respect and admiration, and with whom he sometimes collaborated in "all-star" events.

Echoes of the salon are rare in Alkan's music. He did not go in for the operatic fantasies and paraphrases that were in vogue in his time, and even in his shorter pieces one senses the "symphonic" concept. Bülow was splendidly apt in likening him to Berlioz, and the visionary qualities in his works look forward to specific developments in orchestral music as well as that for the piano. Smith, for example, in his structural analysis of the On-half-hour first movement of the "Concerto," notes "an uncanny anticipation of the arctic world of Sibelius' Fourth Sympho-

In 1965, the American pianist Raymond Lewenthal made the first full LP devoted to Alkan's solo piano music (it included five pieces from Op. 39). Sadly, that record (RCA LSC-2815) is long since gone from the catalog. Aside from Smith's own MHS disc, which is worth acquiring despite the three duplications, nearly all of the very few other Alkan recordings available now are of works for piano with other instruments (the Sonate de Concert for cello and piano, the Concerto da Camera No. 2 for piano and strings, etc.). While these are not without interest, it is in the solo pieces that Alkan is at his most impressive, and the Op. 39 studies surely constitute the most important of his own "Alkan projects." Ronald Smith has put us in his debt by recording this music, and recording it so well, and Arbasque deserves our gratitude for making it available. —Richard Freed


BESQUE 8127-3 three discs $20.94, © 9127-
3 523 94.

BEST OF THE MONTH: RECENT SELECTIONS YOU MAY HAVE MISSED

CLASSICAL
■ Delius: Vocal and Orchestral Works — the Fenby Legacy. UNICORN-KANCHANA DPK 9008-9 "Well-nigh perfect recreations." (April)
■ Haydn: Complete Songs. PHILIPS 6769 064. "A significant release... Elly Ameling's refinement and involvement multiply the pleasure of discovery." (May)
■ Mahler: Symphonies Nos. 2 and 4. PRO ARTE 2PAL-2011, PAL-1068. "Revelatory performances, splendidly recorded." (May)
■ Purcell: Choral Works. ARCHIV 2723 076. "... not only exquisitely performed but brilliantly recorded." (March)
■ Thomson: A Portrait Album. NONE-SUCH D-79024. "Musical portraits in performances that gladden the ears." (May)

POPULAR
■ Dr. John: Plays Mac Rebenack CLEAN CUTS CC 705. "Probably the first solo album by a New Orleans pianist... heartily and heartfelt." (May)
■ Mark Murphy: Bop for Kerouac. MUSE MR 5253. "May be the vocal jazz album of the year." (March)
■ Pennies from Heaven. WARNER BROS 2WH 3639. "A soundtrack album with a difference." (April)
■ Jean Redpath: Lowlands. PHILO 1066. "...it is melodies we have here, and a voice and a half. Both lovely." (May)
■ Sister Sledge: The Sisters. COTILLION SD 5231. "Fresh, feminine, and flawless." (May)
Although the Broadway revival of *Little Johnny Jones* with Donny Osmond closed the day after its official opening, the American musical theater is in excellent health. Such hits as *Annie*, *A Chorus Line*, *Barnum*, *42nd Street*, and *Sugar Babies* continue to coin money for everybody involved in them, and four months ago the producers of *Evita* by Andrew Lloyd Webber and Tim Rice reported that its worldwide gross had exceeded $130 million. Musicals also seem to be doing well in England, where Webber’s *Cats* is a smash hit and the National Theatre is having a big success with *Guys and Dolls*.

We talked this over with singing actress Angela Lansbury, who continues to work both sides of the Atlantic. She said: “The world needs to be entertained, to be taken out of itself, and musicals can do that. It’s a natural tendency we’ve seen before—during hard times people seek escapist entertain-

ment. Life is very hard now for a great many people, and they want films and theater that will show them the bright side of the clouds.”

Born in England, Miss Lansbury began her career in Hollywood movies while still in her teens. “People used to think of me as a dramatic actress who sang,” she said, “but in recent years I’ve worked more and more in musicals.” These include such important shows as *Mame* and *Gypsy*. After a long Broadway run in *Sweeney Todd*, she went to England where she played the Piratical Maid in a new movie version of Gilbert and Sullivan’s *Pirates of Penzance*. “In that I was singing out of my range and just got away with it by the skin of my teeth. Mine is not really a trained voice, you know.”

While in England, Miss Lansbury also recorded Richard Bonynge and Douglas Gamley’s new version of John Gay’s *The Beggar’s Opera*, recently released by London Records. “The producers wanted a voice with a lot of character for Mrs. Peachum, and I was immensely pleased to be asked to do it. Next to acting I love music best, but I felt I had no business on the same platform with the opera singers Kiri Te Kanawa, James Morris, and Joan Sutherland, who were in the cast.” For this recording did her background in musicals give her an edge on the opera singers? “They made me feel that it did, bless their hearts. They were in fear and trembling for the acting, just as I was in fear and trembling for the vocal side of it. But it turned out well, and the English critics liked it.”

When Miss Lansbury was elected to the Theater Hall of Fame in New York this spring, she commented that Broadway has become home for her. Broadway is most likely to see her next in a revival of *Mame* now in the planning stages. “I hope we can recapture the fun and joy of the original,” she said. “It worked well in the Sixties and should work even better now.”

Her current recording project is an album of the Bob Merrill/Jule Styne show *Prettybelle* for Original Cast Records. Back in 1971, Miss Lansbury starred in *Prettybelle*, which never made it to Broadway, but closed in Boston. The company expects to release the album in June.

Miss Lansbury has never recorded *Goodbye, Little Yellow Bird*, the song she sang in *The Picture of Dorian Gray* at the beginning of her career, but she plans to record it some day. “It was the first time the public heard that thin, pure little voice, and it pleases me enormously that people remember the song—some have even taped it when the picture was shown on TV. My next film after that was *The Harvey Girls*, a musical with Judy Garland. I was disappointed that the producers thought my voice not heavy enough and had me dubbed. No one wants to dub me now, so although it has taken me a while, I feel that I’ve got my own back.”

—W.L.

**Popular Music Briefs**

**Angela Lansbury as the pastry-chef Mrs. Lovett in Sweeney Todd**

**Epic raiders of the Columbia vaults recently released two volumes of “Rockabilly Stars,” reissues on the Epic label of CBS recordings by such performers as Johnny Cash, the Everly Brothers, Carl Perkins, and Charlie Rich (see review in the May issue). A third rockabilly album in the series is scheduled for early release.

Epic has also reissued a series of Okeh recordings from the 1930s to the 1960s, five double albums devoted to jazz, Western swing, rhythm-and-blues, soul, and Chicago blues, respectively. If suggestions are in order, Epic merchandisers should now go after the unreleased early work of Barbra Streisand, Bob Dylan and the Band at Royal Albert Hall in 1966, the Yardbirds at the Anderson Theater, and the Byrds live at Monterey.

**Three new books on three major rock figures past and present have crossed our desk this month. Chronologically speaking, the first is The Complete Elvis, edited by Martin Torgoff (Deliah, $13.95), which surprisingly enough almost lives up to its title. The**
Finally, we have Rod Stewart, by Paul Nelson and Lester Bangs (Deliah, $8.95), which is in the grand tradition of Bangs’ earlier Blondie bio: in a word, snide. This is not a hatchet job, exactly. Nelson still believes in Rod the Mod’s artistry and sincerity, even in his later work, and both Nelson and Bangs find Stewart’s early work convincing. But Bangs, who contributed the bulk of the biographical and critical material here, goes on to make a pretty damning case against Stewart as the Ultimate Sellout and makes of him a metaphor for all the ways wrong with rock in the Seventies. An angry, funny, thought-provoking book. —S.S.

Good news for country-rock fans: the Band’s “Music from Big Pink,” one of the genuine classics of the Sixties, has just been released in an audiophile pressing by Mobile Fidelity Sound Labs (MFSL 1-039). The 1968 original was quite well recorded for its day (as opposed to, say, the Beatles’ “Magical Mystery Tour,” a bad recording rendered unlistenable by sonic upgraving), and Mobile Fidelity has done a very nice job technically—the new version sounds terrific. As for the aesthetics of the matter, this is surely the most American-sounding music ever played by Canadians. Not so for nothing did somebody describe the Band as the only rock group that could have warmed up the crowd for Abraham Lincoln. —S.S.

The recent resurgence of interest in the Sixties pop group the Monkees came partly from English punk bands who were influenced by them and partly from Japan, where their fan club has been reactivated partly from Japan, where their albums have been reissued. Although the Monkees were simply manufactured as an American answer to the Beatles and didn’t play very well, they nonetheless got their names and voices attached to a lot of terrific pop singles, and I always liked them.

So when Peter Tork (photo above), the Ringo of the group, hit the road in the States (after a successful stadium tour in Japan), I restrained my cynicism. But after catching Tork and his band, the New Monks, at the Bottom Line in Manhattan, I have to admit that you really can’t go home again.

When Tork hit the stage, my residue of nostalgic good feeling evaporated almost immediately. His New Monks turned out to be a ghastly bunch of slumming dinosaurs who seemed to be as bored by the heavy-metal clichés they were dishing out as the crowd was. A depressing evening.

Another alumus of the band, however, has done himself proud. Mike Nesmith, whom they used to call the Thinking Man’s Monkee, just won a Grammy in the brand new category Best Original Video. The winning program, Michael Nesmith in Elephant Parts, is available on his own Pacific Arts label Elephant Parts, which we raved about in the September 1981 issue, is currently available on tape and will be a videodisc (the laser system) by fall.

Disc and Tape Reviews

By CHRI$ ALBERTSON • NOEL COPPAGE • PHYL GARLAND • PAUL KRESH
MARK PEEL • PETER REILLY • STEVE SIMELS • JOEL VANCE

adam and the ants: Prince Charming. Adam and the Ants (vocals and instruments). Scorpios; Picasso Visita el Planetas de los Simios; Prince Charming; Guns West; That Voodoo; and five others. Epic ARE 37615, © AEC 37615, no list price.

Performance: Hokey
Recording: Good

These guys are already a bad joke, of course, but for me they’re a guilty pleasure. I think it’s really neat that they suckered responsible critics into taking them seriously, if only briefly (all that loose talk about double drumming and African rhythms). It’s somehow immensely reassuring to know that a good commercial gimmick can still compensate for utter lack of talent. It’s so wonderfully egotistical. The music on “Prince Charming” conforms to Adam and the Ants’ tried-and-tested formula: lots of tribal whooping and hollering, sound effects out of old spaghetti westerns, and troweled-on self-mythologizing. Anybody over the age of fifteen will likely find it numbingly moronic. I rather like it (granted, in extremely small doses) for the proudly defiant drive it.

B-52’s: Mesopotamia. B-52’s (vocals and instruments); instrumental accompaniment. Loveland; Deep Sleep; Mesopotamia; Cake, and two others. WARNER BROS. MINI 3641 $5.99, © MMS 3641 $5.99.

Performance: Don’t ask
Recording: Good

I’ve always maintained that pop musicians expend far too much effort saying the same things (about love) over and over, so you can image my excitement when I discovered some who could write about baking a cake. That happy prospect is offered by the new
McCartney and Friends

You can tell by the album's intensity that Paul McCartney wanted his new "Tug of War" to be good. He sings with more conviction and writes with more concentration than he has in years. But if you don't use it, you lose it, and McCartney has been coasting on inoffensive product for so long that when he tries to turn up the energy this time out, not a lot happens.

"Tug of War" has genuine McCartney stamped all over it. He remains one of pop's great crooners, with a schoolboy tone and a dreamy, bucolic delivery. If the sound of his comforting voice is enough for you, read no further. Musically, he's the Sir Edward Elgar of rock (Elgar composed Pomp and Circumstance, the tune you marched to at your graduation). Nobody else writes a high-cadence hymn tune or an old-fashioned round into a rock song, or arranges "ooh-oohs" for a fifty-voice choir, or makes a dramatic exit on a section of lowing cellos the way McCartney does. The songs on "Tug of War" are roughly divided between sweet-nothing ballads and rockers, the latter including a smattering of funk, rockabilly, and reggae. Both categories have their share of McCartney's characteristic novelty cuts of the Uncle Albert variety. Two examples here are Ballroom Dancing (with lines such as "Sailing down the Nile in a China cup" that defy interpretation) and The Pound (using the international financial markets as a metaphor).

If there is one word for McCartney's ballad lyrics, it is vague. Songs such as Here Today, Wander Lust, and Somebody Who Cares are just about impossible to figure out, since they are mainly strings of images apparently picked at random for the way they sound more than for what they mean. When pressed to pin down what he's trying to say in a song, McCartney is apt to cop out with banal phrases such as "There's always someone somewhere who cares" or "It's frustrating" (which, as an expression of human feeling, is about as pointed as "ya know"). Still, there's no law that says a ballad has to make sense, and McCartney's skill at penning a hummable pop melody is second to none.

The rockers are another story. When he's on, which is never a sure thing, McCartney can rock with the best. Here, though, he has to fight a bad production job, surprising coming from studio patriarch George Martin. Much of the problem is over-production; excessive electronic tampering often disfigures the vocals and horns to no apparent purpose. At some points the production is just wrong, as on What's That, a heavy-funk collaboration with Stevie Wonder where there is so much clashing of cymbals and so little bass drum or tom-tom that the beat is lost and the song's momentum peters out. McCartney has only himself to blame, though, if the tune he calls Tug of War sounds more like a ride down the Blue Danube with a thousand strings.

The most talked-about aspect of this album is McCartney's collaborators. Ebony and Ivory, a harmless homily on the brotherhood of man, is the first single pulled from "Tug of War" and one of the two songs that team McCartney and Wonder. The electricity generated by the mere presence of these pop deities is not enough to disguise the song's essential blandness. On What's That, however, Wonder almost blows his partner out of the grooves with a no-sweat demonstration of funk virtuosity that manages to come through despite the cluttered production. McCartney has to work to keep up.

The third collaboration is the rockabilly Get It with Carl Perkins. Perkins steps in with jaunty authority on two verses, pairs with McCartney for the choruses, and is caught for posterity laughing long and hard at the end. While none of the duets really gets the most out of the guest artist, they are the least self-conscious and most plainly fun things on "Tug of War." If the rest of the album comes up short, McCartney fans can at least be encouraged by the effort.

—Mark Peel

Paul McCartney: Tug of War. Paul McCartney (vocals and instruments); Stevie Wonder (vocals, keyboards); Carl Perkins (vocal); vocal and instrumental accompaniment. Tug of War; Take It Away; Somebody Who Cares; That's What; Here Today; Ballroom Dancing; The Pound; Wander Lust; Get It; Interlude; Dress Me Up; Ebony and Ivory. Columbia TC 37462, © TCT 37462, © TCA 37462, no list price.

Burrito Brothers: Sunset Sundown. Burrito Brothers (vocals and instruments); other musicians. If Something Should Come Between Us; Louisiana; I'm Drinking Canada Dry; What's One More Time; Run to the Night; Coast to Coast; as four others. Epic/CLUB FZ 37702, © FZT 37705, © FZA 37705, no list price.

Performance: Catchy

Recording: Good

Gib Guilbeau has said he and the boys were aiming at AM radio here, but their aim may have been a little high. If AM radio uses this kind of thing, AM radio might improve, and I don't know whether the accountants who run it could stand that. I see what Gib meant, though; every song on this album is easy and, to some degree, gib. Guilbeau and John Beland now seem to be the only full-time members of the Burritos, incidentally; steel player Sneaky Pete Kleinow has appeared on both albums since the group was resurrected, but the publicity and credits suggest that this time he's a guest star.

Guilbeau and Beland have headed for a more clear-cut country sound, cutting down radically on the number of experiments and surprises the Flying Burrito Brothers used to spring on us. So, a lot of the old jauntiness and verve are missing these days, but, on "Sunset Sundown" particularly, the boys are turning out some pretty fair juke-box tunes. Guilbeau, originally a Cajun fiddler, is a pretty good singer, and with Kleinow doing his thing in there it never becomes common or manufactured-sounding. Stay tuned. You might hear something other than Kenny Rogers.

Recording of Special Merit

IRENE CARA: Anyone Can See. Irene Cara (vocals); vocal and instrumental accompaniment. Reach Out, I'll Be There; My Baby (He's Something Else); Anyone Can See; Don't Throw Your Love Away; My Baby (He's Something Else); Anyone Can See; Can See; Don't Throw Your Love Away; My Baby (He's Something Else); Anyone Can See. Epic/Curtas FZ 37705, © TCT 37462, © TCA 37462, no list price.

Performance: Sixties flavor

Recording: Good

Most people who have heard of Irene Cara recall the expectant luminosity she radiated in her portrayal of a teenager preparing for her graduation. (Continued on page 74)
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stardom in the film *Fame*. Although she had appeared in other films and television productions (she played Alex Haley's mother as a young girl in *Roots: The Second Generation*), it was *Fame*, a tale of talented youngsters almost bursting with hunger for recognition, that created her public image. She became a sort of Eighties version of the young Diana Ross, Barbra Streisand, and Aretha Franklin, all of whom set out as teens to make it against all odds and did. It has been difficult so far to separate Cara's image from her actual talent as a popular singer.

This new album presents her strictly on her own, without props, a gyrating chorus, or an engaging story line. Though she generates less excitement when stripped of visual enhancement, Cara comes across as a performer with a potentially distinctive style. Most of the material on "Anyone Can See" has a heavy but quite palatable flavor of the Sixties. On several selections the rhythm—with their even beat and nostalgically fashioned arrangements—summon up ghosts of the old Motown sound. The background vocals are carefully wrought, with the ubiquitous Luther Vandross, among others, lending a hand. There is a light, relaxed, comfortable feeling to the whole set. Cara's voice has an appealingly gutsy edge, and she makes these new songs sound like familiar old tunes. Along with *Reach Out, I'll Be There*, which has become strongly identified with her, the other standout here is the title track, a sweetly simple ballad with a fine melodic line.

While this is not an outstanding album in terms of breaking new ground or stirring currents of excitement, it stands above most others because of its success in reshaping the molds and moods of the past to suit current tastes.

**CHUBBY CHECKER: The Change Has Come.** Chubby Checker (vocals); vocal and instrumental accompaniment. *Running: Harder Than Diamond; Under My Thumb; Burn Up the Night; It's Only Rock and Roll*; and five others. MCA MCA-5291 $7.98 © MCAC-5291 $7.98.

Performance: Pro at work

Recording: Good

Chubby Checker (Ernest Evans), whose stage name is a variation on Fats Domino's, had a string of novelty dance hits in the early Sixties, the most famous of which is *The Twist*, copied note for note, vocally as well as instrumentally, from the Hank Ballard original. The British Invasion ended Checker's recording career, as it did for other American pop singers', but he has continued to tour as a "golden oldie" act in small clubs across the country ever since. A terrific stage performer, Evans has been trapped in the nostalgia mode as Gary U.S. Bonds was until Bruce Springsteen rediscovered him. This new Chubby Checker album attempts to do for Evans what Springsteen's backing did for Bonds; the material even attempts to copy the sound and sentiments of Springsteen's fervent odes to New Jersey seashore life.

It doesn't work, but that's not Evans' fault. Cast in an imitative role, he sings with his usual gusto and professionalism, as though he were trying to sing past the limitations that have been imposed on him. But then, this album is meant for a new generation that doesn't remember Chubby Checker, and it is possible it will be a hit. I hope so. Chubby's been working hard for a long, long time, and he deserves another stroll down Easy Street.

**JUDY COLLINS: Times of Our Lives.** Judy Collins (vocals); vocal and instrumental accompaniment. *Great Expectations: The Rest of Your Life; Grandaddy; Memory; Sun Son; Mama Mama*; and four others. Elektra E1-60001 $8.98 © E5-60001 $8.98 © E8-60001 $8.98.

Performance: Grandiose

Recording: Likewise

Judy Collins used to make modest albums that came into town like hippies and won over both the flower children and the slightly older group, the Silent Generation or whatever it was called. Now her albums blow into town like big shots, wearing neckties. Well, times change, and people never were that simple anyway.

A trained pianist before she was a "folk" singer, Collins has long had a yen to do things approaching the art song, and "Times of Our Lives" consists largely of not-so-near misses aimed at that target both by her and by other people. Still, it is more interesting and better than her last two or three MOR-aimed albums, and so are her (Continued on page 80)
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I'm hard pressed to single out favorites among the twelve gems on display here. One day I lean toward She Can't Dance and the biting guitar solo that slices it in half, another day the sly and utterly adorable rockabilly of The Usual Thing. Sometimes what grabs me is the brilliant Merseybeat revivalism of Soldier of Love or the gorgeously melodic impact of Someday. Some- way. Other times I just give up and play the whole album through four or five times in a row while I dance around the room in, as John Lennon put it, wild abdomen. 

I have to warn you that this is not particularly fashionable music. The teenagers who jump up the commercial pom-pom-rock that floods our airwaves may find it anachronistic, and the avant-gardists who think that a tune is a sure sign of artistic bankruptcy will doubtless view it as reactionary. A plague on both their houses, say I. Ironically, what is clearly one of the great rock records of the Eighties might have its initial success on country radio—the crossover potential is there. But let us not pussyfoot; this is the strongest debut album by an American rocker that I have ever been privileged to review. In the immortal words of Reed Foxx: “This is the Big One, Elizabeth.”

—Steve Sinels

**Marshall Crenshaw**

Marshall Crenshaw (vocals, guitar); Chris Donato (bass, vocals); Robert Crenshaw (drums, vocals); other musicians. There She Goes Again; Someday, Someway; I'll Do Anything, Girls...Rockin' Around in NYC; The Usual Thing; She Can't Dance; Cynical Girl; Mary Anne; Soldier of Love; Not for Me; Brand New Lover. WARNER BROS. BSK 3673 $8.98. © M5 3673 $8.98, © M8 3673 $8.98.

**Performance** Straight

Recording Excellent

Chas Jankel, ex-music director for Ian Dury and the Blockheads, is a crack pop composer and arranger, but I wish he'd stop singing! This second solo album from him is a technical gem, danceable in the extreme, and popping with electronic titillation, but it would be hard to image a sillier record (well, maybe "The Ray Coniff Singers Sing the Pianastics Songbook"). While it may be the last thing Jankel would like to hear, I have to say that "Ques-

(Continued on page 82)
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Tots and the Maytals

Tots and the Maytals' new Mango album "Knock Out!" is a nearly flawless combination of material brimming with ideas and confident, commanding performances that squeeze every drop of emotional juice out of the music. Over the years, such classics as "Funky Kingston" have established Toots Hibbert as reggae's pre-eminent vocalist. "Knock Out!" pushes him into the ranks of the great rhythm-and-blues singers. On it he seems to combine the best of Otis Redding and Al Green, his voice ranging from a husky soulfulness to a wistful falsetto, and the Maytals back him up with singing and playing that match the power of his lead vocals.

At a time when too much reggae seems to be slipping into lazy, monotonous, knee-jerking jamming, this album is packed with catchy melodies and irrepressible rhythms. The music draws heavily on r-&-b traditions, and there's even a bit of country/western yodeling. But the thread that runs through "Knock Out!" is a rock-steady beat—the pulse of all great reggae—that's played freshly and imaginatively.

Hibbert also once again proves himself to be one of reggae's most convincing songwriters. On "Knock Out!" he deals with themes of survival, religious freedom, false idols, and false women; he handles them all with understanding, humor, and feeling. Simply put, "Knock Out!" does everything right. It transcends reggae and rhythm-and-blues to embody what's meant when one talks about soul. If you buy only one reggae album this year, this should be it.

(The cassette version of "Knock Out!" is one of parent-label Island's controversial "One-Plus-One" tapes. The whole album is recorded twice, once on each side of the cassette, so you can, if you wish, erase one side and record something else on it. Me, I just flip it over and listen to Toots all over again.)

—Mark Peel

TOOTS AND THE MAYTALS: Knock Out! Toots Hibbert (vocals); the Maytals (vocals and instrumentals); other musicians. Careless Ethiopians; Never Get Weary; Spend a Weekend; Two-Time; Survival Time; Beautiful Woman; I Know We Can Make It; Missing You; Will You Be Kind. Time; Beautiful Woman; I Know We Can Make It; Missing You; Will You Be Kind. Time; Beautiful Woman; I Know We Can Make It; Missing You; Will You Be Kind. Time; Beautiful Woman; I Know We Can Make It; Missing You; Will You Be Kind. Time; Beautiful Woman; I Know We Can Make It; Missing You; Will You Be Kind.

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seems modeled after Peaches and Herb, but this peach must have been soaked in brandy. A delight.

P.G.

LAKESIDE: Your Wish Is My Command.
Lakeside (vocals and instrumentals); other musicians. The Songwriter, The Urban Man, I'll Be Standing By, I Want to Hold Your Hand; and four others. SOLAR S-26 $8.98, © SC-26 $8.98, © ST-26 $8.98.

Performance: Moving on up
Recording: Good

Lakeside's previous album, "Keep On Movin' Straight Ahead," was competent but unexceptional. On this one the group seems to be striving for greater variety and impact. They have succeeded in part: four of the selections here are excellent. One more, and the disc would have earned a "Special Merit" heading. Among the goodies here are the opener, Your Wish Is My Command, a storm of power and special effects, I'll Be Standing By, a mighty fine ballad given a deeply emotional vocal reading, and Magic Moments, a little mood piece tucked in at the end. However, this release has attracted most attention for Lakeside's unusual slow-drag rendition of the Beatles' I Want to Hold Your Hand. They make it sound like a delightfully new composition. Such willingness to try a fresh approach bodes well for Lakeside's future.

P.G.

BRENDA LEE: Only When I Laugh.
Brenda Lee (vocals); instrumental accompaniment. Only When I Laugh; Love Letters; A Good Love Don't Come That Easy; I Know a Lot About Love; and six others. MCA MCA -5278 $7.98, © MCAC-5278 $7.98, © MCAT -5278 $7.98.

Performance: Wasted style
Recording: Very good

Back in the Fifties, one of the best of breed in the bright new world of pop was a young country singer named Brenda Lee. She could sing rings around her peers, and still can; she has style to spare. When she can get her hooks into a solid phrase or the right song she still leaves the competition far behind in technique and vocal control. The trouble here is with the material. Give Lee a good comic ballad such as From Levis to Calvin Klein Jeans, a deft put-on by Richard Runyeon and Rick Lathrop about a cowboy who turns into a playboy, and her bright humor and happy way with a line shine forth. Alas, one good ballad doth not an album make, and the rest of this stuff is simply not worth the attention lavished on it. Songwriters to the rescue!

P.K.

GORDON LIGHTFOOT: Shadows (see Best of the Month, page 68)

LORETTA LYNN: I Lie.
Loretta Lynn (vocals); vocal and instrumental accompaniment. I Lie; There Stands the Glass; I Wanted You to Leave (Until You Left Me); and six others. MCA MCA-5293 $7.98, © MCAC-5293 $7.98, © MCAT-5293 $7.98.

Performance: Comprehensive
Recording: Good

Never be tentative, the late John Jacob Niles told me, and somebody—probably (Continued on page 85)
A funny thing happened to Lou Reed on his way back to RCA Records after a disappointing tenure with Arista; he went and made “The Blue Mask,” probably the most mature, moving, carefully crafted, and consistent solo album of his career. It is, for me, the first record he’s done alone that can be mentioned in the same breath as his classic albums with the Velvet Underground (some of which are nearly fifteen years old, if you can believe it).

The Velvets comparison is especially apropos, for one of the things Reed has done here is to use a stripped-down, no-overdub guitar/band sound very much like that on all the Velvets’ albums except “Loaded,” their penultimate studio effort. And, for the first time in ages, Reed has trusted his instincts enough to be his own lead guitarist. His playing here on the title track and, especially, Waves of Fear is simply awesome. Though his style hasn’t changed much since his revolutionary barnyard squawks on the Velvets’ albums, in the context of the bland metal sludge that dominates the radio it seems as welcome abrasive and ear-clearing here as ever.

Reed has found an extremely sympathetic colleague in second-guitarist Robert Quine, one of the few distinctive soloists to have emerged from the New Wave and a musician whose style has been strongly influenced by Reed’s prophetic sonic assaults over a decade ago. Add in an especially astute rhythm section, and you have a back-up band fully as splendid as (and reminiscent of) Neil Young’s Crazy Horse. In short, “The Blue Mask” features a great rock-and-roll ensemble.

The songs themselves are close to overwhelming. There’s no cheap cynicism here, none of Reed’s old posturing, role-playing, or fooling around. Instead, he offers us songs that are passionately felt and tightly edited in a sequence that’s alternately terrifying, slyly funny, and spiritually uplifting. Some of the songs are ethereally lovely, such as My House, in which the ghost of Lou’s idol, poet Delmore Schwartz, takes up residence in his back room (it recalls the third Velvets album, which has been described as “one long sigh”). Others are bone-crushingly dissonant, such as the title track and Waves of Fear. But all of them display an immense compassion, a love of language, and a restless intelligence.

After spending a large part of the Seventies impersonating himself (badly) and doing his damnedest to cheapen his reputation, Lou Reed has finally shed his masks (blue or otherwise) and made the album that most of us, even his biggest fans, had long since lost hope of ever hearing. Miss this one at your peril.

—Steve Simels

LOU REED: The Blue Mask. Lou Reed (vocals, guitar); Robert Quine (guitar); Fernando Saunders (bass); Doane Perry (drums). My House; Women; Underneath the Bottle; The Gun; The Blue Mask; Average Guy; The Heroine; Waves of Fear; The Day John Kennedy Died; Heavenly Arms. RCA AFLI-4221 $8.98, AFSI-4221 $8.98. ©1982, Fujitsu TEN Corp. of America

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her husband Doolittle—got that lesson across to Loretta Lynn. She has good judgment about how a song should be done and, once committed, sings with a sort of unself-conscious self-assurance. The program on “I Lie” calls on her versatility a little bit. I Wanted You to Leave (Until You Left Me) has her almost getting into r- &- b; it’s actually a gospel song with secular words—black gospel. Save Me, written by John Moffat, is a white gospel-pop song with not-so-secular words that’s the most potent thing in the album. (It is one of six cuts in which Lynn is backed by the Jordanaires.)

While Lynn’s performance is consistently impressive here, some of the songs are not. If I Ain’t Got It (You Don’t Need It), by Max D. Barnes, should lead the two or three that light up jukeboxes; it’s the R-rated novelty kind of thing Loretta’s fans never tire of. Not a great album, but one aspiring singers could learn from. N.C.

RECORDING OF SPECIAL MERIT

GRAHAM PARKER: Another Grey Area. Graham Parker (vocals, guitar); Hugh McCracken (guitar); Nicky Hopkins (keyboards); other musicians. Temporary Beauty; No More Excuses; Dark Side of the Bright Lights; Can’t Waste a Minute; Big Fat Zero; You Hit the Spot; and five others. ARISTA AL 9589 $8.98, © ACT 9589 $8.98, © A&T 9589 $8.98.

Performance: Very good
Recording: Excellent

Graham Parker’s last album, “Up Escalator,” which should have been his commercial breakthrough and wasn’t, was for me the least satisfying he’d ever made. He seemed obviously to be acting, and from a man who had once convincingly sung that Passion Is No Ordinary Word, it was, to say the least, a letdown. “Another Grey Area,” his first album without his now-defunct band the Rumour, is a significant improvement because in it he sounds again as if he means what he’s saying.

Musically, this album is of a piece with his last one, which one critic dubbed “The Hummable Graham Parker.” It’s full of tunes that stay with you and felicitous little instrumental and verbal details, but it is far less blustery, and his old rage is curiously muted. The overall mood is almost—for Parker, anyway—autumnal. Some critics have carped about the high-priced American back-up players, but I can’t hear what the fuss is about. These guys manage a pretty fair approximation of Parker’s usual “Blonde on Blonde” sound, though they do come off a tad impersonal. Given the tenor of the songs, that may have been the point of using them.

There’s nothing here as wonderful as the best of “Squeezing Out Sparks,” which I suspect will remain Parker’s masterwork for the foreseeable future, but Temporary Beauty (perhaps the prettiest ballad he’s ever done), No More Excuses, Can’t Waste a Minute, the title tune, and a few of the others are compelling enough to help you ignore the fact that Parker is mostly waffling about what’s bugging him. But Graham Parker waffling still beats most rockers going full tilt.

S.S.

(Continued overleaf)

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PocO: Cowboys & Englishmen. Poco (vocals and instrumentals). Sea of Heartbreak; No Relief in Sight; Cajun Moon; The Price of Love; There Goes My Heart; and four others. MCA MCA-5288 $7.98, © MCAC-5288 $7.98, © MCAT-5288 $7.98.

Performance: Good
Recording: Very good

Rusty Young, on pedal steel, and Paul Cotton, lead guitar and vocals, are the only ones left here from the old Poco (Young is the only member of the original Poco), and nowadays the band does indeed sound like either cowboys or Englishmen, depending on whether Young or Cotton is being indulged. Fortunately, there are a few more cowboy than English sounds here, since Poco plays any kind of head-on rock with a lack of distinction bordering on Eighties-radio anonymity (check out the uninspired The Price of Love). But when Young branches his steel guitar, Poco stops sounding like a dozen other bands. Even so, the reading here of Gordon Lightfoot's Ribbon of Darkness is hurting for ideas, and programming a song called If You Could Read My Mind right after it is a bit jarring, since that's also the title of a different, vastly superior song by Lightfoot. Elsewhere on the album, though, Poco shows that it is again a pretty good picking band, and the mix and stereo imaging are unusually good. N.C.


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THE RAYBEATS: Guitar Beat. The Raybeats (instrumentals). Tight Turn; Big Black Sneakers; Tone Zone; The Backstreet; B-Gang-Blackshaw; and six others. PVC 8904 $8.98.

Performance: On the beach again
Recording: Good

Here's an album that proves something, though I'm not sure just what it is (possibly that it's not what you do, but how self-consciously you do it). The Raybeats are the kind of avant-surf, Ventures Go Modern act that could only have sprung up in Manhattan—these guys have divined qualities in old beach-party records that you or I (or my dog Eric) might miss even after umpteen playings. Their music is non-melodic and atmospherically spooky. Somewhere Dick Dale and His Deltones must be scratching their heads and wondering What It All Means. I think it's fun stuff, but, then again, in the immortal words of Chuck Barris, I like cold toilet seats. S.S.

THE RINGS: Rhythm Method. The Rings (vocals and instrumentals). Uh Oh (Here I Go Again); Move Over; Talk Back; Bang Bang (Out of Your Misery); It's Not Enough; and five others. MCA MCA-5264 $7.98, © MCAC-5264 $7.98.

Performance: Good
Recording: Good

I don't know if it was an accident or done for effect, but I like the way the singer here counts off on Move Over and then goes into a coughing fit. I'm also impressed by drummer Matt Thurber, who's excitingly rhythmic instead of being a mere timekeeper. The Rings' sound is neo-punk, and their subject matter is—you guessed it—youthful Angst in a turbulent society where values are suspect and the individual is wary and insecure. The Rings' arrangements and production are solid, and their performance is assertive, so if you like the subject matter you'll like this record. I don't like it much, but I like the Rings, and I'd like to hear them do something else. J.V.

SHALAMAR: Friends. Shalamar (vocals); instrumental accompaniment. I Can Make You Feel Good; I Just Dropped By Because I Had To; I Don't Wanna Be the Last to Know; A Night to Remember; On Top of the World; and five others. Solar S-28 $8.98, © SC-28 $8.98, © ST-28 $8.98.

Performance: Polished singing
Recording: Good

The trio called Shalamar is capable of some of the most polished singing to be heard in r- & b these days, but some of their songs are not strong enough to stand up through repeated hearings. Yet when they are good, they are very, very good, as on this album's I Just Dropped By Because I Had To, a lush slow-burner, and A Night to Remember, which presents Shalamar at their up-tempo best. Part of the credit for the better than average overall quality of "Friends" should go to Leon Sylvers III, who not only produced it but is credited on some cuts as the vocal and rhythm arranger, composer, and percussionist. I counted at least three other Sylvers nestled in the credits. So, let the Sylvers take a bow too. P.G.
HAROLD ASHYBY: Presenting Harold Ashby. Harold Ashby (tenor saxophone); Don Friedman (piano); George Mraz (bass); Ronnie Bedford (drums). Candy; Quickie; Dainty; Over the Rainbow; and four others. PROGRESSIVE PRO 7040 $8.98.

Performance: Very good
Recording: Very good

Harold Ashby was with the Duke Ellington band from 1968 until the Duke's death in 1974, and since then he has gigged wherever the gigs may be. This recording, made in New York in 1978 and now released on a small label headquartered in Georgia, reveals Ashby as a frisky improvisor with a sturdy tone and a sense of fun. His transformation of that maudlin old clunker Over the Rainbow is remarkable, and his originals (Quickie, Dainty, Pleading, and Cous Cous) are pleasurable and hearty fare.

The irritating liner notes sound like federal guidelines on how to appreciate jazz. Ignore them, but do introduce yourself to Harold Ashby's zest and bonhomie. J.V.

RECORDING OF SPECIAL MERIT

BENNY CARTER: Opening Blues. Benny Carter (trumpet, alto saxophone); Shorty Sherock (trumpet); Ben Webster (tenor saxophone); Barney Bigard (clarinet); Dave Barbour (guitar); Jimmy Rowles (piano); Leroy Vinnegar (bass); Mel Lewis (drums). Opening Blues; When Lights Are Low; Lula; Heavy-Hearted Blues. PRESTIGE MPP-2513 $7.98.

Performance: Stupendous
Recording: Very good

Originally released under the title "BBB & Co.," this Benny Carter album was recorded in 1962, but the intervening twenty years have only enhanced its appeal. Just look at the sterling cast: Carter, Ben Webster, and Barney Bigard, three of the greatest reed players in jazz history; Shorty Sherock, whose mellow swing trumpet deserved greater recognition; and Barney Bigard, whose mellow swing tenor saxophone tones were perhaps his best work. The result? Ideal resonance characteristics. No racking error. And no waiting for a conventional linear tonearm to crawl back before changing records.

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"Writing is still a mystery to me...."

WHO'S Karla Bonoff?" It was the summer of 1976, and it was an inescapable question if you had heard Linda Ronstadt's latest album, "Hasten Down the Wind," featuring three spectacularly sentimental Bonoff songs. Those songs—"Lose Again, Someone to Lay Down Beside Me," and "If He's Ever Near"—had considerable if unconventional melodic power behind them and raw personal emotions right up front. They stood naked before you. Some time later I was bowled over in a different way by Home in Bonnie Raitt's "Sweet Forgiveness" album. It was not naked and was less intense, starting with a sort of Hemingway-esque objectivity ("Traveling at night/The headlamps are bright.") and, though not so hefty, the melody was absolutely lovely.

Now I have put the question, in an interviewer's various indirect and underhand ways, to Karla Bonoff herself. Her answers—there is no one answer to such a question—and those suggested in her own new (third) album, "Wild Heart of the Young" on Columbia, raise the inevitable contradictions and paradoxes.

Bonoff's first memory of music: "My mother playing Frank Sinatra records twenty-four hours a day." Karla came from "your typical nice West L.A. middle-class family," went to the same high school as Bonnie Raitt, and had a friend who knew Ry Cooder, who was another neighborhood kid but a little older. Her father is a doctor and her mother "a pretty good classical pianist" who used to teach before her marriage.

The first memory of music that made Bonoff sit up and take notice involved the early-Sixties folk business that has been a major influence on her work. "There was a local radio show, and Peter, Paul, and Mary came on and sang if I Had a Hammer, and I remember going, 'Dad, I want that record.' It was the very first record I ever owned."

And her first memory of catalytic action that set her own muse on course involved that folk approach distilled through another generation of songwriters. "When I was fifteen, I was hearing Jackson Browne play his new songs as he wrote them at the Troubadour's Monday 'hoot nights.' He was about nineteen then. I remember the first night he played Opening Farewell—the first night I heard it, maybe the week he wrote it—and I hadn't written any lyrics yet, but I was sitting up in the balcony and he played that song, and at that instant I knew what I was going to do. I was going to be a songwriter." Karla Bonoff had already written a few tunes to poems by her three-years-older sister Lisa. She still finds melodies easier to produce than lyrics. "Writing music for me really isn't difficult," she told me. "Writing lyrics takes the most time, really slows me down. Writing is still a mystery to me in terms of how I do it. I don't know what happens when a song starts to come out. If I did, I think I could probably tap into it a little more. Because I was not lyric-oriented, was not someone who read or wrote poetry and stories, because I didn't feel that I had a big vocabulary at my command, I just wrote what I could, as simply as I could, as quickly as I could.

"It is easier for me to draw on personal experiences because my emotions are what inspire me to write. So the songs always end up being about me or my life. I found it was too hard to maintain my interest in some other topic, I couldn't get inspired about it if I were to say, 'Well, I'm going to write a song about my summer vacation.'... It takes too much energy and too much intensity to write a song if it's not something you really care about."

It may also be pertinent that she doesn't do much rewriting: "I usually get it the first time or I don't get it."

Ronstadt answered my question about Bonoff laconically: "She's a friend of mine." But she also told me Bonoff had been in a band called Bryndle with Wendy Waldman and a couple of members of Linda's band, lead guitarist Andrew Gold and bassist (now Bonoff's producer) Kenny Edwards—who had also played in the Stone Ponys, the earlier band with Ronstadt.

"Bryndle did an album for A&M in 1971," Bonoff said, "and they didn't release it. I think it was ahead of its time—two girls and two guys, four different writers. I don't think A&M thought there was a focus; they thought there was a problem. As we saw later, Fleetwood Mac managed that arrangement just fine. As is often the case, the business end of the industry was behind what people were doing." So Bryndle died, but Edwards was soon making Ronstadt aware of Bonoff's songs.

"I was lucky," Karla said. "At one point, I went through tapes for Linda. They paid me to listen to them, and there were so many, most not very good. I think out of two hundred tapes I found one song that I thought I should actually bring to her attention, and it turned out that it had already been recorded by someone else. I'm glad I didn't have to send my tapes through that route."

HOME probably came out so well because Bonoff is, she says, "a real homebody, basically a nester. I had a wonderful family and a wonderful upbringing and that's a strong part of who I am." She kept referring to this nesting urge when talking about the tour then being put together to support "Wild Heart," to be followed by a trip to Japan just about as you are reading this. Too long on the road, she said, makes her forget who she is. The feeling in Home is "the feeling you get when you've been on the road too long, when you can't identify with anything any more. You really need those things around you that are yours."

Earlier I mentioned Bonoff's contradictions: there's the emotional, personal, from-the-heart Karla Bonoff way with songwriting on one hand, and, on the other, a detached, analytical, almost cold way of talking about herself and her work. There's her folksie attitude—with all those influences from Jackson Browne, James Taylor, Joni Mitchell ("her guitar work especially"), and Laura Nyro—juxtaposed with what she calls her "Motown teenage roots," some of which show above ground in her new album.

"I spent the last couple of years listening to a lot of r- &- b, getting away from the music I've listened to so much, and I think it's paid off. The effect I like is the really commercial r- &- b: the Spinners, the Stylistics, some Commodores songs. I started listening to that partly because I was tired of the very
self-conscious approach to music that I and the people I listened to had been involved in, and I just wanted to have fun with it. I'd be washing dishes and stuff and put those records on and they'd invigorate me.

"Then I realized that a lot of the music I had listened to before I started thinking about writing was Motown. I realized I had a kind of pop/r- & b orientation in my system already that I wasn't really aware of. So I think this new record is simple in that way, a little less introspective, and—I hope—a little more groove-oriented. It's less folk-musical, but I think it's still me."

A critic assessing "Wild Heart of the Young" might use much of the same language. This is not music whose lyrics can be ignored, as most r- & b lyrics can be nowadays. It is not given over to funk or dancing madness, nor is it even predominantly about fun subjects or the lighter side of relationships. But the teenage Motown roots are there. Compared with the one song here that Bonoff didn't write, Paul Kelly's Personally, her eight new tunes are only vague-work. But the teenage Motown roots are fun subjects or the lighter side of relationship. I wasn't really aware of.

"I believe in fate," she said. "I believe people get what they're supposed to get, and that's just the way of the world. That way at least you don't have to go around feeling you didn't get something you were supposed to get."

That must mean I got as much of the answer to "Who is Karla Bonoff?" as I was supposed to. Hope you do too.

Noel Coppage

KARLA BONOFF: Wild Heart of the Young. Karla Bonoff (vocals, piano, guitar); Russ Kunkel (drums); Bob Glaub (bass); Andrew Gold (guitar); David Sanborn (saxophone); Hawk Wolinski (keyboards); other musicians. Personally I Don't Want to Miss You; Just Walk Away; Gonna Be Mine; It Just Takes One; Even If; Wild Heart of the Young; Please Be the One; Dream. COLUMBIA FC 37444, © FCT 37444, © FCA 37444, no list price.
same sense of anticipation and curiosity one of a new Chico Freeman album with the CONTEMPORARY 14008 $8.98.

I have for some time now greeted the arrival of two exceptional new forces in jazz. Vibist and trumpeter Wynton Marsalis. You will be hearing a great deal from and about Marsalis (see "Best of the Month," page 70) and you will not want to miss this meeting of two exceptional new forces in jazz. Vibist Bobby Hutcherson, pianist Dennis Moor- man, and drummer Ronnie Burrage also contribute to make this a memorable set.

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If you have been affected by the youthful spirit, sparkling creativity, and breathtaking musicianship of, say, the Armstrong Hot Five's Potato Head Blues, you'll like "Destiny's Dance." C.A.

EGBERTO GISMONTI AND ACADEMIA DE DANÇAS: Sanfona. Egberto Gismon- ti (piano, guitar, Indian organ, vocal); Mauro Senise (soprano and alto saxoph- ones, flute); Zeca Assumpção (bass); Nene (drums, percussion). Maracatu; Fre- vo; Loro; Vale do Eco; Cavaquinho, and five others. ECM ECM-2-1203 two discs $14.98, © 2E5-1203 $14.98.

Bill Henderson's "A Tribute to Johnny Mercer" is just about as flawless and delightful a collection of the composer's songs as you are ever likely to hear. Accompanied only by pianos and drums, Henderson bends his highly identifiable voice in wondrous ways through a well-chosen thirty-five-minute program of songs that only the most recent generation could have missed hearing before. As on Henderson's previous Discovery album, "Street of Dreams," Joyce Collins steps in briefly as vocalist (she does a fair share assisting with arrangements and on piano too), this time contributing her half to a wonderful weave of My Shining Hour and I Thought About You. The two singers are perfectly matched. C.A.

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TBST STEREO REVIEW
Panasonic has car stereos that eliminate unnecessary noise. The Supreme Series.

I'd like to say a few words about unnecessary noise. Unnecessary noise from car stereos. Like static, fuzz and interference. Not to mention stations that fade, drift and overlap. They're all the result of one overriding factor: Cars move.

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Supreme Series AM/FM stereo cassette players. Some come with Dolby* auto-reverse, electronic tuning and LED clocks. And to make the Supreme Series really sing, Panasonic has 8 speakers. From a 1" thin model to speakers that handle 100 watts of power.

Take it from Reggie Jackson, when it comes to eliminating unnecessary noise, the Supreme Series has a lot to make noise about.

*Dolby is a trademark of Dolby Laboratories.
Bunny Berigan and Bix Beiderbecke are supposed to have met in a pick-up band sometime in 1930 or 1931, when Berigan's star was rising and Bix's was setting. Bunny wowed the college crowd on the date, and that made Bix jealous since his career had begun by conquering campuses with the Wolverines in 1923. Bunny and Bix shared other things too: both were totally devoted to music, both were alcoholics, and both died young. But Bix is a legend while Bunny has remained only a fond memory. Berigan has remained only a fond memory for fans, fellow musicians, and critics—always worth a paragraph or a footnote but not a full evaluation.

A reassessment of Berigan is possible now that RCA Bluebird has released the first volume in its projected reissue series covering all the recordings he made under his own name, starting in 1937. Berigan formed two bands that year, the first flopped, but the second group included some disaffected musicians from Tommy Dorsey's outfit. The new band played with terrific drive for at least two good reasons: George Wettling, usually remembered as a Chicagoan from the Eddie Condon mob, was the drummer, and Bunny led with exuberant trumpet playing that flashed like a Hussar's sabre. 

Unlike Bix—who, drunk or not, always maintained a certain reserve in his playing—Bunny's blasts were always emotional. He was as capable as Bix of playing fast runs, though his middle-register tones had a tendency to sound choked (unlike Louis Armstrong's, who was Bunny's principal model). But the excitement he generated was undeniable, and it remains so today. His band adored him, and though they played with a hell-for-leather zeal, they never tripped over the sometimes tricky arrangements. Berigan also had outstanding soloists in Joe Dixon (alto sax and clarinet), Georgie Auld (tenor sax), and Sonny Lee (trombone). Their reputations too may rise as a result of this reissue. 

The set includes I Can't Get Started, Berigan's great hit and theme song (originally recorded on a 12-inch, 78-rpm disc with a playing time of nearly five minutes, unusual for those days), a rousing Frankie and Johnny, and, in tribute to Armstrong, Mahogany Hall Stomp. Bunny and his merry crew played with such momentum that even the meatball ballads assigned to them are taken as uptempo as possible, with the vocalists (including Berigan himself, who was no slouch) zipping through the bland melodies and stodgy sentiments with happy abandon. 

This nicely remastered and packaged album will surely be welcome to old fans and surprising to new listeners. It offers compelling evidence that Berigan has been underestimated by musical historians. Of all the figures in the Swing Era, he probably deserves the most reevaluation. 

BUNNY BERIGAN: The Complete Bunny Berigan, Vol. 1-1937. Bunny Berigan (trumpet, vocals); vocal and instrumental accompaniment. You Can't Run Away from Love Tonight; Cause My Baby Says It's So; Carelessly; All Dark People Are Light on Their Feet; The First Time I Saw You; Love Is a Merry Go-Round; The Image of You; I'm Happy, Darling, Dancing with You; Swanee River; All God's Chillun Got Rhythm; The Lady from Fifth Avenue; Let's Have Another Cigarette; and nineteen others. RCA Bluebird AXM2-5584 two discs $11.98, © AXK2-5584 $11.98.

GROVER WASHINGTON, JR.: Come Morning. Grover Washington, Jr. (saxophones); vocal and instrumental accompaniment. East River Drive; Come Morning; Be Mine Tonight; Reaching Out; Little Bamba; and nineteen others. Elektra SE-562 $8.98, © SCS-562 $8.98, © ST8-562 $8.98.

Performance: Smooth
Recording: Excellent

It's been said that jazz is less a kind of music than a way of playing music. No doubt this is a personal prejudice, but to me jazz is music played with a hard-edged, rebellious intelligence, music that expresses rage or mischief more than romance. But there is a whole school of jazz players—Grover Washington, Jr. and Bob James and Stanley Turrentine, to name a few—whose concerns are very different. They're the decorative artists of jazz, not so much architects as interior designers, and Washington is one of the best. His new album, "Come Morning," is all atmosphere, all sensation. Washington's warm alto sax rises from the coolly flowing arrangements like morning mist on the East River or dances away like a joker's breath in the frosty air. His solos are simple and soulful, their whole effect sometimes hanging on a single note bent to just the right shade of blue. The personnel on "Come Morning" reads like a roll call of the pop-jazz school: Ralph MacDonald, Richard Tee, Eric Gale, Steve Gadd. They contribute a rhythmic environment that's crisp and breezy. 

Not everything here works. Washington's use of coaxing back-up singers, okay in small doses, starts sounding like Braille by the middle of side two, and now and then the arrangements are just plain wrongheaded (a 'galloping version of the Wailers' Jamming is the most egregious example). But, for the most part, "Come Morning" is as easy and as comfortable to sink into as a warm bath.

M.P.
AMARCORD NINO ROTA (I REMEMBER NINO ROTA). Jaki Byard, Dave Samuels, the Carla Bley Band, Bill Frisell, the David Amram Quintet, Steve Lacy (vocals and instrumentals); other musicians. Amarcord; Interlude from Juliet of the Spirits; 8½; and seven others. HANNIBAL HNBL 9301 $8.98.

Performance: Well-intentioned
Recording: Very good

What we have here is a (somewhat) bewildering variety of musicians—ranging from such jazz artists as Carla Bley, Ron Carter, and Steve Lacy to Blondie's Chris Stein and Debbie Harry—paying tribute to the work of the great Italian film composer Nino Rota. It is a well-intentioned effort, and I hate to knock an obvious labor of love, but, to be blunt, the result is at best a mildly jazzy mood record reminiscent of the kind of thing you might have heard wafting down the hall of a college dormitory in 1958. Estimable as some of the work here is (Jaki Byard's delicate solo-piano version of the theme from La Strada, for instance), I think we'd all have been better served if the original soundtracks of these Fellini films had been excerpted for a genuine Nino Rota "Greatest Hits" album.

S.S.

THE CATHERINE WHEEL (David Byrne). David Byrne (vocals, bass, guitars, percussion, synthesizers, etc.); Yogi Horton (drums); John Chernoff (percussion); Bernie Worrell (Mini Moog, clavinet, piano); Adrian Belew (guitars); Brian Eno (bass, keyboards, vibes); Jerry Harrison (clavinet, drums); Dolette McDonald, Sue Halloran (vocals); Twyla Tharp (water pot). SIRE SRK 3645 $8.98, © M5S 3645 $8.98.

Performance: High-energy
Recording: Heavy, powerful

Yes, you read it right: "Twyla Tharp (water pot)." In the original Broadway production of The Catherine Wheel, Tharp took a somewhat more important role: she choreographed the work—which is to say, she created it—with music and lyrics contributed by David Byrne of the Talking Heads (one instrumental is credited to Brian Eno). The record is described as "Songs from the Broadway Production," but there's not very much singing (Byrne typically does a rap-rhythm-style Talking Head routine with only some marginal singing). Where's the tune? Hey, this must be Modern Music!

Byrne writes classic arty/surreal rock lyrics. The Catherine Wheel (I didn't see it) apparently had something to do with the life and death of the American family, and Byrne's words hover menacingly around this topic. I recently described commercial television as being concerned with "stories
of extreme violence and danger performed in an elliptical, laconic, laid-back style with heavy, threatening rhythmic undertones and a clipped, stylized surface. "Except for the fact that there is no story, that is an accurate description of what's on this disc. Not only is there no literary, dramatic, or narrative content, there is no musical story either. No tune. Just rhythmic outlines for music with a ghastly emptiness inside—light, heavy, even powerful structures that, frighteningly, contain—nothing."

—Eric Salzman

RECORDING OF SPECIAL MERIT

QUARTET (Richard Robbins). Original-soundtrack recording. Armelma McQueen (vocals); instrumental ensemble. Gramavision GR-1020 $8.98.

Performance: Jazz Age revisited

Recording: Superb

The dissolution of rootless women wandering around Europe, holding on as best they can to their looks and the men they helplessly depend on, is the theme of the novels of Jean Rhys, an English author who wrote most of her books in the Thirties but was rediscovered in the Seventies by the feminist movement. Quarter, written in 1929, is set in the Jazz Age, which afforded the movie makers an opportunity to include some stunning jazz performances. The score is a new one by Richard Robbins, but you'd swear it was vintage material of the period as Armelia McQueen socks it to you in Luther Henderson's arrangements of Five-O-Nine and Full Time Lover and as Isabelle Adjani makes the most of a line song called Pars. There's also an Arabesque Valseante, a Tango, a sizzling interlude in Maggie's Trois, and some very French moments in Au Bal Musette. This is one score you don't have to have seen the movie to enjoy, especially if you're good at jazz-style jazz done to a turn. More new records like this one just might bring back the Jazz Age along with Jean Rhys' novels. P.K.


Performance: Good

Recording: Good

Reds is a lavishly beautiful but somewhat sily movie about two narcissists in search of a cause. It might have been entertaining at half the length and with a more mature viewpoint. The soundtrack album from this long, long movie is, I suppose, as properly and unavoidably grandiose as the film itself. Stephen Sondheim contributes Goodbye for Now, the Lara-like theme performed by Jean-Pierre Rampal and Claude Boiling. It isn't exactly a house-burner, in fact, it's pretty dull. Even duller is the incidental music that Dave Grusin supplied for most of the rest of the film. The only breaks from the self-preoccupation of the whole enterprise are three tracks performed by the massice Moscow Radio Chorus. They soar through Communist golden-olde's—The Red Army Is The Most Powerful of All, The Internationale, and The Engine—with a spirit and vitality that are missing from the rest of the score. The disc was produced by, of all people, Phil Ramone. P.R.

SHARKY'S MACHINE. Original-soundtrack recording. Randy Crawford, Peggy Lee, Chet Baker, Doc Severinson, the Manhattan Transfer, Sarita Montiel (vocals) and instruments. Warner Bros. BSK 3653 $8.98, M5 3653 $8.98.

Performance: Star tracks

Recording: Glossy

The new Burt Reynolds vehicle, Sharky's Machine, has been fitted out with one of the glossiest, star-drenched soundtracks in memory. In this slick Snuff Garrett production the names tumble after one another: Sarah Vaughan sings the title Love Theme and then pairs off with Joe Williams in Before You; Chet Baker and Julie London each do a version of My Funny Valentine; Randy Crawford, Floara Purim and Buddy De Franco, the Manhattan Transfer, and Doc Severinson all do their neatly manicured turns. As with so much gals, one star outshines all the rest; in this case it is the unsinkable Peggy Lee. Wrapping her song style and languid lyric style around a really lousy song—Let's Keep Dancing, probably best described as a sort of idiot son of If That's All There Is—she is still able to produce the kind of effects that send the listener back to the recording to play her track again and again. P.R.
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To ensure enough power to take advantage of all these features, there's a superb amplifier which — like all the others in the Concord line — is designed with exactly the same high fidelity specifications as home amplifiers. That's why we can give you complete specifications:

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CIRCLE NO. 55 ON READER SERVICE CARD
Opportunities to see and hear a good countertenor in action are not abundant in the United States. But the Public Broadcasting Service will give television viewers two such opportunities this month in their cycle of Monteverdi operas. The cycle consists of *Orpheus* (June 7), *The Return of Ulysses* (June 14), and *The Coronation of Poppea* (June 21), and the casts for the last two include the noted English countertenor Paul Esswood, who has recorded both operas for the Telefunken label.

We talked with Esswood earlier this season when he made his New York debut singing the alto part in Handel's *Messiah*. He said, "Mine is a quiet voice—not large, but not small either. It certainly is not fragile. I've done 5 1/2-hour recording sessions nonstop, and I've sung fifteen operas in seventeen days. At first people are fascinated that a man can sing so high, then they are delighted to learn that it is possible to sing that way and be musical at the same time."

Esswood studied at the Royal College of Music in London. He says countertenors are more common in England because voices of this kind have traditionally been used in the English cathedrals. "When I used to sing at Westminster Abbey, I had a list of at least forty others I could call on whenever I needed a substitute."

Esswood's speaking voice is rather deep. Does this mean his high singing voice is falsetto? "That depends on how you define falsetto," he said. "Certainly the vocal cords are not being used in the usual way. They are vibrating in half their length, and you are getting the first harmonics. It's like touching a violin string to get the overtones."

When students ask Esswood whether they should aim to become countertenors or basses, he says they should ask themselves two questions: (a) Is it natural for you to sing alto, and (b) Is it natural for other people to listen to you? If you are going to make noises like a cat on a hot tin roof, don't bother. It must be beautiful to be interesting."

Two conductors have been especially influential in building Esswood's international career: Charles Mackerras and Nikolaus Harnoncourt. When Esswood was only twenty-three, Mackerras gave him his first big break by engaging him for an important recording of Messiah for EMI/Angel. With Harnoncourt he has recorded several operas and many works in Telefunken's integral series of the Bach cantatas. His latest U.S. release is Handel's *Xerxes* conducted by Jean-Claude Malgoire for CBS Masterworks. Esswood says, "I stopped counting my records when the number got to three figures."

Although his repertoire includes music of several centuries, Esswood sings mostly Baroque music written for castrato altos. These days he is so busy in opera that he has little time for recitals. "I like to sing the Handel roles of the heraldic warrior type. In music I like to express a man's sentiments, to express my own emotions. I've never sung anything written specifically for a female, and I've never done a travesty role on stage. I'm afraid I might be quite good at it, and I certainly wouldn't want to become typecast in that sort of thing."

—W.L.

Andrew Litton of New York City, a master's degree candidate at the Juilliard School of Music, has won the Sixth International Young Conductors competition in London, England. He conducted the BBC Symphony Orchestra in Mozart's *Haffner Symphony*. The twenty-year-old Litton, who described winning the contest as "the greatest thrill of my life," is the youngest finalist in the history of the contest. He will make his American opera debut conducting the San Diego Opera in October of this year.  

In England, the Royal Opera House, Covent Garden, has licensed films of a few of its performances for distribution on videodiscs. The first of these, Offenbach's *Tales of Hoffman* with Placido Domingo, is now available on Pioneer LaserDisc with a stereo soundtrack that features CBS' new CX noise-reduction system (see this month's "Audio Q. and A." for more on this use of the CX system).

At the Metropolitan Opera we asked Michael Bronson, executive producer of the "Live from the Met" TV series shown on PBS, whether that series was likely to show up in the home video market. He said, "We are negotiating with unions and artists for the rights to issue past performances, and if agreements are reached within the next few months, we might have videocassettes or videodiscs on the market as early as next winter. We have a definite sense that there is a place for opera in this market. It is not just a dream. Licensing our 'Live from the Met' performances to foreign television now produces a little revenue for the company. Perhaps when the new technology settles in, video can produce a significant amount."

Athenaeum recently published Charles Osborne's *The Complete Operas of Puccini* (279 pages, $15.95). Like the author's earlier guides to the operas of Verdi and Mozart, it treats each opera discussed as a work for the musical theater. In the introduction Osborne says, "This book is addressed to the opera-lover who wants to know the background.
of the operas he enjoys, to have the works set in their historical context and the music discussed in terms reasonably free of jargon—remembering that operas are not abstract symphonies." It's quite readable, and we recommend it.

In March, Philips Records released the album "Zamfir, King of the Pan Flute" on the Mercury label. It is a recital of classical favorites by Bach, Mozart, Telemann, and others played by Gheorghe Zamfir, a Romanian virtuoso on the instrument known as the pan-pipes, syrinx, Pandeion pipes, or pan flute. When we heard the album (and learned of Zamfir's impressive record sales in Europe and Canada), we prophesied that Americans would be hearing a lot of pan-flute playing this year.

Well, we prophesied better than we knew. Unknown to us at the time, the Dance Theater of Harlem was performing at the New York City Center (right next door to Philips' U.S. headquarters), and the troupe's repertoire included Doina, a ballet danced to panpipe music on tape—by Zamfir, of course. Then we saw the movie Quest for Fire and discovered that its soundtrack included a lot of pan-piping. Set in the Stone Age, Quest for Fire is a story about love and life some 80,000 years ago. Despite the filmmakers' efforts to re-create prehistoric convincingly, Quest for Fire struck us as a pretentious greek show, but the soundtrack by composer Philippe Sarde (now available on disc from RCA) is interesting. The music is performed by the London Symphony Orchestra and Les Percussions de Strasbourg conducted by Peter Knight with Syrinx as the pan-flute soloist in such cuts as the Love Theme and the Birth of Love.

Syrinx is the stage name of pan flutist Simion Stanciu, who is, like Zamfir, from Romania. His European recordings on the Carrere label include albums of classical pieces, Romanian folk songs, and Christmas carols as well as a recital with electronic instruments. As far as we have been able to determine, the soundtrack album for Quest for Fire is his North American recording debut.

We are not ready to compare Stanciu's technique with Zamfir's, but we're working on it. We don't yet know what James Galway, Jean-Pierre Rampal, and Ransom Wilson will make of these Romanians muscling in on their big flute revival. For all we know, Galway may be in the studio right now making a record with Syrinx or Zamfir. But whatever happens, and at the risk of repeating ourselves, we think there's gonna be a whole lot more pan-flute playing going on.

—W.L.

The Czech pianist Ivan Moravec began attracting his ardent American following back in the middle 1960s with his records of Chopin's Preludes and Nocturnes on the Connoisseur Society label. Those recordings, no longer in the Schwann catalog, are now available only on in Sync cassettes or Book-of-the-Month Club records, but Moravec fans will be pleased to know that on his recent North American tour he was lured into recording studios by not one, but two U.S. labels: Nonesuch and Vox. At his first American sessions in many years Moravec recorded works by Brahms, Schumann, and Janácek for Nonesuch and compositions by Chopin and Debussy for Vox.

Disc and Tape Reviews

By RICHARD FREED • DAVID HALL • GEORGE JELLINEK • PAUL KRESH

ALIAN: Solo Piano Pieces (see Best of the Month, page 71)

RECORDING OF SPECIAL MERIT

J. S. BACH: Seven Motets (BWV 225-231); Cantata 50, Nun ist das Heil und die Kraft; Cantata 118, O Jesu Christ, meins Lebens Licht. Monteverdi Choir; English Baroque Soloists, John Eliot Gardiner cond. EKATO/RCA STU 71337 two discs $17.96.

Performance: Reепlentent

Recording: Superb

Singing here with a rare combination of instrumental-like precision and clarity and a natural vocal warmth, the some twenty-five male singers of the Monteverdi Choir produce an unearthly sound that is a listening experience in itself. Combined with period strings and natural trumpets, their voices make the heavens open and transport us to unknown realms. But there is much more here than sheer sound: the Bach motets and the two motet-cantatas are, of course, masterpieces, and John Eliot Gardiner's interpretations of them are exquisitely wrought.

Gardiner is not afraid to use a wide range of tempos and dynamics, though in each case these are clearly based on the meaning of the words. The articulation of the individual lines and the vocal colorations are similarly based on the sonic structure of the texts. As Bach translates the meaning of the poetry into music, so Gardiner has conveyed the same meanings through his interpretations. The marriage is perfect. Jesu, Meine Freude is a tone poem of faith and rejection; Singet dem Herrn is the epitome of contemplative joy. The unification of poetical and musical meaning in these performances is virtually unique on records, and Bach's spirit shines brightly through them. S.L.


Performance: Inappropriate

Recording: Okay

I like Gidon Kremer's playing very much in a lot of repertoire, but not much in this music. Well, let's say that the D Minor Chaconne is wonderful and that a few other things—abstract pieces such as the E Major Prelude—are strong. These pieces can take Kremer's big, gutsy approach. But mostly he is so far off the beam in style here—uncomfortable-sounding in unfamiliar surroundings—that the music doesn't flow. The dance movements never dance, the ornaments are never ornamental, repeats are never varied, the written-out doubles are played not as varied repeats but as whole new things—abstract pieces such as the E Major Prelude—are strong. These pieces can take Kremer's big, gutsy approach. But mostly he is so far off the beam in style here—uncomfortable-sounding in unfamiliar surroundings—that the music doesn't flow. The dance movements never dance, the ornaments are never ornamental, repeats are never varied, the written-out doubles are played not as varied repeats but as whole separate movements, the wit and ingenuity
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For those who want a Beethoven Ninth steeped in the German classic tradition, this one ranks with Otto Klemperer's 1958 recording as one of high distinction. The sonorities are basically excellent, though I do not find that the digital mastering has made for significant enhancement of quality. D.H.

RECORDING OF SPECIAL MERIT


Performance  Superb
Recording Excellent

Carlos Païta's performance of the Brahms First is almost as impressive for what it is as for what it is. What it is not is self-indulgent or wayward. What it is is superbly musical, it shines with integrity. This most extroverted of Brahms' symphonies seems to tempt many conductors to pull its rhythms about and distort the phrasing by way of making a "personal statement." But the work is monumental enough as Brahms wrote it without staggering the final statement of the chorale theme, and dramatic enough without gratuitous gear-shifting every few bars; it can fulfill its expressive aims fully if it is simply played as written, with minimal "interpretation" and maximal respect for the score. This seems to be Païta's approach, and in this respect his recording recalls the noble simplicity of the early microgroove versions under Eduard van Beinum and Guido Cantelli—except that within a similar framework Païta manages to project a greater sense of drama, a greater intensity, and still more lyrical expressiveness. The proportions of the work are ideally realized, and the finale comes off with really convincing grandeur precisely because of Païta's faithful adherence to what Brahms set down. No stops—and starts, no distorted phrases, no spotlighting; just sound, honest music making, very much to the glory of Brahms. The orchestra, possibly the most versatile ever assembled for recording, plays like one of the world's great ensembles, concertmaster Sidney Sax distinguishes himself in the slow movement, as do the winds throughout the symphony. The recording (made with the 3M system) is extraordinarily rich and realistic, and the pressing is what we have come to expect from Teldec.

R.F.

CHERRY: Humus; Sita Rama Encores (see PENERECKI)

CHOPIN: Andante Spianato and Grande Polonaise, Op. 22 (see MUSSORGSKY)

GINASTERA: Piano Sonata (see MUS-SORSKY)

GRIFFES: Collected Piano Pieces (see Best of the Month, page 70)

RECORDING OF SPECIAL MERIT

HANDEL: Concerti Grossi, Op. 3; Oboe Concerto No. 3, in G Minor. Jürg Schaeftlein, David Reichenberg (oboes); Alice (Continued on page 103)
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Harnoncourt (violin), Herbert Tachezi (harpischord, organ), Concentus Musicus of Vienna, Nikolaus Harnoncourt cond. Telefunken 6.35545 two discs $21.96

Performance: Spirited
Recording: Excellent

Besides the six delightful concertos of Handel's Op. 3, conductor Nikolaus Harnoncourt here throws in two "extras": a second version of Concerto No. 4 and the G Minor Oboe Concerto. The latter is especially welcome since it gives us a chance to hear the excellent playing of Jürg Schaeflein, whose embellishments and divisions are a model of good taste and imagination. When he is joined by oboist David Reichenberg in the Op. 3 set, the result is a marvel of verve and ingenuity. Their articulation is joyous, their syncopation startling. In the Sixth Concerto, in which the organ is surprisingly en-listed as a soloist, Herbert Tachezi puts on a real show. Handel's figuration seems routine in most performances, but Tachezi's ornamentation adds sparkle and brilliance.

The orchestral sound is at once gruff and suave. Harnoncourt savors the peculiarities of each fugue subject and keeps the instruments dancing. The tempos are on the slow side, but the tongue-in-cheek pomposity of the overtures and double-time dances is contagious. All the usual Concentus Musicus mannerisms are in evidence, but somehow they are woven here into the musical fabric and become convincing. This is real music making, not merely a display of musical scholarship.

S.L.

RECORDING OF SPECIAL MERIT


Performance: Excellent
Recording: Superb

Paul Hindemith's Concert Music for Piano, Brass, and Harps, written in 1930, is actually a chamber concerto for piano. There is a movement for piano and brass, another for piano and harps, and a finale for all three. The excellent pianist here is Paul Crossley; the brass ensemble and the unidentified harpists are conducted by Elgar Howarth. The Concert Music for Brass and Strings, Op. 50, is, despite the closeness of date and title to its predecessor, a big symphonic work commissioned by the Boston Symphony for its fiftieth anniversary in 1931. And the Morgenmusik (Morning Music) was a wake-up chorale played from a tower to open a festival in a small town in North Germany for which Hindemith wrote an entire day's worth of music.

I stress these simple facts because this record comes with liner notes that are extremely uninformative and unclear. Fortunately, there is nothing unclear about the music or the playing or the recording. It is vintage Hindemith. This composer played and wrote for virtually every instrument and instrumental combination associated with the modern orchestra, but his style was particularly appropriate for brass. The early Thirties was the best period of his Gehrauchsmusik (music for use) style. And
All-star "Brandenburgs"

Recordings of Bach's ever-popular Brandenburg Concertos come and go, but a new Philips set with an all-star roster of soloists and the Academy of St. Martin-in-the-Fields conducted by Neville Marriner is absolutely top-drawer. Despite their varied backgrounds, the soloists are perfectly matched not only in technical virtuosity but also in musical style. The vexing question of old vs. modern instruments has been delicately resolved here by the unconventional use of recorders, gambas, and harpsichord together with modern flutes, violins, oboes, and trumpets. Musicality, it works.

Perhaps the most remarkable aspect of this gorgeous recording is the balance. In the first movement of the Second Concerto, for instance, the potentially awkward combination of violin, oboe, recorder, and trumpet is so well handled that the thematic material is always clearly heard regardless of which instrument is playing which line. In the Fifth Concerto, the solo harpsichord is always up front but never aggressively forward. All of the instruments sound bright and crisp throughout, and they project Bach's intricate sound tapestry in sharp, clean colors.

In general the playing is based on a long line with seamless legato. Though one might quibble about this approach for its lack of Baroque articulation, I can only admire the unity of style and resultant clarity. My only real criticism of the set concerns the absence of a supporting cello in the slow movement of the Fifth Concerto. That aside, these Brandenburgs are certainly among the best in the catalog, and they reaffirm that great musicianship can carry the day even at the expense of niceties of authentic performance practice.

—Stoddard Lincoln

J. S. BACH: Brandenburg Concertos (BWV 1046-1051), Henryk Szeryng (violin); Jean-Pierre Rampal (flute); Heinz Holliger (oboe); Carl Pini (violin piccolo); Michala Petri, Elisabeth Selin (recorders); George Malcolm (harpsichord); André Bernard (trumpet); others. Academy of St. Martin-in-the-Fields, Neville Marriner cond. Philips 6769 058 two discs $22.96, © 7654 058 $22.96.

This is music for playing which is also (as it is not always with Hindemith) music for listening. Good music, superb performances, and an outstanding recording. Bravo! E.S.

Recording of Special Merit


Performance: Dashing
Recording: Excellent

Moritz Moszkowski (1854-1925) was a celebrated piano virtuoso and teacher in his day, best known as a composer for his set of Spanish Dances and various encore favorites. The E Major Piano Concerto, in four movements, presents him in a decidedly more ambitious vein, and it certainly is a humdinger of a display piece, beginning right off with the opening solo-piano recitativo. The slow movement is a kind of song without words that leads without pause into a liberate but not dragging, and he displays a keen ear for balances and a keen attention to orchestral detail. Dramatically, however, the performance is not the last word: little is made of dynamic contrasts, and surely the final transformation scene, as the stage becomes illuminated through the elimination of the dark forces, should have registered a stronger impact.

The singing is generally good. Lucia Popp is exquisite as Pamina; her "Ach, ich fühls" is the set's highlight. Siegfried Jerusalem is an agreeably musical Tamino, though a shade tight in the high register and occasionally off in intonation. Intonation is not one of Edita Gruberova's strong points either, but she delivers the Queen of the Night's arias with passion and fluency. Commendable too are the charming Papagenas of Brigitte Lindner and the eloquent Speaker of Norman Bailey.

The remaining cast members are less distinguished. Roland Bracht is a none-too-steady Sarastro with precarious low notes. Heinz Zednik croons and whimpers his music, which is not my idea of Monostatos. In the other direction, Wolfgang Brendel floods his music with excessive tone, leaving clean, in short supply. Papageno is a role that seems to come naturally to Viennese singers, but, with due regard for such exceptions as Gerhard Husch and Hermann Prey, it seems to elude the Germans.

Angel's digital sound is generally imposing, but there are some balance miscalculations, starting with the first scene where Tamino's opening words are too far in the background. And, though the extramusical sounds are realistically captured, the last two "thunders" specified in the score have been omitted.

G.J.

Left to right: Bernard, Szeryng, Petri, Marriner, and Holliger.

Left to right: Bernard, Szeryng, Petri, Marriner, and Holliger.
Andras Schiff, probably the best-known of the several admirable Hungarian pianists still under thirty, has already recorded all of Mozart's keyboard sonatas for London/Decca. I'm glad that the discs are being issued one at a time in the U.S. so that the performances can be evaluated and appreciated individually. This first installment is surely a total success. Schiff's feeling for clarity, so evident in his Bach recordings, and his response to the early Romantic idiom combine to serve him especially well in the monumental sequence of the two C Minor works. The music comes to life splendidly and unhurriedly, without posturing or exaggeration of any sort and with a kind of improvisatory sobriety that suits its character ideally. In contrast, Schiff's approach to the cheerier works on the other side of the series.R.F.

MOZART: Sonata in B-flat Major (K. 333); Sonata in C Major (K. 545); Fantasy in C Minor (K. 475); Sonata in C Minor (K. 457). Andras Schiff (piano). LONDON CS 7249 $10.98.

Performance: Stylish
Recording: Fine

Andras Schiff, probably the best-known of the several admirable Hungarian pianists still under thirty, has already recorded all of Mozart's keyboard sonatas for London/Decca. I'm glad that the discs are being issued one at a time in the U.S. so that the performances can be evaluated and appreciated individually. This first installment is surely a total success. Schiff's feeling for clarity, so evident in his Bach recordings, and his response to the early Romantic idiom combine to serve him especially well in the monumental sequence of the two C Minor works. The music comes to life splendidly and unhurriedly, without posturing or exaggeration of any sort and with a kind of improvisatory sobriety that suits its character ideally. In contrast, Schiff's approach to the cheerier works on the other side of the series.R.F.

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MOZART: Sonata in B-flat Major (K. 333); Sonata in C Major (K. 545); Fantasy in C Minor (K. 475); Sonata in C Minor (K. 457). Andras Schiff (piano). LONDON CS 7249 $10.98.
Meilhac and Halévy, the librettists-to-be of Carmen, concocted a plot for Offenbach that has little cohesive story line but an abundance of lively satire and textual and musical wit. Much of the dialogue is missing in the streamlined version here; the Angel set (SLBX-3839) offers more music, a fuller orchestration, operatic voices, and a far richer sound. But it is an advantage of the present abridgment that the selections are banded and the delectable highlights thus easier to find. No libretto is supplied, however, and I noticed some pressing flaws on side two of my review copy. G.J.

PENDERECKI: Actions for Free Jazz Orchestra, New Eternal Rhythm Orchestra, Krzysztof Penderecki cond. CHERRY: Humus—the Life Exploring Force; Sita Rama Encores. Don Cherry (pocket-trumpet, flutes, vocals); New Eternal Rhythm Orchestra. EVEREST 3484 $5.98.

Performance: Authoritative Recording: Good

This live recording comes from the 1971 Donaueschingen Festival and from the very heyday of the intersection between free jazz and avant-garde aleatory music. The New Eternal Rhythm Orchestra is—or was—a band made up of outstanding American, English, German, Dutch, Belgian, Norwegian, and Polish jazz musicians. Don Cherry’s Humus is a loose collection of themes and thematic elements, mostly from Asia and Africa, that are brought in one by one in the most informal manner and picked up on by the musicians in an atmosphere of good spirits and mellowness.

Krzysztof Penderecki’s presence in the midst of these high jinks might seem a little surprising, but, in fact, the distinction between avant-garde jazz and a lot of new non-jazz has been blurred for a long time now. The jazz tradition has accorded more importance to the creative contributions of the players than those of the composer, but, with the advent of so-called aleatory music and free improvisation on the new-music scene these many years ago, even that difference has tended to disappear. Actually, the Penderecki and the Cherry pieces here have a lot in common. Penderecki also gives music to the musicians—in this case a written-out score—and then lets them take off from it. The difference is one of tone. Penderecki is organized, serious, full of intention; Cherry is playful, off-the-cuff, messy, nitty-gritty, spiritual. But this is more a difference in personality between the two men (and a distinction between an Old World attitude and a New World one) than a real difference in genre.

Listeners who like Cherry’s sloppy big-band idea of ecumenical fun may not take so quickly to Penderecki’s long-bearded idea of a free jazz band, but those are the risks. Seems like people were more willing to take those risks ten years ago. A friendly word of warning: my review copy had reversed disc labels. E.S.

RAVEL: Jeux d’Eau (see MUSSORGSKY)

REGER: Serenade in G Major, Op. 141a; Serenade in D Major, Op. 77a. Peter-Lukas Graf (flute); Sándor Vegh (violin); Rainer

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eleven years earlier, is a tad more serious in companion piece on this disc, composed fast outer sections, it movement and witty, perfectly conceived from 1915, only a year before his death.

Saint-Saëns' Third Symphony was actually his fifth. He suppressed two of the other four, all written by the time he was twenty-four. The earlier works may be less ambitious and astonishing than the familiar Third, but it would be nice if some of them would get a little of the attention lavished on it. Sometimes it seems that every organist and orchestra in the world is determined to add yet another recording of the Organ Symphony to the catalog (I counted sixteen in the current Schwann). In terms of performance, I suspect Toscanini did all that could be done for this work years ago (too bad his sensational RCA recording is no longer available), but in terms of sound many of the later versions have landmarks. Although there are mightier symphony orchestras than the Baltimore and more celebrated organists than Frederick Minger, under Sergiu Comissiona's fiery guidance their new digital recording seems to my ears the equal of any of its current competitors. Unlike some other recent recordings, the organ and orchestra were recorded together, not mixed after the fact, and additional resonance is provided by the locale, the National Presbyterian Church in Washington, D.C.

Schumann's chamber music made up of what are of lesser-known works for orchestra, Walter Susskind cond. Vox LDR 71017 $12.98, © LDR5 71017 $12.98.

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has the advantage of the splendid immediacy of sound provided by London's excellent digital mastering, but the late Walter Susskind offers a distinctly more satisfying pacing of the interlinked final three movements of the Ninth Symphony, in which Haitink's sharply defined tempo contrasts tend to throw one off a bit. One might also question Haitink's tempo contrast between the outer sections and trio of the scherzo in No. 1. On the other hand, his pacing of the opening movement in No. 9 captures every bit of its delectable impertinence, and the London Philharmonic winds accomplish prodigies of virtuosity in the presto of the same work. Still, I feel that Susskind does better with the sweet-and-sour aspects of the finale.

Although the production team of Mark Aubort and Joanna Nickrenz did a very decent recording job in Cincinnati, it doesn't quite match what the London disc has to offer, nor does the Cincinnati orchestra itself sound in the same league here as the Londoners. My own preference for No. 1 remains the composer-supervised Ormandy recording on Columbia and for No. 9 either the Kondrashin on Melodiya/Angel or the reissued Koussevitsky on RCA.


Performance: Historic slides
Recording: 1928

The Bohemian String Quartet—really the Czech Quartet but always known abroad by its German name—was founded in Prague in 1892 and remained active until the mid-1930s. When these recordings were made in 1928 the violinists were still, incredibly, the original ones: Karel Hoffman and the composer Josef Suk. The violist, Jiří Herold, and the cellist, Ladislav Zelenka, were long-time members too. The group's repertoire was wide, but, not surprisingly, they specialized in the music of Dvořák, Smetana, Janáček, and Suk, many of whose works they premiered or first brought to the outside world.

Parnassus Records is a company that specializes in reissues of early and historic recordings, and this one is certainly of considerable interest. After all, Suk himself plays the violin in his quartet, and the short, vigorous finale performed here is different from that in the published score. But the Smetana performance—of a work only sixteen years older than the ensemble playing it—is of even greater interest.

As John D. Wiser points out in his album notes, the technical basis for the legato/melodic style of playing this music is the portamento or slide. This way of playing the violin was not limited just to Czech or Slavic music but was completely pervasive from at least the late nineteenth century (perhaps a good bit earlier) until well into the first decades of the twentieth. The technique has gone so far out of fashion today, however, that contemporary listeners may be put off, yet, as Wiser notes, the effect is just the way these composers must have imagined their string music would sound. Just listen to Suk and his companions in his performance and you'll see what I mean.

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JUNE 1982
**Rodrigo: Two Unfamiliar Concertos**

Slow movement: if that isn't authentic, what is? Personally, I'm in favor of a revival of good old-fashioned portamento in modern violin playing—and there are signs that it is already happening.

The case for the old style would be made a little more strongly here if the quartet were just a bit more accurate in intonation. The dry old sound—although serviceable and nicely cleaned up—is quite merciless in its emaciated, close, focused quality. No fancy blend here: everything can be heard and nicely cleaned up—is quite merciless in its emaciated, close, focused quality. No fancy blend here: everything can be heard and nicely cleaned up—simplistically, clearly. We can hear the old style would be made a little more strongly here if the quartet were just a bit more accurate in intonation. But it could be closer to the old style would be made a little more strongly here if the quartet were just a bit more accurate in intonation. But it could be closer to the old style would be made a little more strongly here if the quartet were just a bit more accurate in intonation. But it could be closer to

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**SUK: String Quartet No. 1, in B-flat Major, Op. 11 (see SMETANA)**

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Performance: Excellent Recording: Very good

Christopher Hogwood must have had two purposes in mind when he chose the repertoire for this delightful record. First, to present in their original scorings, with periodic instruments and stylistically correct performances, popular pieces that are usually heard in souped-up versions. Second, to display the sonorities of various instruments in an orchestral context. The result is a splendid anthology that makes a perfect introduction for listeners wishing to be initiated into the joys of authentic performance practice on early instruments.

The performance here of Pachelbel's Canon cleans the ears of meaningless string vibrato and shapeless legato. The Gluck dances astonishing with the fury of the full ensemble and the contrasting sweetness of the old flute. The Vivaldi and Handel pieces bring in the sounds of oboes, militant brass, and Baroque festive joy. The Academy's strong performances throughout should dispel any doubts about the recollection of the old style would make it a little more strongly here if the quartet were just a bit more accurate in intonation. But it could be closer to the old style would be made a little more strongly here if the quartet were just a bit more accurate in intonation. But it could be closer to the old style would be made a little more strongly here if the quartet were just a bit more accurate in intonation. But it could be closer to the old style would be made a little more strongly here if the quartet were just a bit more accurate in intonation. But it could be closer to the old style would be made a little more strongly here if the quartet were just a bit more accurate in intonation. But it could be closer to the old style would be made a little more strongly here if the quartet were just a bit more accurate in intonation. But it could be closer to the old style would be made a little more strongly here if the quartet were just a bit more accurate in intonation. But it could be closer to the old style would be made a little more strongly here if the quartet were just a bit more accurate in intonation. But it could be closer to

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(Continued on page 113)
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**S.L.**

**RECORDING OF SPECIAL MERIT**


Performance Gutsy, communicative Recording Warm and clear

Lili Kraus celebrated her seventy-seventh birthday on April 2, but she obviously has no more intention than Arthur Rubinstein before her of ever assuming an "elder statesman" role in her music making. She has never believed, of course, in such a thing as a "feminine" approach, nor ever felt that the music of any of the four composers represented here was to be regarded in terms of gossamer fragility. There's no mincing reticence in her confrontations with Bach and Mozart, no condescending smoothing-over in her Haydn and Schubert. The playing is, as always, gutsy, involved, and urgently communicative. The program makes more sense than many a collection of unrelated pieces by one composer, and the recording, digitally mastered from a four-track analog tape, presents a comfortable balance of warmth and clarity.

**R.F.**

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**BOYD NEEL: A Concert for Strings. Wolf-**


Performance Luscious lollipops Recording Excellent

Some years after founding the eighteen-member Boyd Neel Chamber Orchestra in England and leading it in performances praised all over the world, the late Boyd Neel emigrated to Canada, and in 1954 he started the Hart House Orchestra in Toronto. To judge from this recording, the group played with the same high polish and discipline that characterized the British ensemble. The program here ranges from such crescendos as Rimsky-Korsakov's Flight of the Bumble Bee, in the Serenade for Strings by Dag Wigren, at-**

mospheric pieces by Maurice Delta, and An-**

thony Collins' melodic miniature Vanity Fair. It's a lightly hearted, lightweight program, but everything is played so splendidly that it adds up to a thoroughly satisfying listening experience.

**NEW YORK CORNET AND SACHBUT ENSEMBLE:** German Brass Music, 1500-1700. Schmelzer: Music for a Carrousel.

**PEZEL: Suite: Spree: Sonata for Four Sac-**

buts; Sonata for Trumpet and Three Sacs-**

buts; Reich: Fugues Nos. 4 and 18. Hauss-**

mann: Pavane and Galliard. Praetorius: Hel-**

gale and Staccato. Schützenkönig. Three Sets**

ings of "Gelobet sei du, Jesu Christ."


New York Cornet and Sachtburt Ensemble.

**TITANIC T-97 $9.**

Performance Uncommon Recording Full-bodied

This album gets off to a rather lackluster start with Schmelzer's Music for a Carrousel. The rhythms in the two courante sections by Stabbes, and the whole performance sounds tentative. Something of the same quality pervades the rest of side one. On flipping the disc over, however, all is changed. Brilliance and precision characterise the rousing renditions of Isaacs A la Bataglia, and in the patchwork canzones the group's handling of the very rhythmic and tempo changes is masterly. Both the music and the playing reach their greatest heights with William Brade's sumptuous Pavane and Galliard.

Despite the uneveness of the music and performance on this record, it will be rewarding to those interested to brood on. It is a fine cola-**

lection of old German music and displays its different facets very well.

**S.L.**

(Continued on page 114)
Two new CR1 releases not only offer some attractive new American music but also document the remarkable rise of performance groups devoted to new music. One disc features the Orchestra of the 20th Century in works by Robert Moevs and Jacob Druckman, the other the Da Capo Chamber Players playing works commissioned for the group's tenth anniversary concert in Alice Tully Hall at Lincoln Center.

The Orchestra of the 20th Century was founded by Arthur Weisberg in 1975 and has continued to be active in the performance of new music, mostly American. The conjunction of circumstances that brought about its new album is too curious not to be recounted. Robert Moevs, born in Wisconsin in 1920, studied with Nadia Boulanger in Paris. But his Concerto Grosso for Piano, Percussion, and Orchestra, the work offered here, was conceived in 1960, finished in 1968, and won the Stockhausen International Composition Prize in Italy in 1978. As you might imagine, it does not sound like a product of the Boulangerie but is right up there with the serialist avant-garde.

But that's not the end of the tale. Wanda Maximilien, the excellent pianist in the Concerto Grosso, is from Haiti, and the record was subsidized by His Excellency, Jean-Claude Duvalier, the President-for-Life of Haiti, as well as by grants from Rutgers University, the National Endowment for the Arts, and the New York State Council on the Arts. Subsidy these days, I wonder what will be the future of such projects in the Reagan era.

In tribute to the group's name, all the pieces here make some kind of reference to the idea of repetition—long anathema in new music but now very much on its way back. The most obvious example is Philip Glass' two-chord Modern Love Waltz, charmingly arranged for the Da Capo Players by Robert Moran from a solo piece originally contributed to Moran's "The Waltz Project" (the piano original is on Nonesuch 79011, which I produced). The other works range from Joan Tower's amusing retakes of Stravinsky to the warmth of Joseph Schwantner, the wit and wisdom of George Perle, and the austerity of Schuman's "Petroushkas."


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