

MAY 1982 • \$1.25

# Stereo Review

• **Are Audio-component Specs Better Than Our Ears?** •

## NEW AUDIO PRODUCTS

Reports from the Las Vegas Consumer Electronics Show

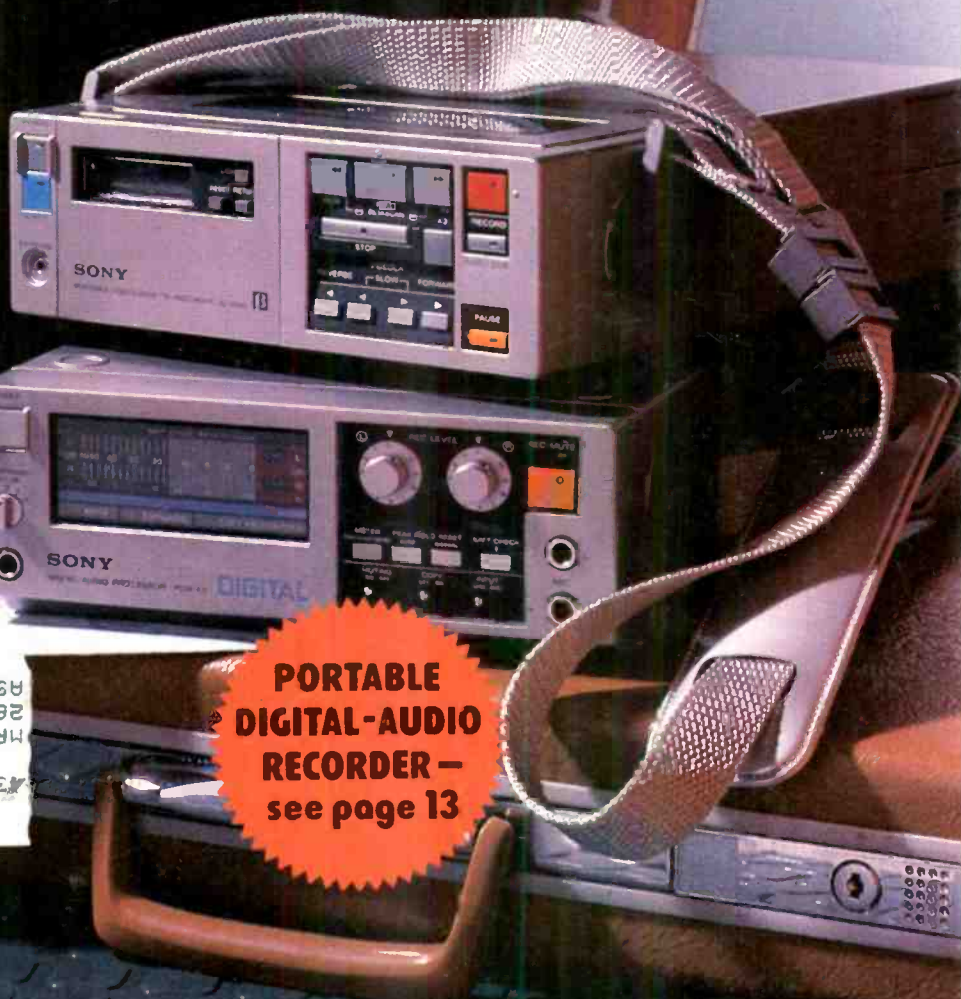
## EQUIPMENT TEST REPORTS

- Akai GX-77 Open-reel Tape Deck
- Denon DP-52F Turntable
- Jensen System 400 Speaker
- Pioneer SX-8 AM/FM Stereo Receiver
- QEC Model 7 Preampifier

## DISC SPECIALS

ABBA • Sister Sledge • Dr. John  
Rockabilly Stars • Johnny Hodges  
Bucky Pizzarelli • Akiyoshi/Tabackin

Eilly Arneling's Haydn Songs  
Vaclav Neumann's Mahler  
Virgil Thomson's Portraits  
Leoš Janáček's *Cunning Little Vixen*



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DIGITAL-AUDIO  
RECORDER —  
see page 13**

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Philadelphia Orchestra photo by Don Hunstein for Columbia Records

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**SONY.**

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Hear quiet flute passages free of hiss.



## Sony introduces W and UCX-S, the breakthrough

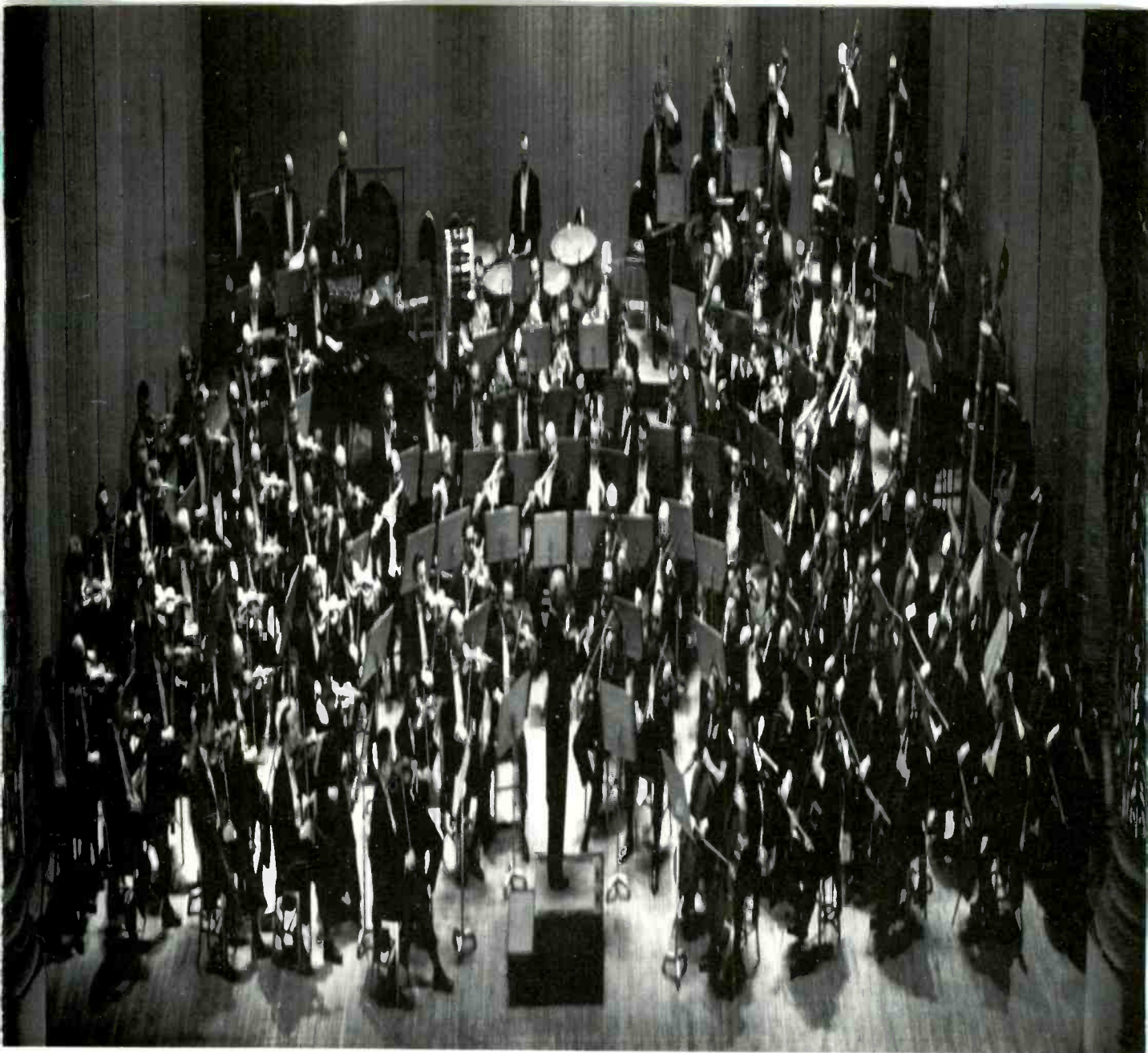


Sony's UCX-S is a revolutionary new audio cassette tape. A high-bias tape with a wider dynamic range than any other tape of its type. So wide, it actually expands the sound you can hear. (With minimal distortion, hiss or print-through.) That's why we call it Wide Fidelity Sound.

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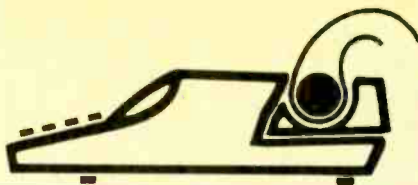
How did Sony do it? With three





**Sony is about to change  
your idea of what you can expect  
from an audio tape.**





Stereo Review

# BULLETIN

Edited by William Livingstone

- THE FREEDOM TO TAPE may soon not be free. Legislation that was originally intended only to protect the right of individuals to videotape copyrighted materials for private use has been encumbered with two amendments that would tax the manufacturers of audio and video tape and tape equipment as a way of reimbursing copyright owners (not necessarily the performers) for revenue lost to home taping. The cost of this would be passed along to tape consumers. The legislation is still in committee, so the form of the bill to be voted on is still subject to change. These amendments to the right-to-tape bill were sponsored by Senators Mathias (R-Md.), Baker (R-Tenn.), Baucus (D-Mont.), Byrd (D-W.Va.), Cranston (D-Calif.), Hart (D-Colo.), and Stevens (R-Alaska) and in the House of Representatives by Congressman Edwards (D-Calif.).
- THE CONCORD STRING QUARTET is now celebrating its tenth anniversary, and for the occasion commissioned works by Jacob Druckman, Krzysztof Penderecki, and George Rochberg. The group, which is quartet-in-residence at Dartmouth College, has a close relationship with Rochberg and has premiered a number of his compositions. These include his Quartets Nos. 4, 5, and 6, known as "The Concord Quartets," just released on RCA ARL2-4198.
- THE NEW YORK PHILHARMONIC played its 10,000th concert on March 7. Conducted by music director Zubin Mehta, the orchestra played the Symphony No. 2 by Gustav Mahler, who was music director from 1909 to 1911. The orchestra is celebrating the 100th anniversary of the birth of Leopold Stokowski by issuing a two-disc set of Philharmonic performances conducted by Stokowski. Mono only, the set includes works by Bach, Handel, Falla, Prokofiev, and Virgil Thomson as well as Herman Hupfeld's When Yuba Plays the Rhumba on the Tuba Down in Cuba. Price: \$20 postpaid from Radiothon V, New York Philharmonic, Avery Fisher Hall, Lincoln Center, New York, N.Y. 10023.
- "BRIDESHEAD REVISITED," an album of music from the soundtrack of the TV series seen on the Public Broadcasting Service from January through March, has been released by Chrysalis Records. It is the company's first "classical" release and lists for \$8.98. The music was composed by Geoffrey Burgon, who provided the soundtracks for the TV hit Tinker, Tailor, Soldier, Spy and the Monty Python movie Life of Brian. The popularity of Brideshead with the American audience is attested to by the fashionable appearance on the nation's campuses of Aloysius the teddy bear, a totemic figure in the Evelyn Waugh novel.
- DOO-WOP LIVES. CBS Records has just launched a new label, Ambient Sound Records, to document the streetcorner vocal groups of the early rock era (roughly 1955-1963). Billed as "The Sound of Human America," albums from Ambient Sound are recorded in studios but without overdubbing in an effort to duplicate the feel of the artists' classic singles. Up first: albums by the Mystics, Randy and the Rainbows, the Harptones, the Capris, and the Jive Five.
- BUT HEAVY METAL RULES...at least at Cyclops Records, the first independent label devoted exclusively to heavy metal rock. Cyclops' first release is an EP by a young American band called Guardian. The band's oldest member is all of twenty-two, and, according to label president Robert Fish, it plays with "reckless abandon."
- JAZZ ARTIST QUINCY JONES celebrated the Grammy Awards given to his A&M album "The Dude" and to Lena Horne's Broadway show album, which he produced, by donating \$10,000 to his alma mater, the Berklee College of Music in Boston. The gift is to establish a scholarship fund for needy and deserving students. Jones, who graduated from the Berklee College in 1951, said, "Thirty years ago I was fortunate enough to receive a scholarship to Berklee which enabled me to go on to a satisfying career."



# "This New Radio Shack Receiver Puts Digital Technology At Your Fingertips"

Isaac Asimov

Renowned science and science fiction author

**Microprocessor control. Digital synthesis. Quartz-locked.**

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FORMERLY HI FI/STEREO REVIEW (ISSN 0039-1220)

# Stereo Review

MAY 1982 • VOLUME 47 • NUMBER 5

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**COVER:** A standout at the Las Vegas show, Sony's portable digital-audio recording system (see page 13). Design by Borys Patchowsky; photo by Bruce Pendleton.

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# Speaking of Music...

By William Anderson



## CLOSE HARMONY

ONLY pure cussedness, it seems to me, could explain why an artist would want to use his or her vocal cords to imitate a musical instrument—one thinks of, say, Cleo Laine or the Swingle Singers, among others. That the trick may be marvelously done is beside the point, for while those voices are valiantly trying to imitate some instrument, most instrumentalists are paradoxically struggling, perhaps even more valiantly, to coax their violins, trombones, saxophones, guitars, and, yes, even their pianos to produce a "singing" tone. That makes sense to me, for though all these instruments have tonal beauties of their own, they are at their best when they aspire to the condition of the human voice. "The oldest, truest, most beautiful organ of music, the origin to which alone [*sic*] our music owes its being...."

Richard Wagner could not have heard

the English vocal group known as the King's Singers when he made that observation, but I am sure he would agree that they constitute some kind of proof of it. The King's Singers (they take their name from their origin at King's College, Cambridge), were in New York recently at the beginning of a U.S. tour that would take them from Boston to L.A. and beyond, and I had the good fortune to hear them in their first Carnegie Hall performance. Since critics owe their readers an occasional measure of candor about their shortcomings, I will confess one of mine: a sometime chorister myself, I am more likely than most to find rapture in a program of *a cappella* choral music, particularly when the singing group presenting it turns out to be the very definition of "ensemble."

The King's Singers have been perfecting their art for fourteen years now, and they

have a vast repertoire to show for it. A good deal (seventeen albums in all) continues to be available here on the MMG label, and a cannily drawn cross section was presented at the New York concert. It ranged from a brilliantly sung group of English renaissance madrigals (see MMG 1105), through a heart-stopping performance of Thomas Tallis' *Lamentations of Jeremiah* (MMG 1107) that kept the capacity audience cathedral-silent for close to twenty minutes, and on to the pure delight of six Songs of the Auvergne—not, of course, in the Canteloube arrangements Madeleine Grey used to introduce these wonders to the world's discophiles in the Thirties, but new ones commissioned from Goff Richards (the King's Singers do a lot of commissioning). The second half of the program was titled "Arrangements in Close Harmony," and it was back to the barber shop for a medley of songs with the word "lazy" in the title (they lent themselves beautifully to exquisitely agonizing, long-drawn-out resolutions of very unlikely but highly satisfying harmonies), some pop tunes (among them a gentle spoof of a Beatles song), and, finally, what turned out to be the unchallenged hit of the whole evening: a mini-cantata of an arrangement of an old (1931) sweet song called *Georgia on My Mind*. It had the audience on its feet cheering for what must have been minutes, and I do not at all doubt that it would have had its composer, the late Hoagy Carmichael, as close to tears as I was.

Still on the subject of *a cappella* singing, I am delighted to note a new release from the Twin Cities' accomplished Dale Warland Singers ("Americana," 23-0980, Augsburg Publishing House, Minneapolis). A collection of newly arranged concert versions of fourteen folk favorites (*Simple Gifts, Amazing Grace, Shenandoah*, etc.), it is distinguished for the remarkable quality of its analog sound (engineered by Scott Ribard for Sound 80). □

## Stereo Review

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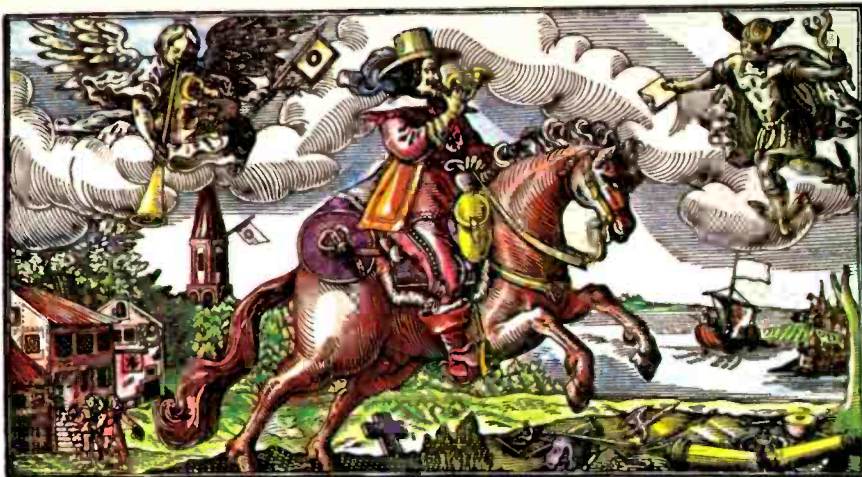


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## LETTERS TO THE EDITOR

### Counterfeit Tape

● In his excellent article "Bargain Tape" in the March issue, Craig Stark compared genuine TDK cassettes to counterfeits, noting that consumers may distinguish the real TDK product by the "full lifetime warranty" visible through the back of the cellophane wrapper. While this is true in the U.S., it does not apply to other market areas where the products must conform to different packaging laws. It is therefore not possible to employ his guideline as a *universal* rule.

The surest method of guarding against counterfeits is to buy through reputable channels of distribution, and any questions that might arise should be directed to the TDK representative or distributor for that particular region. I trust that this will clarify the situation for your substantial readership outside the U.S.

ED HAVENS  
TDK Technical Services Manager  
New York, N.Y.

### Photo Reverse

- I have a question about the photograph of the Teac X-1000R open-reel tape deck on page 10 in the March issue. Is this
- STEREO REVIEW's unique version of auto-reverse?
  - the way Japanese tape decks look before they clear U.S. Customs?
  - just your way of finding out how many people read "New Products"?
  - all of the above?

VIC FONSECA  
Los Angeles, Calif.

Try (e): the way our printer decided at the last moment the product should look.

### Tape Tax

● With reference to "Taping and the Law" in March, I think it is important that the notion of a tax on blank tape be considered in light of the fact that it would impose a tax on a use that may not occur in all cases. I have been using small-format video

since 1968 when the first Sony units became widely available (I have received a National Endowment for the Arts fellowship for my work in video). At no time have I had the least desire to tape a program off the air. If I missed a broadcast television program I just considered it a blessing.

It is a sad state of affairs when a machine that can do anything from making home movies of your kids to creating art for cable is thought of only as something with which to make passive recordings of programming that is of questionable value. At any rate, the tax is not fair unless it can be proved that a reel of blank tape is going to be used to dub copyrighted material.

FRED KRUGHOFF  
New York, N.Y.

*Once video artist Krughoff has copyrighted his art, he may become sensitive about its being taped by others. For more on this, see this month's "Bulletin," page 1.*

### Technics' Digital Deck

● The March test report on the Technics SV-P100 digital cassette recorder (what a strange model number for a "first of its kind") was interesting, but it lacked some information that I, for one, would like to have had. For example: (1) What is the tape speed? (2) How much recording time is available using a VHS videocassette? (3) Does it record in only one direction or two (two-track or four-track)?

DON E. MANNING  
Chicago, Ill.

*Tape speed is the normal SP (standard-play) speed of a VHS cassette, which at the moment provides a maximum of two hours of stereo recording on a standard T-120 VHS videocassette. And since VHS cassettes are not reversible, the two hours are available in one direction, continuously.*

### Frank Sinatra

● The March review of Frank Sinatra's latest album, "She Shot Me Down," is of the  
*(Continued on page 8)*



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The Perfect Path removes residues that collect on tape paths and heads. It uses a dry, non-abrasive cleaning system that won't harm equipment. And it keeps your Jensen sounding terrific.

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finest quality that popular-music criticism can achieve. Henry Pleasants deserves hearty congratulations for his emphasis on the technical, relatively objective aspects of the music and its performance. While critics of classical music stress these factors as a matter of course, pop critics rarely do.

STEREO REVIEW has the best set of pop critics that I've read, yet I feel that Henry Pleasants' triumph is becoming increasingly rare. Although the unfortunate slide downward in the quality of STEREO REVIEW's popular-music coverage is only slight in the work of Joel Vance, Noel Coppage, and the rest, it is quite apparent in the writing of Steve Simels, who as recently as three years ago was the best of them all. Now Mr. Simels apparently prefers to exercise his considerable literary and social-commentary talents at the expense of discussions of purely musical achievements. A recent example is his review of the Rolling Stones' "Tattoo You" (November 1981).

NATHAN BASIK  
Baltimore, Md.

*The Editor replies: From the point of view of an observer of unimpeachable generational objectivity, it appears that contemporary pop music, both for its purveyors and its consumers, has always been more sociology than music—"rock as a way of life" etc. Much of the energy that used to go into producing the stuff, however, is now devoted to writing its history and reliving its headier moments through reissues. The "unfortunate slide downward" is but a reflection of the current "state of the art"—the sand is running out of this dolly fast.*

### Billy Burnette Again

● There is nothing more annoying than a "nit-picker" who is wrong. In March "Letters" Allen Pasternak informed us that Billy Burnette's album "Gimme You" is his third, not his second, as had been stated by Joel Vance in his review. In fact, it is Burnette's fourth. Mr. Vance was acknowledging only the previous Columbia release, since Burnette's two Polydor releases were of little popular significance. These preceded "Gimme You": "Billy Burnette" (Polydor PD-1-6187), "Between Friends" (Polydor PD-1-6242), and "Billy Burnette" (Columbia JC 36792).

SEAN MCGOWAN  
Rockaway Beach, N.Y.

### Erratum

● George S. Kaufman was not Richard Rodgers. Oscar Hammerstein was not Lorenz Hart. STEREO REVIEW is not *Rolling Stone*—and has proved it by gathering one too many a Moss in the review of Frank Sinatra's "She Shot Me Down" in March. The words of *It Never Entered My Mind* would be gladly claimed by many a lyricist, and it seems unfair of Henry Pleasants (or is it Donald Pleasance?) to grant their authorship arbitrarily to a man whose words never entered a song. Reviews should certainly come from the Hart, but they should display a little more Pleasants of mind.

HENRY ARONSON  
Brooklyn, N.Y.

STEREO REVIEW



# ...and then came the SE-9.

35 years ago, to satisfy listening preferences, serious music lovers had to redesign their listening rooms. Remove the drapes. Add a rug here. Rearrange the upholstered sofa there. Get rid of that crystal chandelier!

Bass and treble tone controls came later, and they helped—but only a little. When you needed a boost in that lowest bass region, you had to accept boosted upper bass and mid-range tones as well—whether you needed them or not.

By 1958, the first equalizers appeared. They allowed you to alter specific bands of tones to suit the needs of the listening room—and the music program. With special mics, a pink noise generator, and a real-time

analyzer, you could electronically adjust your system to your listening preference. If—that is—you didn't mind spending several thousand dollars and a half hour adjusting and readjusting controls to enjoy a half hour of listening.

Then came Sansui's remarkable SE-9 Compu-Equalizer. It takes the guesswork and the frustration out of equalization. At the touch of a button, the SE-9's built-in pink noise generator feeds its signals first to one speaker, then the other. Sounds picked up by the SE-9's calibrated microphone are then analyzed by its microprocessor. Sit back and watch in amazement, as the SE-9's motorized system moves each of its

16 fader controls (8 per channel) to create the curve that yields precisely flat response at your preferred listening location.

Touch another button, and the curve is memorized for future, instant recall. Move to another room—even another room—and the SE-9 can create and store a new curve—up to four of them.

At last, after 35 years, a perfect equalization system without errors or frustration. And, at a price that makes perfect equalization affordable for all serious music lovers.

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HYPERELLIPTICAL  
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**BERYLLIUM  
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**SHURE**

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This revolutionary new phono cartridge is not just an advance in design... it's a quantum leap forward resulting in superior sound reproduction. The V15 Type V not only re-creates the music... it brings back the emotion of the performance! It solves such ever-present, record playback problems as "Superdisc" hot signals, record warp, static electricity, record wear, cartridge misalignment, and stylus breakage.

The Type V is totally optimized for flawless performance at 1.0 gram tracking force. Its trackability in the critical 5 kHz-plus region is double that of the nearest competitor; and its high frequency mechanical resonance is well beyond the audible range. All of this is due to the incredible Beryllium Microwall Technology Shure developed specifically for this cartridge.

A MASAR™-polished stylus tip contributes far less to record wear than any other high performance cartridge. This impressive array of features combines to give performance that goes far beyond what was —until now— considered the best. The performance is so improved that an entirely new, landmark system of measurement was developed: the Total Trackability Index (TTI).

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Send for our fact-filled brochure on this remarkable new cartridge. Ask for AL694.

No other cartridge, at any price, offers all these benefits:

- Incredibly accurate high frequency trackability due to the revolutionary new high stiffness, low mass Beryllium MICROWALL/Be™ stylus shank.
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- Accurate, distortion-free tracking—a result of the HYPERELLIPTICAL stylus tip.
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- Highest performance with lowest record wear due to optimizing for 1.0 GRAM TRACKING FORCE.
- Designed with an ULTRA-FLAT FREQUENCY RESPONSE resulting in natural, uncolored sound.
- LEVELING ALIGNMENT STYLUS included to minimize crosstalk and maximize channel separation.
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built on taste.  
**Winston Lights**



Warning: The Surgeon General Has Determined  
That Cigarette Smoking Is Dangerous to Your Health.

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## Sony's Small, Portable Digital-audio Adaptor

□ Pictured on this month's cover are Sony's portable BetaPack SL-2000 Beta-format VCR (top) and PCM-F1 portable digital-audio adaptor (bottom). The small and lightweight PCM-F1 (above) turns any NTSC-standard video recorder (such as the SL-2000) into a two-channel digital-audio recorder.

Making extensive use of large-scale integrated circuits, the PCM-F1 is said to permit the advanced amateur or semi-professional to make digital recordings at a fraction of the cost of professional analog equipment. Both the PCM-F1 and the SL-2000 will run off house current, rechargeable battery packs (which fit inside the units), or car/boat batteries (12 volts).

The PCM-F1 performs fourteen-bit digital encoding and decoding according to the requirements of the STC-007 digital-audio standard (see "Audio News," March 1980). The unit can also make

and play sixteen-bit recordings "for compatibility with professional PCM recordings."

Specifications include a sampling rate of 44.056 kHz, a dynamic range of at least 86 dB (fourteen-bit) or 90 dB (sixteen-bit), and harmonic distortion of less than 0.01 per cent (fourteen-bit) or 0.007 per cent (sixteen-bit). Frequency response is 10 to 20,000 Hz  $\pm 0.5$  dB at all recording levels. Wow-and-flutter is unmeasurable. Dimensions are 8½ x 3½ x 12 inches; weight is 8¾ pounds.

Other features include a multifunction peak program meter, a battery-level indicator, a VCR-tracking indicator, and mic/line input switching. The microphone inputs are for low-impedance mikes with unbalanced phone plugs. An AC-700 a.c. power adaptor is supplied; the rechargeable battery pack (NP-1) is optional. Price: \$1,900.

Circle 120 on reader service card



## Cybernet's AM/FM Digital-synthesis Receiver

□ Cybernet's Kyocera R-651 AM/FM stereo receiver is rated at 65 watts per channel into 8-ohm loads with no more than 0.015 per cent total harmonic distortion from 20 to 20,000 Hz. Intermodulation distortion is given as 0.015 per cent at rated output. A-weighted signal-to-noise ratios (S/N) are 82 dB for the phono input and

100 dB for the other functions. The amplifier section has been designed for low transient-intermodulation distortion and uses high-transconductance MOSFETs in the output stages to extend the power bandwidth to very high frequencies.

Distortion for the FM section is given as 0.07 per cent at 1,000 Hz in mono and 0.1 per cent in stereo. The stereo A-weighted S/N is 76 dB. The digital-synthesis tuner features variable-capacitance preselector tuning in the front end and has seven AM and seven FM station presets. Other features of the receiver include LED peak-power level displays, an audio-mute switch, connections and switching for two tape decks, five-step tuner signal-strength and station-lock indicators, and a fluorescent station-frequency display. Most of the controls are hidden behind a flip-down panel. Price: \$740. Cybernet International, Inc., Dept. SR, Seven Powder Horn Drive, Warren, N.J. 07060.

Circle 121 on reader service card

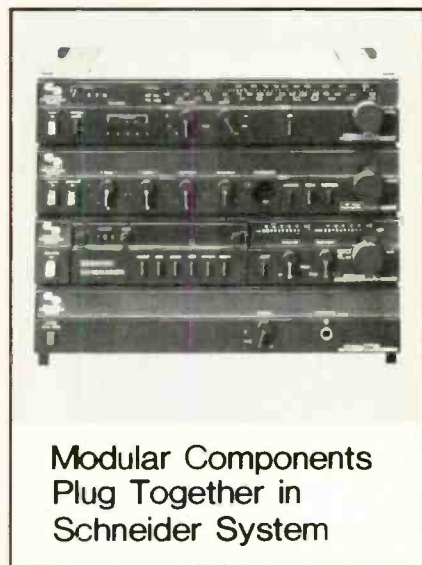


## Adcom's 100-Watt Power Amplifier

□ Adcom's GFA-2 power amplifier features dual power supplies. Each channel has an independent power transformer and associated circuitry, including separate a.c.-line fuses. Protection circuits for the GFA-2 are self-resetting, and their operation is shown by a front-panel LED. Peak-output LEDs are provided for each channel. Finished in black anodized aluminum, the GFA-2 is rack-mountable and has rack handles.

Specifications include an output power of 100 watts per channel into 8-ohm loads with no more than 0.02 per cent total harmonic distortion from 20 to 20,000 Hz. Intermodulation distortion measured by the SMPTE method is less than 0.008 per cent. Slew rate is given as 35 volts per microsecond, frequency response as 20 to 20,000 Hz  $\pm 0.2$  dB at 100 watts output. Weight is 29 pounds. Price: \$360.

Circle 122 on reader service card



## Modular Components Plug Together in Schneider System

□ The German-made Schneider DCS-8025 Direct Contact System consists of four electronic components that plug directly into one another, either side by side or vertically stacked, in any order without connecting cables. Two speakers and a Dual turntable (not shown) are supplied. The DCS-8025 AT AM/FM stereo tuner (top

(Continued overleaf)



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**The New York Times**

**"Polks are vastly superior to the competition."** Musician Magazine

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The award winning Polk Monitor 10 is less than \$300 each. Audiogram says, "It's simply a steal."

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## New Products

latest audio equipment and accessories

in photo) has an FM frequency response of 20 to 15,000 Hz. Sensitivity is given as 0.8 microvolt (mono). Included are five FM presets, a bar-graph signal-strength indicator, and switchable a.f.c. The DCS 8025 PA preamp (next down in the photo) has bass and treble controls, a microphone input, switchable infrasonic filter, and a loudness switch. The DCS 8025 SR cassette deck has a three-motor transport controlled by light-touch pushbuttons. The metal-capable unit has Dolby-B and Telefunken High-Com noise-reduction circuitry. Wow-and-flutter is given as 0.12 per cent, frequency response as 30 to 18,000 Hz with metal tape. The DCS 8025 MA power amplifier (bottom) has a rated output power of 25 watts per channel and a distortion rating of 0.05 per cent at 1,000 Hz. It also includes connections and switching for two pairs of speakers and a headphone set.

The supplied speakers are three-way systems with rated impedances of 4 ohms. Their frequency response is given as 47 to 18,000 Hz. The four electronic units each measure about 2 x 11 x 10 inches. The speakers measure 9 3/4 x 16 1/4 x 7 1/4 inches. System price: \$1,150.

*Circle 123 on reader service card*

cies. According to Celestion, much distortion is caused by flexible coupling between parts of the diaphragm assembly.

The SL-6 uses a 1 1/4-inch dome tweeter whose coils are wound around the extended rim of the dome so that coil and dome vibrate as one, and its 6 1/2-inch woofer has a one-piece diaphragm and center cap. This is said to eliminate the need for a separate dust cap, which would tend to decouple sonically from the other driven parts. The design goal, according to Celestion, was to achieve "perfect-piston" driver action in the SL-6. The enclosure is 20-mm-thick particle board covered with wood veneer. Dimensions are 14 1/2 x 7 7/8 x 9 1/2 inches and weight is 17 pounds. Power-handling capability is 200 watts. Price per pair: \$800.

*Circle 124 on reader service card*



□ Stereo Sentry Manufacturing Company has a line of patch panels designed to solve complex audio-signal routing problems in large home sound systems. The line includes five different Audiopatch models, each with a black-anodized front panel and multiple patching capabilities. Depending on the model chosen, the patching jacks are phono-type or 1/4-inch stereo phone jacks. The Model 465 (shown) has normally closed circuits that interconnect components without patching. Patching is used for making temporary connection changes. Prices range from \$112.90 to \$210.50 for the five models in the series. All come with solid wood cabinets, although rack-mountable versions are also available. Stereo Sentry Manufacturing Co., Dept. SR, 5420 Blodgett Avenue, Downers Grove, Ill. 60515.

*Circle 125 on reader service card*



**Compact Two-way Monitor Speaker From Celestion**

□ The Celestion SL-6 loudspeaker was designed on the basis of the company's research into diaphragm distortion with its "Ultra-accurate Laser Topographic Response Analysis" system. The ULTRA system uses laser-Doppler interferometry and a computer to measure a speaker driver's diaphragm distortion at various frequen-

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.



Loran™ is the cassette of the future... but it's here right now. The original and only heat resistant cassette shell and tape that withstands the oven temperatures of a car dashboard in the sun. Testing proves that even TDK or Maxell cannot take this kind of punishment.

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tapes stand up to being accidentally left near a source of excessive heat in your home or in your car. It is indeed the finest quality tape available today.

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# Audio Q. and A.

By Larry Klein



Technical Director Klein, moderating a conference at the Winter CES, shares a light moment with Don Palmquist of Yamaha.

## INDAC

**Q.** Where can I get more information about the INDAC loudspeaker test system used by Julian Hirsch for his test reports?

JOE BURKE  
Cambridge, Mass.

**A.** Right here. Many readers, including some manufacturers, have written to ask about the INDAC system, and apparently several loudspeaker manufacturers are now using it regularly in their own testing and development programs. First, it is now called the IQS system, because that is the name of the new company making and selling it: IQS, Inc., 5719 Corso di Napoli, Long Beach, Calif. 90803. You can write directly to IQS for detailed specifications, prices, and delivery information.

The IQS system consists of a digital-circuit board that plugs into an Apple II computer plus special IQS programs supplied on 5¼-inch floppy discs. At this time the system can be used only with the Apple II, but versions for other small computers are being planned. In operation, the system generates a test pulse that is fed to the user's amplifier and loudspeaker. The reproduced pulse (heard as a "tick") is picked up by a microphone placed (usually) in a typical listening location and fed back to the computer, where it is converted to digital format and stored in the computer's memory. In about 2 seconds, the IQS system converts the reproduced pulse into the frequency response of the speaker and displays it on the Apple's video screen. The resolution is as fine as 2 Hz at low frequencies, and the readout scale can be either logarithmic or linear.

The IQS system can also provide the equivalent of a frequency-response measurement in an anechoic chamber instead of a live room if desired. It can display phase shift, group delay, the difference between two curves, and the waveform of the impulse signal (as on a storage oscilloscope). And it can be used just as easily to analyze speech, a musical instrument, or any other kind of time-varying signal the user can feed into the computer.

The speed and versatility of the IQS system result from its use of a computer pro-

gram developed during the past decade and known to engineers as an "FFT" program. FFT stands for "Fast Fourier Transform," a cross between a brilliant idea of the French mathematician Fourier and the work of the American mathematicians Cooley and Tukey. The FFT concept added to a modern microcomputer provides a laboratory-grade analytic instrument that makes old-fashioned pen-and-graph-paper measurement devices practically obsolete.

## Phono-overload Specs

**Q.** I am planning to purchase one of two preamplifiers that have respective "MM phono overload" specifications of 180 and 150 millivolts. Other, less expensive units have figures in excess of 250 and 300 mV. What is the importance of phono overload? Are the higher figures better?

DONALD CARROW  
Virginia Beach, Va.

**A.** To understand phono-overload specs, it is first necessary to understand how a cartridge's output signal relates to what is happening in the record groove. The term "groove velocity"—which has nothing to do with the rotational speed of the record—refers to the velocity, in centimeters per second (cm/sec), of the undulations of the signal-carrying groove walls. A phono cartridge's output voltage is usually specified at the standard recorded groove-wall velocity of 3.54 cm/sec, a typical "average" level. However, most records contain peak levels up to ten times as high, and these produce ten times the output voltage. Studies of record grooves have shown velocities as high as 70 cm/sec occurring for very brief periods. No cartridge we know of can track such high levels, which would be heard, if at all, only as a burst of distortion, and in many cases such signals are "wiped off" the record on the first play.

The rated output voltage of a magnetic phono cartridge (with a 3.54-cm/sec test cut) is typically between 2 and 6 millivolts. The sensitivity (gain) of a phono preamplifier must therefore be high enough to deliver a usable signal level to the following stages from a low-output cartridge, but it is also

(Continued on page 18)

## M-1.5

Bob Carver's penultimate Magnetic Field Power Amplifier, the M-1.5.

Because when it comes to music, too much is not enough.

350 watts minimum continuous power per channel into 8 ohms, 20 Hz to 20 kHz, with no more than 0.1% THD.

And more! 750 watts per channel Dynamic Headroom. 600 watts per channel long-time-period reserve power to give unclipped punch to even the broadest transient.

And if you think the M-1.5 is astonishing, tune in next month for Carver's answer to tall buildings and ghosts in the ether.

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CARVER

# The \$5 Calculator Watch

*It may be a crazy scheme. But, you really can get this LCD calculator-watch for just \$5 with one catch.*



By Drew Kaplan, President

Stick it to us. Rip us off. Here's a promotion that's been vetoed by our vice president, our accountant and my wife. It's a promotion that's such a good deal for you, (it really is) that it's virtually guaranteed to lose us money.

In fact, if we don't do at least 300% more business off this ad than we have ever done off any ad before, we will lose a lot of money.

## ARE WE CRAZY?

Well, our VP, our accountant and my wife certainly aren't crazy. They're all dead set against this whole idea. But, you don't get anywhere in this world without taking chances, so here it goes.

First a word about credibility. Right now you're probably thinking that this is some very slick copy, but it just isn't believable. But is a calculator-watch for \$5 any more believable? Read on.

## COMPUTE WHILE YOU COMMUTE

You're in a restaurant. You get the bill. To the amazement of those nearby, you touch a few buttons on your wrist and tell the waiter you were overcharged.

You can compare the per quart cost of paint with the per gallon price when you're shopping. Or, here's a great idea. If you've ever heard a phone number on your car radio you can enter the phone number on the calculator display.

And, you'll do it all with style. The calculator-watch is the newest fad that's sweeping the nation. But remember, the other participants in this fad are paying up to \$69 for their calculator-watches.

## BUT WHAT ABOUT QUALITY

The calculator is easy to use with raised easy to push buttons. It has a full 8 digit display with floating decimal. You can add, subtract, multiply and divide. You can even do chain equations.

The watch is the latest accurate quartz crystal type. Setting it is a delight. You don't have to hold a button and sit waiting for the numbers to change.

Simply punch in the time on the calculator while you push set. It shows AM, PM, and has a built-in night light.

The sleek case and adjustable band are made of the newest space age black resin. It's lighter, cooler and more comfortable than metal. And, it's very slim.

This finely crafted accurate quartz

time-piece comes complete with a manufacturer's standard limited warranty.

## THE CATCH

Frankly we are losing our shirts on the calculator-watch, but we're looking for audiophiles who use audio cassettes.

If you buy top name TDK and Maxell cassettes, you probably pay \$3.50 to \$4.50 each for a 90 minute cassette.

We want you to try DAK's new Gold Label MLX ultra high energy normal bias cassettes. Not at \$4.50 or even \$3.50 each, but at a factory direct price of just \$2.49 for a 90 minute cassette.

We challenge you to compare our new Gold Label MLX to Maxell UDXL or TDK SA. If you can hear a difference, any difference at all in frequency response, tape hiss or distortion, not only will we return your money, but we'll give you a free gift for your trouble.

So here's our proposition. To get the \$5 calculator-watch, try just 10 DAK MLX90 minute cassettes complete with deluxe index insert cards, boxes and a one year warranty at just \$2.49 each.

## WHY, YOU MAY BE ASKING?

You're very valuable to us in the form of future business. DAK has excited over 140,000 of you valuable customers with special bonuses. But, we've never had one like the calculator-watch.

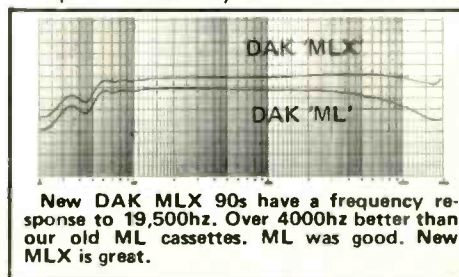
We find most of you keep buying once you try our cassettes and our prices; and that's a gamble worth taking.

The real gamble of this ad is that the calculator-watch is so expensive that there's not much left to help us pay for this ad and processing the orders. We'll have to sell thousands more orders.

## NOT A BAD CATCH

DAK manufacturers a cassette with great sound, and no problems.

Up until recently we were hot on the



heels of the frequency responses of Maxell UDXL and TDK SA. We had a great frequency response up to about 14,500hz. And our cassettes were great for most recorders.

Now our new Gold Label MLX is second to none. We have a frequency response to 19,500hz and we'll go head to head against any tape on the market.

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**Hi Frequency protection!** We've made mostly industrial cassettes for high speed duplication. We've developed a special jam proof cassette. It uses a spring tension liner within the cassette that guides the tape as it winds.

We coat these liners with a chemical called Moly sulfide. As tape moves within the cassette, friction causes the build up of static electricity. Static electricity is drastically reduced by the Moly sulfide and so is its tendency to erase very high frequencies. A very important consideration for often played tapes.

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Try these high energy cassettes and the incredible \$5 calculator-watch in your own home risk free. If you aren't 100% satisfied for any reason, return only 9 of the cassettes and the calculator-watch in its original box within 30 days for a courteous refund. The 10th cassette is a gift from DAK for your trouble.

To order your 10 Gold Label DAK MLX 90 minute cassettes and the calculator watch for only \$5 with your credit card, call the DAK toll free number or send your check for only \$24.90 for the tapes, plus \$5 for the calculator-watch, and \$3 for postage and handling for each group Order Number 9335. CA res please add 6% sales tax.

Why not order an extra group of 10 MLX 90 cassettes. We will add one free cassette to each additional group you buy and of course you can get a calculator-watch for \$5 with each group.

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necessary that it not be overloaded by *any* cartridge likely to be connected to it. (Since an amplifier's volume control *follows* the phono-preamplifier section, note that preamplifier overload cannot be prevented by turning down the volume.) A phono input capable of handling 80 millivolts or so of signal at 1,000 Hz will probably serve nicely most of the time. Good designers, however, provide an extra safety margin, and overload ratings of 150 to 300 millivolts are not uncommon. But keep in mind that once an overload margin is high enough, no further audible improvement can be expected from an even higher figure.

## Full-gain Problem

**Q.** *I was experimenting with my new integrated amplifier recently, and I found that when the selector is set to phono and the gain is turned full up (with no record playing) a very noticeable distortion results. It is present in lesser degrees until the volume knob is set below twelve o'clock. Is this normal?*

DANNY ARNOLD  
Denver, Colo.

**A.** First of all, what reader Arnold is hearing is noise, not distortion, and what he is hearing is probably normal. A good practical test of the noise performance of an amplifier is to play a record at a normal loud level and then, without touching the amplifier knobs, raise the tone arm with its cueing control. With even the finest equipment, you'll hear some noise (hiss, mostly) if you press your ear to the grille cloth over the tweeters. But if no noise is heard at your normal listening location, then I would say that everything is okay.

## Replacement Belts

**Q.** *Do you have any idea where I could buy a replacement drive belt for my old Gray turntable?*

HENRY NELSON  
Commack, N.Y.

**A.** Anyone seeking a replacement for a rubber or fabric belt, idler, or drive wheel on an old (or recent) record player or tape recorder will probably find it listed in the comprehensive seventy-page reference catalog published by Projector-Recorder Belt Corp. (Dept. SR, 200 Clay Street, P.O. Box 176, Whitewater, Wis. 53190). The catalog costs \$1 (refunded with the first order); be sure to ask for a copy of the separate belt cross-reference guide.

For olde-tyme audiophiles like myself, the catalog is a tour down memory lane. I found listings for Fairchild, Gray, Rek-O-Kut, Sherwood, and Stromberg-Carlson turntables as well as Pentron and Magnecord tape recorders. And even if your cherished audio heirloom doesn't show up among the pages of fine-print listings, all is not lost. The PRB Corporation offers to examine your old belt—if sent along with brand, model, and function information—and either supply a replacement from stock or make one up. Prices range from a low of 47¢ to a high of \$12 (for a Stromberg-Carlson belt). □

STEREO REVIEW

Revised and updated!  
Stereo Review's SRT14-A

# STEREO TEST RECORD

THE EDITORS AND TECHNICAL STAFF OF STEREO REVIEW PRESENT THE MOST COMPREHENSIVE, ACCURATE AND EASY-TO-USE TEST RECORD EVER DEVELOPED. SRT14-A HAS BEEN REVISED AND UPDATED FROM THE ORIGINAL SRT14 VERSION USING MORE SOPHISTICATED TEST SIGNALS TO MAKE THE JOB OF SETTING UP AND EVALUATING YOUR SYSTEM EVEN EASIER.



This latest version contains everything you need to get the fullest, most realistic reproduction from your stereo equipment. Whether you've spent thousands on your stereo system or have a more modest setup, the SRT14-A is an indispensable tool for helping you realize the full potential of your equipment. Best of all, you don't have to be an electronics engineer to use it. You can actually perform a complete stereo system checkup by ear alone.

### A test lab in a record jacket

Employing the most advanced recording, mastering, and pressing techniques, the Stereo Review SRT14-A is produced to strict laboratory standards. Engraved in its grooves are a series of precisely recorded test tones, frequency sweeps, and pink noise signals that enable you to accurately analyze and check your stereo system for:

- Frequency response
- Stereo separation
- Cartridge tracking ability
- Channel balance
- Hum and noise, including turntable rumble
- Wow and flutter
- Optimum speaker placement
- Cartridge Tracking Force & Anti-skating
- Musical Instrument Tuning Standards, and more...much more.

And you can do it all without any instruments...by ear alone.

### Step-by-step instructions

Included with SRT14-A is a detailed instruction manual, complete with charts, tables, and diagrams. This takes you step by step through the testing process. It explains the significance of each test. It tells you what to listen for. It clearly describes any aberrations in system response. And it details corrective procedures.

### For professionals too

The usefulness of the SRT14-A is not confined to the nontechnical listener. Included on the record are a series of tests that call for the use of sophisticated measuring instruments, such as oscilloscopes, chart recorders, and distortion analyzers. These tests permit the advanced audiophile and professional to make precise measurements of transient response, recorded signal velocity, anti-skating compensation, IM distortion, and a host of other performance characteristics.

### SRT14-A record contents

**CARTRIDGE TRACKING, HIGH FREQUENCY.** Consists of a two-tone signal (16,000 and 16,300 Hz) that repeatedly swoops to a high level and returns to a fixed low level. The level and quality of the audible 300-Hz "difference tone" indicates pickup quality and mistracking.

**FREQUENCY RESPONSE, 20 kHz to 25 Hz.** Uses one-third octave bands of pink noise, centered on twenty-nine frequencies over the audio spectrum, compared with reference tones at three levels.

**SEPARATION, LEFT-TO-RIGHT.** Uses test tones consisting of one-third octave bands of pink noise recorded in the left channel with reference tones in the right, to check leakage from left to right.

**SEPARATION, RIGHT-TO-LEFT.** Same as Test 3, with channels reversed.

**CARTRIDGE TRACKING, LOW FREQUENCY.** Uses a single 300-Hz tone that repeatedly swoops to a high level, producing buzzy tones if the cartridge is misadjusted or inferior.

**CHANNEL BALANCE.** Two random-phase noise signals, one in each channel, produce sounds heard separately to allow accurate setting of channel balance.

**CARTRIDGE AND SPEAKER PHASING.** A low-frequency signal alternates in and out of phase in the two channels to allow proper phasing of cartridge and speakers.

**LOW-FREQUENCY NOISE.** A very-low-level orchestral passage, followed by a section of "quiet groove," allows analysis of low-frequency noise.

**TURNTABLE FLUTTER.** A passage of piano music is recorded three times with increasing amounts of flutter. The degree to which the record player's flutter "masks" the test passages indicates the severity of turntable flutter.

**FREQUENCY-RESPONSE SWEEP, 500 Hz, TO 20,000 Hz, LEFT CHANNEL.** A steady tone rises from 500 Hz to 20 kHz, allowing evaluation of system electrical response by instrument.

**FREQUENCY-RESPONSE SWEEP, 500 Hz TO 20,000 Hz, RIGHT CHANNEL.** Same as Test 10 but in right channel.

**-tone-burst.** The test signal is sixteen cycles on, same period off, sweeping from 500 Hz to 20 kHz, allowing evaluation of transient response of phono cartridges.

**INTERMODULATION DISTORTION.** A phono cartridge's intermodulation distortion can be measured directly using a standard IM meter designed to analyze an SMPTE signal.

**ANTI-SKATING ADJUSTMENT.** A specially designed signal allows adjustment of anti-skating force for best reproduction of high-level passages.

**1000-Hz REFERENCE TONES.** Four tones with recorded velocities that increase by 3-dB steps can be used to determine (by the comparison method) the recorded signal velocity on a disc recording.

**FLUTTER AND SPEED ACCURACY.** A 3,150-Hz tone recorded with great accuracy of speed provides the standard signal for use with a flutter meter or frequency counter.

**STEREO SPREAD.** A series of drum beats recorded out of doors provides a guide to optimum speaker placement for a subjectively satisfying stereo effect.

**STANDARD "A."** The standard 440-Hz tone is recorded with very high precision for tuning instruments and for checking turntable speed.

**CHROMATIC OCTAVE.** The tones of the "equal-tempered" octave from 440 Hz to 880 Hz are recorded with accuracy better than 0.1 per cent.

**GUITAR TUNING TONES.** The six notes of standard guitar tuning are recorded with accuracy better than 0.1 per cent.

### The final step

Start getting the most out of your stereo system. Make the SRT14-A your next record purchase. Just complete the coupon and mail it along with your remittance...today!

 **CHARGE ORDERS—for your convenience PHONE 24 HRS. TOLL FREE 800-345-8112. IN PENNSYLVANIA ONLY 800-662-2444.**

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Please send \_\_\_\_\_ SRT14-A Stereo Test Records @ \$9.95 each.  
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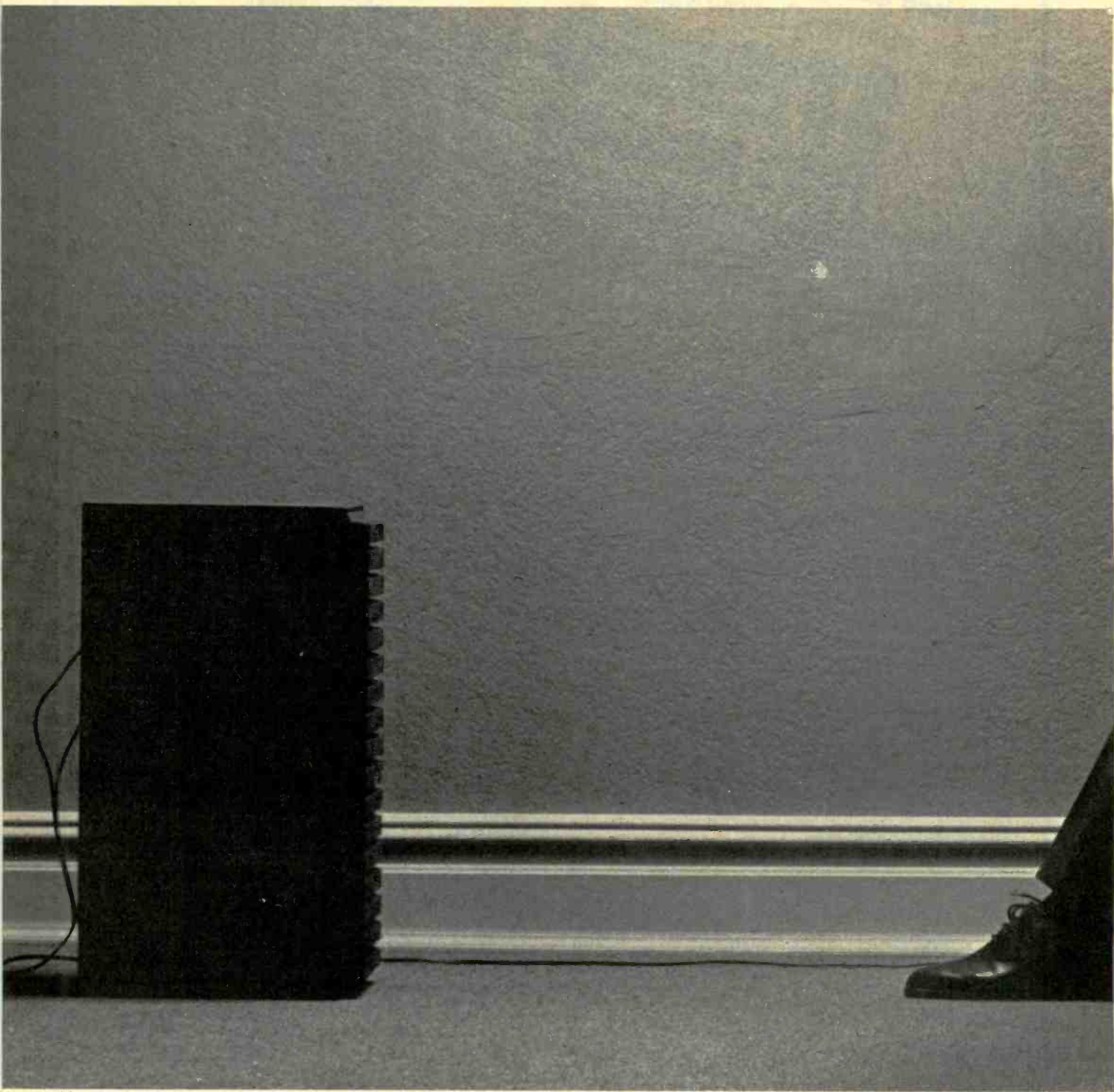
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\*Residents of CA, CO, DC, FL, IL, MA, MI, MO, NJ, NY State, OH, SC, TN, and VT add applicable sales tax.

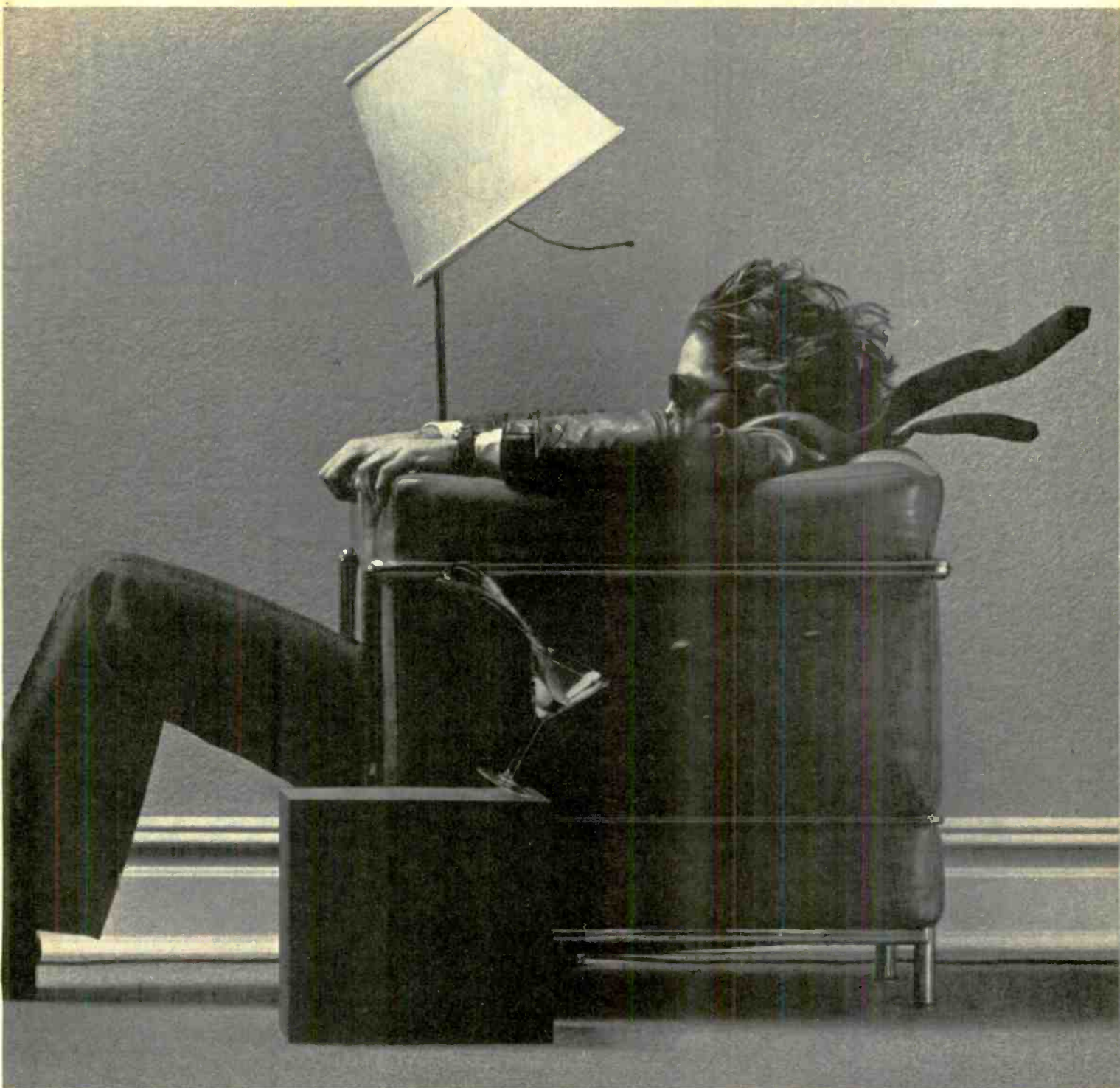


# AFTER 500 PLAYS OUR HIGH FIDELITY



Maxell Corporation of America, 60 Oxford Drive, Moonachie, N.J. 07074.

# TAPE STILL DELIVERS HIGH FIDELITY.



If your old favorites don't sound as good as they used to, the problem could be your recording tape.

Some tapes show their age more than others. And when a tape ages prematurely, the music on it does too.

What can happen is, the oxide particles that are bound onto tape loosen and fall off, taking some of your music with them.

At Maxell, we've developed a binding process that helps to prevent this. When oxide particles are bound onto our tape, they stay put. And so does your music.

So even after a Maxell recording is 500 plays old, you'll swear it's not a play over five.



**IT'S WORTH IT.**

CIRCLE NO. 21 ON READER SERVICE CARD



# FULL BLOWN MANGIONE

These pop artists are now available on dbx discs:

CHUCK MANGIONE: *Feels So Good* (A&M), PS-1059

ALLMAN BROTHERS: *Live At The Fillmore East* (Nautilus/Polygram), QS-4002

J. GEILS: *Love Stinks* (Nautilus/EML-America), PS-1049

SARAH VAUGHAN: *Copacabana* (Pablo), GS-2049

RITA COOLIDGE: *Anytime . . . Anywhere* (Nautilus/A&M), PS-1042

NEIL DIAMOND: *His 12 Greatest Hits* (Direct Disk Labs/MCA), PS-1014

TIM WEISBERG: *The Tip Of The Weisberg* (Nautilus/MCA), PS-1011

THE WHO: *Who Are You* (Direct Disk Labs/MCA), PS-1015

JOAN ARMATRADING: *Joan Armatrading* (A&M), PS-1056

JOE SAMPLE, RAY BROWN, SHELLEY MANNE: *The Three* (Inner City), GS-2035

LARRY CORYELL: *The Eleventh House* (Vanguard), GS-2038

AL STEWART: *24 Carrots* (Nautilus/Arista), PS-1052

WOODY HERMAN: *Concord Jam, Volume 1* (Concord Jazz), GS-2054

DIZZY GILLESPIE: *Digital At Montreux, 1980* (Pablo), GS-2046

JACK SHELDON: *Playin' It Straight* (RealTime), PS-1078

dbx discs give you the full dynamic range of a live performance with none of the surface noise of conventional records.

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CIRCLE NO. 8 ON READER SERVICE CARD

# Car Stereo

By Ivan Berger



## ROAD TESTS

ASSUMING you have the choice, the time to start checking out your new car stereo is before you say goodbye to your old one. So take notes on all the operating areas where your current car system either works well or doesn't measure up. This information can help you evaluate any stereo you're thinking about buying.

To know as much about a car-stereo unit you're about to buy as you will learn once you've got it installed, you would have to take it for a long test drive—and few if any dealers are set up to let you do that. Still, you sometimes do find a dealer willing and able to demonstrate one or two systems on the road, but it's hard to understand such demos without some standard of comparison. (We'll leave checks you can make in the store or from spec sheets for another column.)

I have my own stereo "test track" in and around New York City. My first test is a stretch of choppy road along the Hudson River waterfront: some tape transports get the hiccups going over the potholes and cobblestones. Most recent high-quality decks pass this test with flying colors, though, so either car-stereo tape transports or New York's streets have improved in the past few years (I'll bet on the stereos).

When I get downtown, I switch to FM and cruise in the East Thirties, between the Empire State Building and the Queens-Midtown Tunnel. My first car FM set overloaded like crazy there, cross-modulating till some stations popped up at several points on the dial. Most stereos still have some trouble, with some stations "puffing" in and out, sounding like outdoor broadcasts with no microphone windscreens.

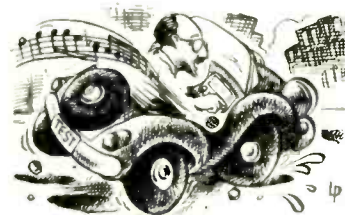
Try both the AM and the FM bands—some tuners have trouble on one but not the other. Give extra points for models that can handle such strong-signal areas without making you hit the local/distant switch (or are able to make do without such a switch). But don't penalize those that do make you use the switch—that's what it's for.

If you can, check distant reception too. Again, it helps to have a certified trouble spot. Mine is a place about 65 miles from New York where my old car FM radio would ricochet back and forth annoyingly

between reasonable monophonic reception and distorted, noisy stereo. I recently drove by with my present stereo and found it never got unlistenable.

With digital tuning, you can run another test, checking reception at every FM channel on the dial. (With analog tuning, it's much harder; only digital units tell you when you've hit each frequency whether there's a station on it or not.) I make a test chart listing all the frequencies and mark how good a signal I get on each. A sensitive radio should receive all the stations in your area clearly, and a selective one won't pick up distorted versions of strong signals on the channels flanking the true frequency. No radio, however, is absolutely perfect.

Remember also that there are more variables in radio tests than in the radios themselves—for instance, the antenna, atmospheric conditions, and precise location.



When I was a kid in Connecticut, our car radio (a 1954 model, AM only) used to pick up WWVA in Wheeling, West Virginia, all winter but not in summer, and WQXR in New York couldn't be picked up from the parking space in front of my father's store but came in perfectly if I nosed the car three feet forward into the crosswalk!

THOUGH the tests I've described will help you most in comparing car stereos before you buy them, you probably won't get a chance to make them until after you've bought a system. Too late, then? Make them anyway. If your new stereo doesn't outperform your old, there may be something wrong with it or its installation. The time to complain about that is right after you get it, and your complaint will get most action if you can state precisely how the performance falls down. □

# 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

Magnified  
15,000 X

Perfectly shaped and uniformly sized particles of pure chromium dioxide provide a magnetic medium like no other tape in the world.

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.

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. 41 ON READER SERVICE CARD

And like all BASF tapes, PRO II comes encased in our new ultra-precision cassette shell that provides perfect alignment, smooth, even



BASF designed and developed the world's only Measurement Reference Tape Cassette. And our new ultra-precision cassette shell is the logical culmination of that development.

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.





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You can now own every record or tape that you may ever want . . . at tremendous savings and with no continuing purchase obligations. You can get valuable free dividend certificates, you can get quick service and all the 100% iron-clad guarantees you want.

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CIRCLE NO. 11 ON READER SERVICE CARD

## Tape Talk

By Craig Stark



### Tape Types

**Q.** I'm new to the recording field. Can you explain the differences between the various tape types (I, II, III, IV) I see advertised?

KURT HIRSHINGER  
Encino, Calif.

**A.** The existence of four different basic tape types engenders the kind of consumer confusion that Philips (the inventor of the cassette format) long sought, in vain, to preclude. However . . . here's a brief run-down on their characteristics.

(1) What are called "Type I" cassettes use a ferric oxide (or a slightly modified version of one) as their magnetic material and are designed to be played back on tape decks with nominal equalization time constants of 120 and 3,150 microseconds. These cassettes constitute the greatest part of the market, can be used with any licensed cassette deck (mono or stereo, component or portable), and are made by most manufacturers in quality gradations ranging from superb to wretched.

(2) The Type I tapes initially introduced were inadequate for high-fidelity use. They had too much hiss and were incapable of adequate high-frequency response. To circumvent these limitations, DuPont introduced chromium-dioxide cassettes more than a decade ago, and since then other companies have introduced various CrO<sub>2</sub>-equivalent tapes that are collectively grouped today as "Type II." What they share is the need for a higher recording-bias level than Type I tapes, plus the need for a different playback equalization (70 and 3,150 microseconds) so as to boost the high frequencies (and tape hiss) about 4.5 dB less than the conventional ferric-oxide equalization does. Type II (CrO<sub>2</sub> or equivalent) cassettes will always enjoy a theoretical advantage in terms of tape hiss over Type I formulations, but the practical advantage has been reduced very significantly by improvements in Type I tapes.

(3) "Type III" formulations are "ferrichrome" cassettes, which are made by depositing a relatively thick layer of regular ferric oxide on the tape base, then a rather thin layer of chromium dioxide (or its equivalent). The idea here is that the very

high audio frequencies—which tend to be recorded very close to the coating surface—are best served by chrome, but the middle and low frequencies are better recorded on ferric oxide. The original plan was for such dual-layer tapes to be recorded using bias and equalization suitable for ferric tape, then played back with the 70-microsecond (chrome) equalization. Unfortunately, standardization and production difficulties plagued the ferrichrome or Type III tape almost from its inception, though it has been found to work well in car stereos. Playing back a tape with 70-microsecond equalization on a car deck that is equipped only with the standard 120-microsecond equalization boosts the high frequencies about 4.5 dB. This is equivalent to turning up the treble control, which compensates, at least in part, for the deficiencies in high-frequency response heard in most cars.

(4) Type IV cassettes, like Type II, introduced a new magnetic material. Known as "metal particle," "pure metal," or just "metal," Type IV cassettes are designed to use 70-microsecond equalization but require a much higher bias and have a much higher treble capacity. Whether you need this increased capacity depends on your recording requirements. It would be silly to spend the additional money for a Type IV tape to dub a conventional FM broadcast whose high-frequency content is all too obviously limited, but it might well be worth it to preserve a direct-cut or digitally mastered LP.

### New Deck, New Sound?

**Q.** I'm thinking about replacing my old cassette deck, but I'm concerned that tapes I've recorded on it may sound different on a new unit. Could I lose the highs or encounter new distortion?

PHILIP KOWITZ  
Columbia Heights, Minn.

**A.** The reason that playback-adjustment procedures are standardized around the 70- and 120-microsecond equalization curves is precisely to avoid the problem you're worried about. Assuming that your old deck was properly set up at the factory, tapes recorded on it should sound identical

on any properly adjusted machine, except that you may possibly get *more* high-end response with a new deck because of its improved heads. If you get *less* treble it indicates that one of the two decks is out of azimuth alignment, a condition that a service technician should be able to correct easily.

## Long Cables

**Q** I need to interconnect a receiver/tape-deck system on one floor of my home to another set upstairs. This will require about 70 feet of cable each for the two "in" and the two "out" channels. Should I use regular shielded cable or foil-enclosed cable? Does it make any difference if the wire gauge is #20 or #22?

MARK F. GOLDFINE  
Brooklyn, N.Y.

**A.** What you need to worry about is not the difference between conventional and foil-shielded cables, much less the wire gauge; your concern should be with the rated impedance at the jacks to which you propose to attach those 70-foot cables. With most home hi-fi equipment, you'll wipe out the high-frequency response. That is why professionals who *must* use long cable runs specify costly equipment with very low output impedance—and, generally, use "balanced-line" cable, which minimizes hum pickup in a long run. If you are really serious about your proposed hookup, you may require an engineering consultant to get it right. He'll probably recommend the use of separate buffer amplifiers.

## JVC and Dolby

**Q** I have a number of tapes recorded using JVC's Super ANRS. Can I copy them successfully using a deck that has Dolby-B and Dolby-C?

MEYER SHERMAN  
Park Forest, Ill.

**A.** The "regular" JVC ANRS (Automatic Noise Reduction System) is playback-compatible with Dolby-B. Both work on low-level high frequencies and are sufficiently similar that you're unlikely to have any problems if you treat tapes processed with these systems interchangeably.

The JVC "Super ANRS" is a very different animal, however, and it is nothing like either Dolby-B or Dolby-C. The "Super" part works on *high-level* high frequencies, *lowering* their level before recording (to prevent tape saturation) and restoring it on playback. This does *not* have an exact counterpart in the Dolby system.

My advice, then, is to borrow a JVC deck with Super ANRS and *play* the tape(s) to be duplicated on this machine while recording the copies on your own Dolby-equipped deck. □

*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!*



# WHAT TYPE ARE YOU?

Power has its price. Unfortunately, with many receivers, you usually end up paying for a lot of power you may not necessarily need in order to get the computerized features you want.

At Kenwood, we don't think that's playing fair.

Which is why every one of our new Hi-Speed™ receivers offers a host of very intelligent engineering advances.

Like Direct Coupled, Hi-Speed amplifier circuitry for absolutely brilliant musical clarity, down to OHZ.

And microprocessor controlled Quartz PLL Synthesizer tuning to give you perfect, drift-free FM reception.

We've even included the convenience of our computerized AutoScan tuning. And instant, automatic computer-memory tuning of 6 AM and 6 of your favorite FM stations.

But best of all, we didn't restrict all this intelligence to just our new KR-850 Hi-Speed receiver.

You can also find it on our new KR-830.

And our new KR-820.

And even our new Slimline KR-90.

Examine all the possibilities at your Kenwood dealer. With all the choices we offer, you'll find the computerized receiver that's exactly your type.

At your type of price.

 **KENWOOD®**  
The audio company that listens.



# Technical Talk

By Julian D. Hirsch



## ● Measuring Preamplifier Characteristics ●

**I**n January I discussed how Hirsch-Houck Labs measures power-amplifier performance in accordance with the IHF industry standard (now known as EIA Standard RS-490, November 1981), and I now propose to address myself to the subject of preamplifiers. Basically, preamplifiers are tested very much as power amplifiers are, but there are a number of significant differences resulting from their very different operating conditions.

There are seven primary specifications that must be disclosed when a preamplifier is rated by the IHF standard. In addition, there are twenty-one secondary disclosures (the same ones used for power amplifiers) listed for use at the discretion of the manufacturer and where applicable (obviously, some of these apply only to a power amplifier or to a preamplifier but not to both).

The primary disclosures for a preamp are frequency response, maximum voltage output, total harmonic distortion, sensitivity, A-weighted signal-to-noise ratio, maximum input signal, and input impedance. In general they are separately specified and measured for each available signal input (phono, aux, etc.).

Instead of the usual power-amplifier load of 8 ohms, the standard test load for a preamp is 10,000 ohms in parallel with a 1,000-picofarad capacitance. This simulates the "worst-case" situation of a power amplifier with a very low input impedance (10,000 ohms) being driven through a long shielded cable. Unless specified, all tests are made using standard gain conditions, the preamplifier gain controls being set for 0.5-

volt output with a high-level input of 0.5 volt, a moving-magnet phono input of 5 millivolts, or a moving-coil phono input of 500 microvolts. The inputs are to be loaded with 1,000-ohm resistors (10 ohms in the case of a moving-coil phono input) to simulate the load impedance of the cartridge.

The *frequency response* of the preamplifier is measured with all tone controls and filters at their indicated "flat" settings, and the output is referenced to the 1,000-Hz level (in other words, the variation in response is to be expressed as a  $\pm x$  deviation from the output at 1,000 Hz). In the case of an equalized input (such as the RIAA phono preamp) the preferred procedure (which we use) is to apply the test signal through a pre-equalization network that simulates the output of an ideal signal source (in this case, a perfect phono cartridge playing a constant-velocity test record). A correctly equalized phono preamplifier will deliver a uniform output from such an input signal, and any errors must be expressed as deviations from the 1,000-Hz reference output.

The *maximum signal-output voltage* is measured at the point of 1 per cent distortion, which in practice corresponds to the clipping level. Although the standard requires that maximum output be measured at the frequency extremes as well as at 1,000 Hz, we use only the middle frequency since the difference is negligible in modern preamplifiers.

*Total harmonic distortion* is the next primary specification. Standard gain settings are used for this test, but the output level is

12 dB higher (2 volts). The THD rating is the maximum distortion measured over the rated bandwidth of the preamplifier at this output. Note that it is independent of the manufacturer's rated output, which may be more or less than 2 volts. The distortion measurement through an equalized input (such as phono) should be made using a pre-equalizing network.

**S***ENSITIVITY* is a measure of the maximum gain of the preamplifier, and it is made with all level controls set at maximum. It is the 1,000-Hz input-signal level required at each input for a reference output of 0.5 volt. The *A-weighted signal-to-noise ratio* (S/N) is measured at reference gain, with a standard A-weighting filter placed between the preamplifier output and the measuring meter. This filter attenuates both low and high frequencies in the noise to reflect their relative audibility levels. For measurement, the inputs terminate in standard resistances.

The *maximum input signal* is measured for each input by successively reducing the amplifier gain and increasing the input level until the output waveform shows clipping (at a level well below its maximum capabilities). In the case of the phono input, the overload level is measured at 20 and 20,000 Hz as well as at 1,000 Hz. Because of the nearly 20-dB difference in gain between either frequency extreme and the center frequency, it is necessary to adjust the measured overload limits at the band edges to their equivalent values at 1,000 Hz (by multiplying the 20-Hz figure by 9.23 and dividing the 20,000-Hz figure by 9.55).

## Tested This Month

Pioneer SX-8 AM/FM Stereo Receiver • Akai GX-77 Open-reel Tape Deck  
Jensen System 400 Speaker • QED Model 7 Preamplifier  
Denon DP-52F Turntable

The final primary disclosure is the *input impedance*. Although this is usually specified for each input, we measure it only at the standard phono input (moving-magnet) since this is the only place where a moderate impedance change can have an audible effect on system sound. A 1,000-Hz signal is connected to the phono input through an adjustable precision resistance, and the output of the preamplifier is displayed on a spectrum analyzer (to exclude hum and noise that could affect the measurement). The series resistor is increased until the output falls to half its original value. That resistance is equal to the input impedance of the preamplifier at 1,000 Hz. The input capacitance is measured separately, and in our reports the phono-input impedance is stated in the form "47,000 ohms in parallel with 100 picofarads."

Most of the secondary disclosures either do not apply to preamplifiers or are rarely specified by manufacturers. We limit our-

selves to measuring the filter and tone-control frequency-response curves, using both maximum and intermediate settings of the knobs to determine how they affect response. We also make a non-standard test of the phono input, measuring the frequency response in the usual way through a resistive source and then again through the series inductance of several typical phono cartridges. This reveals any possible interaction between the preamplifier's internal feedback network and the cartridge inductance, which in worst cases can modify the frequency response at high frequencies by 5 dB or more.

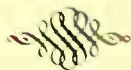
Such factors as crosstalk, differences in gain or frequency response between channels, and the like are almost never significant in today's preamplifiers, and we do not measure them in detail although they are included in the standard as optional disclosures. As with power amplifiers, we normally measure only the left channel, spot

checking the right channel to verify that it is essentially identical to the left. In the case of integrated amplifiers, we test the two sections separately to the extent that it is possible; otherwise the appropriate tests for power and preamplifier sections are made using a high-level input.

**T**HIS constitutes only the bare outlines of the test procedures we use. A full amplifier test in accordance with the standard is obviously very time consuming, and we have had to extract from it only the parts we consider most useful. In addition, only a fraction of the test data we produce appears in the published reports. However, the reader can be assured that "no news is good news," since any *significant* departure from the manufacturer's ratings or what we consider to be proper performance will be pointed out in our appraisal. The "strength" of our comment is usually in direct proportion to the audible significance of the problem. □

## Equipment Test Reports

By Julian D. Hirsch  
Hirsch-Houck Laboratories



By Craig Stark  
Starksonic Studio



Pioneer SX-8 AM/FM Stereo Receiver

- Pioneer SX-8 AM/FM Stereo Receiver
- Power Rating: 100 watts per channel
- Size: 16½ x 16 x 6 inches
- Weight: 28 pounds
- Price: \$800

**T**HE new Pioneer SX-8 AM/FM stereo receiver heads that company's receiver line. It is completely microprocessor controlled, with a power-amplifier section rated to deliver 100 watts per channel to 8-ohm

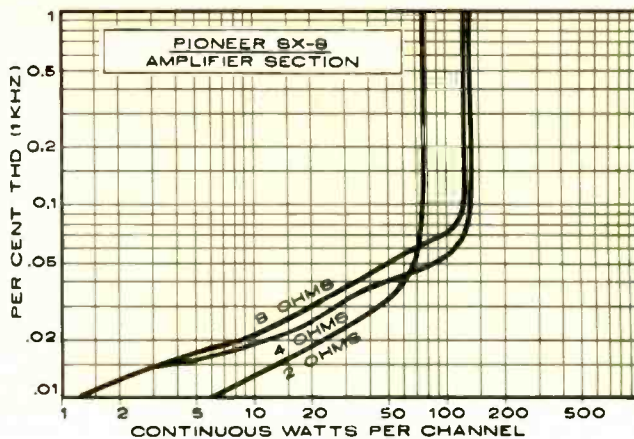
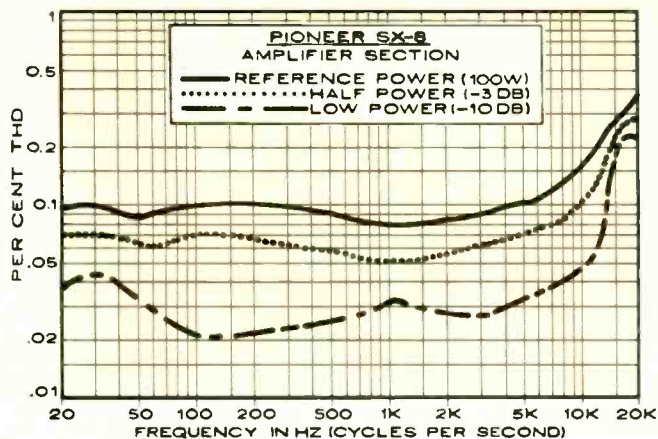
loads from 20 to 20,000 Hz with no more than 0.005 per cent total harmonic distortion. The styling of the SX-8 matches that of the other current Pioneer audio components, with pale-gold, satin-finish panels flanking a dark-brown center section in which are contained a number of displays that completely define the unit's operating conditions.

The receiver's most unusual external characteristic is its total lack of knobs.

Everything is controlled by flat rectangular buttons of different size and shape. These operate voltage-controlled amplifiers and solid-state switches to adjust gain, frequency response, and signal routing through the amplifier circuits.

The SX-8 has all the usual receiver functions, including bass and treble tone controls, loudness compensation, audio muting, a low-cut (infrasonic) filter, and switching for two pairs of speakers. The phono-





preamplifier gain and input impedance can be switched to accommodate moving-magnet (MM) or moving-coil (MC) cartridges. The controls are operated by holding in the specified button until the desired condition is reached. The final setting is retained (even with the power off) by the receiver's memories, and the SX-8 returns to its previously set operating condition each time it is turned on.

The actual setting of each control is shown clearly by luminescent numerical displays in the center panel section. For example, a two-digit readout with numerals from 0 to 31 shows the volume setting. When power is applied, the numerals blink for several seconds before the audio outputs are connected so that one can see the previous setting and change it if necessary before any sound is heard. The actual volume change is continuous and very smooth. The numbers take the place of the numerical calibrations sometimes located around a control knob, although they are far more readable.

Another window with two single-digit readouts joined by a line pattern shows the tone-control settings. A "0" indicates a flat response, and when both controls are flat the digits are joined by a horizontal line. Each control has a calibrated adjustment range of plus or minus seven digits, and any change from flat is accompanied by an up or down "jog" in the line between the numbers to show either a boost or cut of response. Like the volume, the tone-control circuits respond smoothly and almost imperceptibly, depending on the discrete digits to show the equivalent settings of nonexistent knobs.

Unique as this control system is, it is further enhanced by dual memories for the major variable controls, permitting the storage of two volume and two tone-control settings for instant recall (tone-control responses can be returned to flat at any time by pressing a button between the "up" and "down" control buttons). The volume memories also store the status of the loudness compensation and muting buttons as well as the volume setting. The muting button reduces volume smoothly by about 25 dB a second or so after the button is pressed and restores it equally smoothly at a second touch.

The digital-synthesis tuner section of the

SX-8 is in many respects similar to other digital tuners we have tested. It is tuned by "up" and "down" buttons, with the frequency displayed by four large digits on the center panel (this is also the readout of a digital clock when the receiver is off or when any input other than the tuner is selected). There are eight memory buttons, each of which can store one AM and one FM frequency in the memory for instant recall. A sliding plastic strip, inserted from the left edge of the panel, holds the frequencies of the memorized stations so that they can be seen through small windows above the memory buttons. This eliminates the guesswork that is associated with the more common unmarked preset buttons.

The tuner has the usual tuning and scanning modes, selectable by small buttons at the bottom of the panel. It can be set to advance one channel in either direction, depending on which button is pressed, to scan to the next station it encounters and stop there, or to scan to each station, stop for 5 seconds, and resume scanning unless stopped by touching another button. The tuning increments are 100 kHz for FM and either 9 or 10 kHz for AM (selectable by a switch in the rear of the receiver). The input source is selected by a vertical row of large buttons at the right of the display panel. In addition to the FM and AM tuner inputs, there are PHONO, AUX/VIDEO (high level),

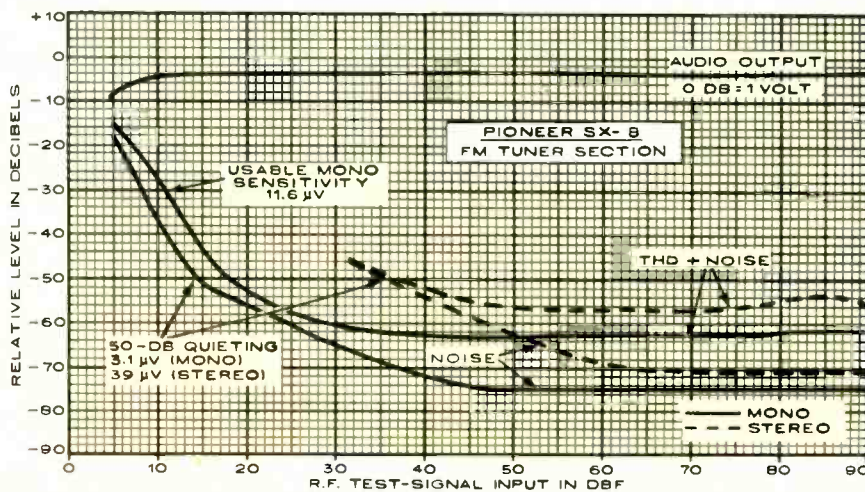
TAPE 1, and TAPE 2 inputs (the last named is also identified for use with external signal processors).

Across the bottom of the display panel are two sets of LED power-output indicators. Occupying much of the rest of the center panel is a signal-flow diagram whose symbols are illuminated to show the various control settings. It includes a three-LED signal-strength indicator and two arrows that show the direction of any balance-control movement from center (both are lit when it is centered, and it can be centered instantly by pressing in both the balance buttons together). The letters A and B under the tone and volume displays indicate which memory has been selected for each particular function.

The rear panel includes preamplifier-output/main-amplifier-input jacks with jumper links, three a.c. outlets (one switched), and an AM STEREO output jack for use with a yet-to-be-developed stereo-AM adaptor (the FCC has just decided to let the market determine which system it will be). The Pioneer SX-8 has a metal cabinet that matches the color of the front panel.

● **Laboratory Measurements.** Since the power and distortion ratings of the Pioneer SX-8 are specified *only* for its power-amplifier section, we first measured that part sep-

(Continued on page 30)







**Come to where the flavor is.  
Come to Marlboro Country.**

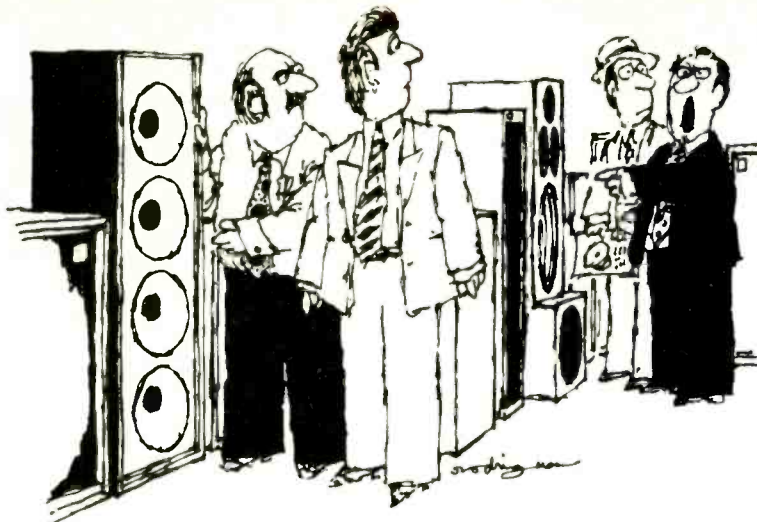


Marlboro Red or Longhorn 100's—  
you get a lot to like.

Warning: The Surgeon General Has Determined  
That Cigarette Smoking Is Dangerous to Your Health.

16 mg "tar," 1.1 mg nicotine av. per cigarette, FTC Report Mar '81





"Don't believe him, sir! This one here is the world's best-sounding speaker!"

arately (after preconditioning) by driving it through the main-amplifier inputs in the rear of the receiver. Then we repeated those measurements through the preamplifier inputs in the normal manner and also made measurements of the preamplifier section alone through the PRE OUT jacks.

Through the power amplifier alone, the 1,000-Hz distortion was virtually unmeasurable (it was typically 0.0002 to 0.0003 per cent) for all power outputs from 1 to 100 watts. It was only 0.00063 per cent at 120 watts—just at the clipping level into 8-ohm loads. A power-amplifier input of 84 millivolts (mV) produced a reference output of 1 watt. The slew factor was 2.5, and the amplifier rise time was about 2 microseconds. It was stable with simulated reactive loudspeaker loads.

At the rated 100 watts output and at all lower power levels, the distortion rose only slightly at low frequencies to about 0.003 per cent at 30 Hz. (It was not possible to make accurate distortion measurements at 30 and 20 Hz because the distortion components could not be isolated from power-line frequencies at those minuscule levels.) The distortion rose at high frequencies to a maximum of 0.008 per cent at 20,000 Hz and full power, falling to 0.0045 per cent at -10 dB (10 watts).

Measured through the preamplifier section, the distortion readings were much higher than through the power amplifier alone. The distortion also depended to a degree on the volume-control settings, indicating some nonlinearity in the low-level, voltage-controlled circuits of the preamplifier.

We measured the distortion and clipping level at the preamplifier output, driving a standard IHF load of 10,000 ohms in parallel with 1,000 picofarads, at different frequencies and with various volume settings. At the IHF reference-gain setting (0.5-volt output for 0.5-volt input at a high-level jack) the distortion was low—less than 0.05 per cent from 20 to 20,000 Hz at a 0.7-volt output. However, at a 1-volt output the distortion increased sharply at about 5,000 or 6,000 Hz, rising to about 1 per cent at 10,000 Hz and 4.5 per cent at 20,000 Hz.

Waveform distortion clearly indicated the onset of slew limiting.

At 1,000 Hz, the distortion increased smoothly from less than 0.01 per cent at 0.15 volt and below to 0.7 per cent at 1 volt and about 1 per cent at 1.2 volts. We measured the preamplifier section's voltage output at clipping at frequencies of 1, 10, and 20 kHz as a function of volume-control setting. The IHF reference-gain setting corresponded to a reading of 18 on the front-panel numerical display. At that point the clipping output was 1 to 1.1 volts for frequencies under 10,000 Hz. The level at which clipping occurred increased to 1.7 to 2 volts at maximum gain (a reading of 31 on the panel). However, reducing the volume to a reading of 15 (which is -11.5 dB referred to standard gain) reduced the available output before clipping to 0.63 volt at 1,000 and 10,000 Hz and to 0.45 volt at 20,000 Hz. Since the power-amplifier section requires 0.85 volt for its rated output of 100 watts, it is evident that it cannot be driven to that level, even at middle frequencies, when the volume is set below about 17. At 20,000 Hz a volume setting of at least 20 is needed for full output without distortion.

The distortion of the complete amplifier rose from 0.01 per cent at 1 watt to 0.07 per cent at 100 watts and 0.08 per cent at 120 watts using 8-ohm loads at 1,000 Hz. When we drove 4-ohm loads, the amplifier performance was not very different, with the distortion readings ranging from 0.01 per cent at 1 watt to 0.1 per cent at 130 watts (the output clipped at 132 watts). Even 2-ohm loads did not degrade the amplifier performance significantly. The 2-ohm clipping-power output changed during our tests, possibly due to the extreme heating of the amplifier when delivering high power into low-impedance loads (though it was never shut down by its thermal protection system or damaged in any way). Immediately after the normal preconditioning period, the 2-ohm output clipped at about 120 watts, but after extended operation the maximum power fell to about 72 to 75 watts. This is still much more than many higher-rated amplifiers can deliver to such

a low load impedance. The 2-ohm distortion was 0.014 per cent at 10 watts and 0.215 per cent at 75 watts.

The 8-ohm clipping headroom of the Pioneer SX-8 was 0.72 dB. The short-term power available during dynamic-power and headroom tests was essentially identical to the steady-state clipping output—120 watts (0.72 dB) into 8 ohms, 134 watts into 4 ohms, and 130 watts into 2 ohms. The rise time through the preamplifier measured 4 microseconds, and the slew factor varied from 2.5 at maximum gain to 0.75 at the IHF standard gain setting (0.5-volt input giving 1 watt output).

At full power output and with the preamp in the circuit, distortion measured between 0.08 and 0.1 per cent from 20 to 5,000 Hz, increasing to 0.36 per cent at 20,000 Hz. At lower power levels the curve was similar, but with lower readings (typically 0.06 per cent at half power and 0.03 per cent at one-tenth rated power). The IHF intermodulation distortion (IM) was measured with equal-amplitude inputs of 19- and 20-kHz signals whose combined peak value was equal to that of a single-frequency 100-watt signal. The third-order IM (18 kHz) was -72 dB and the second-order component at 1,000 Hz was -78 dB, both referred to 100 watts.

The tone-control frequency-response curves were conventional, with a maximum control range of about  $\pm 12$  dB. The "15-Hz" filter reduced the output by about 0.5 dB at 40 Hz and 2.5 dB at 20 Hz. The RIAA phono equalization was unusually accurate, deviating less than 0.5 dB from the ideal response in the 20- to 20,000-Hz range. When measured through the inductance of a phono cartridge, the phono response decreased very slightly and gradually to -1 dB at 10,000 Hz and -1.3 dB at 20,000 Hz relative to the 1,000-Hz reference level.

The FM-tuner section of the SX-8 had a mono IHF usable sensitivity of 11.6 dBf (2.1 microvolts, or  $\mu\text{V}$ ). The stereo-switching threshold was 31.2 dBf (20  $\mu\text{V}$ ). The 50-dB quieting sensitivity was 15 dBf (3.1  $\mu\text{V}$ ) in mono and 37 dBf (39  $\mu\text{V}$ ) in stereo. The respective noise readings at 65 dBf (1,000  $\mu\text{V}$ ) input were -75 and -69.5 dB, and the distortion was 0.077 and 0.165 per cent in mono and stereo, respectively. The IM distortion (using 14- and 15-kHz test frequencies whose peak level corresponded to 100 per cent modulation of the signal generator) was -74 dB (below 100 per cent modulation) for the second-order component at 1,000 Hz and -55 dB for the third-order distortion at 13,000 Hz (relative to 100 per cent modulation at that frequency). In stereo, the distortion readings were -68 and -55 dB, but there were also a number of additional beat frequencies in the output at levels between -60 and -80 dB (typical behavior for an FM tuner).

The stereo-FM frequency response was almost perfectly flat, within  $\pm 0.1$  dB from 30 to 15,000 Hz. The channel separation was also unusually uniform, between 40 and 45 dB over virtually the entire audio range. The capture ratio was 1.5 dB, and AM rejection was 54 dB at a 45-dBf (100- $\mu\text{V}$ ) input. The image rejection was a good 86 dB, alternate-channel selectivity was a reason-

ably good 67 dB, and adjacent-channel selectivity was 3 dB. The muting and stereo thresholds were identical at 31.2 dBf (20  $\mu$ V), and the 19-kHz pilot carrier leakage in the audio outputs was a low -70 dB. Tuner hum was -68 dB. The only measurement made of the AM-tuner section was its frequency response, which was down 6 dB at 100 and 2,400 Hz.

● **Comment.** Our tests show that the Pioneer SX-8 has an excellent power amplifier (using their "Non-Switching" circuit) coupled with a much less distinguished preamplifier section and a good FM-tuner section that is on a par with those of other top-quality receivers.

The distortion readings we obtained through the preamplifier section, and the manner in which they depended on volume setting, suggest some design limitations, as evidenced by the unit's inability to deliver a 1-volt output at high frequencies with IHF standard gain settings without severe wave-

form distortion. Fortunately, the preamplifier can drive its own power amplifier to full output without difficulty up to perhaps 8,000 Hz, and at outputs only a decibel or so below rated output its distortion remains negligible even at the highest frequencies.

While the numerical results of our overall distortion measurements were not too impressive, it must be understood that they were *not* reflected in the sound of the amplifier in the slightest. With the distortion reading exceeding 0.1 per cent *only* at high power levels and very high frequencies, it is difficult to imagine that anyone could hear their effects under home-listening conditions. In short, we never heard anything but first-rate sound from the SX-8.

Any judgment on the SX-8 must take into account its unique control features. It is handsomely styled, and it makes a most attractive combination with, for example, one of Pioneer's matching cassette decks. At first glance, the array of controls and displays may seem overwhelming. Neverthe-

less, it is so easy to use, so free of human-engineering flaws, and so utterly smooth in every operation that we speedily came to appreciate its advantages and even to feel that this is the proper way for such a highly complex unit to operate.

Admittedly, it takes a bit of practice to become familiar with everything this receiver can do and to use it to full effectiveness. Once one becomes accustomed to pressing instead of turning to produce a result, everything happens naturally. Although the control memories will be retained for up to a week with the receiver unplugged, the clock has no such back-up. It is hard to think of a more versatile or elegant receiver presently available at anywhere near the price of this one. The Pioneer SX-8 is a fine unit, worthy of its place at the top of the new Pioneer line of microprocessor-controlled components, and a reasonable value for the money.

—Julian D. Hirsch

Circle 140 on reader service card



Akai GX-77 Open-reel Tape Deck

- Akai GX-77 Open-reel Tape Deck
- Size: 17¼ x 9½ x 9 inches
- Weight: 37½ pounds
- Price: \$795

**T**HE Akai GX-77 is an open-reel deck designed to use both conventional and the new EE (Extra Efficiency) chrome-type tapes, and it is the first of these units I have

had an opportunity to test. A two-speed (7½ and 3¾ inches per second), 7-inch-reel machine, the GX-77 is capable of bidirectional recording and playback. The basic advantage of the new EE tapes (currently available from TDK, Maxell, and BASF) is that, when used with recorders designed for them, performance previously attainable only at 7½ ips can be achieved at 3¾ ips.

The formulation thus makes it possible to provide an uninterrupted 90-minute playing time (twice that of a C-90 cassette) with a standard 1,800-foot 7-inch reel and, further, an increase in the potential signal-to-noise ratio. The EE tapes, however, require increased bias and departure from the standard playback equalization. A switch

(Continued on page 34)



# LINEAR TRACKING THE TURNTABLE

The linear tracking tonearm is without question the ideal way to recover information from a disc. It can virtually reduce horizontal tracking error to zero, eliminate crossmodulation and significantly minimize stylus and record wear.

But until now there hasn't been a linear tracking turntable whose overall performance truly measured up to the technology of linear tracking itself.

Pioneer's new PL-L800 has changed all of that.

## THE LINEAR INDUCTION MOTOR ELIMINATES MECHANICAL CONTACT.

Unlike other linear tracking tonearms that are driven by vibration-producing rollers, worm screws or pulleys, the PL-L800's tonearm is driven by Pioneer's exclusive linear induction motor. Through a process known as electromagnetic repulsion, a magnetic field is set up that gently propels the tonearm, allowing it to track perfectly with no mechanical linkages to degrade performance.

## THE POLYMER GRAPHITE™ TONEARM DAMPENS VIBRATIONS.

To minimize any tonearm resonance caused by acoustic vibrations, the PL-L800's tonearm has been constructed with an exclusive dampening material called Polymer Graphite™. The only thing we want you to hear through our tonearm is music.

Our Coaxial Suspension System, on the other hand, will absorb vibrations that occur when someone walks or dances too hard in a room, or accidentally drops the dustcover. Because inside the cabinet is a free-floating suspension system which isolates the tonearm, platter



## THE PIONEER LINEAR TRACKING

# NG FINALLY GETS LE IT DESERVES.

and motor from the rest of the turntable; vibrations that reach the cabinet are absorbed by the spring-coupled insulators before they can harm the reproduction process.

## THE STABLE HANGING ROTOR DESIGN REDUCES WOW AND FLUTTER.

The most advanced turntable platter motor wasn't advanced enough for the PL-L800. So we came up with a new direct drive system called the Stable Hanging Rotor. The problem with the design of conventional motors is that the fulcrum is at the base of the motor, making it impossible for the platter motor's center of gravity to coincide with the fulcrum. And that results in a wobbling of the platter, known as wow and flutter.

The Stable Hanging Rotor system reduces the cause of this wow and flutter. Because the fulcrum lies immediately below the platter, it coincides with the platter's center of gravity.

And as if all this weren't enough, the PL-L800 also is equipped with Pioneer's exclusive moving-coil cartridge. It has such unusually high output that even a receiver or amp not equipped to handle most moving-coil cartridges can be used with the PL-L800.

If you find it hard to believe that a turntable could be as remarkable as the PL-L800, we suggest you visit your nearest Pioneer dealer and see and hear the PL-L800, along with our entire line of new turntables, for yourself.

No other linear tracking turntable deserves your attention more.

**PIONEER**

We bring it back alive.

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CIRCLE NO. 40 ON READER SERVICE CARD

**ER PL-L800  
NG TURNTABLE.**



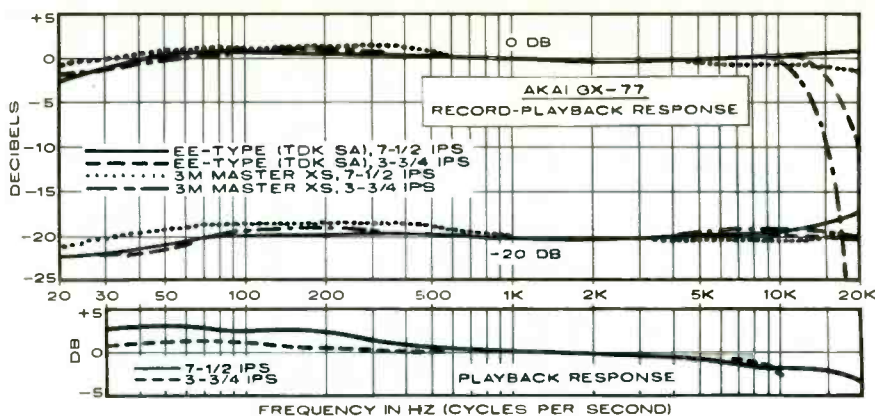
on the GX-77 selects the proper parameters for either conventional or EE formulations, and a control permits a  $\pm 30$  per cent bias variation to compensate for brand-to-brand tape differences. No internal audio generator is provided to facilitate bias adjustment, though the owner's manual suggests recommended settings for a number of different tape brands and types.

The dual-capstan transport of the GX-77 uses a servo-controlled d.c. drive motor and two d.c. reel motors. There are six tape heads—erase, record, and playback for each direction. The transport pushbuttons operate logic-controlled solenoids that prevent tape damage from rapid mode switching and permit instantaneous direction change during recording or playback at normal speeds.

Tape threading is a simple, straight-line procedure from supply to take-up reels, and the head cover is hinged to facilitate editing and routine cleaning and demagnetizing. A separate roller that glides up and down in a slot approximately 5 inches long is used both to draw the tape into the head nest and to control a digital counter that reads directly in minutes and seconds. During the threading operation the two spring-loaded tension arms are automatically retracted.

Separate left- and right-channel recording controls are supplemented by a MASTER record knob that affects both channels simultaneously. Record and playback levels are displayed on a sixteen-segment peak-reading fluorescent indicator that is calibrated from  $-20$  to  $+8$  dB. An OUTPUT control adjusts the level at both the front-panel headphone jack and at the regular rear-panel output jacks. Additional front-panel switches are provided for a CUE/REVIEW function, operation from an external timer, and speed, as well as for selection of either one-direction, auto-reverse for a single cycle, or continuous repeat-play modes. The automatic-reverse functions require the addition of a short length of metal-foil sensing tape to the tape backing at the point(s) where reversal is desired.

The rear panel of the GX-77 has the usual input/output jacks plus provision for



a remote-control accessory. A separate Akai MM-77 mixer (or equivalent) is required for recording with microphones.

● **Laboratory Measurements.** The Akai GX-77 unit I received for testing did not include the usual manufacturer's check-out data, nor were specific tapes indicated as having been used in the factory setup. Experimenting with various formulations, I achieved the best performance (by a narrow margin) with TDK SA in the EE position and with 3M Master XS in the regular mode, though essentially the same results could be achieved with a variety of alternative formulations from Maxell, BASF, and Ampex.

Playback response was tested using MRL test tapes for the standard (NAB/IEC) playback equalizations at  $7\frac{1}{2}$  and  $3\frac{3}{4}$  ips, as shown in the graph. EE tapes use different time constants for the two speeds (35 and 50 microseconds instead of 50 and 90  $\mu$ sec), and there are, as yet, no standard playback test tapes available for this format. Using standard test tapes and mathematically calculating the response variations to be expected with the new format indicated that the playback of the GX-77 in its EE position would fall within a few tenths of a decibel of the curves shown.

The bass rise in the playback curves is *not* a characteristic of the recorder but results from using a full-track test tape on a quarter-track deck.

On an overall record-playback basis the advantages of EE-type tape are most obvious at the  $3\frac{3}{4}$ -ips speed when recording at a relatively high level (0 dB), as the curves in the graph indicate. In a way it is comparable to the difference between a metal-particle cassette and a good ferric or  $\text{CrO}_2$ -type cassette. The difference between  $7\frac{1}{2}$  and  $3\frac{3}{4}$  ips is not entirely wiped out, but for most practical recording purposes it is reduced to insignificance. The curves in the graph are for the forward direction, but those made in the reverse direction did not differ by more than  $\pm 0.5$  dB.

Third-harmonic distortion from a 1,000-Hz tone at an indicated 0-dB input level measured only 0.2 per cent at the  $7\frac{1}{2}$ -ips speed with the 3M tape and only 0.15 per cent with the EE TDK SA. At  $3\frac{3}{4}$  ips the respective figures (averaging the forward- and reverse-direction measurements as before) were 0.3 per cent for both tapes. The overload margin was generous for both the regular ferric and the EE formulations at both speeds, averaging between 7.5 and 10 dB with either tape before producing 3 per cent third-harmonic distortion. At  $7\frac{1}{2}$  ips, the signal-to-noise ratio, referred to the 3 per cent distortion point, measured 63 dB with the TDK SA and 62 dB with 3M Master XS unweighted, rising to 68 dB and 66.8 dB with IEC A-weighting. At the  $3\frac{3}{4}$ -ips speed the S/N figures were 60.6 and 60.1 dB (unweighted) and 64.7 and 64.1 dB (A-weighted) for the TDK and 3M tapes, respectively.

Averaging both directions, overall record-playback wow and flutter at  $7\frac{1}{2}$  ips measured only 0.032 per cent on the conventional wrms basis and 0.048 when employing the stricter DIN peak-weighted standard. At  $3\frac{3}{4}$  ips the comparable figures were 0.04 and 0.07 per cent, respectively. Fast-forward and rewind times for a 1,200-foot reel averaged 72 seconds, and an input signal of 64 mV was required to produce a 0-dB indication. The output at this level was 0.755 volt.

● **Comment.** The Akai GX-77 is certainly easy to operate, though some of its control knobs seem slightly small. It was capable of making truly excellent copies of audiophile



"To fill the remaining time we bring you Verdi's Aida, two  $33\frac{1}{3}$  LP records played at 78 rpm."

discs at the 7½-ips speed, and at 3¾ ips only the most demanding material showed any sign of high-frequency rolloff. The specific virtues of the EE format are still, to some degree, to be determined, for while

high-end response and signal-to-noise ratio are definitely improved at 3¾ ips, modulation noise (flutter and program-responsive hiss) could still be detected by very critical listening. Nonetheless, for the home user in-

terested in open-reel capabilities I can recommend serious consideration of the Akai GX-77.  
—Craig Stark

Circle 141 on reader service card



Jensen System 400 Speaker

- Jensen System 400 Speaker
- Size: 26¼ x 13 x 10¼ inches
- Weight: 31 pounds
- Price: \$230

**T**HE Jensen System 400 is a three-way speaker system consisting of a 10-inch acoustic-suspension woofer, a 3½-inch high-compliance midrange cone driver, and a 1-inch soft-dome tweeter. The midrange and high-frequency speakers are acoustically isolated from the woofer within the enclosure. The crossover frequencies are 1,500 and 4,200 Hz, and the nominal system impedance is 8 ohms.

The System 400 has an acoustically transparent "minimum-diffraction grille" designed to minimize the interference effects often caused by the edges of a framed grille or by the speaker's baffle board. The grille is made of an open-weave brown cloth stretched on a molded frame that is largely open around its edges as well as in front of the speakers. A level-control knob (behind the grille) provides a continuously variable combined middle- and high-frequency adjustment calibrated from 0 to -10 dB with

a fully "off" setting. The spring-loaded connectors (which accept the stripped ends of the wire leads) are recessed into the rear of the cabinet, which is finished in walnut-grain vinyl veneer.

● **Laboratory Measurements.** The room response of the Jensen System 400 speakers with their level controls set to 0 (maximum highs) was relatively uniform from about 500 to 5,000 Hz, showing only the minor peaks and dips that are normal in a live-room measurement of this type. Above 5,000 Hz, the average output dropped about 5 dB and then fell off at about 10 dB per octave between 10,000 and 20,000 Hz. The response curves from the left and right speakers (on axis and about 30 degrees off axis, respectively) diverged only moderately above 7,000 Hz, showing the typical horizontal dispersion pattern of a 1-inch dome tweeter.

The bass response was measured with the microphone close to the woofer cone. The woofer output was very uniform from 100 to 1,000 Hz, with only about ±1 dB of variation over that important part of the audio

band. The low-frequency output reached its maximum at 60 Hz, where it was about 5 dB greater than the upper portion of the woofer's operating range, and it fell at 12 dB per octave below 60 Hz.

When the two sets of curves were spliced, the composite frequency response was within ±3 dB from 80 to 6,000 Hz. Including the effects of the bass rise and the lower plateau of the tweeter's output above 5,000 Hz, the overall frequency response was ±5 dB from 40 to 18,000 Hz.

We also measured the quasi-anechoic *on-axis* response of the System 400 using our IQS (INDAC) FFT computer program. It differed from the room-response measurement significantly. At a 1-meter distance, the output variation was no more than ±2 dB from 300 to 11,000 Hz (on axis), rising to a plateau of about 5 dB in the 12,000- to 17,000-Hz range. We obtained our flattest overall response in this test by setting the MID/HIGH level control to -8 dB, resulting in a ±3-dB variation from 180 to 18,000 Hz. (Note that those limits are those of the measurement system, not necessarily those of the speaker.) (Continued overleaf)



The apparent anomaly of a *peaked* high-frequency characteristic in the IQS FFT anechoic measurement and a *depressed* output in the same frequency range in the averaged room-response measurement is not actually inconsistent with the speaker's performance. The tweeter's dispersion, although reasonable for its size, nevertheless restricts its total acoustic-power output in the  $2\pi$  solid angle facing the speaker. Listened to and measured on axis, the speaker actually does have an accentuated output in the upper octave, but its total power output into the room falls with increasing frequency since at off-axis angles the tweeter output is down compared to its axial output.

The woofer distortion with a 1-watt signal input was extremely low, varying between 0.1 per cent at 100 Hz and 0.4 per cent at 60 Hz. Even at 40 Hz, the speaker's effective lower frequency limit, the distortion was a mere 1.6 per cent. A power increase to 10 watts had only a moderate effect on the distortion, which remained between 0.25 and 1 per cent from 100 to 60 Hz and reached a maximum of 10 per cent at 30 Hz.

The system sensitivity was 89 dB, as rated. The impedance minimum was 6.5 ohms at 20 Hz and from 100 to 150 Hz; it was between 7 and 20 ohms over the rest of the audio range.

● **Comment.** The Jensen System 400, as might be expected from its measured performance, was a very smooth, uncolored-sounding speaker. Normally, on musical material without significant bass, it gave no indication of its excellent bass potential, but when the program called for it, the bottom-end performance was equal to the task.

MANUFACTURER'S RATING	H-H LABS MEASUREMENT
● <i>Frequency response:</i> 45-20,000 Hz $\pm$ 3 dB	40-18,000 Hz $\pm$ 5 dB*
● <i>Dispersion angle</i> (for -6-dB output): 150 degrees at 5,000 Hz, 94 degrees at 10,000 Hz	Not measured
● <i>Recommended power for amplifier:</i> 10 watts minimum, 90 watts maximum continuous, 180 watts peak	Okay
● <i>Sound-pressure level:</i> 89 dB at 1 meter with 1-watt input	Confirmed
● <i>Impedance:</i> 8 ohms nominal, 5 ohms minimum	Confirmed (6.5 ohms minimum)

\* Using different measurement method

In our listening room (the same one used for the measurements) the frequency balance of the speaker seemed best with its MID/HIGH control turned down about 6 dB, although the optimum position would no doubt be different in other rooms. With the control set for maximum high-frequency output, there was a slight but audible crispness to the sound.

As we have noted on several occasions, the \$200 class of loudspeakers is an extremely competitive one in which is to be found the highest ratio of sound performance per dollar. The Jensen System 400 falls squarely in this category. Frankly, we would have difficulty choosing between this speaker and several other fine similarly priced units we have tested in the past. The System 400's performance is truly excellent in each part of the audio range as well as when taken as a whole. This speaker is, above all, *balanced*, which means that it is likely to give satisfying performance in a

wide variety of listening environments.

It is worth mentioning that the high sensitivity (efficiency) of the System 400 and the fact that its impedance never falls low enough to present problems to any amplifier contribute in no small measure to making it suitable for any home music system. It does not need a lot of power to play loud, yet it will handle just about anything one might supply to it without distress or damage. Although we usually prefer that the level balancing of a multi-way speaker system be done in its design and not left to the possibly inept hand of the user, the action of the MID/HIGH control on this speaker is both beneficial and highly unlikely to degrade its sound in any way. All in all, the experience of testing and living with the System 400 convinced us that it is a fine product, well designed and executed, honestly rated, and reasonably priced. —Julian D. Hirsch

Circle 142 on reader service card



QED Model 7 Preamplifier

- QED Model 7 Preamplifier
- Size: 19 x 3 x 9½ inches
- Weight: 11½ pounds
- Price: \$415 (East coast); \$399 (West coast)

**T**HE Model 7 preamplifier from Questar Electronic Design (QED) is a compact and versatile control center with functions that go well beyond the usual preamplifier roles of gain, input selection, and equaliza-

tion. Its tone controls have completely passive circuits followed by an "op-amp" gain stage. The phono-preamplifier section has direct-input coupling from the cartridge. There are two pairs of moving-magnet (MM) phono inputs, each with a lever switch that selects an input capacitance of 100, 200, or 300 picofarads in parallel with a fixed resistance of 49,000 ohms. A fourth position changes the gain and input resistance for a moving-coil (MC) cartridge.

To help minimize hum pickup, QED removed the power transformer from the preamplifier, leaving only the rectifiers and filter capacitors within the chassis of the Model 7. The transformer is a small plug-in unit, similar to the a.c. adapters for calculators and other low-power devices, and the removal of a.c.-line connections from its chassis prevents the Model 7 from having built-in a.c. convenience outlets. All signal

(Continued on page 38)

Warning: The Surgeon General Has Determined That Cigarette Smoking is Dangerous to Your Health.

Ultra Kings, 2 mg. "tar", 0.3 mg. nicotine; Lights Kings, 9 mg. "tar", 0.8 mg. nicotine av. per cigarette by FTC method; Filter Kings, 15 mg. "tar", 1.1 mg. nicotine av. per cigarette, FTC Report Dec. '81.



There's only one way to play it...

Wherever the music is hot, the taste is Kool. At any 'tar' level, there's only one sensation this refreshing.



Original



Low 'tar'



2 mg.



switching is done close to the jacks in the rear of the unit by means of remote mechanical couplers connected to the front-panel knobs.

The "Bi-FET" output stage of the Model 7 is claimed to combine a very high signal-output capability with low noise. In addition to its two phono inputs, the Model 7 has two high-level audio inputs (TUNER and VIDEO). The large SOURCE knob at the left of the panel is matched by a similar LEVEL knob at the right side. A three-position lever switch is marked OFF, ON, and MUTE (the latter reduces the preamp output by 20 dB). A red LED above the switch blinks on and off in the MUTE mode. A phone jack is located next to the LEVEL knob.

A three-position vertically oriented lever switch (REC) channels either phono, tuner, or video sources to the tape-recording output jacks, making it possible to record from one source while listening to another. In its center (REC) position the DUB switch supplies a signal to both sets of tape-output jacks. In the 1-2 and 2-1 positions the tape decks are connected for dubbing from the first to the second (the selected REC program goes to the input of the first numbered tape deck at all times). The monitor switch connects the source to the preamplifier circuits in its S position, replacing it with the output of either tape deck in the T1 and T2 positions.

The Model 7 has a signal-enhancing feature controlled by a three-position switch labeled E.E. (Environmental Enhancement). Switching from the OFF to the ENH position introduces a fixed amount of phase-inverted cross-coupling between the two channels. When the speakers are located relatively close together, this tends to spread the ap-

parent image width, giving a broader sound stage in a small listening room. The manufacturer suggests using the tone controls to modify this effect to suit personal taste. Switching to the SUM position retains the enhancement feature but blends the low frequencies into a mono signal below a frequency determined by the CROSSOVER switch in the rear of the preamplifier. This minimizes rumble or warp signals that could, in some cases, use up much of the excursion range of small woofer cones. To the extent that the bass-program energy is in phase in both channels, the blending will not cause an equivalent reduction in bass response.

The remaining front-panel control is loudness, with an OFF position and two active settings marked L1 and L2: L1 gives a more or less conventional loudness compensation using a modified version of the Fletcher-Munson equal-loudness contours as the basis for its action, and L2 uses the same basic contours but adds a fixed boost of about 6 dB in the upper bass (about 100 Hz). This mode of operation is suggested for small speakers, which can thus be made to give the effect of a strong bass without overdriving their cones.

Not all the features of the QED Model 7 appear on its front panel. The rear panel contains the usual jacks for the signal sources and tape recorders. The MAIN OUTPUT jacks are shorted out when the front-panel power switch is set to OFF (this does not remove the power from the preamplifier circuits, which QED recommends be left on continuously by keeping the plug-in transformer in a "live" socket). By grounding the output jacks, the switch silences the follow-

ing power amplifier as effectively as though the preamplifier had been turned off. Next to the MAIN OUTPUT jacks is a TIM FILTER switch whose settings are marked 10 V/ $\mu$ s, 100 V/ $\mu$ s, and 200 V/ $\mu$ s. These refer to the rated slew rate of the power amplifier in use, and when the switch is set to a value no higher than the power-amplifier slew capabilities there is no likelihood of transient intermodulation (TIM) distortion.

Also on the rear panel are two sets of outputs marked BI-AMP OUTPUT (LO-FREQ and HI-FREQ). The Model 7 contains electronic-crossover circuits for driving two power amplifiers in systems using biamplified speakers. The crossover frequency is set by an adjacent switch at 120, 240, or 400 Hz. The same settings apply to the summed mode of signal enhancement mentioned earlier. Although the HI-FREQ output is in full stereo, with the low frequencies attenuated, the LO-FREQ outputs are driven with a summed (mono) program at frequencies below the selected crossover. However, the left and right outputs for the low-frequency portion of the system are driven 180 degrees out of phase so that a stereo amplifier driven from them will produce a "bridged" mono output across its two "hot" speaker terminals with roughly four times the power capability of the same amplifier in its normal stereo mode.

The QED Model 7 is finished in black except for the silver control-panel insert, which has contrasting black knobs. The panel is slotted for rack mounting.

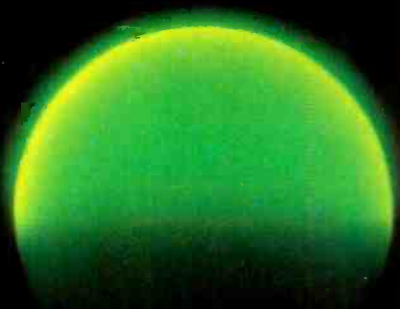
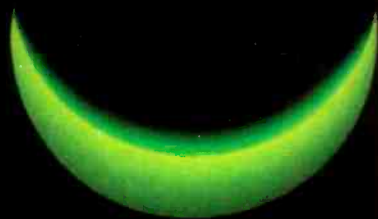
● **Laboratory Measurements.** The sensitivity of the QED Model 7 at maximum gain, for a reference output of 0.5 volt, was 53 millivolts (mV) at the high-level inputs and 1 mV for the phono (MM) input. The A-weighted output noise was below our measurement limit of 100 microvolts, corresponding to better than -74 dB referred to 0.5 volt. The phono (MM) input overloaded at 107 mV at 1,000 Hz and at equivalent levels of 140 to 150 mV at 20 and 20,000 Hz. The output waveform clipped at 6 volts when we drove a standard IHF load of 10,000 ohms in parallel with 1,000 picofarads. The 1,000-Hz harmonic distortion was a constant 0.003 per cent up to 6 volts output. We also measured the distortion from 20 to 20,000 Hz at outputs of 0.5, 2, and 5 volts. At the 5-volt level, the distortion did not exceed 0.01 per cent from about 50 to 5,000 Hz, increasing to 0.025 per cent at 20,000 Hz and 0.05 per cent at 20 Hz. At lower outputs the distortion was even less.

The phono-input impedance was measured as 48,000 ohms shunted by a capacitance of 75, 180, or 275 picofarads depending on the switch setting. The MC input had a 100-ohm terminating resistance. The RIAA phono equalization was very accurate, within  $\pm 0.3$  dB from 30 to 20,000 Hz and -1 dB at 20 Hz. There was absolutely no detectable change in response when it was measured through the inductance of typical phono cartridges. On our test sample, the TIM FILTER switch had its 10- and 100-V/ $\mu$ s positions interchanged. Nevertheless, the -3-dB upper response frequency was 100, 75, and 50 kHz, respectively, and rise time was 3, 4, and 6  $\mu$ s as the

(Continued on page 40)



"I'm afraid someone is pulling your leg, my son. We've never had an 'annual blessing of the cassette decks' at St. Anthony's."



## Only one tape deck combines the incredible realism of dbx<sup>®</sup> with the precise sound of direct drive. Technics RS-M270X.

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recording made on the RS-M270X will sound 50 percent more dynamic than the same recording made on a conventional deck.

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**Technics**  
The science of sound

CIRCLE NO. 36 ON READER SERVICE CARD



## test reports

TIM switch was moved down to 200 V/ $\mu$ s.

The tone controls had good characteristics with virtually no effect on the midrange response (300 to 800 Hz) even at extreme control settings. The loudness compensation boosted both low and high frequencies, and there was some low-frequency boost when the loudness compensation was switched in even at a maximum level setting. The 1.2 setting boosted the response by 6 dB at 100 Hz, with some boost being apparent between 400 and 40 Hz. The sound seemed a bit heavy to our taste, possibly because we had no speakers on hand that could benefit from it. As far as we could tell, the response at 20 Hz and below was not affected.

The biamp crossover curves had 12-dB-per-octave slopes, with the LO output about

6 dB higher than the HI output. This implies the need for an input-level control at the bass amplifier. When we summed the LO and HI signals resistively, the transition between the two levels took place smoothly, with the approximate midpoints of the change being at 230, 500, and 1,000 Hz for crossover frequencies of 120, 240, and 400 Hz. In the enhance mode, each channel was cross-coupled in reverse phase to the opposite one at a -8-dB level. In the SUM mode, the phase reversal between channels was fully effective above 2,000 Hz, with 90 degrees of phase shift at 200 Hz and 0 degrees at 40 Hz.

● **Comment.** The QED Model 7 clearly reflects the audio philosophy of its designers.

much of which is expressed in the informative instruction manual.

Overall, there can be no doubt that the QED Model 7 is a very competent preamplifier with some unconventional features. We were especially impressed by its ruler-flat phono response and total absence of interaction with cartridge inductance (to say nothing of its ability to match the capacitive load requirements of just about any cartridge). The provision for a bridged amplifier connection is a good idea and is typical of the way in which the designers of this amplifier have built into it a host of novel features, at least some of which will appeal to any audiophile. —Julian D. Hirsch

Circle 143 on reader service card



Denon DP-52F  
Turntable

- Denon DP-52F Turntable
- Size: 18 x 16 $\frac{3}{4}$  x 5 $\frac{1}{8}$  inches
- Weight: 20 pounds
- Price: \$525

**T**HE Denon DP-52F turntable has a two-speed (33 $\frac{1}{3}$ - and 45-rpm) quartz-lock direct-drive a.c. motor driving a cast alloy platter weighing (with its rubber mat) about 3 pounds. Recorded around an inner circumference of the platter are some 1,000 magnetic pulses that are sensed by a small magnetic pickup head to provide speed-control feedback information to the servo system. The DP-52F is mounted on a handsomely finished high-gloss wood-grain base together with a "Dynamic Servo Tracer" tone arm. The entire base is supported on four softly sprung adjustable feet; the unit

is equipped with a hinged, clear-plastic dust cover.

The upper surface of the rubber turntable mat is illuminated by a LED in a cylinder next to the arm base. The turntable and mat have three pairs of holes spaced 120 degrees apart at radii of approximately 2 $\frac{1}{2}$  and 4 $\frac{3}{4}$  inches. Below the platter are two photocells that sense the light passing through either or both sets of holes. If no record is on the turntable, light passes through both sets of holes and the arm does not move from its rest (the platter shuts off in a couple of seconds). A 12-inch record covers all the holes, signaling the microprocessor in the control system to start the turntable at 33 $\frac{1}{3}$  rpm and index the arm for a 12-inch record. A 7-inch record covers only the inner group of holes, causing the motor to turn at 45 rpm

and the arm to index to a 7-inch diameter. Nonstandard records such as 7-inch 33 $\frac{1}{3}$ -rpm, 10-inch of any speed, or 12-inch 45-rpm can be played with manual speed selection and modification of the tone-arm indexing.

The Dynamic Servo Tracer tone arm operates in a balanced condition (by means of a threaded counterweight adjustment at its rear). The downward force is applied electronically by a built-in torque servo controlled by a small dial next to the arm base. The force calibrations cover from 0 to 3 grams at 0.1-gram intervals. The motion of the arm is controlled in both vertical and horizontal planes by its servo system, with a fixed percentage of the vertical force being applied horizontally by the horizontal torque motor. This automatically supplies

the correct antiskating compensation for any tracking-force setting.

A second control dial, calibrated over the same range as the stylus-force/antiskating dial, is marked Q-DAMPING. It controls the damping of the arm resonance in both planes through its servomotors. The arm itself is a straight low-mass tube with a plug-in cartridge shell. The effect of the electronic damping is to place the arm/cartridge resonance close to the ideal frequency of 10 Hz and to damp its amplitude.

The operating controls of the Denon DP-52F are soft-contact rectangular pushbuttons on the sloping upper front panel outside the area protected by the plastic cover. Power is applied by the left-most button, near which are individual manual speed-selection buttons (not needed in normal operation). A touch on START places the platter in motion at a speed determined by the record size (speed can be changed manually after starting). The arm moves to the appropriate diameter and descends to the record surface. The arm lifts after play, the motor stops almost instantly (it has electronic braking), and the arm returns to its rest. The STOP button produces the same effect whenever it is pressed, and the REPEAT button causes a record to be repeated until the button is pressed a second time. The LIFTER button raises and lowers the tone arm on alternate operations with a smooth yet rapid motion.

The DP-52F also has an electronic system, operated by the PLAY and STOP buttons, that gives full control over the arm movement even while the cover is down. Pressing the START button while the pickup is on the record raises it and causes the arm to move slowly toward the center of the record. When the button is released, the arm stops and descends to the record. Similarly, a light pressure on the STOP button lifts the arm and causes it to move outward with the same stop-and-descend sequence when the button is released. When using STOP in this manner, care is needed not to press it too hard, since that will immediately stop the turntable and return the arm to its rest. After a little practice, one learns how much pressure is permissible for arm indexing.

Denon's Model DP-51F is identical to the DP-52F except that it has a vinyl wood-grain base and lacks the tone-arm lateral-movement feature; its price is \$425.

● **Laboratory Measurements.** We installed a Shure M97HE cartridge in the plug-in shell of the DP-52F for our tests. Although no installation instructions were supplied with our review sample (one of the first to enter this country), a trial-and-error process showed that a 38-mm distance from the stylus to the end of the arm tube gave the lowest tracking error, less than 0.4 degree per inch for radii of 2.5 to 6 inches. The applied stylus force was exactly equal to the dial calibration up to 1.5 grams and typically within 10 per cent of it above that force.

The effective arm and cartridge mass (the cartridge weighs 6.4 grams) was only 14 grams with the power off (no damping or servo action to control the arm resonance). Switching on the power dramatically reduced the apparent effective mass to a mere



"... You'd like to know if a speaker is playing music in the forest and there's no one there to hear it, is there any sound coming out of it? One moment, sir, and I'll connect you with our service department. They may be able to help you..."

7 grams, since the bulk of the work needed to move the arm system was now done by the servomotors instead of by the record groove via the stylus tip. The difference in resonance amplitude between the powered and unpowered states was also most impressive: it was difficult to find the tone-arm resonance when the Dynamic Servo Tracer was functioning.

The low-frequency resonance of the M97HE stylus and the total effective arm mass was at about 9 Hz. The Q-DAMPING dial had to be set to zero for this measurement, since it damped the resonance so effectively when set to the tracking force that we could not identify its frequency. The antiskating compensation was correct, using the criterion of equal distortion in both channels when playing discs recorded at a very high velocity. The arm lift operated rapidly and precisely, with no detectable lateral shift during its up/down cycle. The capacitance to ground of the arm and signal wiring was 80 to 90 picofarads per channel, with a very low interchannel capacitance of 1 picofarad.

The non-adjustable turntable speeds were exact, and the unweighted rumble was a low -40 dB, improving to -61 dB with ARLL audibility weighting. The rumble spectrum covered the range from 5 to 35 Hz with no significant peaks within it. The flutter was 0.05 per cent weighted rms and  $\pm 0.07$  per cent weighted peak, with the flutter spectrum limited to the 3- to 8-Hz range. The auto cycle times were 7.5 seconds for START and 9.5 seconds for STOP (from the end of a record). The isolation of the record player from base-conducted vibration was excel-

lent, with responses only at 20 and 40 Hz and between 150 and 250 Hz.

● **Comment.** The DP-52F is about as automatic and foolproof a player as most users could desire. Although a rare translucent record might be able to fool its photoelectric sensing system, with ordinary records everything worked perfectly, and it was impossible to make the player do anything that could result in pickup damage.

The arm-positioning control also worked well and was very easy to use, except that when the speed had to be changed manually after initiating the operation (as for a 7-inch 33 $\frac{1}{3}$ -rpm record) even a light touch on STOP would sometimes shut off the player.

We played our collection of warped records to check the effectiveness of the Dynamic Servo Tracer tone arm. It was soon evident that this arm could track *any* record that we had ever been able to play with any other arm of any type (including tangential) at the minimum force of which the Shure cartridge was capable (0.75 gram). Other than with a grotesquely warped record that must have been stored on a hot radiator, the DP-52F simply did not recognize the existence of record warps as an impediment to tracking.

Overall, the Denon DP-52F is one of the most thoroughly engineered record players we have used. Though quite conventional in its externals, it is an exceptionally refined and handsome product with an utter ease of operation that makes it a delight to use.

—Julian D. Hirsch

Circle 144 on reader service card



The new Harman Kardon CD series of cassette decks.



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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.

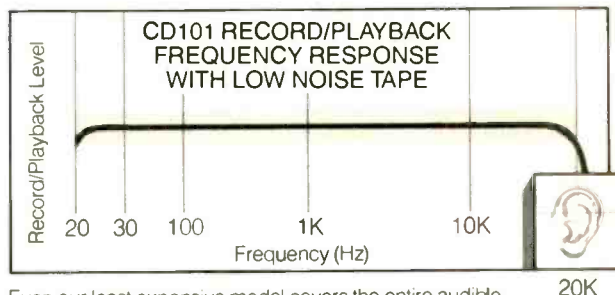
Yet until now, only a handful of the most expensive cassette decks—often costing more than the rest of your system—have been able to accurately reproduce the entire frequency range.

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  $\pm 3$  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.\*\*



Even our least expensive model covers the entire audible spectrum, from the deepest bass at 20Hz to the highest overtones at 20,000Hz. (Shaded area represents accuracy to  $\pm 3$  dB.)

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

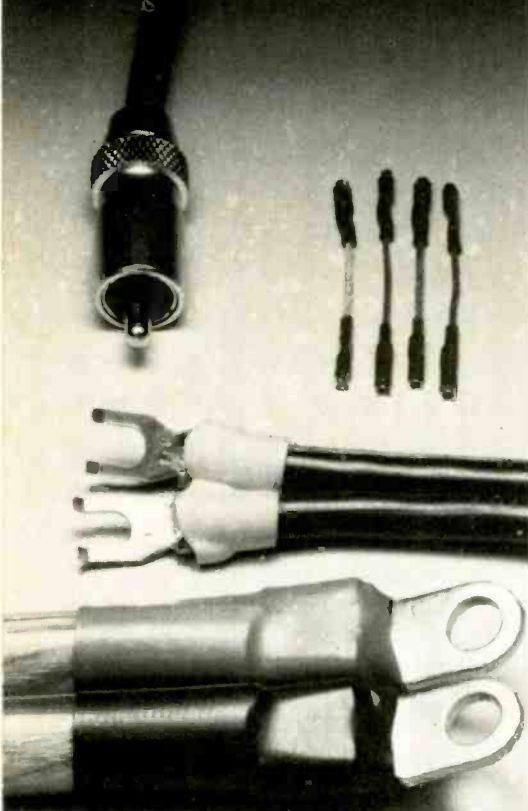
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CIRCLE NO. 38 ON READER SERVICE CARD

## Going on Record

By James Goodfriend



### TECHNOLOGY SAVES

SAY all you want about atomic power, space exploration, and the artificial creation of life, the two inventions that most directly affect the lives of musical people today are the computer and the cassette recorder. Pianists walk through the streets analyzing, through miniature earphones, their most recent concert performances captured on cassette. Composers feed technical specifications into computers and draw forth from the machines sets and variants that may well constitute their (the composers') next opus. Cassette recorders replace notation in the effort to capture an exotic bit of folklore or a viable musical idea, and computers supersede stylistic analysis in the effort to determine who wrote Beethoven's Fifth and whether Pergolesi was one man or three. A tool for organizing information and a method of conveying it are what we have here, and the two, separately and together, have made a great deal of the dog work of musical life considerably easier as well as opening the doors to projects for which people had previously thought life was too short.

The computer, for example, is particularly adept at things like taking a large number of assorted availabilities on the one hand and matching them up with a large number of seemingly random requests on the other. Many recondite projects could be undertaken through such a program, but it seems to me that it is exactly what people need to buy season tickets to the opera. The Metropolitan Opera (I use it only as an example) seems to feel that the primary concern of subscribers is that whatever operas they see, they see them on a Thursday (or Wednesday or Friday) night, and that their secondary concern is that they see all operas from the same seats. Which operas anyone sees therefore becomes a random matter.

Now, I have spoken with several subscribers and they have assured me that what they see is not at all immaterial to them and that to see what they want they might even be willing to go to the opera on some other night of the week and sit in some other seats. Fine. Tell the Met what it is, out of what they are presenting, that you want to see, have them feed it into the computer, and *voilà*, a season of pure content. Despite

what one might assume to be the Met's fears on such a matter, not everybody will want to see the same eight productions. And if no one requests those dreary productions of, say, *Il Trovatore*, with the third-rate casts, perhaps that will make the managers of the Met ask themselves why they continue to offer them.

THE cassette is a very efficient way to convey information because its method of duplication makes it the perfect one-on-one medium. As record manufacturers have found out, there is an audience for practically everything, but the audience for some things may be very small indeed. The cassette offers the opportunity to satisfy audience demand without overproducing.

I am happy to see that this potential has occurred to Mr. Diz Greer of Box 169, Monroe, Connecticut 06468. Mr. Greer has decided to enter the recordings business in a way that will allow him to select from the widest variety of artists and repertoires and sell to even the smallest audiences. What he is saying is basically this: he is looking for material, already recorded material, which he will then make available, for a price, to anyone who wants to buy it. He will carry no inventory; he will simply duplicate a cassette on order, two if he gets two orders, and so on. He is interested, he says, "in tapping that vast reservoir of latent talent consisting of comics, poets, musicians, writers, and so forth that are out there but never get heard." Obviously, he is also interested in tapping that vast reservoir of consumers who each want something so specialized that they never get catered to. He will handle the editing (if necessary) and the engineering himself, will pay a royalty on every tape sold, and asks for no money from the artist. But, before you get your audition tapes out of the closet, understand that he will not issue just *anything*. He will listen to anything himself, but if he's going to offer it for sale, "it must be of at least some interest to somebody." Great idea. I may not want to buy any of the tapes myself (I wouldn't swear to it, though), but I certainly look forward to seeing that first catalog. I presume that it will be produced with the help of a Xerox machine. □





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# AUDIO SPECIFICATIONS AND HUMAN HEARING

By Mark F. Davis



**I**t has probably happened to you. You walk up to a hi-fi salesperson and ask "How good does this one sound?" and what you get back is an avalanche of technical specifications and audio jargon. Though they have useful technical meanings that reflect the complexity of the issues and of the equipment involved, the terms "frequency response," "distortion," "transient response," "imaging," "wow-and-flutter," "noise," and "dynamic range" can also be used as buzz words to obscure meaning, to make it harder rather than easier to understand how we hear.

The science of psychoacoustics can help interpret these technical terms in the course of trying to explain the nature and the limits of human hearing and how those limits determine, among other things, sound-reproduction goals for stereo equipment (see the box on page 52). Our understanding of the human auditory system is still far from complete, but there has now been amassed enough consistent evidence about how we hear to support some preliminary conclusions about the necessary "real-world" (as opposed to the "spec-sheet") performance of stereo equipment.



## The Ear

The human auditory system consists of the head, the ears, the auditory (or "eighth") nerve, and the brain. Approaching this complex assembly from the outside (see Figure 1, next page), we first encounter the *pinnae* (the cartilaginous, shell-like flaps of the external ear). These function as sonic baffles and reflectors, and their acoustical characteristics play an important role in sonic direction-finding (see "Hearing in Space" below). Sound collected by the *pinnae* is funneled down the auditory canals to the *tympanic membranes*, or eardrums. The auditory canals tend to resonate around 3,000 Hz, which in part explains why the ears' sensitivity to just-audible sounds (the so-called threshold of hearing) is greatest near that frequency.

The middle ear consists of three tiny bones (the *ossicles*) and a muscle. These act as a mechanical transformer, coupling the sound from the eardrum to the *oval window*, a much smaller membrane at the entrance of the inner ear. The muscle functions as a kind of automatic gain control or compressor. In the presence of high-level sounds which can damage the sensitive inner ear, it contracts and limits the movements of the ossicles. This process is called the *acoustic reflex* and is one of the few protection devices supplied as standard equipment in the hearing system.

The inner ear, or *cochlea*, consists of a small chamber filled with clear fluid and the gelatinous *basilar membrane*, which is covered with some three thousand vibration-sensing hair cells. These hair cells are the terminations of the main auditory nerve in each ear. Sound coupled through the oval window in the cochlea vibrates the fluid, which in turn vibrates the hair cells.

Short of the brain itself, these hair cells are probably the most intriguing part of the auditory system. To get a rough idea of how they respond to sound, picture microscopic seaweed waving in a very rapidly changing current. The ears' hair cells are stiffer than seaweed and are "tuned" to individual frequencies (called "characteristic frequencies") much as the strings of a piano are. Perhaps a more exact analogy would be to a bank of bandpass filters such as can be found in any stereo equalizer. (A bandpass filter lets pass only those frequencies near the frequency to which the filter is tuned.) When a hair cell is excited by acoustic energy at or near the frequency to which it is "tuned," it responds by emitting electrochemical neural impulses which are transmitted down the eighth nerve to the brain. A hair cell, therefore, is a frequency-sensitive sound transducer that transforms mechanical movement of the cochlear fluid into electrochemical pulses which in turn signal the presence of sound in the hair cell's frequency range.

In other words, all by itself, a single hair cell acts as the biological equivalent of a bandpass filter, level detector, smoothing network, and transducer—microminiatur-

ization of the highest order. All together, the whole collection of hair cells in the inner ear forms a bank of filters, level detectors, etc. which span the audible range, breaking up the incoming sound into its component parts according to frequency and level (amplitude). In effect, the cochlea performs a continuous spectral analysis of the incoming sound, and its output is analogous to the (much cruder) spectrum-analyzer displays seen on some stereo components and tape recorders.

Two such running spectra, one from each ear, comprise the totality of the information about a sound available to the brain. Even if the sound is an isolated transient such as a click, what the brain receives is not the transient itself, but what can be considered the *effect* of that transient on a bank of bandpass filters and level detectors. It doesn't matter at this stage whether it is Mozart or the Stones; all the brain gets to work with are continually changing spectrum analyses.

The precise details of what happens when the signals from the hair cells reach the brain is, at the present state of our knowledge, a bit vague. The output from each ear

A sound reproduction system need not be any better than the ears listening to it, but just how good are our ears?

seems to be channeled into several distinct areas of the brain (called "complexes") which simultaneously and independently process the information to form a conscious perception of the sound field surrounding the listener. For example, one of the cerebral complexes thus far identified seems to generate perceptions of timbre or tone color by observing how hair-cell response varies as a function of frequency.

## What Is Audible?

The simplified conceptual model of the human auditory system derived from psychoacoustical investigations boils down to this: two microphones feeding two filter banks with level detectors feeding a rather slow but very smart computer (Figure 1). On the basis of this grand simplification, we can derive these criteria for "audibility":

A sound, or a change in a sound, is audible if—and only if—it affects the output of at least one hair cell (and preferably a few). Not only must hair cells be affected, but the change in their behavior must be above the brain's thresholds for detection of such

changes. (In our spectrum-analyzer model of the auditory system, the brain's threshold for detection works out to be approximately a 1-dB change in hair-cell filter output.)

We can now sketch in some of the details of this model and evaluate some common audio-equipment specifications in accordance with it. You'll see how various limitations of our hearing system result from the way in which it is constructed. But keep in mind that audio thresholds are rarely very sharp; usually there's a region of uncertainty between the audible and the inaudible. We are dealing with statistical generalizations around which there are inevitable individual variations.

## Frequency Response

The minimum frequency-response requirements of audio equipment involve not only the frequency but the *amplitude* limits of the auditory system. The characteristic frequencies (CFs) of the hair cells in the cochlea start at a low of about 20 Hz and continue upward to about 20 kHz, a range of some ten octaves or so. This *physiological* fact is the basis of our first *psychoacoustical* limitation: you can't hear frequencies that lie appreciably outside the 20- to 20,000-Hz range because there are no hair cells to respond to them. (Furthermore, a gradual stiffening of the mechanical linkages in the middle ear tends to limit high-frequency response to under 15,000 Hz as one gets older, especially in males.)

The hair-cell CFs are spaced in a generally logarithmic fashion so that each audible octave has approximately the same number of hair cells assigned to it. With 3,000 hair cells covering ten octaves, neighboring CFs are only about one three-hundredth of an octave apart, which suggests that the human ear has very precise frequency resolution; it does. The effective bandwidths of the hair cells, considered as electronic bandpass filters, also scale logarithmically with frequency, so that each is about one-third of an octave wide. As a result, the ear's response to varying frequency is, in almost all instances, logarithmic—one reason why frequency response is usually plotted on logarithmic frequency scales in spec sheets and test reports. It also figures in the reason why almost all music is based on logarithmically arranged scales (there are twelve logarithmically spaced semitones to the octave in most occidental music).

The figure of one-third octave (a "critical bandwidth" in psychoacoustic terms) is of key importance: all spectra reaching the brain are subject to an effective one-third-octave smoothing characteristic. This means that if a piece of stereo gear has frequency-response aberrations, those aberrations will generally be inaudible if they span a third of an octave or less.

The response of a hair-cell filter at frequencies other than its CF (the skirt response) rolls off very sharply. Near the CF the rolloff rate is about 96 dB per octave, falling to about 18 dB per octave well away



# SPECS AND EARS...

"As far as human hearing is concerned, transient response is a red herring."

from a hair-cell CF (see Figure 2). This is approximately the response of a third-order (six-pole), one-third-octave Butterworth bandpass filter, making such an electronic filter particularly appropriate for spectrum-analysis work. (The high phase shift of such a filter—over 60 milliseconds at low frequencies—makes it unsuitable for equalization applications.)

Like its response to frequency, the ear's response to sound amplitude is generally logarithmic—every doubling of amplitude will be perceived as an equal change in loudness. The familiar decibel (dB), being proportional to the logarithm of a ratio of amplitudes, is therefore extremely convenient as a common unit of measurement. The usually specified sensitivity of the auditory system to a change in amplitude is about 1 dB, although that varies with sound-pressure level, frequency, and many other factors. Under ideal conditions, the resolution can improve to around 0.3 dB, especially when large numbers of hair cells are being stimulated at the same time.

As mentioned above, the ear's amplitude sensitivity is not uniform at all frequencies. Frequency-weighting curves are often applied to distortion and noise measurements to reflect this behavior since weighting emphasizes those frequency ranges to which the ear is most sensitive. As sound levels rise, the frequency sensitivity tends to flatten out (the well-known Fletcher-Munson effect). A practical consequence of this is that deep bass and upper treble can be better perceived at higher sound levels.

In the light of the "audibility criteria" covered in the previous section, we can say that the frequency response of a piece of hi-fi equipment can be considered perceptually "flat" if, after one-third-octave, third-order smoothing, the response deviations do not exceed 1 dB (0.3 dB if you're really fussy). As a practical consideration, if the frequency response in the chain from recording studio to your ears in your listening room is within  $\pm 2$  dB over most of the frequency range, you're doing very well indeed.

## Frequency Selectivity

The sharply tuned responses of the hair-cell filters provide a frequency resolution (as opposed to frequency response) much finer than a third of an octave. This is because small frequency changes produce large amplitude changes of the hair-cell-filter outputs if the input frequency falls on a filter skirt (and not directly on its CF). For example, with hair-cell filter-skirt slopes of 96 dB per octave and a single, constant-level sine-wave input, a 1-dB change in the outputs of some of the filters requires a fre-

quency change of only one ninety-sixth of an octave—about 0.7 per cent—which happens to be approximately the frequency-resolving power of the auditory system. Under controlled laboratory conditions, this figure improves to about 0.3 per cent, which corresponds to a filter-level change of 0.4 dB.

Room-resonance effects can multiply the degree of amplitude/frequency interdependence, rendering even finer frequency changes audible. Wow and flutter audibility thresholds can therefore be seen as being dependent on the listening environment.

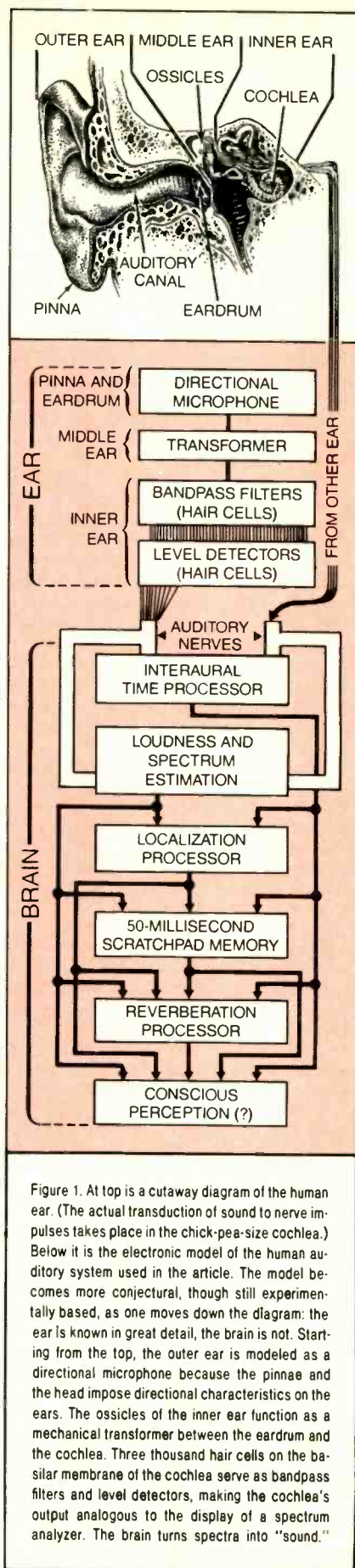
## Phase Shifts

Psychoacoustically speaking, the difficulty with the phenomena known as phase shifts is that there seem to be a number of mechanisms in the auditory system that can respond to them, and in several different ways. There is also a wide disparity in how sensitive these mechanisms are. Most precise is the ability to detect the difference in the *time of arrival* of a sound at our two ears. This interval ranges from 0 seconds for sources equidistant from the ears to a maximum of about 675 microseconds (millionths of a second) for sources directly to the left or right of the head. An arrival-time difference of only 10 microseconds is just noticeable, and this corresponds to a change in the horizontal position of a sound source by 1 degree of arc (see "Hearing in Space" below).

This remarkably accurate interaural time processing is carried out in the superior olivary complex of the brain, which is connected to the hair cells in the inner ear by neural pathways only one cell long. The neural interconnections in this part of the brain appear to preclude timing comparisons between different frequencies. Thus the superior olivary complex's great timing precision is unavailable to the analysis of monaural phase shift. In other words, it doesn't matter to the superior olivary complex how bad the phase shift of one channel is; as long as the other channel matches it within 10 microseconds, phase shifts between stereo channels will not be detectable.

Monaural phase processing appears to take place in a different part of the brain, which has a timing resolution about 100 times coarser—on the order of 1 to 2 milliseconds (thousandths of a second). This value is associated with the effective smoothing time constants of the hair-cell filters, which are also about 1 millisecond. In effect, the brain seems to update its binaural spectral estimates every millisecond.

A final important time period associated with the brain's processing is the *fusion time* (30 to 50 milliseconds). The fusion time means that two sounds arriving within 50 milliseconds of one another tend to be heard as a single event; once the spacing exceeds 50 milliseconds, separate events are perceived (the "Haas effect"). This fusion time seems to come from a "scratchpad" memory in the brain which allows it to keep track of the previous 50 milliseconds of audio, rendering certain acoustic events perceptually simultaneous if they occur within 50 milliseconds of each other. It's as if part of the brain did its sonic computations at a 50-millisecond (20-Hz) rate.



Other mechanisms of phase sensitivity show up in careful laboratory tests, usually with electronically generated test signals, but their audibility outside the lab is arguable. In home listening, monaural phase shift usually doesn't become apparent until it exceeds several milliseconds, and sometimes not until it approaches the fusion time. Few stereo components contribute anywhere near that much phase shift.

## Transient Response

As far as human hearing is concerned, transient response is a red herring. The perceptual requirements for accurate reproduction of transients are no different from those for other types of signals. If a system has flat frequency response and sufficiently low phase shift, distortion, and noise, transients will be reproduced with no audible degradation. Pictures of transient, square-wave, or pulse responses are therefore potentially misleading. What they *look* like

a stereo component which were not a part of the input spectrum. This definition subsumes all common measures of distortion such as total harmonic distortion (THD), intermodulation distortion (IM), and transient intermodulation distortion (TIM).

Our audibility criteria predict that distortion will be inaudible if none of the newly created frequency components significantly affect the outputs of any of the hair-cell filters. This means, for one thing, that out-of-band (ultrasonic or infrasonic) distortion products will be inaudible, as will distortion products with levels that fall below the threshold of hearing. For example, at a very soft listening level—say, only 20 dB above the threshold of hearing—distortion has to exceed 10 per cent before it can become audible.

Distortion will also be inaudible if it is "masked" by the source spectrum. Such masking can occur even in the case of a pure sine-wave sound if enough of the original signal leaks into those hair-cell "filters"

## Noise and Dynamic Range

The issues involving the perception of noise are nearly identical to those for distortion. Like distortion, noise is basically spectral energy present in the output of a stereo component that was not part of the input. Noise differs from distortion, however, in that it is not usually related to the input signal (it is not correlated mathematically with the input, and it sounds hissy) and is usually present even when there is no source signal.

The audibility criteria for distortion apply as well to noise. Noise will be inaudible if

- it lies outside the audio band
- it is below the threshold of audibility
- it is masked by the program.

The noise signal as a whole will be inaudible if substantially all of its spectrum is rendered inaudible by any combination of the above three factors.

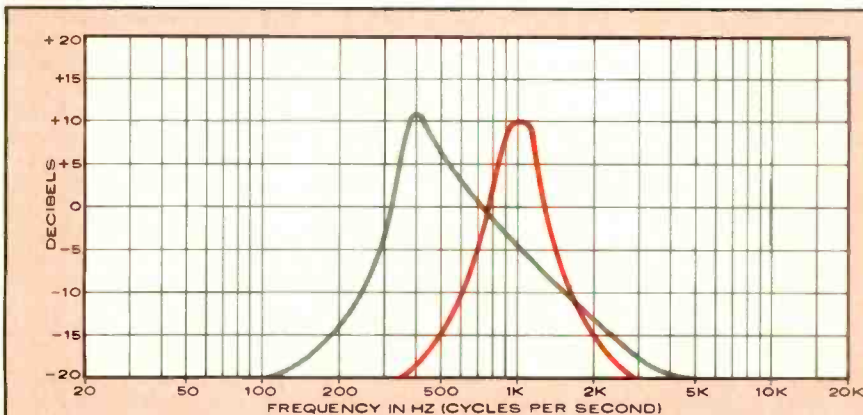
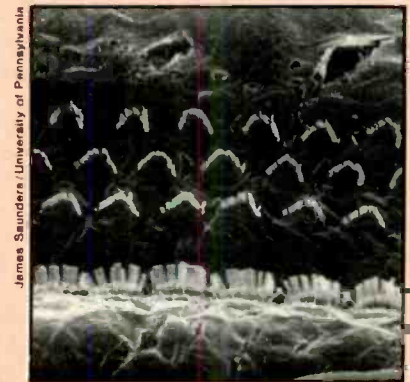


Figure 2. If a hair cell is considered as a bandpass filter, its frequency response, obtained from masking experiments (grey trace above), drops sharply away from the cell's characteristic frequency (here 400 Hz). The

colored trace is the response of a 1,000-Hz, third-order, one-third-octave bandpass filter used in acoustical instrumentation. At right, where it all begins: hair cells of the cochlea. Each cell carries a V-shaped tuft of hairs (or



James Saunders / University of Pennsylvania

stereocilia); three rows are seen from above and one from the side. This scanning-electron micrograph is of mouse hair cells, which are quite similar to human and other mammalian hair cells. Magnification is 1,480 times.

doesn't necessarily tell you how they sound. Deviations from picture-perfect response on such signals can be caused by

- audibly non-flat frequency response
- inaudibly non-flat frequency response
- Audibly non-flat phase response
- inaudibly non-flat phase response
- some of the above
- none of the above (distortion, for example).

In short, *bad-looking* transient response does not necessarily equate with bad sound, and good-looking transient response is no guarantee that there aren't audible problems. If the significance of a transient-response measurement is to be assessed in perceptually meaningful terms, its effect should be evaluated on a one-third-octave, third-order spectral basis; otherwise, the measurement can be either ambiguous or misleading.

## Distortion

The term "distortion," as used here, refers to frequencies in the output spectrum of

whose CFs correspond to the distortion frequencies. A pure sine wave, for example, will mask any second-harmonic distortion (where the distortion frequency is twice the input frequency) of less than about 1 per cent. However, seventh-harmonic distortion (a distortion frequency seven times the input frequency) will be audible if it is greater than 0.03 per cent. In this case the original signal is further away from the CF of the hair-cell filter responding to the seventh harmonic and therefore does not mask the distortion.

The spectral complexity of most music and speech will tend to do a much better job of masking distortion than a pure tone. This raises practical "inaudible" distortion levels to around 2 or 3 per cent for second- and third-order distortion; the figure drops to 0.1 to 0.2 per cent for higher-order (fifth-order and up) distortion products. High-order distortions (from transistor-amplifier or digital-recorder clipping, for example) are therefore potentially more objectionable than low-order distortions caused by tube-amplifier clipping, analog tape-recorder overload, or loudspeaker limiting.

Commercial encode/decode noise-reduction systems rely on the last two criteria above to improve perceived dynamic range in tape and disc recording. They do this by deliberately keeping the source spectrum above the noise spectrum of the recording medium, then undoing that action during playback to restore the original signal.

In terms of frequency, the masking of noise by a signal is similar to the masking of distortion, in that masking is much more effective near the frequency of the source signal. Thus high-frequency noise is relatively easy to mask with even a quiet cymbal clash, but it is very hard to mask hiss with a low organ-pedal tone.

Subtracting the ears' threshold of audibility sensitivity from an assumed maximum sound level of 120 dB SPL (higher levels can do permanent damage to the hearing system), we get minimum dynamic-range requirements for audibly "perfect" reproduction of around 120 dB in the 3,000-Hz region, 100 dB at 20,000 Hz, and only 45 dB at 20 Hz. Masking by room noise will typically moderate these requirements both in recording and playback. However, *high-*



## SPECS AND EARS...

"...the current generation of stereo components is very well matched to the capabilities of much of the auditory system."

frequency room noise can be surprisingly low, often falling near or below the threshold of hearing, so its ability to mask high-frequency recording noise is minimal.

### Hearing in Space

With the exception of interaural-timing resolution, the specifications discussed so far have been monaural in nature. The performance requirements stated apply to each information-carrying channel, two in the case of stereo. Spatial acuity, on the other hand, affects what you want to do with those perceptually pristine channels once you have them.

The direction from which a sound arrives at the ears, be it the direct sound or an echo or reflection, has a significant effect on the perception of *that sound*. This is easy enough to demonstrate: have a friend talk to you from across a good-size room while you hold an omnidirectional microphone and make a monaural recording of the event. When the recording is played back—preferably through a headphone so the sound doesn't go through the room a second time—you will find that it sounds hollow and "echoey," quite different from the live experience. Assuming that the equipment is of reasonable quality, you have accurately preserved all the spectral and timing information on the recording, but you have thrown away the spatial information. The result, as you can easily hear, is far from the "real thing."

The processing of acoustical space is a higher-order brain function. The brain uses the signals entering the two ears to create a

continuous three-dimensional "picture" of the acoustic space. Left/right judgments are based primarily on

1. interaural arrival-time differences caused by the spatial separation of the ears and

2. amplitude differences caused by acoustic shadowing by the head (the head is its own acoustic shadow above about 1,500 Hz); the limit of horizontal resolution is about 1 degree of arc.

Vertical (front-top-back) spatial judgments seem to rely mainly on

1. the angle-dependent high-frequency (7,000- to 14,000-Hz) response dips imposed by the convolutions of the pinnae on the incoming sounds (so *that's* why they're shaped so strangely!) and

2. movements of the head; the vertical resolution limit is about 5 degrees.

Distance judgments seem to depend on an even more complicated evaluation involving relative amplitudes and the reverberation content of sounds.

All this "processing" is carried out simultaneously on all the direct sounds and echoes that impinge on the ears, even if you're at the Super Bowl surrounded by 50,000 screaming sound sources. The result is that you can concentrate on what the person next to you is saying and filter out most sounds (they may even be louder ones) coming from other directions. This ability has been aptly named the "cocktail-party effect."

Moreover, the cocktail-party effect operates over the previous 50 milliseconds of audio: the contents of the brain's 50-millisecond audio memory are apparently tagged with their estimated source positions, allowing the brain to ignore spatial information it has recently determined to be extraneous. In particular, this process permits the suppression of spatially divergent echoes from the consciousness. In order to be suppressed, an echo must

1. arrive within 50 milliseconds of the primary-source signal, and

2. come from a *different* direction than the source signal—otherwise the brain assumes the echo was emitted by the source and you hear a change in the sound of the source (this is one reason why speaker

sound can be greatly influenced by speaker placement in a room).

Most echoes die out within 50 milliseconds in the average room, and they are usually spatially diverse. This allows them to be perceptually suppressed. The monaural recording you made of your friend speaking inhibited the action of your brain's echo-suppression system by doing away with the clues it needed to identify and ignore echoes. In a large enclosed area where the time lags are much longer than 50 milliseconds (churches, concert halls, auditoriums), the 50-millisecond memory capacity is exceeded, and even spatially divergent echoes can become audible.

### For the Future

If we compare the psychophysical limits covered here to the performance of modern high-fidelity equipment, we find that, on the whole, the current generation of stereo components is very well matched to the capabilities of much of the auditory system. There are audible improvements still to be made in some of the areas discussed (dynamic range, for one) if "perfect" fidelity is to be attained. But already proposed recording systems, some of them digital, offer the hope of achieving perceptually pristine sound channels in the foreseeable future.

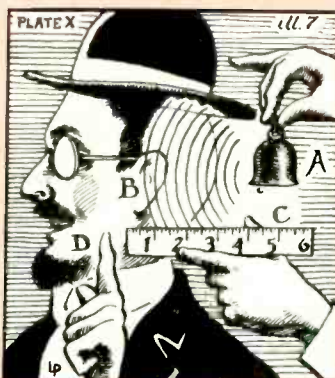
Perceptually, the greatest discrepancy remaining in high fidelity is between real and reproduced acoustical space. As it is now, gross distortions of acoustical space are an inevitable consequence of funneling three dimensions through two stereo channels. A better understanding of the ear's localization processes may make possible the development of practical systems of recording *and* reproduction (the two are of course intimately related) that preserve the spatial characteristics of the original recording site and accurately reproduce them at home.

Will such systems "solve" the problem of high fidelity once and for all? Is there really an "ultimate" sound reproduction quality? Is it likely to be achieved in the foreseeable future? I don't know—and I don't think anybody else knows either. But perhaps further psychoacoustic investigation will in time tell us. □

**P**SYCHOACOUSTICS is the branch of hearing science which deals with analyzing the perception of sound. It tries to relate "what you hear" to "what went in." Psychoacoustics is not a particularly new discipline—presently useful work dates back to before the turn of the century—but it has modern applications in the advancement of the sound-reproduction arts as well as the development of aids for the hard of hearing.

In recent years, psychoacousticians have been addressing such issues as the relationships between electronic and acoustic specifications and perception, what specifications are worth measuring in the first place, and the limits of hearing beyond which further technical refinement produces no audible improve-

### PSYCHOACOUSTICS



ment. This work has been assisted by studies in the fields of auditory physiology and neurophysiology, where attempts are being made to explain the detailed processing of sound by the ears and by the brain.

**F**OR more information on psychoacoustic theory the reader is directed to *Acoustics* by Leo Beranek, Volume II of *Foundations of Auditory Theory* edited by J. V. Tobias (articles on "Critical Bands" by Bertram Scharf and "Auditory Localization" by A. Wilbur Mills), George von Békésy's *Experiments in Hearing*, and issues of the *Journal of the Acoustical Society of America*, which prints the latest results in psychoacoustical research.





## NEW AUDIO PRODUCTS AT LAS VEGAS CES

It was a rather gloomy collection of manufacturers' sales, marketing, engineering, and public-relations representatives who came together for the opening of the Winter Consumer Electronics Show in Las Vegas the first week in January. With record cold temperatures and snow sweeping a nation already chilled by the recession, there was apparently little to be optimistic about. Money was tight, and audio consumers seemed not to be consuming.

Happily, retailers who came to Las Vegas to order the latest in electronics equipment to sell in their stores were not so pessimistic. The Christmas season had not been quite the disaster some crapehangers had predicted. Though initial sales were slow, a last-minute buying surge had cut into the dealers' already slim inventories and left them with a need to restock. By the end of the show all the previous official attendance records had been broken, and this stimulated hopes that, at least as far as the electronics industry was concerned, the recession may have bottomed out.

The excitement of an upturn in busi-

ness was not, however, matched by an outpouring of exciting new audio products. The manufacturers, overstocked with inventory, had anticipated mediocre sales at the show, so genuinely new products were few and far between. No one had a production-model digital-audio-disc player to sell, but there were prototypes from Denon, Toshiba, and Yamaha, all designed in the Sony/Philips "Compact Disc" (CD) format, and it is expected that someone (probably Sony) will be taking orders at the Summer CES in Chicago.

In conventional equipment the trend continues toward more microprocessor/computer control (in the field of hi-fi, computer and microprocessor are synonymous) that allows greater flexibility, more convenience, and more "special features" for the dealer to sell with. Even on receivers, the volume-control knob is beginning to go the way of the analog tuning knob, being rapidly replaced by up/down touch buttons.

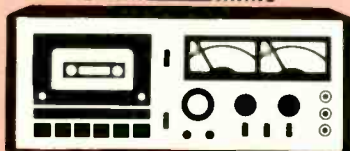
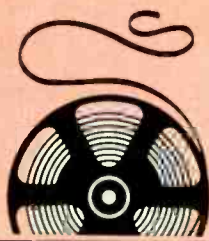
Dolby-C and dbx noise-reduction systems are appearing on more and more cassette decks, and CX (CBS' disc-encoding system) switches made

an appearance on some prototype receivers and even a few preamplifiers. The unaccountably slow rate at which CBS is "CXing" its catalog, however, is causing some concern among manufacturers planning to install CX decoders in their hardware.

Our correspondents combed the show to see what was new and interesting. The reports that follow are as complete as we could make them, but with literally hundreds of companies, 100 per cent coverage is impossible. Any significant omissions will be rectified in our "New Products" columns in the months to come.

If you are interested in a product mentioned, write to the manufacturer or check the hi-fi dealers in your area for more information. Regretfully, STEREO REVIEW will not be able to answer individual requests for product information. If you are unable to locate a manufacturer, we'll supply the address if you send us a note with the name of the company and include a stamped, self-addressed envelope: Stereo Review, Dept. CES, One Park Avenue, New York, N.Y. 10016.





## TAPE AND TAPE DECKS

A report by  
Craig Stark

**T**HE increasing popularity of the Dolby-C noise-reduction system was evident in the Winter CES cassette-deck introductions, though dbx also expanded its influence, primarily through the Teac line. Normally the Las Vegas show is more devoted to restocking post-Christmas dealer inventories than to announcing new models, but a respectable number of newcomers in various product lines were presented.

Teac introduced ten new tape decks, five open-reel and five cassette. The new top of their line is the bidirectional X-1000R (\$1,400), which is capable of handling 10 1/2-inch reels, has built-in dbx noise-reduction circuitry, a real-time linear tape counter, and, of course, the ability to use the new EE (Extra Efficiency) tapes from TDK, Maxell, and BASF. The other four new Teac open-reel decks (the X-10MKII, X-7RMKII, X-7MKII, and X-3MKII, priced from \$1,090 to \$590) are updated versions of previous models with the alterations necessary to make use of the EE format.

On the cassette side, Teac's top new offerings, the V-95RX and V-1RX (\$625 and \$590), incorporate dbx noise reduction; the former model offers bidirectional record and playback with fast auto-reverse, the latter three-head operation. The V-90R (\$490) also offers bidirectional record and playback but with Dolby-B, and all three new models use computer-chip-controlled transports. Three-head operation with Dolby-B is also among the features of the new V-80 (\$420), and Dolby-B and Dolby-C are offered in the V-70C (\$390).

Akai, the other deck manufacturer to introduce EE-capable machines last June, was standing pat on its open-reel offerings but brought out a large number of new cassette decks, all featuring Dolby-C (includ-

ing Dolby-B for compatibility, of course). The GX-F66RC and GX-F44R (\$575 and \$475) are both bidirectional quick-reverse decks, the former including a twenty-program search function. The new GX-F71 (\$450), GX-F51 (\$350), and GX-F31 (\$300) also make extensive use of microprocessor controls, the first two including automatic bias/equalization/sensitivity adjustments. Rounding out Akai's new offerings are the CS-F21, CS-F14, and CS-F12 (\$250, \$200, \$180), all but the least expensive of which include Dolby-C in addition to Dolby-B.

Hitachi showed five new cassette decks, all with Dolby-C. The D-2200M (\$750) has a new Hitasenrite single-housing record-playback head, and the D-E99 (\$570) has a similar titanium-surface head; both have microprocessor-controlled automatic tape-type optimization and digital elapsed-time counters. The D-E66 (\$400) omits the automatic tuning system but is otherwise similar. The D-E57 (\$350) is microprocessor-operated with a program memory and scanning facilities, and the D-E33 (\$200) offers Dolby-C and metal capability at an economical price.

Dolby-C is also incorporated in the new Nakamichi LX-3 (\$545), a two-head version of the LX-5 (see April test report) that otherwise contains all the latter's advanced transport and logic-controlled features. Onkyo introduced three new models: the three-head TA-2070 (\$699) and the TA-2055 (\$360), both with Dolby-B, Dolby-C, and automatic bias adjustment, plus the TA-2025 (\$255) with Dolby-B.

Sansui filled out its cassette line with three new introductions, all featuring Dolby-C. The D-770R (\$600) permits bidirectional record and playback with a 0.6-second turnaround time. The three-head D-570 (\$525) and two-head D-370 (\$420) are available in either black or silver finish, and all three decks offer Sansui's automatic-program-search feature and other microprocessor-controlled functions.

Denon's two new cassette-deck offerings,

the DR-F7 and DR-F6 (\$500 and \$425), are three-head recorders with servo-controlled tape tension and Dolby-C. The DR-F7 also features an automatic bias system. Digitally adjusted automatic bias, equalization, and tape sensitivity, three-head operation, and Dolby-C are featured in Aiwa's new AD-3800 (\$595), which also includes automatic head demagnetizing.

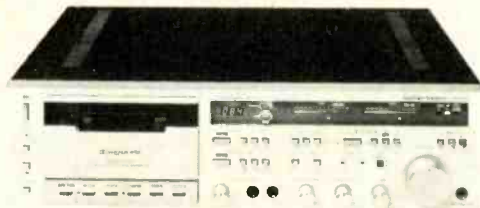
B&O, which developed the Dolby-HX Professional headroom-extension system, has incorporated it, together with Dolby-B and Dolby-C, in its new three-head Beocord 9000 (\$1,800). The deck not only adjusts bias and equalization with a microprocessor, it also adjusts the readings on the peak-level indicators by measuring actual distortion at the output. Both elapsed-time and remaining-time readings are shown on the digital counter display. B&O's unique Scandinavian styling is also exemplified in the more moderately priced (\$550) new Beocord 2400.

Dolby-HX Professional is included in the top two models in the CD (Citation Division) series from Harman Kardon. The three-head CD401 (\$750) has a claimed response of  $\pm 3$  dB to 27 kHz with high-bias tape, and the similar two-head CD301 (\$530) is said to go out to 24 kHz  $\pm 3$  dB! Both also include Dolby-C, as does the CD201 (\$400). Even the least-expensive new HK model, the CD101 (\$300), is rated for 20 Hz to 21 kHz  $\pm 3$  dB. Unlike B&O and Harman Kardon, NAD is offering Dolby-HX on a budget-price model, the \$218 Model 6040A cassette deck.

While most of the emphasis on noise-reduction systems was clearly on Dolby-C and Dolby-HX, the attraction of dbx was not confined to Teac. The new BSR CX-300 (\$380) incorporates dbx circuitry and provides an additional facility by making it switchable to use as a disc decoder for dbx-encoded records. Among the eight new Sanyo decks, the Plus D90 (\$380) and Plus D58 (\$300) utilize Sanyo's own non-compatible "Super-D" noise-reduction system. Sanyo's Plus D57 (\$250), RDS46 (\$200), and



Denon DR-F6



Harman Kardon CD401



Teac V-95RX

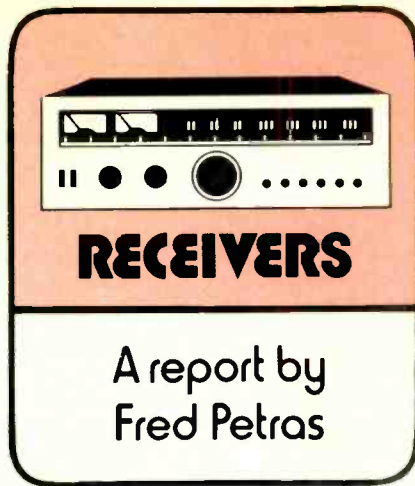
RDS35 (\$180) use Dolby-C. For dubbing (at a 1:1 speed ratio), Sanyo offers the double-transport RDW50 with Dolby-B (\$220). Double-speed dubbing using two separate cassette drives is possible with the new Optonica RT-5050 (\$380) and the Cybernet DD-701 (\$480). Cybernet's Kyocera series has two new decks, the D-801 (\$600) and D-601 (\$550), both featuring Dolby-C and dual-capstan drive; the former also has a real-time readout.

Dual showed its new Model 828 auto-reversing deck (\$500), and Technics introduced the three-head, twin-capstan M273D (\$550). At approximately \$500, the Kenwood KX-900 features fifteen-program random-access memory and an advanced, amorphous-alloy record/playback head. Toshiba added two new models, the bidirectional (recording and playback) PC-G6R (\$300) and the low-cost PC-G2 (\$220). An old name in turntables, Garrard became a new one in cassette decks, introducing the CD-5000 (\$290), with Dolby-C, and the CD-3000 (\$180), with Dolby-B.

On the software front there were several new products of note. Sony introduced its new high-bias UCX-S cassettes, whose fine particle size is said to produce dramatically improved sensitivity and maximum output level. TDK has applied its cobalt-adsorption Avilyn technology to produce a normal-bias particle with improved characteristics for its new AD-X cassettes. Loran has modified its high-bias formulation to achieve flatter midrange frequency response and better high-frequency overload properties. Scotch has greatly upgraded its mid-price Dyna-range series and has somewhat improved its budget Highlander series, which now comes in a regular cassette box. PD (Philips-DuPont) Magnetics, which introduced its initial line last June, will now start to market it. BASF, which has the official responsibility for producing the world-standard reference tapes for IEC Type I and Type II (normal and high-bias), is upgrading its own Professional II's sensitivity and output to conform to these standards and will introduce a C-90 metal tape shortly. Maxell is adding a new metal microcassette and announced an agreement to supply Nautilus with their premium UDXL-II high-bias tape for limited-edition top-quality prerecorded cassette releases.

At any CES there are always a few things that tend to stand out in your memory. This time, one was the new "Speed Listening" cassette recorder from VSC Corp. Using digital circuitry and large-scale-integrated (LSI) circuits, it makes it possible to listen to a spoken-word recording at speeds up to twice normal *without* encountering the "Donald Duck" pitch changes that usually make such playback unintelligible. Students, executives, and the sightless can all profit from such a device, which will be introduced for under \$200.

Another standout was Sony's pair of small, lightweight components making up a digital-audio record and playback system: a compact Betamax VCR and the PCM-F1 two-channel digital-audio adaptor. The system is probably an example of "the shape of things to come." The PCM-F1, shown on this month's cover, is described more fully in "New Products" (see page 13).



**T**HE Winter 1982 CES may go down in history as the best attended of these electronics shows so far, but it will not be remembered as one offering much excitement to those looking for something new in stereo receivers. Other than the entrance of a few companies into the receiver market, the expansion of the use of microprocessors, a certain amount of downsizing, and the demonstration of a prototype CX-decoder-equipped unit, most of the receiver news from CES amounted to "more of the same." Only twelve major companies showed new models.

The general trend was toward refinement of features rather than startling innovation. For example, virtually every major audio manufacturer now has from one to a half-dozen receivers with digital frequency-synthesis tuning in its line. Other companies have climbed on the bandwagon with digital readouts added to conventionally tuned models to cash in on a strong awareness that the *display* is the thing to attract consumer interest.

Since, thanks to microprocessors, receivers today provide a high level of operating convenience and automation plus a quality of sound that is hard to improve on, there has been a heavy emphasis on what is aptly known as "cosmetics." Changes in this area are more apparent than are technological advances, most of which cannot be perceived by average listeners and sometimes not even by the more dedicated "golden ear" audiophiles.

This growing concern with receiver cosmetics was most noticeable in the trend toward downsizing. Coming on strong were models best described as "midi"—smaller than most receivers currently being produced, but larger than "micro" or "mini" models. The midis' appeal, say manufacturers, is that their appearance suggests heft and power but without bulk; they satisfy those who initially wanted something smaller but who found the micro or mini models a bit *too* small.

Another cosmetic trend, made possible by the use of microprocessors, is toward the reduction and/or elimination of rotary controls in favor of pushbuttons, or "pushpads," for an appearance that better suits modern home decor. Reflecting that trend are Bang & Olufsen's Beomaster 6000, Pio-

neer's new SX-8, and Kenwood's KR-1000, all with flat, soft-touch electronic controls. Volume, equalization, mode, and AM/FM channel-selection circuits are controlled by the microprocessor, eliminating the need for electromechanical potentiometers.

Toshiba gave us a glimpse of their prototype CX-decoder-equipped receivers, which will be introduced officially this summer. The units shown had discrete-component CX circuitry, but production units are said to utilize a single chip that is now under development. Two receivers were shown, the 25-watts-per-channel (W/ch) SA-R2 with analog tuning (under \$300) and the 40-W/ch SA-R3 with digital tuning (under \$400).

Toshiba is not the only company planning to include CX in components. CBS has announced CX licensing agreements with Yamaha, Kenwood, Superscope/Marantz, Telefunken, Phase Linear, Audionics, Sound Concepts, MXR, Nakamichi, Soundcraftsmen, and Applied Technology, among others. They are also reported to be negotiating with Pioneer, Hitachi, Onkyo, Panasonic, and Sanyo.

Hitachi introduced its HTA-3000, described as "the lowest-priced [\$249.95] quartz-locked digital-synthesized-tuning receiver on the market today." (We could find nothing else at the CES to contradict that statement.) The HTA-3000 offers 30 W/ch and programmable memory for six FM and six AM presets. It is cosmetically matched to two earlier Hitachi models with 40- and 50-W/ch outputs.

Kenwood's digital-synthesis Model KR-1000, at \$1,250, utilizes microprocessor technology extensively and, except for two rotary fine-tuning controls, is entirely controlled by pushbuttons and pushpads. About one-third of the set's face is devoted to a flow-chart display that indicates operating status, mode, peak power output, time of day, station frequency, speakers in use, relative volume level, and filter(s) in use. The microprocessor makes possible such features as the "Program Mode Commander," which retains four different "signal flows" in its memory; a weekly program timer; pushbutton control of volume and muting; and a built-in graphic equalizer that adjusts seven frequency bands over a  $\pm 10$ -dB range at the touch of individual UP and DOWN keys. The tuner section has twelve station presets (six FM and six AM).

Kenwood also added four other models, priced from \$330 to \$599, all with quartz-PLL digital-synthesis tuning systems and power outputs of 30 to 75 W/ch. They all feature Kenwood's "Hi-Speed" amplifiers, presets for six FM and six AM stations, and automatic station scanning.

The U.S. Pioneer 100-W/ch Model SX-8 (\$800) also features a built-in microcomputer that controls all receiver functions, including volume, loudness, muting, balance, function selection, and AM/FM tuning. (For more information, see Julian Hirsch's test report on page 27.)

The Bang & Olufsen Beomaster 6000, whose shape conforms to the unique style of all B&O components, is also a microprocessor-controlled receiver. In addition to some of the same computerized functions as in



the Kenwood and Pioneer units, it has a 24-hour timer and optional remote control. It can operate as the central control unit for a B&O "Data Link" audio system also including a B&O turntable and one or two B&O cassette decks, all of which can be timer- or remote-controlled through the receiver. The Beomaster 6000 has 75-W/ch output, volume preset, and a price of \$1,600 (the full-function wireless remote-control unit is included).

Among the newcomers to the receiver business was Cybernet International, a major Japanese audio manufacturer, introducing its Kyocera (from *Kyoto Ceramics*, the parent company) series of "tuner/amplifiers" incorporating direct-coupled, variable-bias, MOSFET power amplifiers. The top-of-the-line R-851 (\$866) has a built-in three-band parametric equalizer, MC (moving-coil) cartridge input, and automatic i.f. bandwidth selection, among other features. Its power output is 85 W/ch. The 65-W/ch R-651 (\$740) offers two-band parametric equalization. Both feature a narrow drop-down panel that hides secondary controls, and both are operated mainly by push controls. The R-451 (\$569) is a 45-W/ch unit notable for its slender profile and compact size. All three units have large glass-front display areas.

Also new in the receiver arena was Garrard, a name previously associated mostly with English-made turntables. The company has been "reborn" as Garrard U.S.A. under the aegis of Gradiante of Brazil, that country's largest consumer-electronics manufacturer. Garrard showed four new receivers at the show. The top unit, the Model 1660 (\$450), has quartz-PLL digital-synthesis tuning and "discrete components instead of ICs in the preamp section as well as the rest of the audio path, for superior performance," according to a spokesman. Its "Triple A" non-switching, variable-bias amplifier circuit is described as "identical to JVC's Super Class-A, offering Class-A/B-type operation." The 60-W/ch unit has fourteen station presets (seven FM, seven AM); bass, midrange, and treble controls; high and low filters; and loudness and mute controls, among other features. Similar in terms of its preamp/amplifier circuitry is the Model 1560 (\$350), a traditionally tuned model with an unusually short dial scale and an output of 40 W/ch. Other new Garrard units are the Model 1360 (\$250), with 35-W/ch output, and the Model 1260 (\$190), with 25-W/ch output; both feature wide-scale tuning dials, dual speaker-pair operation, and signal-strength meters.

A third new entrant in the receiver field was BSR, introducing two units. The 30-W/ch RX-300 (\$280) has regular tuning but digital station readout. The 20-W/ch RX-100 (\$220) is similar in most respects to the RX-300 but has a nondigital station readout.

The final new entrant (actually a re-entrant) in the receiver field is KLH, lately known primarily as a speaker manufacturer. Its R-301 (\$250) is an elegant-looking traditional receiver with 30 W/ch and a full complement of controls.

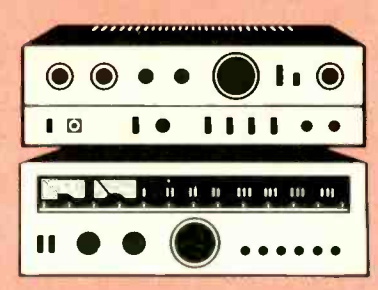
Adding a lower-power model to its line was Denon. The DRA-400 (\$399) matches the appearance and functional capabilities

of the firm's DRA-600 but has an output of 40 W/ch instead of the latter's 60 watts. Among the important features of the new unit are a direct-coupled output stage with non-switching class-A output circuitry, a low-noise preamp section with moving-coil step-up stage, a frequency-synthesis tuner section with ten preset buttons (five FM, five AM), and a flip-down panel that conceals ancillary controls.

Scott's new offering is the Model 385R (\$600) featuring AM/FM digital readout plus analog tuning scale and servo-lock FM tuning. It is notable for a midrange tone control in addition to the bass and treble controls, moving-coil as well as moving-magnet cartridge inputs, three-pair speaker capability, and Scott's proprietary fluorescent auto-range peak-hold power meters, which switch automatically between a high and low range to provide more accurate readings at all volume levels. The power output is 85 W/ch with no more than 0.03 per cent total harmonic distortion.

Sanyo came up with three receivers sporting a "new look" that reflects the industry's concern with large display areas on the front panel. The top model, the 33-W/ch DCR350 (\$300), features digital PLL frequency-synthesis scan tuning with twelve presets and a LED numerical readout. The 22-W/ch DCR250 (\$200) also features PLL frequency-synthesis scan tuning but has a twenty-eight-LED linear array instead of a mechanical dial pointer. It also offers ten-station memory and operation of two pairs of speakers either separately or simultaneously. The 22-W/ch DCR150 (\$160) is a "basic" model with a five-LED signal-strength indicator, flywheel tuning with illuminated dial pointer, and high-cut filter among other features.

Two other companies contacted during the show have new receivers on the way with details still to come. Grundig has scheduled release of its R-400 receiver, but no details were available at press time. "Almost ready," according to a spokesman, was the NAD Model 7140 receiver, a 40-W/ch unit that will be "in production form" in May or June.



**AMPLIFIERS  
TUNERS**

**A report by  
Ralph Hodges**

**Amps and Preamps**

**T**HE Winter CES drew a pretty good collection of audio amplifiers to Las Vegas in January. Most of the new products introduced had some ready appeal, and a few genuinely broke new ground.

One source of new amplifiers was Sony, which added three integrated models to its standard high-fidelity line and two power amplifiers and a preamplifier to the elite Esprit series. The TA-AX6 integrated amp (\$480), 75 watts per channel (W/ch), employs what Sony calls "Audio Current Transfer," evidently referring to a scheme of low-impedance interstage coupling said to improve channel separation and reduce stage-to-stage interference. Just below it in price (\$410), the TA-AX5, at 65 W/ch, combines a microprocessor with some non-volatile memory to permit fully electronic



adjustment of volume, balance, filter settings, and bass and treble, with instantaneous recall of previous settings. Illuminated front-panel displays keep the user informed of what is happening. The TA-AX4 (\$320, 55 W/ch) has more conventional—but not *entirely* conventional—control facilities but shares the very efficient pulsed-power-supply technology of its more expensive brethren.

In the Esprit line, the new TA-N901 power amplifier offers 150 W/ch and what is said to be class-A operation for \$2,500. The TA-N902, based on the same design principles, has 100 W/ch and a \$1,600 price tag. Both amplifiers employ no negative feedback around their output stages and feature novel construction techniques intended to curb the malignant effects of electromagnetic induction. The TA-E901 preamplifier (\$2,000) employs no negative feedback around its moving-coil-cartridge *input* stage, and its design is equally scrupulous about magnetism, vibration, and the chemical purity of its internal electrical wiring and conductors.

The audio world has been awaiting with interest the results of the collaboration of Harman Kardon and Dr. Matti Ojala, a researcher much publicized for his investigations into dynamically induced forms of amplifier distortion. It got its first real look in Las Vegas with the appearance of the Citation XX power amplifier, a \$7,500 double armful (93 pounds) of laser-adjusted, gold-plated electronics rated at 250 W/ch and with such astonishing performance parameters as "200 amperes of instantaneous current capability." The user can switch between three different bias conditions for the output stages, and he can also engage infrasonic and ultrasonic filters when indicators on the amplifier's front panel suggest it is wise to do so. Harman Kardon promises further additions to its revived Citation line in due course.

Cybernet's Kyocera division also intends to astound, apparently. The massive Kyocera B-901 power amplifier (150 W/ch, \$1,750) is heavy in the power-supply and control-circuit departments. Its companion, the \$1,350 C-901 preamplifier, concentrates on bandwidth, reduction of noise and distortion, and appropriate interface with signal sources.

In the extreme-overachiever category there is the Carver M-1.5 power amplifier, which is rated at 350 W/ch continuous into 8 ohms and 600 W/ch for musically significant time periods (in excess of a second). The M-1.5 is intended to cost about \$750, weighs about 16 pounds, and is about the size of a briefcase! Perhaps needless to say, it employs Carver's proprietary "magnetic-field" technology.

Phase Linear shares some of Carver's design goals. Its new DRS (Dynamic Range System) series is topped by the DRS 900 power amplifier (\$1,095) and includes the DRS 400 power amplifier (\$695) and the company's first integrated amplifier, the DRS 250 (\$975). The DRS 900 has two power-supply voltages, one giving a rating of 150 W/ch continuous, the other delivering a momentary 900 W/ch on peaks. The DRS 400 and DRS 250 are similarly configured, with corresponding ratings of 50

watts continuous and 400 watts peak. Complementary new preamplifiers are the P3800 (\$750), with three-band parametric tone controls, and the more basic P3600 (\$450). Of special interest is the multi-LED front-panel display on the DRS 900, which provides indication of average power output plus a marker for peak power that will hold the highest output levels attained.

The new Onkyo M-5090 power unit (200 W/ch, \$1,800) is a bias-switching amplifier with built-in guards against unwanted infrasonic signals and thermal anomalies throughout, and its companion P-3090 preamplifier (\$1,250) is designed for maximum circuit simplicity and maximum quality of integral parts. Adcom, after improving its GFA-1 (now GFA-1A) in various ways, has introduced the GFA-2 power amplifier (\$360) with 100 W/ch, the GPF-1 preamp (\$350) to complement it, and the HAPI 300, a 125-watt power amplifier designed by audio pioneer Stuart Hegeman that can be bought for \$650 assembled or \$500 as a kit.

sented a new integrated amplifier, the \$800 A-1060, which is clearly not class-A but puts forth 140 W/ch over the full audio bandwidth and incorporates such endearing Yamaha features as continuously variable loudness compensation.

More integrated amplifiers came from Sansui, which attributes the fine performance of its AU-D33 (50 watts) and AU-D22 (35 watts) to feedforward techniques; feedback is used for lower frequencies, however. Neither feedback nor feedforward is used in Denon's three new integrated amps, the PMA-730 (50 W/ch, \$229), PMA-750 (80 W/ch, \$450), and PMA-770 (100 W/ch, \$620). "Instead," according to the manufacturer, "a localized error detection and correction system is used to cancel distortion without any . . . negative side-effects." The language puts one in mind of digital technology, but its application there is unlikely. However, we certainly can't argue with the prices.

As inviting in price, and as mysterious in operation, are the new Akai AM-U61 (80



Left, Harman Kardon Citation XX; right, Adcom GFA-1A

Soundcraftsmen RA6501

Phase Linear DRS 900

Threshold equaled Sony's numbers in new amplifier introductions, presenting two new preamplifiers, the FET One (\$2,000) and FET Two (\$1,000), plus four large power amplifiers, the S/150, S/300, S/500, and S/1000, ranging from \$1,200 to \$3,000 in price and from 75 to 250 W/ch in power (roughly speaking; the top-of-line S/1000 is actually a single-channel amplifier rated at 500 watts). All six products are "Stasis" designs, referring to a Threshold circuit configuration said to eliminate feedback and operate all gain stages in a constant-current/constant-voltage mode. They are also very pleasing to look at and are endowed with numerous precious-metal touches inside and out.

Another single-channel amplifier, said to be the company's finest power-unit product to date, was shown by Yamaha. Priced at \$2,000, the BX-1 appears to be a conservative class-A design capable of 100 watts continuous output with harmonic distortion as low as 0.002 per cent. Yamaha also pre-

W/ch, \$400) and AM-U41 (55 W/ch, \$300) integrated amplifiers, which apply "Zero Drive" circuits described as operating on a "servo principle" to iron out nonlinearities at the output stages and eliminate switching distortion. Akai has worked out a front-panel control scheme—with lots of push-plates and push-bars, plus some pushbuttons and rotary controls normally hidden by a cover—that is both unusual and attractive.

The Garrard brand name, after a temporary disappearance, has returned to the marketplace on an extensive line of new products that includes five integrated amplifiers ranging in model number from 86 to 366, in price from \$170 to \$550, and in power from 20 to 85 W/ch. Features are added with increasing price in the kind of progression you might expect, with the emphasis on power-output indicators, which change from mechanical meters to LEDs to fluorescent displays as the price goes up.

(Continued overleaf)



And KLH has also come back with two new integrated amplifiers, the A-351 and A-601, which deliver 35 and 60 W/ch, respectively, and do it with attractive but unpretentious LED power-output displays.

CX, the CBS compander system for phono noise reduction, has stirred a few manufacturers into action. Audionics now offers the RS-2 preamplifier (\$650) with CX decoding built in, along with an expander system based on the CX circuitry that is said to do well with non-encoded signal sources of limited dynamic range. The same maker has also introduced a \$700 80-W/ch power amplifier, the CC-3, and a lower-price version with less power-supply regulation, the \$600 Model 280-A. Sherwood's S-6020 preamplifier (\$250) has CX decoding along with a novel LED visual guide to volume-control settings and extensive use of FET gain circuits. Sherwood's S-6040 100-W/ch power amplifier uses FET power transistors and costs a measly \$300.

The Amber Model 50A integrated amplifier is a \$600 combination of an existing preamplifier and a power amplifier not specifically rated as to power (but around 100 W/ch seems right), and it may augur an unexpected interest in this product category among "esoteric" manufacturers. The next show could tell.

Soundcraftsmen appeared with the \$650 LA2502 power amplifier with an output rating of 125 W/ch and twenty-LED output-level indicators. A larger relative, the RA6501 (\$800), has 250 W/ch and a more austere appearance. Acoustat, which everyone thought made only electrostatic loudspeakers, now makes a 200-W/ch power amplifier for anybody's loudspeaker. The Trans-Nova Twin-200 (\$995) aims at resolving the differences between transistor and vacuum-tube advocates with a circuit that has nothing but field-effect transistors in its signal path and which employs an as yet unrevealed form of feedback. Chassis construction is totally stainless steel, and the appearance is a bit stark, but the design story is provocative.

Stax Kogyo has cut its Model DA-100M in half to create the \$1,000 DA-50M class-A power amplifier, liquid cooled with a heat pipe. Output is 50 watts in pure class-A mode, switchable (in the interest of power conservation) to a combination of class-A operation below 12.5 watts and class-AB above. Confronted with a 4-ohm load, it reverts to straight class-AB operation.

Audio Research, a company that has traditionally served vacuum-tube advocates, is doing it again with the D-160 power amplifier, a unit that is 19 inches wide, almost a foot high, and nearly 2 feet deep. Rated output, from what appeared to be ten vacuum tubes of KT-66 dimensions, is 160 watts per channel.

Nevertheless, transistors are still with us in one form or another. At Mission Electronics the form they take is a preamplifier apparently powered by two internal storage batteries. The mate to the Model 776 preamplifier is the 200-W/ch Model 777 power amplifier. The spartan controls for both units nestle within the contours of the word "Mission," cast in high relief so as to cover the entire matte-black front panels.

Prices and final specifications were not yet available.

Dennesen now has a \$3,000 preamplifier, the JC-80, which is said to embody the latest conceptual ideals of the "esoteric" audio approach, including passive phono equalization, field-effect transistors, impeccably fashioned switches and controls, and plenty of gold plating. For smaller purses there is the \$800 Dennesen Lyra preamplifier, which adopts much of the JC-80's technology, and to back up either preamplifier there is the 250-watt single-channel Orion power amplifier at \$600.

Manufacturers coming to these shows routinely try to bring along spare samples of their newest products to be loaned to—and seen at—the exhibits of other, noncompeting manufacturers. Often a show will adopt a "sweetheart" component that—because of intrinsic merit, beguiling appearance, ready availability, or all three—turns up at the booth of every noncompeting exhibitor who can lay hands on it. This show's sweetheart was the Spectral DMC-10 preamplifier, a \$1,595 two-piece (separate power supply) product that is just plain pretty both inside and out. Curiously, it uses *power* FETs in its signal path, but there's no obvious reason why that should hurt.

Krell Electronics will have nothing but pure class-A in power amplification and claims to have the only power amplifiers (two now, with a third coming) that maintain true class-A operation up to full power output—100 watts per channel from Krell's \$2,500 stereo unit and 200 watts for its mono amp (\$5,800 per pair). The Krell PAM 1 preamplifier (\$2,000) consists of two mono preamps sharing nothing more than a faceplate and cover, with the two power supplies physically separate inside.

And beyond all these, there were new amplifiers from BRB Systems, whose Model 200 Reference Amplifier (\$899) operates in quasi-class-A and affords 100 W/ch and whose \$499 Model 10 preamplifier has a moving-coil input section that is also available as a \$139 outboard device; from Fostex, whose two new power amplifiers, the Models 300 and 600, are rated at 100 and 200 W/ch, respectively; from Sumo Elec-

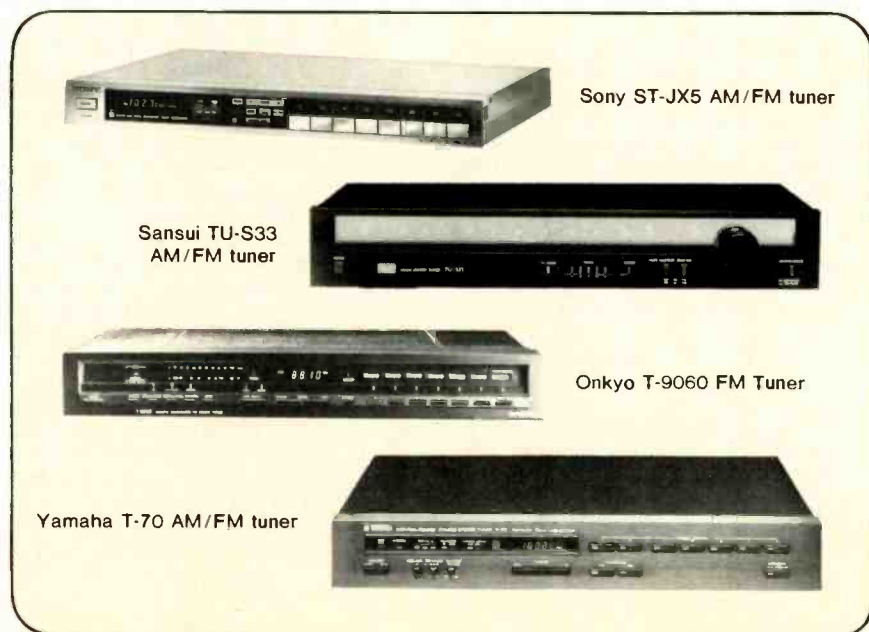
tric, which introduced the \$699 Andromeda Plus class-AB power amp with 200 W/ch and the matching \$399 Electra preamplifier; and from Electrocompaniet, which is augmenting its 150-W/ch Ampliwire I (\$2,195) and 45-W/ch Ampliwire II (\$1,395) with the Preampliwire, which is expected to cost about \$1,400 (I presume the "Ampliwire" name is intended to invoke the "straight-wire-with-gain" idea).

Spectrascan now has a family of three BPA-100 series power amplifiers priced from \$850 to \$1,795 and dedicated to the proposition that appropriate amounts of feedback are a good thing, as are tightly regulated power supplies. The company also has three preamplifiers, the LCA-10, LCA-20, and LCA-30, priced from \$595 to \$1,195. Amplification & Recording (Cambridge), a.k.a. Arcam, presented its C200 preamplifier, which has inputs for a tuner and two tape units plus space for up to two of three optional phono-input modules (moving-magnet, moving-coil, and line-level). The phono modules feature switch-selectable sensitivity, capacitance, and resistance settings. Price: \$750 with one module and \$895 with two. The SA200 power amplifier (100 W/ch, \$895) has a DIN input socket, but adaptors are available.

Questar has reworked its 110-W/ch Model 220 and made it the Model 330, with the same output power but price still undecided. And RGR, which showed a prototype of its Model Five "High Current" power amplifier last June, can now sell you a production version for \$1,050.

Audio Design's products are very attractive in an unassuming way, with soft grey finishes and softly rounded edges. New are the \$400 Model One preamplifier and three power amps, the Models 10-A, 20-A, and 30-A, ranging in price from \$500 to \$1,200. Bedini's newest products, a \$1,000 preamplifier and a massive \$3,000 power amplifier, emphasize the company's design philosophy of complete electronic separation of the two channels. Music Reference Corporation's latest is a \$930 vacuum-tube preamplifier, the RM5.

Undoubtedly there were still more hidden away where I couldn't find them.



## Tuners

**W**HILE the amplifier tribe lustily trumpeted great new strides in circuit innovation and refinement, tuners at this show did pretty much what they did last year, which was to offer quartz-crystal-referenced frequency-synthesis tuning, phase-locked-loop multiplex decoding, plenty of station presets, and a low-silhouette appearance. Displayed again in prototype form, Carver's mysterious signal-cleaner-upper tuner has not yet reached the production stage (it's said to be getting there, though), and of other novelties there were virtually none.

One small feature probably destined to be of some significance did turn up, however: a jack at which the output of the AM detector appears. Such a jack will connect to the input of some future stereo-AM decoder when some future stereo-AM system finally shakes down. Phase Linear's new AM/stereo-FM Model T 5200 has the jack, and others I didn't notice may have had it too. The T 5200 also has six FM and six AM station presets with non-volatile memory, wide and narrow i.f.-band selection for both FM and AM, and a price of \$495. The new Sansui TU-S33 (\$200) has a special noise-reduction circuit as well as a long, linear tuning dial and tuning-aid LEDs that ride with the dial pointer. You can choose black or aluminum front panels.

Introduced shortly before the show, the Onkyo T-9060 FM-only tuner is an important product for this manufacturer, and its front panel—busy with indicators for carrier deviation, i.f. bandwidth, and the like—shows it. There are seven station presets, auto and manual tuning modes, and, of course, all the internal quartz-synthesizing digital-readout technology that has become the industry's state of the art.

Akai's new AT-S61 has presets for ten FM and ten AM stations, and any of them can be summoned up automatically by a remote timer. It also has an automatic circuit that gradually shrinks stereo separation for weaker signals, a knobless front panel, and a \$250 price. Another knobless front panel graces the \$370 Yamaha T-70, with ten station presets shared between FM and AM, a built-in oscillator for calibrating tape recorders, timer recording capability, and various aids to good reception. Scott's Model 558T (\$280), with seven FM and seven AM presets, auto tuning, much fluorescent front-panel activity, and an unusually low silhouette, became available in January. And NAD's Model 4020S tuner, based on technology (Schotz circuitry) evolved for Proion's FM portable, will apparently become available on schedule sometime this year, but the price and other details are not yet firm.

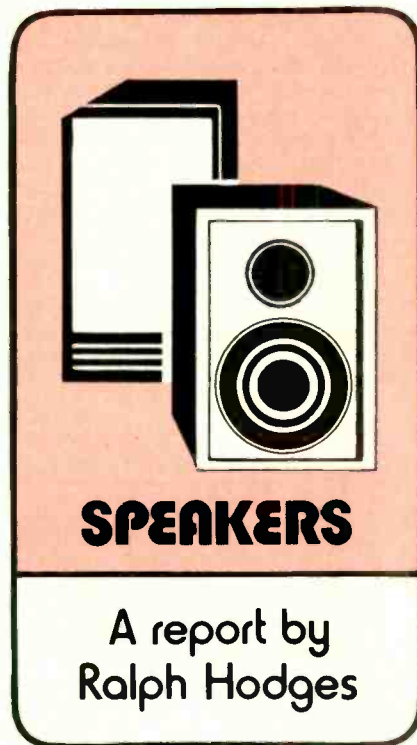
Sony's new tuners are three, the costliest of which (the ST-JX5 at \$290) has seven station presets for FM or AM and the ability to recall four of them in sequence for unattended recording with a timer system. The ST-JX4 (\$250) closely resembles the JX5 sans a few features. The \$200 ST-JX3 has that rarity of rarities, a tuning dial, plus a servo-controlled tuning system to go with it, but no frequency synthesis. For the models with station presets, Sony provides labels

with frequency designations that mount on and blend with the front panels—a very thoughtful touch.

Denon and Sherwood introduced one new tuner apiece. Denon's TU-720 also has a tuning dial and a servo-lock tuning system plus a built-in recording-calibration oscillator and an agreeable price of \$229. Sherwood's S-6010 (\$250) is fully in the current mode, with eight FM and eight AM presets and all the rest.

KLH's overseas supplier has done handsomely by them with two colorful new tuners, the frequency-synthesis, digital-readout, seven-preset (for FM and AM) T-201 (\$350) and the tuning-dial-equipped T-101 (\$230). And Garrard showed two attractive, utterly analog AM/FM models that are tuned by hand and tweaked by ear. The Garrard Models 9 and 7 are \$230 and \$170, respectively.

If these remembrances of yesteryear are not enough for you, be aware that they're good enough for Quad, whose new FM4 tuner, although not at the show, has been announced and revealed in photos. It tunes by hand with a knob, and its front panel gives you little else to do. However, the station readout is digital, there are seven FM presets, and there is a built-in microprocessor. It has not yet been announced what the microprocessor does, but for \$625 it had better be a lot.



**A**ND now for the show's maddest marathon, the romp past hordes of walnut boxes that produce sounds, some music-like and some not. Under the show's conditions it is not within anyone's power to make fine distinctions on matters of audible musicality, so all I can do is tell you what I saw. What was out there in Las Vegas was *not*, for once, thousands or even hundreds of *new*

speaker systems. Even speaker manufacturers were showing some restraint this year. But I found some noteworthy new speakers among all those boxes.

A pair of new two-way bookshelf systems, the L46 (\$150) and L56 (\$250), join the JBL L Series. The tweeter, a 1-inch aluminum-coated phenolic-dome type, is the same for both. The woofers are 8 and 10 inches, respectively, and both cabinets are ported. Altec Lansing's Series II consists of three new speaker systems in what is essentially a bookshelf format. Altec's constant-directivity "Mantaray" horn loading a solid-state compression driver with a "Tangerine" phasing plug is the high-frequency driver for all three. Models 6 and 8 are three-way systems with 5-inch midrange drivers and 10- and 12-inch woofers, respectively, in ported cabinets, and the Model 4 is a two-way speaker with a 10-inch woofer. Two more Altec products, the Models 310 and 312, use cone drivers exclusively in three-way configurations employing 10- and 12-inch woofers in vented enclosures.

Infinity moved both up and down at this show. Up was to a \$4,000 system, the Reference Standard I, which is a direct descendent of the astounding \$22,000 Infinity Reference Standard and which, like it, consists of two columnar line arrays of bass drivers and two curved panels mounting lines of mid- and high-frequency drivers with planar diaphragms. Down was to the \$130 Reference Standard Jr., a compact two-way design. The RS I employs 8-inch bass drivers, six per column. The RS Jr.'s woofer is 6½ inches. Both systems use EMIT-type drivers to reproduce the higher frequencies.

A number of manufacturers limited their introductions to a single smallest system. Acoustic Research's new three-way AR58S (\$325) could be considered small compared with some of the company's floor-standing towers. KEF's \$200 Model 303.3, a two-way design in a vinyl-clad enclosure, is definitely small. The Sony SS-X150 (\$90), with a 6½-inch woofer and 2-inch tweeter, is smaller still. And so is the new Micro-Acoustics 4dx, with drivers of the same size and the company's unique "lollipop" tweeter mounting, which enables the user to aim high frequencies where he wishes. The BES C60E, the smallest model yet from this manufacturer of flat-diaphragm loudspeakers, is recommended for ceiling installation and outdoor use. The Mini-Mesa 100 from Mesa, though small, is a three-way system with an 8-inch woofer. Celestion's SL-6 "Laser Monitor" made its official debut in Las Vegas even though it had been announced to the press before the show. This small but obviously sophisticated speaker system sells for \$800 per pair.

KLH has a new line of four systems, the Series 500, all employing ported cabinets and cone drivers, the largest of which is the 15-inch woofer of the Model 515. The tweeters are all 3-inch devices, and the mid-ranges (except for the two-way Model 508, which has none) are 5 inches. Garrard, pursuing its new identity as a full-line manufacturer, now offers four speaker systems, all of them three-way designs with woofers ranging from 8 to 12 inches. The top two models, the Master 78 (\$170) and Master



100 (as yet unpriced), have front-panel LEDs to warn of excessive drive.

Interaudio Systems, not really a new company but a newly re-emergent one, has devised a novel-looking acoustic lens to modify the directivity of the 3-inch tweeter used in all its models. Its least expensive system, the Alpha One (\$150), has this tweeter/lens assembly plus an 8-inch woofer in a ported enclosure. Its most expensive system, the Alpha Four (\$450), has two of the assemblies plus a 6 1/2-inch midrange, a 10-inch woofer, and a passive radiator; it stands just under 4 feet high.

"Ambassador" speakers are new from Visonik, and they come in five varieties, from the \$150 A 60 WN (5-inch woofer, 1-inch dome tweeter) to the \$465 A 150 WN (12-inch woofer, 2-inch dome midrange, 1-inch dome tweeter). A new line of what are called "residential" loudspeakers comes from Cerwin-Vega. Seven models have been announced and three have so far appeared, including a three-way floor-standing design with a 12-inch woofer, two 6-inch midranges, and a horn tweeter; a bookshelf system with the same drivers less one midrange; and a subwoofer intended for use with minispeakers. And what had been C-V's Model 812S, employing its coaxial-horn arrangement for mid and high frequencies, has become the 812T as the result of further refinements. Its price is \$600, and an enlarged version with a 15-inch (instead of 12-inch) woofer will cost \$700.

Polk's latest is the Monitor 4, a two-way (6 1/2-inch woofer, 1-inch dome tweeter) design that, at \$100, is the company's least expensive system. Two of them together with Polk's previously introduced LF-14 subwoofer make up the \$500 LF-14/4 three-piece subwoofer/satellite system. Finally, a \$400 adaptation of the Polk RTA-12, the RTA-11, uses most of the same drivers but mounts them all in a front-firing configuration. If you are interested in really small speaker systems, Fostex showed its G-7000, a desk-top subwoofer/satellite system with a 7 x 13 1/2 x 10-inch teak-finish subwoofer and two small satellites (\$550).

Snell's latest is the Type E (\$749 per pair), which stands on the floor, tilts back to any desired angle (within reason), and has an 8-inch woofer and 1-inch soft-dome tweeter with a crossover network that is adjusted to the characteristics of each driver pair coming off the line. Scott's latest, also a reworking of a previous design, is the Pro 100B II (\$795), now with a 15-inch woofer, 4 1/2-inch midrange, and 1-inch tweeter in front plus a midrange and two more tweeters on top. The relative contributions of the front and top drivers can be adjusted. Densen's latest, the \$350 Catella, has a 10-inch woofer, a 5-inch midrange, three electrostatic tweeters, and a butcher-block enclosure in oak, cherry, or mahogany.

Jamo introduced five attractive new speakers, including three in its CBR (Center Base Reflex) line that have vents around the woofer and other features to isolate the drivers. The CBR line ranges from the three-way Model 902 (\$300) to the four-way Model 1702 (\$650). The two non-CBR systems are a two-way and three-way at \$140 and \$220, respectively.

The DQM-5 from Dahlquist is called a

"Compact Monitor," and at \$250 or \$289, depending on finish, it is the least expensive of this Dahlquist series, which was originally intended to bring certain sonic benefits to a rectangular-box format. Not a rectangular box, but rather a column of roughly oval cross section, the DCM Time Window<sup>2</sup> [sic] is an enlarged version of DCM's original Time Window; together with greater dynamic range, it is said to have superior time coherence between drivers and to protect that coherence with less directionality. Two each of 8-inch, 6-inch, and 1-inch drivers are employed, and the price is expected to be about \$750.

Mordaunt-Short, an energetic English manufacturer, has revamped its line; the enclosures are now square in cross section, a bit larger in internal volume, and clad in fabric on four sides. The new-look Series 3 will coexist with the old Series 2 for the time being. Prices are: Carnival 3, \$395 per pair; Festival 3, \$525 per pair; Pageant 3, \$765 per pair. Stands are \$50 extra. Avid and Cizek are also said to be revamping their lines. Avid's plans were under wraps at the time of this writing, but Cizek has introduced the three-way Model 747 (about \$500), and there is the possibility of a new four-way system by the time you read this.

ADC has three new models: the 103B (\$100), with a 10-inch woofer, 5-inch midrange, and 3-inch tweeter; the 123B (\$130), which substitutes a 12-inch woofer; and the 153 (\$200), equipped with a 15-inch woofer, a 5-inch midrange, and a horn tweeter. Norman Laboratories has seven models, of which the leader is the \$800 12B, consisting of a bass enclosure with two 10-inch woofers and a vertical panel for a 2-inch dome midrange and two planar-diaphragm tweeters. Byers has a new tall speaker (the 6501T, \$575 per pair) and a new short one (the 5010R, \$390 per pair); both are ported two-way designs. O'Malley has two brand-new systems, the Models 3015 and 3008, that employ horn-loading extensively. They are modular three-way designs, with the 3008 recommended as a rear speaker to complement the 3015 up front.

A new full-range electrostatic system has been brought out by Stax Kogyo. Specifically designed for small rooms and for placement near the wall (damping material attenuates some of the rear radiation), the ELS-F81 (\$3,100 per pair) is only about a yard high and a foot and a half wide. It contains three electrostatic elements, the narrow central one being driven full range and the two outer ones having attenuated highs and a signal delay of about 0.3 millisecond. The speaker can be tilted to obtain the best-sounding perspective on the listening area. The Wilson WAMM (Wilson Audio Modular Module) attracted attention at the show with its \$32,000 price if not its sound. Why \$32,000? Well, the system includes KEF woofers, an elaborate array of RTR electrostatic elements, a very large subwoofer enclosure with an 18-inch driver, and several other devices, all variable in their distance from the listening area. All that costs something, and Mr. Wilson's personal services (he does all final installations himself) are certainly worth something more.

As for evidence of new or newly refurbished speaker technology at this show, I noted only two examples. The AEC Monitor joins the Plasmatronics loudspeaker and the Magnat tweeter imported by Dahlquist as one of the few devices that produce sound by modulating ionized air. The Monitor employs a 12-inch woofer, 3-inch midrange, and a horn-loaded "ionic" tweeter. The system costs \$5,000; the tweeter is available separately for \$1,000. AEC products are manufactured in West Germany and imported by CM Labs of Albany, Kentucky.

Innovation number two was a new piezoelectric tweeter from Motorola, whose original horn-loaded device has been used in a number of highly regarded speaker systems. The new tweeter uses two piezo elements in a vertical line-source array, thereby improving dispersion significantly. The device is inexpensive and reasonably uniform in response from below 5 kHz to above 40 kHz, and it generally requires no crossover network. Look for it in next year's speaker systems.



Fostex G-7000 subwoofer/satellite system

Scott Pro 100B II

JBL L46 (left) and L56 (right)

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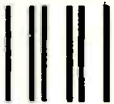
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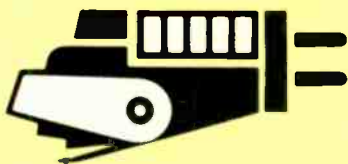
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## CARTRIDGES

A report by  
Peter Mitchell

**C**ONTINUING the trend established at the previous CES six months earlier, only a moderate number of new phono pickups were introduced at the Winter CES, and most of the action was in the moving-coil category, with a growing population of MC models offered at prices that compete with popular moving-magnet designs. One trend that spans the entire cartridge marketplace is a continued lowering of the weight of cartridge bodies; not long ago a weight of 7 to 8 grams was typical, but in this year's models 5 grams is the norm.

Denon, long known as a leading supplier of MC pickups, introduced two new moving-coil models. The \$275 DL-207 was developed specifically to achieve a rated tracking force of 1.4 grams, uncommonly low for an MC design (most are designed to track at 2 grams or more). The DL-207 features high compliance, a 4.7-gram body weight, a lightweight and rigid amorphous-boron cantilever, and an effective tip mass of only 0.25 milligram. Denon's second entry is the DL-300, a medium-compliance MC model with a fiberglass body weighing only 4.2 grams, an elliptical stylus, and a price of under \$100.

Yamaha has added two more moving-coil units to its line, each designed with separate coils on the horizontal and vertical axes. The \$200 MC-3 features a tapered tubular cantilever made of pure beryllium, a metal noted for its unique combination of extremely light weight and high rigidity, and its 8 x 40-micrometer stylus has a square solid-diamond shank. The MC-9 employs a tapered aluminum cantilever tube, its 8 x 20-micrometer elliptical stylus also has a square diamond shank, and its \$90 suggested price makes it the cheapest moving-coil pickup on the market.

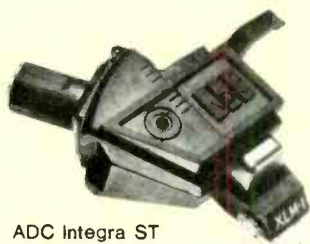
Dynavector's top-of-the-line "Karat" cartridges employ unusually short diamond and ruby cantilevers in the interest of maximum rigidity. Now Dynavector has managed to develop revised versions of these moving-coil cartridges with even shorter cantilevers: the DV17D with a 1.7-mm diamond cantilever (\$600) and the DV23R with a 2.3-mm ruby cantilever (\$310).

Another MC pickup that has been popular is the Fidelity Research MC-201. The new entry from FR, the \$350 MC-202, is a refined version featuring a lowered effective tip mass, a rectangular "Vital" stylus tip with improved groove-wall contact, and a rated tracking force of only 1.3 grams. Sumiko's Premier LMX is a \$200 moving-coil pickup with an intriguing "cutter analogue" diamond stylus—a line-contact stylus said to fit the groove wall almost as intimately as the cutting stylus did. For their own reasons, Sumiko also offers the same stylus in a moving-magnet model at the same price, the Andante FGV.

High-output moving-coil pickups don't require a step-up transformer or special MC preamp, and their low impedance ensures that their frequency response is unaffected by cable capacitance or preamp impedance. Adcom's Crosscoil series of high-

signed before the recent profusion of pickups employing rare jewels in their construction. Owners of the F9 can now update it with an RS9 replacement stylus assembly featuring a ruby cantilever for no more than \$200.

The popularity of the Technics line of compact radial-tracking turntables has spawned a broad range of plug-in cartridges specially designed to mate with the lightweight radial arms. Audio-Technica, which had previously marketed two such plug-in moving-magnet pickups, has now introduced two more, both with elliptical styli: the AT112EP (\$70) and the AT122EP (\$95) with a nude-mounted diamond stylus. Ortofon's series of four new plug-ins for the Technics turntables includes three VMS-type moving-magnet models (the TM14, TM20, and TM30H, with list prices of \$65, \$115, and \$175, respectively) and the



ADC Integra ST  
XLM-I



Fidelity Research  
MC-202 "Gold"



Audio-Technica AT30HE



Dynavector Karat 23R

output MC pickups has been notably successful, and the new Model HCE, weighing 5 grams, is priced at \$130—half the price of the earlier Crosscoil models employing a similar lightweight, symmetrical X-shape armature.

Audio-Technica's AT30HE (\$135), the first high-output MC model from A-T, shares with its low-voltage stablemates the unusual convenience of a user-replaceable stylus assembly. Boston Acoustics, in its first departure from loudspeakers, is introducing two high-output MC pickups assembled in Japan: the MC-1E (\$140), with an elliptical stylus, and the MC-1vdh (\$200), with a Swiss-made Van den Hul tip. Their cantilevers are said to resist twisting in response to torsional forces in order to preserve correct orientation of the stylus tip in the record groove and to maintain good high-frequency separation.

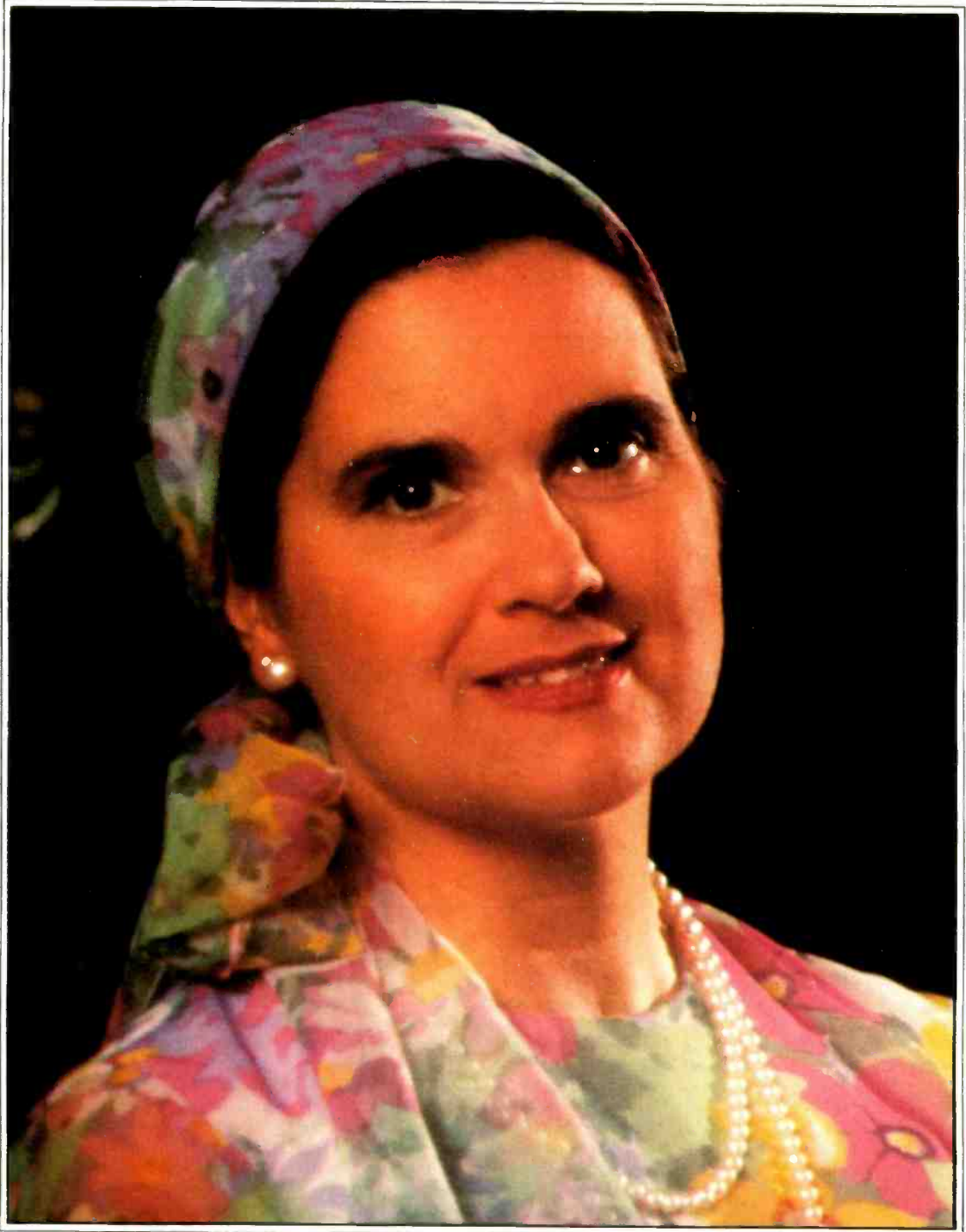
Among the moving-magnet designs, the Grace F9E cartridge has gained an excellent reputation for its sound, but it was de-

TMC200 moving-coil pickup, which at \$350 includes a boron cantilever, a line-contact stylus, and a samarium-cobalt ring magnet.

The Integra ST series from ADC is a group of magnetic-pickup cartridges installed in headshells designed to plug directly into the straight tubular tone arms that have become common in recent years. The ST headshells are made of carbon fiber for low mass and high rigidity, and they feature built-in adjustments for offset angle, stylus overhang, and vertical tracking angle. Three models are available, each with a total cartridge/headshell mass of 9 grams; prices range from \$80 for the XLM-I to \$135 for the XLM-III. □

This report will be concluded next month with coverage of Turntables, Audio Accessories, Headphones, One-brand Systems, Audio Cabinetry, and audio-related Video.





Elly Ameling

(Photograph courtesy of Phonogram International)

# STEREO REVIEW'S SELECTION OF RECORDINGS OF SPECIAL MERIT

## BEST OF THE MONTH



### • A Significant Release: Joseph Haydn's Songs Complete •

THE German *Lied* originated in the age of Goethe and his contemporaries, the era of the great German Romantic poets. Beethoven and Schubert are the pioneers of the *Lied*; the fact that composers of lesser rank had already set to music texts by Goethe and others before they did is not really significant. Joseph Haydn, however, is always significant (we will be celebrating his 250th birthday this year), and the release by Philips of the first complete recording of his forty-eight songs, with soprano Elly Ameling and pianist Jörg Demus, calls attention to his worthy contribution without in any way altering Beethoven's and Schubert's primacy in the field.

The simple fact is that the enormous influence of Goethe and his fellow Romantic poets on composers of the period was a German affair. Neither Mozart (in Vienna) nor Haydn (in Esterháza) was significantly affected by its mighty currents. Mozart did set Goethe's *Das Veilchen* to music in 1785 (and a good case can be made for its designation as the first important *Lied*), but that modest little violet stands nearly alone. Most of the Haydn and Mozart songs were conceived operatically and bear the imprint of the Italian *canzonette*, the French *ariette*, or, in Mozart's case, the Viennese *Singspiel*.

Haydn's first song collection, published by Artaria in 1781, contained twelve songs with texts by unknown or minor poets. His second collection (1784) discloses two major German authors, Bürger and Lessing, as well as the popular Johann Wilhelm Gleim, whom Mozart also favored. These early

German songs were followed by a set of "original canzonettas" written during Haydn's London stay to verses by Anne Hunter, wife of an English surgeon. The remaining songs were written on individual occasions, and among them we find a tender *Abschiedslied* (No. 40) composed for a female friend and the celebrated *Gott, erhalte den Kaiser* (No. 43), a special Haydn favorite known to us from his *Emperor* Quartet and to Austrians as their former national anthem.

**HAYDN: Complete Songs.** *Beim Schmerz, der dieses Herz durchwühlet; Der Schlaue und dienstfertige Pudel; Trachten will ich nicht; Abschiedslied; The Spirit's Song; Gott, erhalte den Kaiser!; O Tuneful Voice; Als einst mit Weibes Schönheit; Un tetto umil; Pensi a me si fido amante; The Lady's Looking Glass; Bald wehen uns des Frühlings Lüfte; and thirty-six others (twenty-four German songs and twelve original canzonettas).* Elly Ameling (soprano); Jörg Demus (piano). PHILIPS 6769 064 three discs \$32.94.

Like Mozart's similar endeavors, all of Haydn's songs are brief. They are usually strophic, rather limited in structural invention but not in character variety. Simple devotional hymns, Italian *canzonette à la* Metastasio, pastoral songs on French models, a Shakespeare setting, a lusty English

sailor's song, and love songs of various kinds follow one another. The compilers of the Philips set had the happy idea of *not* presenting these songs chronologically, thus reducing the danger of subjecting listeners unnecessarily to sameness. Haydn was quite expert in his word settings in all three languages, but he was not above repeating lines in the style of the operatic aria. His piano accompaniments are superior to those of such German contemporaries as Neefe and Reichardt: simple supporting chords and conventional patterns suddenly blossom into rippling passages and joyous *ritornelli* (*Die Landlust* and *Pleasing Pain* are good examples). Perhaps the most individual—it is certainly the most harmonically adventurous—of the lot is *The Spirit's Song*. And the composer's humorous touch enlivens several songs as well, notably *Lob der Faulheit* (here mistranslated as "Indolence" when it is "Idleness" that is meant).

It is entertaining to discover "Schubertian" touches in *Gleichsinn* and *Die Landlust* (which is *Der Musensohn* in an earlier guise), both written years before Schubert was born. *The Mermaid's Song* looks ahead to Mendelssohn (and to Sullivan!), while *Eine sehr gewöhnliche Geschichte* tells a tale similar to Brahms' *Vergebliches Ständchen*, though with a different outcome.

Some of Haydn's best songs have found their way onto records before. There was an Electrola disc by Dietrich Fischer-Dieskau some twenty years ago that contained thirteen of them. This complete edition, however, is unprecedented, and to hear the totality per-

"... Elly Ameling's refinement and involvement multiply the pleasure of discovery."



formed with the refinement and involvement displayed by Elly Ameling multiplies the pleasure of discovery. Her tone is pure and unforced, and she tosses off Haydn's modest embellishments with appropriate lightness. I would perhaps have welcomed a touch more exuberance in *The Sailor's Song*, but, then again, broad humor can lead to a coarsening of tone, and I appreciate the artist's avoidance of the risk. Similar tasteful restraint allows Miss Ameling to display involvement without exaggeration in the sentimental songs. Her enunciation in German, English, and Italian is exemplary. She is admirably supported by Jörg Demus, whose pianistic touch is finely attuned to eighteenth-century dynamics and articulation. In terms of recorded sound, the set is just about perfect.

So now, in addition to the symphonies and various forms of chamber music, we also have all of Haydn's songs. His achievement in this area may not be as momentous as it is in the instrumental forms, but these outstanding performers have raised it to a lofty plane indeed.

—George Jellinek



SISTER SLEDGE: Kathy (top), Debbie, Kim, and Joni

## Sister Sledge: Fresh, Feminine, and Flawless in an Album of Their Own

**W**ITH their new Cotillion release "The Sisters," four young women known collectively as Sister Sledge have given us proof that they are ready to claim a spot in the top rank of contemporary soul and pop performers. I confess that before this release I hadn't been much impressed with them. Four cute little girls who looked amazingly alike and who recorded songs that sounded alike, they had come roaring out of the East on the crest of the disco tidal wave, and the only impression they made on me was with the song *We Are Family*—not for its quality, which was negligible, but because it was chosen as the Pittsburgh Pirates' fight song when the team slammed its way to victory in the 1979 World Series. But even as their music tended toward exuberant monotony, they showed considerable spunk, ingenuity, and sex appeal in performance, they were young, and they had plenty of time to develop.

And develop they have, for here is an album that shimmers with musical en-

chantment, a carefully balanced program of selections that range from dance tunes to ballads to songs of social comment. All of them simply breathe freshness; everything about them is perfectly suited to this very feminine foursome. In addition, the singing is so flawless that it exceeds the accomplishments of the precedent-setting old Supremes, and therefore of just about everyone else since.

Although this album is likely to attract attention first for its sweetly cooed updating of Smokey Robinson's *My Guy*, emblematic of the boundless, carefree r-&-b of the early Sixties, there is an abundance of other musical pleasures tucked into these grooves. The opener, *Super Bad Sisters*, fuses hang-loose dance rhythms with a hint of rap, and *Lightfootin'*, penned by Sledge Sister Kathy and spouse Phillip Lightfoot, employs skillful changes and accented group chants to rejuvenate the all-too-familiar genre of the party-dance song. Uptempo numbers are delivered with an enticing aplomb, and more introspective selections, such as *My Special Way* and *All the Man I Need*, get a caring sensitivity.

Perhaps this album differs so markedly from everything Sister Sledge has done before because this is the first time they have served as their own producers: they appear to know better than anyone else exactly what will work for them, and they manipulate their individual talents to full advantage. The album's range and general excellence support my belief that current popular music would be far more exciting and

less predictable if artists were permitted to play a greater role in conceiving and producing their own recordings. It's not talent we're short of but room for it to work in. Commercial timidity is getting in the way of the music.

—Phyl Garland

**SISTER SLEDGE: *The Sisters*.** Sister Sledge (vocals); instrumental accompaniment. *Super Bad Sisters; My Guy; Lightfootin'; My Special Way; Grandma; Get You in Our Love; Il Mâcquillage Lady; Everybody's Friend; All the Man I Need; Jacki's Theme; There's No Stopping Us.* COTILLION SD 5231 \$8.98, © CS 5231 \$8.98, © TP 5231 \$8.98.

## Václav Neumann: Radiance and Nobility In Mahler's Second and Fourth Symphonies

**A**BOUT fifteen years ago Vanguard, then introducing its Cardinal series, issued a recording of Mahler's Fifth Symphony played by the Leipzig Gewandhaus Orchestra under Václav Neumann, its music director at that time. That set (VCS-10011/12, still in the catalog) and a more or less contemporaneous Turnabout disc of the *Kindertotenlieder* and *Lieder eines Fahrenden Gesellen* with mezzo Vera Sou-

kupova and the Czech Philharmonic (TV 34302, still in Schwann but apparently *not* available) suggested that here was a conductor of sure Mahlerian instinct, and it was hardly surprising that Neumann subsequently undertook a recorded cycle of all the Mahler symphonies with the Czech orchestra for Supraphon.

None of the first three or four performances issued in the cycle (among them a somewhat disappointing remake of the Fifth) struck me as especially memorable, however, and none of Neumann's recorded Mahler to date could have prepared anyone, I'm sure, for what he has achieved in his new recordings of the Second (*Resurrection*) and Fourth Symphonies, now issued in this country on the Pro Arte label. The natural, unforced radiance one hopes for in a performance of the Fourth—surely the most ingratiating of all Mahler's major works—is seldom hinted at in the Second, but this is nonetheless the distinguishing quality of Neumann's reading of it: a sense of *joy* which, however unexpected, is instantaneously and unarguably convincing.

The Second Symphony, like Beethoven's Ninth, is a ceremonial work, and the context in which it is presented has tended to magnify the aura of solemnity and heaviness. But it is in its own way also concerned with joy: what is celebrated in Klopstock's ode and Mahler's own words in the final movement, after all, is nothing less than a triumph over earthly pain and despair. This is not sorrowful music, but music of hope and certitude. In Neumann's hands the Second becomes very much a part of the same unpretentious world as that of the Fourth. The stark drama of the opening movement is not laid on externally, but rises spontaneously and unselfconsciously—and drawn to human scale. Similarly, the ironic sections of the next two movements make their points in contrast with the sweetness of the surrounding material; Neumann seems to acknowledge that Mahler has written all the drama into the music and there is no need for further interpretive overlay. Eva Randová is marvelously touching in the *Urlicht*, fully in accord with Neumann's straightforward, unexaggerated statement of sentiments that are so simple yet so deep that any attempt to underscore them only distorts them.

In the march section of the vast finale, leading up to the "Grand Call" and the entry of the chorus, the textures are clear enough for every motif to emerge without artificial spotlighting, and the effect is one of barely suppressed excitement, of undercurrents of joy in anticipation of certain deliver-

ance. It is not that Neumann has contrived to divest the work of its solemnity, but that he has managed to release its message of joy; in so doing he has drawn the most beautiful and committed singing and playing from all his associates. Whether this is the "best" of the currently available Mahler Seconds may be an unanswerable question, but the performance is revelatory in the truest sense and retains its freshness in repeated hearings.

From the foregoing description of Neumann's Second one knows what to expect in his Fourth, and there is no disappointment. The pacing is slightly broader than that of Neumann's fellow Czech Rafael Kubelik in his similarly straightforward account (DG Privilege 2535 119), and the orchestral textures are perhaps still clearer. The slow movement here does not imagine itself a sequel to that of the *Eroica* but is content to radiate a fairy-tale sadness and sweetness: it is simplicity of the noblest sort. In the final movement Magdaléna Hajóssyová sings with a freedom that suggests folk music, yet with all the childlike seriousness that the charming text dictates. As in the Second, the overall spontaneity of the performance is supported by the most luminous playing from the fine orchestra.

Both performances are splendidly recorded, and the Wakefield pressings are flawless. The only shortcomings are in the annotation and, for No. 2, the cover art (which misleadingly implies that the work deals with the Resurrection of Christ rather than Mahler's mortal hero), but since both works speak for themselves so effectively (at least in such performances as these)

and the texts in both cases are printed in full and with decent translations, there is really nothing at all to complain about. These are very distinguished issues, and Pro Arte must be congratulated for taking so much care in their processing. —Richard Freed

**MAHLER: *Symphony No. 2, in C Minor ("Resurrection")***. Gabriela Beňačková-Čápková (soprano); Eva Randová (alto); Prague Philharmonic Chorus; Czech Philharmonic Orchestra, Václav Neumann cond. PRO ARTE 2PAL-2011 two discs \$19.96, © 2PAC-2011 \$19.96.

**MAHLER: *Symphony No. 4, in G Major***. Magdaléna Hajóssyová (soprano); Czech Philharmonic Orchestra, Václav Neumann cond. PRO ARTE PAL-1068 \$9.98, © PAC-1068 \$9.98.

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## Jean Redpath and the Ballads of Scotland: Melody Knows No Cultural Frontiers

CONSIDER everything, my granddad said, so I have had to entertain the notion that the serial number of Jean Redpath's new Philo record, 1066, may be a factor in my loving it, for the digits also represent the date that probably lies behind my clan's having an English name that sounds suspiciously French. "Music" is personal, but, whatever

VÁCLAV NEUMANN: *the drama is written into the music*



Pavel Horník/Supraphon





## BEST OF THE MONTH: RECENT SELECTIONS YOU MAY HAVE MISSED

### POPULAR

- **Art Blakey and the Jazz Messengers: *Straight Ahead***. CONCORD JAZZ CJ-168. "The Class of '81 graduates with full honors." (April)
- **George Jones: *Same Ole Me***. EPIC FE 37106. "Honkytonk singing that will just flat astonish you." (March)
- **King Crimson: *Discipline***. WARNER BROS. BSK 3629. "A seminal band back better than ever." (February)
- **Mark Murphy: *Bop for Kerouac***. MUSE MR 5253. "May be the vocal jazz album of the year." (March)
- **Pennies from Heaven**. WARNER BROS. 2HW 3639. "A soundtrack album with a difference." (April)
- **Doc and Merle Watson: *Red Rocking Chair***. FLYING FISH FF 252. "Strong tunes and some amazing flat-picking." (April)
- **Neil Young and Crazy Horse: *Reactor***. REPRISE HS 2304. "... a textbook on how to make music out of the sounds of a scrap yard." (March)

### CLASSICAL

- **J. S. Bach: *The Notebook for Anna Magdalena Bach***. NONESUCH DB-79020. "An album to be treasured." (February)
- **Brahms: *Piano Trios Nos. 1-3***. HARMONIA MUNDI FRANCE HM 1063/64. "Remarkably intense interpretations... richly recorded." (March)
- **Delius: *Vocal and Orchestral Works — the Fenby Legacy***. UNICORN-KANCHANA DKP 9008/9. "Well-nigh perfect recreations." (April)
- **Puccini: *Tosca***. ANGEL DSBX-3919. "The opera's best recorded performance since 1963." (April)
- **Purcell: *Choral Works***. ARCHIV 2723 076. "... not only exquisitely performed but brilliantly recorded." (March)
- **Schoenberg: *Erwartung; Six Orchestral Songs, Op. 8***. LONDON LDR 71015. "Revelatory performance of one of the landmarks of twentieth-century music." (March)
- ***Love Can Be Still — Music on Verses by Norma Farber***. NORTHEASTERN NR 201. "Impeccable performances of song cycles by two New England composers." (April)



JEAN REDPATH: art concealing art



VIRGIL THOMSON: portrait by Cliff Condam

your lineage, if you like beautiful sounds you've got to like the voice of Jean Redpath, America's A-Number-One purveyor of Scottish ballads. As in the case of a woodwind instrument, you can hear just a hint of air escaping around the vocal cords, and like a clarinet in the hands of a master, Redpath's instrument covers a considerable range so smoothly that there's no hint of strain. Talk about art concealing art and you are talking about the way Jean Redpath sings.

The program's relevance, for people in many American environments, lies mostly in the melodies—a good tune is a good tune right across any cultural frontier—and this recording has some that are special. My favorite, I think, is *Bonny at Morn*, which was collected, it says in the notes, by John Bell in 1783. Several others, including *Riddles Wisely Expounded* (which, speaking of collecting, is Child Ballad No. 1, no less), are just about as lovely. I do wish she had sung instead of recited most of *Mary Hamilton*, which may be overexposed, but only among dedicated folk-niks. Ironically, as the late John Jacob Niles pointed out in these pages several years ago, it is far less likely that the melody of a ballad survived intact through the years and the folk process than that the words did. Still, it is melodies we have here, and a voice and a half. Both lovely. —Noel Coppage

**JEAN REDPATH: *Lowlands***. Jean Redpath (vocals, guitar); Abby Newton (cello). *A Wee Bird Cam' tae My Apron; Faraway Tom; Who Shall Count for Thee; The Lichtbob's Laddie; Clerk Saunders; Mary Hamilton; Lowlands; Laddie wi' the Yellow Coatie; Bonny at Morn; Gallowa' Hills; Riddles Wisely Expounded; Rose of Allendale*. PHILO 1066 \$7.98.

## Virgil Thomson's Musical Portraits In Performances That Gladden the Ears

"A PORTRAIT ALBUM," a new digital recording from Nonesuch, appears to have been designed to honor Virgil Thomson on the occasion of his eighty-fifth birthday, which occurred last November 25. It is an appropriate gesture, for the series of musical portraits Thomson began in the 1920s displays one of the unique facets of his creative activity.

More than thirty years ago Thomson himself conducted the Philadelphia Orchestra in a recording of the orchestral versions of five of the portraits, including those of Picasso and Flavia Alvarez de Toledo (first and fourth, respectively, in the piano sequence on the Nonesuch disc). The well-known sonata depicting Peggy Guggenheim (composed originally for piano but introduced into the harpsichord repertoire by the late Sylvia Marlowe, herself the subject of *Chromatic Double Harmonies*) is the most elaborate of the portraits, comprising three brief movements. The other sketches are shorter, single-movement pieces, though the portrait of Ruth Smallens with which the violin set begins is fairly extended and intricate (it was composed in 1940, a dozen years after the rest of the set).

*Family Portrait*, composed in 1972, represents four members of one family and a fifth person who may have been visiting at the time of the group "sitting." It is the one work on the disc that

is played by the performers for whom it was written, and it is presented with brilliance to burn. But all the performances here would surely gladden the heart of any composer—and the ears of any listener.

The sound is quite good, and Thomson's own annotation, which gives a concise summary of his career as well as the background of each of the twenty-five pieces, is almost as treasurable as the music. Poor marks for the editing of the printed material, though: the misspellings of the names of some of the portrait subjects ("Mina Curtis," "Roger Desermière," etc.) must have dismayed the composer, who is one of the most fastidious as well as stylish of writers. In the works at Nonesuch, by the way, is the first complete recording of the composer's *Four Saints in Three Acts*.  
—Richard Freed

**THOMSON:** *Bugles and Birds; With Fife and Drums; An Old Song; Tango Lullaby; Solitude; Barcarolle; Alternations; In a Bird Cage; Catalan Waltz; Chromatic Double Harmonies; Aaron Copland.* Paul Jacobs (piano). *Sonata No. 4 (Guggenheim Jeune).* Paul Jacobs (harpsichord). *Eight Portraits for Violin Alone.* Joseph Silverstein (violin). *Family Portrait for Brass Quintet.* American Brass Quintet. NONESUCH ● D-79024 \$11.98, © D4-79024 \$11.98.

## New Orleans Pianist Dr. John "Radiates The 88's" with a Heartfelt Solo Album

**M**AC REBENACK, whose professional name is Dr. John, has just recorded for the aptly named Clean Cuts label what is probably the first solo album by a New Orleans pianist. No one else, except perhaps Allen Toussaint, has the necessary technique, the fine-honed sensibility, to record such an album. All the other bright keyboard lights of that city—Fats Domino, Huey Smith, and the late Roy "Professor Longhair" Byrd—were basically singers who accompanied themselves in a mixture of styles acquired from such Twenties-to-Forties boogie players as Pine Top Smith, Meade Lux Lewis, Jimmy Yancey, and the team of Albert Ammons and Pete Johnson.

Rebennack's mentor was Roy Byrd, who certainly put his own individual stamp on his stylistic sources, but his

student has a much greater range and command. He has heard and hearkened to Earl Hines and Fats Waller, picking up a flashing bravura from the former and the habit of inventing wistful little codas from the latter. But some of Rebennack's codas become so extended that one gets the impression he has just figured out a completely *different* interpretation of his subject and would set it right down if time and circumstances would only permit.

As a vocalist, Rebennack can be classified as a blues-and-holler man, which means that the lyrics of *The Nearness of You* get pummeled into a painfully inappropriate gumbo of funk. But he concentrates on the keyboard for the rest of the album and "radiates the 88s," as he puts it, with great charm and conviction.

Rebennack is not only a pop musician, he is a *New Orleans* pop musician. The city has for years been ab-

tual *Let My People Go*, and his own *Dorothy* contains the resolution from Fats Domino's *Wait Till It Happens to You* combined with the opening statement from *Who's Sorry Now*.

On the cognominal *Big Mac* he uses some fine and intriguing inner-voice harmonies that fall midway between James P. Johnson and Jimmy Yancey, both of whom, although differing in their pianistic concepts and technical skills, were certified poets of the keyboard. *Memories of Professor Longhair* is neither a medley of Byrd's songs nor an original Rebennack composition, as one might perhaps expect, but rather a down-tempo, reverent version of Byrd's *Tipitina*.

Dr. John's flamboyant onstage personality and his many quick trips up and down the success ladder over the past fifteen years may have worn his image a little thin for some, but don't let that keep you from hearing this



MAC REBENACK (alias Dr. John): serious and feeling

sorbing and redefining any number of musical forms and styles, and it's not surprising that Rebennack's solos are made up of kaleidoscopic colors abstracted from fragments of jazz, pop, and spirituals. And so *The Nearness of You* opens with an extended quotation from Vernon Duke's *Autumn in New York*, fully half of *Saints* is a rococo and subtextual version of the old spiri-

hearty and heartfelt solo album. He's a serious musician and a feeling one; you can hear what a difference that makes here.  
—Joel Vance

**DR. JOHN:** *Plays Mac Rebennack.* Dr. John (vocals, piano). *Dorothy; Mac's Boogie; Memories of Professor Longhair; Big Mac; New Island Midnight; Pinetop; The Nearness of You; Delicado; Honey Dripper; Saints.* CLEAN CUTS CC 705 \$8.98.



# Classical Music Briefs



**S**INGERS who devote themselves to German *Lieder*, French *mélodies*, and other art songs deal with finely wrought music and usually give their recitals in small auditoriums. The successful ones compensate for this smallness of scale by singing often and making a lot of records. The Dutch soprano **Ely Ameling** says she travels practically the whole year long.

Interviewed on a brief stop-over in New York, she said, "I don't sing every night, of course, and I take little vacations between tours. If you try to give beauty through your own work, you must feel it somewhere. On the way to Japan, for example, I always try to visit another one of the Hawaiian islands, and in Japan I take an extra week to visit the temples in Kyoto. I try to absorb what I can of the beauty of nature and culture in order to replenish my supply."

Recordings have played an enormous role in Miss Ameling's career, and this spring she has new ones with all four of her regular piano accompanists. CBS Masterworks has just released an album of songs by Fauré and Debussy on which she is accompanied by Dalton Baldwin and an album of Mendelssohn *Lieder* on which her collaborator is Rudolf Jansen. Her recording of Wolf's *Italian Songbook* with baritone Tom Krause and pianist Irwin Gage is an April release from Nonesuch, and Philips has brought out a three-disc set of all the Haydn songs, which she recorded with Jörg Demus (see review in "Best of the Month").

The Mendelssohn was her first digital recording, and she liked the results. "There is ab-



Philips Records

solutely *no* hiss, and the balance between voice and piano is very natural. I'm not a technical person, but I think in digital recordings you can do more with dynamics."

Miss Ameling finds it stimulating to record all the songs of a particular composer. "Although Haydn's songs are not well known, they are splendid. I found a few of his German settings weak, but 90 per cent are good, and the English canzonettas are great masterpieces. My manager told me that the British coach who worked with me on the English songs has a Liverpool accent. If anyone criticizes my diction on these records, I plan to say that it is the English of Haydn's time."

For EMI in Europe she has recorded similar integral sets of the songs of Fauré and Poulenc, and she wishes Angel would release them in the United States. "For EMI Holland I recorded the songs of the Dutch composer Christian Huygens, and I think it is un-American of Angel not to issue them this year when we are celebrating two hundred years of

unbroken diplomatic relations between Holland and the United States. As part of the celebration I will be coming with the Hague Philharmonic to perform at Carnegie Hall, the Kennedy Center, and Symphony Hall in Boston."

In the dozen or so years she has been singing for American audiences, Miss Ameling notices only one major change. "There are more of you—at least more who are interested in coming to my concerts." The principal difference she notices in herself is greater strength in the lower register of her voice. "I think it's warmer. On records I hear a color I didn't have when I started."

"I hope my experience of life has also given deeper meaning to my interpretations. I like to sing. It's my job, and it gives me pleasure, but I have come to realize that the artist serves a purpose for the audience. In Japan I sang Schubert's *Mignon* songs, and a man who was terminally ill wrote me that hearing them helped him and would make it easier for him to accept death. A large number of such moving letters have made me understand that many people *need* music. Although it doesn't apply to their problems specifically, music through its timelessness and its beauty has the power to lift their burdens. That is a great reward for the artist, but it is also a tremendous responsibility." —W.L.

**A**RT has always been the handmaiden of commerce, so it's no surprise that in the United States these days culture is having an affair with business. The latest corporation to

go out with the Metropolitan Opera is the brokerage firm Merrill Lynch, Pierce, Fenner & Smith, which is donating \$300,000 to help underwrite the Met's annual spring tour.

Corporate support of classical recording projects has become fairly common in Europe, and we can expect to see more of it on this side of the Atlantic as well. London has released a *Tristan* funded by Amoco, and an integral set of the nine Beethoven symphonies with Kurt Sanderling conducting the Philharmonia Orchestra has been recorded by EMI thanks to a subsidy from du Maurier cigarettes. Since those cigarettes and that conductor are not well known here, Angel has decided against releasing the set in the United States.

We were not surprised, however, to see the Sanderling Beethoven box in the window of Orpheus Records, the hottest little classical store on New York's East Side. "We recommend choosing recordings of the symphonies individually," says Orpheus' manager David Hunt, "but we haven't figured out a way to *stop* people from buying Beethoven symphonies in sets."

Asked why he stocked what has been called the low-tar Beethoven cycle, Hunt said, "I had heard good things about the sound on the Sanderling recording—it's digital without sounding clinical—and the set was widely advertised in the English record magazine the *Grammophone*, which our customers memorize." But despite all that and *Time* magazine's endorsement of Sanderling's Beethoven, Hunt admitted that it had died on the shelf. "We

could not sell one single set. Finally, we marked it down to \$40, and a couple of students bought it."

Hunt thinks we'll see more outside corporate aid for recording projects. "Why not a complete Chopin cycle sponsored by, say, Estée Lauder? There are lots of good pianists who could do it. I'm very fond of Jorge Bolet, and Stephen Bishop is popular among our customers. Andras Schiff has just made a Mozart record for London that's really beautiful. If you haven't heard it, stop by, and I'll play it for you." We think it's that kind of enthusiasm, more than corporate support, that really sells records. —W.L.

**E**VER-rising production costs make it impossible for companies to lower the prices of new recordings. Despite recession and inflation, however, record buyers can still add musical treasures to their collections without spending \$12.95 per disc. In addition to the various budget labels, most major companies have introduced "mid-price" lines usually composed of worthy reissues. These include such series as RCA's Gold Seal, CBS Masterworks' Great Performances, Philips' Festivo and Sequenza, and Deutsche Grammophon's Privilege and Resonance.

With an initial release of twenty items available on discs

or cassettes, London Records has just launched its own mid-price line. The discs in the new Jubilee series are imported pressings from the Netherlands, and the cassettes are Dolby-B processed. List price is \$6.98, but you may see them discounted to as little as \$4.99 per disc or cassette.

So far the Jubilee line consists mostly (but not entirely) of reissues of such basics as Bach's Brandenburg Concertos, Holst's *The Planets*, Puccini's *La Bohème*, Ravel's *Boléro*, and Vivaldi's *Four Seasons*. Jubilee's big selling point is its roster of artists. Represented in the series on at least one recording each are singers Mirella Freni, Birgit Nilsson, Luciano Pavarotti, Leontyne Price, and Joan Sutherland, pianists Vladimir Ashkenazy and Wilhelm Backhaus, hornist Barry Tuckwell, and conductors Antal Dorati, Carlo Maria Giulini, Herbert von Karajan, Lorin Maazel, Neville Marriner, and Zubin Mehta. Some of these are among today's best-selling recording stars, and it will be interesting to see how successfully their earlier recordings at half-price will compete with their own current releases.

A second group of titles will be added to the Jubilee line in June or July. Scheduled for inclusion are performances by such big-name conductors as Leonard Bernstein, Georg Solti, and Leopold Stokowski. □



**D**o you remember **Katia and Marielle Labèque**, the French duo pianists whose first album was released here by Philips last summer? European and American sales of that album—two-piano versions of Gershwin's *Rhapsody in Blue* and *Concerto in F*—have long since passed the 100,000 mark. Philips now reports that their second album, a recital of Gershwin songs which the Labèque sisters perform with the American soprano Barbara Hendricks, is off to a running start.

The Labèques are currently touring the United States and

Canada as the opening act in concerts by the jazz guitarist John McLaughlin. The tour started in Canada on April 2, then dipped down into the U.S. for a series of dates including a Carnegie Hall performance (their New York debut) on April 23, and will continue across the continent until May 16. The key item in their repertoire for this tour is the *Rhapsody in Blue*. But to keep you from thinking that these two pianists are a one-composer team, Philips has scheduled the Labèques' recording of Brahms' Hungarian Dances for their next U.S. release in July. □

## Disc and Tape Reviews

By RICHARD FREED • DAVID HALL • GEORGE JELLINEK • PAUL KRESH  
STODDARD LINCOLN • ERIC SALZMAN

Ⓢ = stereo cassette

Ⓢ = eight-track stereo cartridge

Ⓛ = digital-master recording

Ⓛ = direct-to-disc

Ⓛ = quadrasonic disc

Ⓛ = monophonic recording

The first listing is the one reviewed; other formats, if available, follow.

**J. S. BACH: Trio Sonatas.** *Sonata in G Major for Flute, Violin, and Continuo (BWV 1038)*; *Sonata in C Major for Two Violins and Continuo (BWV 1037)*; *Sonata in G Major for Two Flutes and Continuo (BWV 1039)*; *Sonata in D Minor for Violin, Harpsichord Obbligato, and Cello (BWV 1036)*. Musica Antiqua Köln. ARCHIV 2533 448 \$10.98, © 3310 448 \$10.98.

Performance: **Fine**

Recording: **Very good**

Although Bach heartily subscribed to the principle of the trio sonata, he usually scored such works for one melodic instrument and harpsichord obbligato or organ. There are, however, five trio sonatas per

se—that is, sonatas scored for two trebles and basso continuo—by or attributed to him. The greatest of these is part of *The Musical Offering*, and it is wisely omitted from this album because it should be heard in its original context. Of the four remaining examples, only one, that in G Major for violin and flute, has been positively authenticated as a trio sonata by J. S. Bach. The C Major Sonata is often attributed to Johann Gottlieb Goldberg. The Sonata in D Minor is undoubtedly by one of Bach's sons, Wilhelm Friedemann or Carl Philipp Emanuel, and whether it was scored for two violins and continuo or for violin and harpsichord obbligato *col basso* (as it is played on this disc) is a moot question. The G Major So-

nata for two flutes is more widely known in its version for viola da gamba and harpsichord obbligato. But despite questions of authenticity, these four sonatas are fine works and of considerable interest, especially the highly mannered D Minor Sonata, which is imbued with a passion rare in this genre. Those familiar with the G Major Sonata in its gamba version will be fascinated by the one for flutes since it brings a different balance to the counterpoint.

The Musica Antiqua Köln performs on authentic instruments at the old pitch and follows the performance practices of the period. Their playing is clean, musical, and gentle. The highlight of the album is their  
(Continued on page 72)





LILI KRAUS



ROBIN MCCABE



JERZY SULIKOWSKI

## Keyboard Bartók: Three Views

**L**ILI KRAUS is so thoroughly identified with the music of Mozart, Haydn, and Schubert that many of her devoted admirers are jarred a bit on being advised that she was one of the first pianists to record music by Bartók. In an article about her in February 1975 *STEREO REVIEW*, she was quoted as saying she had persuaded Parlophone to let her record some Bartók in the 1930s, over the company's objection that such an undertaking would be "suicide," and that she then had the satisfaction of noting that "until the war every radio station in Europe played those recordings regularly." Those recordings of the Three Rondos on Folk Tunes and the Six Romanian Dances were reissued on an American Decca LP thirty years ago, at the same time that label brought us Kraus' postwar recordings of Mozart concertos and Haydn trios. "I adore to play Bartók," Kraus continued, "and still include his music in all my recitals, though I'm sorry to say I have never played the concertos. I don't believe one's nationality defines one's capacity for that country's music, really, but still, there is some truth in such a notion. When I play Bartók's folksong pieces, I can't help singing the words to myself, and of course the very *metrum* of the text is also the rhythm of the music; it is much nearer to me . . ."

In a new Vanguard release that is apparently her first recording of Bartók's music in nearly a half-century, Lili Kraus plays the works mentioned above as well as four others of varying dimensions plus a generous selection from Volume I of *For Children*. Her 1975 remarks seem very much to the point here, for her playing is characterized most of all by the sort of idiomatic freedom that suits the quasi-improvisatory nature of these works down to the ground and makes them not only effective display pieces but exceptionally communicative.

Nowhere is there a single labored or fussed-over phrase; everything flows spontaneously, as if there were no "middle man" involved. It's an intriguing program too, the sound is first-rate, and the album is further enhanced by Halsey Stevens' authoritative annotation as well as a shorter autobiographical note by Kraus herself, in which she makes her *bona fides* absolutely clear: "I was blessed by the privilege and joy of having been taught by Béla Bartók. . . . I was a young child when I first saw him. Then, as in the last moment when I saw him in Italy, I found him the most beautiful, transcendental, almost saintly human being I had ever seen."

**R**OBIN MCCABE, who wrote her own notes for her Bartók program on the Swedish Bis label, duplicates only one of the titles in Kraus' collection (the ubiquitous Romanian Folk Dances) and turns in the sort of brilliant and deeply sympathetic performances one would expect after hearing her Mussorgsky *Pictures* on Vanguard. There is perhaps more driving force in McCabe's playing than in Kraus', but this is certainly appropriate in the *Allegro Barbaro* and the Dance Suite (quite the most persuasive performance of this work in its piano version I have yet heard), and there is no lack of subtlety. She is hardly less idiomatic-sounding than Kraus, for this quality is so written into the music that it can't fail to come through in any really successful realization. The other five pieces on her disc will be discoveries for most listeners, and most attractive ones they are. The recording is all we have come to expect from this label—which is to say first-rate.

**J**ERZY SULIKOWSKI, whose name is new to me—the notes on his new Stolat album say he was born in 1938 and is now a professor

at the conservatory in Gdansk—is almost as persuasive as Kraus and McCabe in his single side of relatively well-known Bartók. The *Out of Doors* suite is suitably evocative, the jazzy quality of the Six Dances in Bulgarian Rhythm (from *Mikrokosmos*, Book VI) is brought out splendidly and without exaggeration. (Is this music really all that familiar, or does it only seem so because of the likeness to *I Got Rhythm* in its final section?) He seems more at home in this music, in fact, than in the Ravel on the other side of his disc, in which one can hear the wheels turning, as it were, the interpretive decisions somewhat more self-consciously arrived at, the technique stretched a little more effortfully. Which is perhaps an overly negative way of saying that the five sections of *Miroirs* are given thoughtful and on the whole effective performances. Both sides are well recorded, and the silence of the surfaces is a bonus one doesn't take for granted at this price these days.

—Richard Freed

**BARTÓK:** *Six Romanian Folk Dances; Three Rondos on Folk Tunes; Three Hungarian Folk Songs; Sonata; Fifteen Hungarian Peasant Songs; Evening in the Country; Twelve Selections from "For Children."* Lili Kraus (piano). VANGUARD VSD-71249 \$7.98.

**BARTÓK:** *Six Romanian Folk Dances; Dance Suite; Two Romanian Dances; Three Burlesques; Allegro Barbaro.* Robin McCabe (piano). BIS LP-182 \$10.98 (from Qualiton Records, Ltd., 39-28 Crescent Street, Long Island City, N.Y. 11101).

**BARTÓK:** *Out of Doors; Six Dances in Bulgarian Rhythm.* RAVEL: *Miroirs.* Jerzy Sulikowski (piano). STOLAT SZM 0116 \$5.98.





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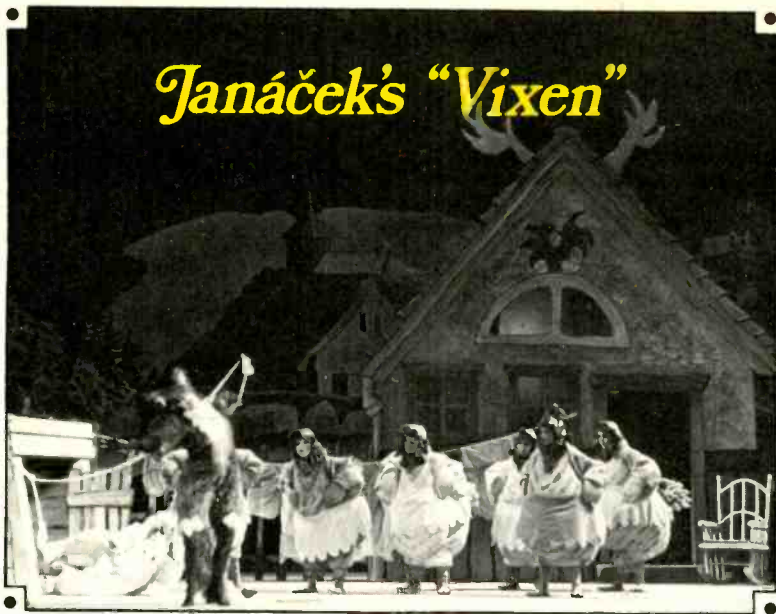
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## Janáček's "Vixen"



Beth Bergman

Scene from the New York City Opera production

UNLIKE any other opera, Janáček's *The Cunning Little Vixen* is a poetic fable glorifying the wonders of nature and the innocence of the animal world in contrast to human yearnings and frailties. There is no overt preaching or moralizing; the opera's philosophy is conveyed in mosaic-like fragments, with the composer's veneration of nature mirrored in the glow of his orchestral music. And, while Janáček's admiration for the resourcefulness with which the animals pursue their destiny is everywhere evident, he demonstrates similar compassion for his fellow men. Just from reading the libretto, I would never have imagined that this strange amalgam of fantasy, philosophy, and humor could be turned into a stageworthy opera. The New York City Opera's current production has convinced me otherwise, but that is no isolated phenomenon: the lovable *Vixen* has been successfully produced in several European theaters in recent years.

Just how much of the opera's magic can be communicated to the home listener by a recording in a strange language is a matter for speculation. In the case of the new Pro Arte album derived from a Supraphon original, we are treated to a virtuosic account of the orchestral writing—in which a large orchestra is asked to produce chamber-music sonorities peppered with those brassy ostinatos and tricky high violin passages that are the earmarks of the composer's style. The Czech Philharmonic plays magnificently under its seasoned conductor, Václav Neumann, and the moments when the music eases into folk dances with seamless naturalness have an authenticity of idiom that is likely to elude foreign interpreters.

There are a few grating voices in the cast, which is usually the case in recordings of East European origin. But Magdaléna Hajóssyová enlivens her pleasing timbre with warmth and humor in the title role, and she is ably partnered by Gabriela Beňáčková-Čápková as the amorous Fox. Richard Novák manages the role of the Forester well enough, but the beautiful closing apostrophe calls for a tonal splendor (*à la* Milnes or Weikl) that is not within his command.

The recording is a rather static studio job. Movements, distances, a sense of passing time—all are suggested by the libretto but not realistically mirrored in the recording, which is otherwise admirably rich and clear. As a broadcaster, I also take exception to the absence of a dividing band between Acts II and III, a careless or amateurish oversight in the mastering. There are no annotations, but there is a complete English libretto. Reservations notwithstanding, this is a fine album of an endearing opera. —George Jellinek

**JANÁČEK:** *The Cunning Little Vixen*. Richard Novák (bass), Forester; Miroslav Frydlewicz (tenor), Schoolmaster/Gnat; Karel Pruša (bass), Parson/Badger; Jaroslav Souček (bass), Harašta; Magdaléna Hajóssyová (soprano), Vixen; Gabriela Beňáčková-Čápková (soprano), Fox; Karel Hanuš (tenor), Innkeeper; Drahomira Tikalová (soprano), Innkeeper's Wife; others. Czech Philharmonic Chorus; Kühn Children's Chorus; Czech Philharmonic Orchestra, Václav Neumann cond. PRO ARTE PAL-2012 two discs \$19.96, © PAC-2012 \$19.96.

beautifully matched phrasing and articulation in the Sonata in C Major for two violins and continuo. The two flutes also play well together, but the combination of flute and

violin is less successful. Nonetheless, this is a very listenable record. S.L.

**BAIRD:** *Elegia* (see LUTOSLAWSKI)

**BEETHOVEN:** *String Quartet No. 2, in F Major*. Pro Arte Quartet. LAUREL LR-116 \$7.98.

Performance: **Fluent**  
Recording: **First-rate**

This is Beethoven's original version, with his original title, of the work he subsequently revised and published as Op. 18, No. 1. It may not have been performed in public anywhere till the Pro Arte presented it at Princeton in the summer of 1980, and it may have a rather limited appeal on disc, since most listeners are happy enough with the composer's final thoughts on this material. Chamber-music buffs serious enough about the Beethoven quartets to enjoy more than a single recorded performance, though, may find it intriguing. Lewis Lockwood, in his annotation, notes that "the logic that dictated many of the structural changes forced Beethoven to abandon a number of beautiful and subtle details in the original version," three of whose four movements are much longer than in Op. 18, No. 1. A printed insert offers musical examples from both versions of the work and additional notes by Norman Paulu, the Pro Arte's first violinist, detailing the practical considerations that led to the revision—among them a passage near the end of the work with a voicing problem that "could only be solved for the recording with electronic help." Such explication is indispensable to such an undertaking, and the documentation is both comprehensive and clear. The performance is fluent enough to make this more than a mere musicological curiosity, the sound is first-rate, and the pressing, on "the new American 'Quiex' vinyl," is exemplary. R.F.

### RECORDING OF SPECIAL MERIT

**BEETHOVEN:** *Variations on a Waltz by Diabelli, Op. 120; Piano Sonata No. 31, in A-flat Major, Op. 110*. Leonard Shure (piano). AUDIOFON 2001 two discs \$23.96.

Performance: **Magisterial**  
Recording: **Very good**

Now in his seventies, sometime Schnabel pupil Leonard Shure is very much at home with the masterpieces he has recorded for the Florida-based Audiofon label. Indeed, it is regrettable that this eminent teacher and concert artist has made so few recordings: the *Diabelli* Variations and Brahms' Op. 116 *Fantasien* for Vox back in 1947; a scattering of Beethoven, Schubert, and Schumann for Epic in the 1950s; and now this Audiofon set, which I hope will be only the first in an extended series.

Though capturing to the full the magnificent *comédie humaine* dimensions of Beethoven's *Diabelli* Variations, Shure's performance is somewhat less volatile than Charles Rosen's on his memorable Peters International disc. But the imposing moments here, especially Variations Nos. 29-31 and the towering fugue of No. 32, are really imposing, even awesome. As always with any outstanding performance of this work, one comes away exhilarated. No less can be said for Shure's reading of the Op. 110 sonata. From the very opening the tonal gradations are beautifully and carefully weighted, to magical effect. Shure imparts

(Continued on page 74)



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Daniel Barenboim, Dietrich Fischer-Dieskau

## The Songs of Franz Liszt

**F**RANZ LISZT's remarkable legacy of songs reflects the universality of his background. Hungarian by birth and German by cultural inclination, he rose to prominence in the Paris of Chopin, Berlioz, Hugo, Balzac, and Delacroix. In the later phases of his long life he could feel equally at home in Weimar, Rome, and Pest. Music has never known a more spectacular cosmopolitan. Is it any wonder that when he chose the poets for his songs, he could turn to Petrarch, Goethe, Heine, Hugo, Musset, Tennyson, and Hungary's Petöfi with equal ease and set their verses with utter naturalness?

There is a great deal of originality in these songs. Some reveal an indebtedness to Schubert, but Liszt's harmonic idiom was daring and experimental, with Wagnerian elements (*Die Loreley*, *Über Allen Gipfeln Ist Ruh*) in evidence in anticipation of Wagner himself and ambiguous tonalities far in advance of their age. His more than seventy songs embrace an extraordinary range: Italian *canzoni*, French *mélodies*, mystical German *Lieder*, vocal-pianistic rhapsodies, melodramas, and so on. Some, such as *O Lieb, So Lang Du Lieben Kannst* (far better known in its instrumental guise as the *Liebestraum* No. 3), call for the purest kind of lyricism. Others require a semi-operatic declamation. When the two extremes are brought together in the same song, the mixture is seldom brought off convincingly. Liszt was also frequently given to overstatement, but he gave a great deal of thought to his songs and repeatedly revised them, taming their excesses. There are several masterpieces in his output: the Hugo settings of *Oh! Quand Je Dors* and *Comment, Disaient-Ils* stand out in the French group, the Petrarch sonnets (which he later

turned into more ornate piano solos) are entirely unique, and Goethe's brief philosophical poems are captured in a rapt, pantheistic mood.

About a dozen years ago Hungaroton released a three-disc Liszt song collection involving various Hungarian singers and pianists. Deutsche Grammophon's new four-disc set with Dietrich Fischer-Dieskau and Daniel Barenboim is even more comprehensive. It includes forty-four songs and overlooks none of true significance (although it is regrettable that DG missed the opportunity to ask Julia Varady, Mrs. Fischer-Dieskau, to contribute at least one of the three songs on Hungarian texts).

Who but Fischer-Dieskau, that living encyclopedia of vocal literature, could have undertaken such a project? We are all in his debt, but I, for one, wish it had happened, say, fifteen years ago. This peerless singer is fifty-six now, and it has been evident for several years that relentless time has been no kinder to him than to other great artists before him.

Even in his glory years, Fischer-Dieskau could rarely resist the temptation to overinterpret, and this tendency has assumed truly damaging proportions in recent years. When he does overcome it here—in such songs as *Wie Singt die Lerche Schön*, *Du Bist Wie eine Blume*, and *Über Allen Gipfeln Ist Ruh*—we hear lyric simplicity free of artifice, singing that is nearly magical. But all too often we are disturbed by intrusive mannerisms. When the tone is darkened for a dramatic effect, it tends to assume unwanted sinister overtones; declamations turn into martial hectoring, climaxes into explosions. Surely the yearning passion in *Oh! Quand Je Dors* does not require the outburst it receives here (Fischer-Dieskau's own earlier treatment on DG 138 793 is far subtler), and the Petrarch lyrics call for the purity of *bel canto* phrasing and not for teasing and overinflecting every single phrase.

**M**Y notes are full of specific critical comments on other songs, but I stop here because this is a singer I admire and because I am grateful for what he and Daniel Barenboim have given us. They work well together because the pianist, expert Lisztian that he is, knows how to surround the singer with rich sonorities and meaningful articulation without indulging in excessive rhetoric. This set is a valuable and revelatory document that fills an important gap.

—George Jellinek

**LISZT: Songs.** *O Lieb, So Lang Du Lieben Kannst; Es Muss ein Wunderbares Sein; Die Loreley; Gastilbelza; Ein Fichtenbaum Steht Einsam; Die Vätergruft; Ich Möchte Hingehn; Du Bist Wie eine Blume; Vergiftet Sind Petrarch Sonnets; Über Allen Gipfeln Ist Ruh; Die Drei Zigeuner; Ihr Glocken von Marling; Oh! Quand Je Dors; Comment, Disaient-Ils; Enfant, Si J'Étais Roi; Three Petrarch Sonnets*; and twenty-six others. Dietrich Fischer-Dieskau (baritone); Daniel Barenboim (piano). DEUTSCHE GRAMMOPHON 2740 254 four discs \$43.92.

great nervousity and excitement to the rugged and capricious *allegro molto* second section. As in the later pages of the variations, Shure is an infinitely knowing guide to the late-Beethoven universe. The great series of chords just before the inversion of the fugue subject in the sonata's finale will not soon be forgotten by those who hear them on this recording.

The excellence of Audiofon's analog sonics is a major factor in the impact of these performances. Clearly, no pains were spared in the choice of a fine instrument (Baldwin) or in matching it to the recording locale, and the microphoning is just right as regards presence and room tone. Only the very best of the Connoisseur Society piano discs of the Sixties and Seventies are in the same class as this release. Spreading the *Diabelli* Variations over three sides was an excellent idea, for it not only helps ensure the highest-quality sound but also enables individual banding of the variations, a boon for students and teachers. The pressings are flawless. Highest recommendation—and a request to Mr. Shure and Audiofon for more. *D.H.*

### RECORDING OF SPECIAL MERIT

**FAURÉ: Pénélope.** Jessye Norman (soprano), Pénélope; Jocelyne Taillon (mezzosoprano), Euryclée; Alain Vanzo (tenor), Ulysse; Jean Dupouy (tenor), Antinoüs; Philippe Huttenlocher (baritone), Eurimaque; José van Dam (bass), Eumée; others. Ensemble Vocal Jean Leforge; Orchestre Philharmonique de Monte-Carlo, Charles Dutoit cond. ERATO/RCA STU 71386 three discs \$26.94.

Performance: **Some good singers**

Recording: **Okay**

Like Debussy, Gabriel Fauré wrote only one opera, *Pénélope*, and even that one he called a "*poème lyrique*." It is in the great French neo-Classical tradition (wait and see, Boulez's first opera will be based on Aeschylus or Sophocles). It was first produced in 1913 at the Opera of Monte-Carlo and later in Paris, Brussels, and elsewhere. It has had a consistently good reception from critics and connoisseurs and has been revived a number of times, but it has never made its way outside the French-speaking world, and even there it has never really captured the public's admiration.

The story is that of the final scenes of Homer's *Odyssey*. Fauré's modesty in calling his setting a "*poème lyrique*" was apropos. It is said that the director of the Monte-Carlo Opera tried to get him to change the happy ending—to what, exactly, is not very clear! Not a great deal happens in the way of plot, and until the moment when Ulysses confronts the suitors there is no real conflict. In a positive orgy of French good taste and classical measure, even that big fight takes place mostly offstage.

Still, it would be a mistake to imagine that this is purely a quiet, lyric, or contemplative work. There is plenty of animation and even passion—in the music at least. Fauré inexplicably neglected the operatic stage for most of his life, but he was an experienced and successful man of the theater, supplying a good deal of incidental music to contemporary plays. What a pity he didn't write more lyric drama—he had

the gift. He was a master at writing for the voice, and he knew how to absorb the Wagnerian lesson without knuckling under to Wagnerism or ever giving up his individuality and Frenchness.

*Pénélope* may never be a popular work, but it is a beautiful one and full of music that is inspired and, in the best sense, theatrical. Fortunately we have—thanks to the patronage of the Prince of Monaco—this recording from Erato. It is far from perfect. The Monte-Carlo Philharmonic is not the best orchestra in the world, and there are many obvious edits. But there are two or three excellent singers in the cast—Jessye Norman, José van Dam, and a good French tenor, Alain Vanzo, as Ulysses. And there is a general level of competence with the French language and style.

The early twentieth century was a better period for opera than is commonly believed. The old operatic theater was dying, not from a lack of good works but from the competition of the popular musical theater, the nascent movies, and the political upheavals that made it seem increasingly irrelevant. *Pelléas et Mélisande* is at least about the dark side of the human soul; *Salomé* is part of the temper of the times; *Elektra* and *Erwartung* are concerned with psychosis; *Wozzeck* is a psychic history of World War I; *Le Sacre du Printemps* is a break-out of artistic violence on the eve of the real thing. Where in this scheme of things could *Pénélope* possibly fit in? It is not a backward-looking work, and yet it seems to belong to another, safer world of order, feeling, and taste. Irrelevant! No wonder it was lost in the shuffle. Pity, though. It is a lovely, idyllic thing and deserves to live and be known. Perhaps this recording, with all its faults, will help it to do that. I enjoyed it immensely. E.S.

**HAYDN: Complete Songs** (see Best of the Month, page 62)

#### RECORDING OF SPECIAL MERIT

**LISZT: Piano Concerto No. 1, in E-flat Major; Piano Concerto No. 2, in A Major.** Claudio Arrau (piano); London Symphony Orchestra, Sir Colin Davis cond. PHILIPS 9500 780 \$10.98, © 7300 854 \$10.98.

Performance: **Absorbing**  
Recording: **Mostly very good**

Claudio Arrau has never been my favorite pianist in a large part of the standard keyboard repertoire, but, from his earliest German Polydor and Odeon 78-rpm discs, I have admired him as a Lisztian. As might be expected after some fifty years, there is slightly less flash in Arrau's latest Liszt readings, but there is a very high and most welcome poetic content. This new recording of the First Piano Concerto has a rather stately opening, and throughout there is an elegance of phrasing and passagework that enables one to savor the music in a fresh way quite different from the usual hell-for-leather readings.

Even finer (and more of a piece) is the interpretation here of the A Major Concerto. Not only do the lyrical elements receive their full due (the solo-cello passage in the slow section is absolutely outstanding), but the big moments come off with a splendidly martial panache. Sir Colin Davis and

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the London Symphony are ideally sympathetic collaborators throughout. The orchestral sonics seem a bit cavernous at the opening of the E-flat Concerto, but there is ample body and presence. The piano sound is altogether superb. *D.H.*

**LISZT:** *Reminiscences de Norma* (see SCHUMANN)

**LUTOSLAWSKI:** *Mi-Parti*. **PENDER-ECKI:** *The Awakening of Jacob; Anaklasis for String Orchestra and Percussion*. **BAIRD:** *Elegeia*. Prague Radio Symphony Orchestra, Jacek Kasprzyk cond. SUPRAPHON □ 1410 2734 QG \$9.98 (from Qualiton Records, Ltd., 39-28 Crescent Street, Long Island City, N.Y. 11101).

Performance: **Excellent**  
Recording: **Dull**

After the so-called "revolution" of 1956—the precursor of today's events in Poland—Polish intellectuals and artists gained a good deal of freedom, and the Poles became the first East Europeans to absorb the influences of the Western avant-garde. The whole country became a hot-bed of modernist creation and performance.

Composers too turned to new ideas at this time. The one best known in the West is Krzysztof Penderecki (born 1933), and his 1959 *Anaklasis* was, along with *Threnody for the Victims of Hiroshima*, one of the works that brought him to prominence. Scored for strings and percussion, *Anaklasis* is not as monolithic in sound or single-minded in mood as its companion piece, and it perhaps holds up better today. Penderecki further developed the new Polish style—great dark masses of sound daubed on a big canvas with a thick, heavy brush—in an almost melodramatic fashion in such later pieces as the 1974 *The Awakening of Jacob*. The Slavic anguish in these works is close to unbearable.

Witold Lutoslawski (born 1913) is the best-known Polish modernist of an older generation. His 1976 *Mi-Parti* is orchestral music in the same genre as the Penderecki pieces, but it is more lyrical, more reflective, more sculptured. Tadeusz Baird was born in 1928, and his 1973 *Elegeia* for orchestra is an introverted and expressionist piece.

All of these works are very well performed by the Prague Radio Symphony Orchestra under the direction of the young

Polish conductor Jacek Kasprzyk. The recorded sound is adequate but on the heavy side—not that any of this is brilliant music, but the scoring and playing are much more sonorous than the recording. *E.S.*

**MAHLER:** *Symphony No. 2, in C Minor ("Resurrection"); Symphony No. 4, in G Major* (see Best of the Month, page 64)

**MARTINŮ:** *The Greek Passion*. John Mitchinson (ténor), Manolios; Helen Field (soprano), Katerina; John Tomlinson (bass), Grigoris; Phillip Joll (baritone), Kostandis; Geoffrey Moses (bass), Fotis; Arthur Davies (tenor), Yannakos; Rita Cullis (soprano), Lenio; others. Czech Philharmonic Chorus and Kühn Children Chorus; Brno State Philharmonic Orchestra, Sir Charles Mackerras cond. SUPRAPHON ● 1116 3611/2 two discs \$31.96 (from Qualiton Records, Ltd., 39-28 Crescent Street, Long Island City, N.Y. 11101).

Performance: **Very good**  
Recording: **Excellent**

*The Greek Passion* was Bohuslav Martinů's last opera. Its English libretto was based on a novel by Nikos Kazantzakis, but the première performance was of a German version produced in Zurich in 1961, two years after the composer's death. The present recording, made in collaboration with the Welsh National Opera, uses Martinů's original English text as revised by Brian Large.

The story begins with the decision by the elders of a Greek mountain village to produce a Passion play. Led by their priest, they select the various people who are to enact the roles of Christ, the Apostles, Judas, Mary Magdalene, and so on. The shepherd Manolios, chosen to portray Christ, becomes obsessed with his role; in his dedication to charity and saintliness, he antagonizes the other villagers. Overcome by greed and unreasoning fear of a phenomenon that transcends their simple lives, they mark Manolios a "revolutionary" and destroy him.

The detailed album notes relate Martinů's difficulties with the setting of this complex and powerful novel. At one point Martinů observed, "The text must be respected more than in an ordinary opera; it costs me a lot of music." Indeed, it appears that his self-effacing commitment to the text may have hurt the opera's effective-

ness. The elemental power of Kazantzakis' original is frequently captured, but the musical inspiration is rather uneven.

Just the same, *The Greek Passion* is not a failure. The characters are strongly drawn, and, though the opera's four acts are rather brief, tension builds convincingly toward a tragic dénouement. There are some miscalculations: one particularly virile character is assigned to a soprano, and another important supporting part is given to a speaking actor. Despite such distractions, the listener is inescapably drawn into the orbit of a moving drama.

The music, permeated with elements of the Greek Orthodox liturgy, is thoroughly accessible, and the vocal writing, at times suggestive of plainsong and supported by rich sustained chords, never compels the singers to stray beyond their natural ranges. The interpreters of Manolios, Katerina, and Grigoris stand out in a uniformly capable cast, and the important choral portions are rendered with distinction. In Sir Charles Mackerras, the music of Martinů has found a committed champion, and the digital sound is outstanding. *G.J.*

#### RECORDING OF SPECIAL MERIT

**MILHAUD:** *Scaramouche; Carnaval à la Nouvelle-Orléans; Le Boeuf sur le Toit*. Philippe Corre, Edouard Exerjean (pianos). **PIERRE VERANY** PV 9811 \$13.98 (from Brilly Imports, 155 North San Vicente Boulevard, Beverly Hills, Calif. 90211).

Performance: **Exuberant**  
Recording: **Quite good**

If Milhaud had written only one of the saucy, vivacious works on this disc and nothing else, he might have enjoyed the sort of admiration Dukas earned with *The Sorcerer's Apprentice*. But because he was able to turn out so many such pieces, there has been a tendency in certain quarters to react with disdain instead of admiration. Well, too bad for the stuffed shirts. Milhaud did produce a goodly quantity of more serious works, but his charming *divertissements* are shot through with the more than casual exuberance that prompted Arron Copland to remark, some thirty years ago: "Others write music to express themselves; Milhaud, like no other composer I know, writes music to celebrate life itself." *Scaramouche* and the *Carnaval à la Nouvelle-Orléans* are both, of course, by now classics of the two-piano literature. *Le Boeuf sur le Toit* proves to be nearly as fetching in the four-hand version here as in the more familiar orchestral one, or so it seems in this astoundingly alive performance by Philippe Corre and Edouard Exerjean. I had never heard of them before (there are some amusing biographical notes with the annotation), but they play with exactly the sort of freedom and relish this music needs—just the sort Milhaud must have felt when he set it down in the first place. The recording is quite good, and so is the pressing. A winner. *R.F.*

#### RECORDING OF SPECIAL MERIT

**MOZART:** *Thamos, King of Egypt (K. 345)*. Thomas Thomaschke (bass), High Priest; Janet Perry (soprano); Anne-Marie Mühle (mezzo-soprano); Marius van Altena (tenor); Harry van der Kamp (bass); Nether-



lands Chamber Choir; Collegium Vocale; Concertgebouw Orchestra, Amsterdam, Nikolaus Harnoncourt cond. TELEFUNKEN 6.42702 AZ \$12.98, © 4.42702 CX \$12.98.

Performance: **Radiant**  
Recording: **Wonderful**

Mozart's only incidental music was for Gelder's *Thamos, King of Egypt*, a play so laden with Masonic imagery that it has been considered a precursor of *The Magic Flute*. Although the play was unsuccessful, Mozart was very fond of the music. In fact, writing to his father some years later, he said, "It ought to be performed, just for the sake of the music." He was right: the score is a powerful one.

Nikolaus Harnoncourt, as he clearly demonstrated in his recent recording of *Idomeneo, Rè di Creta*, is a superb Mozart conductor. Under his direction, the Concertgebouw Orchestra takes on a mellow sound and is balanced to bring out the often submerged inner details of Mozart's orchestration. His pacing too is perfect for the fiery nobility of the music. A radiant performance of an almost unknown Mozart masterpiece—a beautiful record. S.L.

**PENDERECKI: *The Awakening of Jacob; Anaklasis*** (see LUTOSLAWSKI)

#### RECORDING OF SPECIAL MERIT

**SCHUMANN: *Faschingsschwank aus Wien, Op. 26***. **LISZT: *Reminiscences de Norma***. Ivan Davis (piano). AUDIOFON 2004 \$11.98.

Performance: **Immensely enjoyable**  
Recording: **Exceptionally realistic**

It is hard to think of so youthful a man as Ivan Davis as having reached the age of fifty, as he did in February, but he has seemed for some time to be one of the triumvirs—the others being his senior colleagues Jorge Bolet and Earl Wild—who have been performing the big Romantic virtuoso pieces on the highest level. The coupling here reminds us that many of Schumann's works may be so regarded, without slight to him or condescension to Liszt, and there is certainly no trace of either quality in Davis' sterling performances. The coupling is convenient too for avoiding duplication; although the *Norma* Fantasy has been recorded more than once in the somewhat shorter two-piano version, I do not recall coming across one of the solo version before. In his engagingly modest annotation, Davis describes the piece as "one of the most stupendously difficult" of Liszt's piano works, but he brings it off brilliantly, concealing the difficulty and exposing a perhaps unsuspected depth. The Schumann is served no less effectively, its poetic content by no means compromised in Davis' exuberant, outgoing interpretation—for even in his exuberance Schumann is one of the most intimate of all composers. Both sides are immensely enjoyable, the more so for the exceptionally realistic sonics, the only flaw in the release being a misspelt name or two in the production credits. R.F.

**TCHAIKOVSKY: *1812 Overture, Op. 49; Serenade for Strings in C Major, Op. 48***. Philadelphia Orchestra, Riccardo Muti

cond. ANGEL 0 DS-37777 \$10.98, © 4ZS-37777 \$10.98.

Performance: **Superior 1812**  
Recording: **Very fine**

Were it not for Riccardo Muti's somewhat overemphatic treatment of the String Serenade, this disc would have rated a "Special Merit" tag. Surprisingly, it is the *1812* Overture that is the winner here, and on musical grounds, not sound effects. I don't think I've ever heard this old warhorse played with such loving attention to details of color and phrasing and to niceties of dynamics. The recording is almost the best I have heard from Philadelphia's "Old Met" auditorium, and the digital tape mastering

does wonders for the music's quiet episodes as well as full justice to the truly majestic treatment of the last pages.

I would have liked a lighter hand in the String Serenade, especially in the end movements. The famous waltz comes off best, with some nice changes of pace in the various contrasting episodes where a light touch is in evidence. Wonderful as the Philadelphia string sound is, I wish that the overall sound level had been set a couple of notches lower, particularly in the slow-movement elegy, and that the string basses were not quite so obtrusive. Again, though, Muti's *1812* is something else. D.H.

(Continued overleaf)

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
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**THOMSON:** *A Portrait Album* (see Best of the Month, page 66)

**VAUGHAN WILLIAMS:** *The Springtime of the Year—Folk-song Arrangements. The Dark-Eyed Sailor; The Springtime of the Year; Just as the Tide Was Flowing; The Lover's Ghost; Wassail Song; Bushes and Briars; Loch Lomond; John Dory; Green-sleeves; Ward, the Pirate; Ca' the Yowes; The Unquiet Grave; The Seeds of Love; Early in the Spring; The Turtle Dove; An Acre of Land.* London Madrigal Singers, Christopher Bishop cond. MUSICAL HERITAGE SOCIETY MHS 4463 \$7.75 (plus \$1.60 postage and handling from the Musical Heritage Society, 14 Park Road, Tinton Falls, N.J. 07724).

Performance: **Lovely**  
Recording: **Well-balanced**

About every ten years or so, someone gets the idea of recording the Vaughan Williams folk-song arrangements. Musically, it's always a good idea. The basic songs are

among the great treasures of folk art, and the arrangements are knowing and sympathetic, a cross breeding, as it were, of the two great British musical traditions of folk song and choral singing. And Vaughan Williams, unlike most arrangers of earlier times, made no conscious attempt to "correct" the songs, to bring them within the harmonic and melodic strictures of a classical tradition to which they were never related, but built his arrangements out of the materials of the songs themselves.

This particular recording was made by EMI in 1970 but has apparently not been released here before. The London Madrigal Singers include such soloists as Ian Partridge and Geoffrey Shaw, and they are quite an excellent ensemble, but, despite the name, they are really a small choir, not a madrigal consort. Their choral sound seems to emphasize a certain genteel quality in the arrangements (not in the songs) that takes them perhaps just one step too far from the earth for their own good. Still, these are lovely, sympathetic performances that do at

times (such as in *Ca' the Yowes*, which is Scottish for "call the ewes") bring out the haunting, mysterious quality of the music. There is something absolutely foreign and primeval there—and incredibly beautiful—that makes one think that the "folk," whoever they were, were very different beings from you and me. —James Goodfriend

#### RECORDING OF SPECIAL MERIT

**WHITE:** *Lamentations of Jeremiah; Regina Coeli; Portio Mea Domine; Domine Quis Habitabit; Christe Qui Lux Est.* The Clerkes of Oxenford, David Wulstan cond. NONESUCH H-71400 \$5.98, © H4-71400 \$5.98.

Performance: **Ethereal**  
Recording: **Ethereal**

Robert White was a master craftsman whose music is imbued with passion and beauty and is on the same lofty level of quality as that of his contemporaries Byrd and Tallis. Thanks to David Wulstan and

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The Clerkes of Oxenford occupy a unique place among choruses today. The beauty and clarity of their sound are unequalled, as are their phrasing and poise. Particularly striking is the purity of the treble parts, which are taken by women rather than boys. Just listen to the astronomically high range of the soprano part in the motet *Portio Mea Domine* and marvel. Wulstan has created the perfect instrument for White's undeservedly forgotten music. S.L.

**WOLF-FERRARI: *Il Segreto di Susanna*.** Renata Scotto (soprano), Susanna; Renato Bruson (baritone), Count Gil. Mary Nash (piano); Philharmonia Orchestra, John Pritchard cond. CBS ◊ M 36733, © MT 36733, no list price.

Performance: **Good, but . . .**  
Recording: **Good**

Susanna's secret vice was smoking cigarettes—a situation intriguing enough back

in 1909 for Ermanno Wolf-Ferrari and his librettist Enrico Golisciani to turn it into a one-act opera. Since then, as vices (along with everything else) have become more sophisticated, the theatrical viability of this delightful opera has been accordingly diminished. That is a pity, for it is delicately wrought and seems well suited to form part of an evening of one-acters or as a companion to Mascagni's brief *L'Amico Fritz*.

The first stereo recording of *Il Segreto di Susanna* appeared about five years ago on London (OSA 1169) with a performance that I find on balance superior to this new one. There is more elegance in the overall leadership of Lamberto Gardelli on the London album than in John Pritchard's here. I don't find Pritchard's approach objectionable, but this production stresses a certain kind of realism that militates against the score's delicacy. Technically, too, the disc is somewhat overproduced: in the opening scenes, for instance, the jealous husband's pacings up and down are so evident as to be distracting.

The performance is certainly lively. As always, Renata Scotto creates a vivid character, but, as usual nowadays, we must accept a great deal of vocal stridency along with her theatrical expertise. The lovely duet "*Il dolce idillio*" particularly suffers in this respect. London's Maria Chiara is clearly superior in the role. The two baritones are more closely matched. Bernd Weikl on London offers the richer sound, Renato Bruson here the smoother and more Italianate style. Both are more than satisfactory. The annotations for the CBS release by Barrymore Laurence Scherer are useful and informative. G.J.

#### COLLECTIONS

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Pro Arte Records

The Cantilena Chamber Players

## Three by Taneyev

**S**ERGEI TANEYEV (1856-1915)—a favorite pupil of Tchaikovsky, brilliant concert pianist, renowned music theoretician, revered as both teacher and human being—has been represented only sporadically on discs outside of Russia. For many years David Oistrakh's Angel recording of the Concert Suite for Violin and Orchestra was the major point of contact with the composer's work for Western listeners, but more recently two of the symphonies, a number of choral works, and the ambitious opera *Orseida* have come to hand.

Now Pro Arte has released three new Taneyev discs, two devoted to chamber works and one to that same Concert Suite. If they are fair evidence, then I am inclined to agree with the commentator in Cobbett's *Cyclopaedic Survey of Chamber Music* that Taneyev's most powerful and effective musical utterances are to be found in his chamber music. Compared with the Piano Quartet and Piano Trio, the charming Concert Suite seems diluted and a trifle overlong. Like his own pupil Nicolai Medtner, Taneyev avoids both nationalism and Tchaikovskian emotional excess. Stylistically, both the quartet and the trio could be characterized as Russian Brahms, and in terms of structural logic and musical substance, neither is inferior to works in these forms by the German master.

An impressive architecture and strong rhythmic pulse give real power to these works, and there is also brilliant writing for the piano. The complex, scintillating finale of the quartet, the syncopated scherzo of the trio with its Rachmaninoff-style ending, and the dazzling final movement of the trio are among the high points. The New York-based Cantilena Chamber Players—whose pianist is Frank Glazer—do splendidly by the Piano Quartet and receive a superlatively

full-bodied and well-balanced recording. Germany's Odeon Trio is equally impressive in the trio and is also superbly recorded. The terse nine-minute Piano Trio of Alexander Tcherepnin (1899-1977), dating from 1925, makes a delightful filler on side two of the Odeon's disc.

The Concert Suite for Violin and Orchestra (there's also a violin-piano version) has movement titles—Prelude, Gavotte, *Conte*, Theme and Variations, Tarantella—that lead one to expect a pleasant series of genre pieces, but this is actually a large-scale, fully developed work built up mainly from the materials of the opening movement. There are charming things in the variations, which are redolent of the Tchaikovsky ballets, and the concluding tarantella is a violinist's delight. Young Christian Altenburger's new recording will not make me forget the famous Oistrakh performance, but he does a much more than merely creditable job with the solo part, bringing to it a sweet but not overly lush tone and ample dexterity. Yuri Ahronovitch and the Vienna Symphony provide warm and wholehearted collaboration. The recording is again first-rate. All in all, a very satisfying trio of releases.

—David Hall

**TANEYEV: Piano Quartet in E Major, Op. 20.** Cantilena Chamber Players. PRO ARTE Ⓢ PAD-107 \$9.98, © PCD-107 \$9.98.

**TANEYEV: Piano Trio in D Major, Op. 22. TCHEREPNIN: Piano Trio in D Major, Op. 34.** Odeon Trio. PRO ARTE PAL-1052 \$9.98, © PAC-1052 \$9.98.

**TANEYEV: Concert Suite for Violin and Orchestra, Op. 28.** Christian Altenburger (violin); Vienna Symphony Orchestra, Yuri Ahronovitch cond. PRO ARTE Ⓢ PAD-110 \$9.98, © PCD-110 \$9.98.

*Maria. La Traviata: Addio del passato. Puccini: La Bohème: Mi chiamano Mimi; Donte lieta usci. Madama Butterfly: Entrance of Butterfly; Un bel dì vedremo. Wagner: Tannhäuser: Dich, teure Halle. Lohengrin: Einsam in trüben Tagen. Gounod: Faust: Jewel Song. Massenet: Manon: Adieu, notre petite table; Gavotte. Werther: Air des lettres. Bizet: Carmen: Habanera; Seguidilla (with Nicolai Gedda, tenor). Granados: Goyescas: La Maja y el Ruiseñor. Falla: La Vida Breve: Allí está! Riyendo!; Vivan los que rien! Songs by Schubert, Brahms, Fauré, Hahn, Duparc, Canteloube, Granados, Rodrigo, and others; three zarzuela excerpts. Victoria de los Angeles (soprano); various orchestras and conductors; Gerald Moore, Gonzalo Soriano (piano). ANGEL SCLX-3914 three discs \$29.94.*

Performance: **Good to exceptional**

Recording: **Good**

The foregoing list speaks for the comprehensive nature of this marvelous collection. New to LP are the early (1949-1950) recordings of Mozart and Wagner, the *Goyescas* excerpt, and various Spanish songs. They appear here interspersed with selections of later origin in a way that makes such matters as the passing of time and tonal changes relatively insignificant. One's attention stays focused on the Spanish soprano's pure, warm, beautifully controlled vocal instrument and the keen mind and lively personality that shine through it.

In the early stages of her career, Victoria de los Angeles sang in Bayreuth under Wieland Wagner's direction. And what a pleasure it is to hear her sing Wagner. In the *Tannhäuser*; and *Lohengrin* excerpts here, she traces the music sensitively and effortlessly, never overpowering it or, even worse, being overpowered by it.

For the rest, here are reminders of De los Angeles' coy, winking Rosina, her affecting Mimi and her not very tragic but uniquely charming Carmen (both under Beecham), her exquisite Butterfly (two excerpts from two different complete recordings), and her peerless Manon under Monteux. There are also reminders of her natural mastery of French song literature as well as souvenirs of her Granados, Falla, and Rodrigo—composers she interpreted incomparably. If her Schubert and Brahms are not the last word in authenticity, they are still embodiments of charm, taste, and musicality. The recital concludes characteristically with *Adiós Granada*, which she sings to her own guitar accompaniment.

The career of this unique singer has more or less coincided with my own as a professional critic. No other singer has given me more pleasure in so many different musical areas. Obviously, I recommend the set wholeheartedly. The sound is fine, electronic "enhancement" of the oldest selections and all. Texts and translations are supplied along with notes by Frank Granville Barker expressing an enthusiasm for Victoria de los Angeles that matches my own. G.J.

**PLACIDO DOMINGO: Sings Tangos. Caminito; Nostalgias; Volver; Vida Mia; Mi Buenos Aires Querido; El Día Que Me Quieras; Uno; María; Alma de Bohemio; Cuesta Abajo.** Plácido Domingo (tenor); orchestra, Freddy Leutgebweiger arr. and

cond. DEUTSCHE GRAMMOPHON 2536 416  
\$9.98, © 3336 416 \$9.98.

Performance: **Overkill**  
Recording: **Fine**

If anybody should be able to "cross over" from the classical to the popular sphere it would be Plácido Domingo. Practically "born in a trunk," he had his first singing experience with his parents' zarzuela troupe, and he has performed in Spanish-language productions of such American lyric-theater standards as *Brigadoon* and *My Fair Lady* as well. In this new album of tangos for Deutsche Grammophon, however, he remains on the far side of the dividing line, sounding offhand and even, unfortunately, a little condescending, singing from outside the songs rather than from within them.

Domingo has, God knows, a right to a certain amount of vocal narcissism, but it can get in the way. Many of his vocal effects here sound self-conscious, more calculated than felt, so we get the singer and not the song. Vernacular music is not all that easy to sing well. The point can be made by comparing the inimitable Carlos Gardel's performances of these tangos with Domingo's, or (quicker and easier) by checking the tenor's current "Perhaps Love" album (CBS 37243), in which he goes up against John Denver in the latter's *Annie's Song*—and comes in second.

Does that mean that vocal perfection is the kiss of death for some music? Yes. Does it matter? Not, evidently, for many record buyers. "Perhaps Love" has gone gold, and these tangos are the rage in Argentina, where the dance originated. The orchestrations—cymbal crescendos and busy violins on a very wide screen—are overdressed, but you might enjoy *El Día Que Me Quieras*, the best song here, nonetheless.

—William Anderson

**PHILIP JONES BRASS ENSEMBLE:**  
*Battles for Brass.* Byrd: *The Battell*. **Banchieri:** *Udite Ecco le Trombe*. **Kuhnau:** *The Battle Between David and Goliath*. **Jenkins:** *Newark Siege*. **Handel:** *La Rejouissance*. Philip Jones Brass Ensemble, Philip Jones and Elgar Howarth cond. LONDON CS 7221 \$10.98.

Performance: **Militant**  
Recording: **Super**

From the glories of Renaissance and Baroque battle music, the Philip Jones Brass Ensemble has blasted out a disc that will turn doves into hawks in about five seconds. The works of Byrd and Kuhnau here, ingeniously arranged by, respectively, Elgar Howarth and Chris Hazell, are actually more effective played by brass than in their original keyboard versions. *The Battle Between David and Goliath*, for instance, is usually played on the barely audible clavichord; here the tempest has been taken out of that little teapot and put back on the battlefield.

Actually, a little of this sort of thing goes a long way, since composers portraying battles are generally sternly diatonic, assiduously avoiding modulation or chromaticism. After ten minutes of tonic and dominant, even the subdominant becomes something of an event. Nonetheless, if you are an aficionado of "*La Battaglia*" and dote on

brass, this record is your wildest dream come true. S.L.

**JOSEPH SMITH: Piano Recital.** Turina: *Sanlúcar de Barrameda (Sonata Pintoresca)*. **S. Bernstein:** *Guernica*. **Mendelssohn:** *Fantasy on "The Last Rose of Summer."* **Op. 15. Chasins:** *Fantasy on Themes from Weinberger's Opera "Schwanda the Bag-piper."* Joseph Smith (piano). ORION ORS 81402 \$8.98.

Performance: **Believable**  
Recording: **Very good**

Joseph Smith is a very good pianist. But it is his choice of repertoire that gives this record its special interest. The Turina *Sonata*

*Pintoresca*, which takes up all of side one, is a substantial work and an appealing one. Its Hispanic evocations are made believable by the skilled keyboard writing and the assured mastery of large, diverse forms, and Smith's performance is convincing too. These are musical frescoes on a big scale.

Side two is even more unusual. Seymour Bernstein's *Guernica* (from *New Pictures at an Exhibition*) is as cruel and unexpected as Picasso's painting itself. Mendelssohn's fantasy on *The Last Rose of Summer* is, in another way, equally unexpected (but a lot more charming). Abram Chasins' contribution is an old-fashioned opera fantasy on themes from a now almost forgotten opera. All are well played and recorded. E.S.

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# Popular Music Briefs



Anthony Crickmay/ICM Artists, Ltd.

**I**n the music business "cross-over" doesn't just mean that an occasional jazz or pop performer finds his way onto a classical label. It works the other way too, and a current example is the English conductor **John Lanchbery**, who has taken time from his duties with the world's leading ballet companies to arrange and conduct a score based on Cole Porter songs for the Agatha Christie movie *Evil Under the Sun*.

Peter Ustinov plays the detective Hercule Poirot, and others in the cast are Roddy McDowall, James Mason, Sylvia Miles, Diana Rigg, and Maggie Smith. The story is set in a Mediterranean resort in the 1930s, and Lanchbery evokes that time and place very effectively with Porter's music. "I used twenty-four tunes, seven of them unpublished," he said. "For a scene of Adriatic fishwives at work I needed something with a Greek feel to it and tried a song called *It's Greek to Me*, but it didn't work. An arranger can take liberties, so I scored *Why Should I Care?* for high mandolins, and that gave the right Eastern Mediterranean

atmosphere. One often thinks of Porter's very clever words, forgetting that many of his songs have excellent melodies. Those are the ones I was looking for.

"Since *Evil Under the Sun* is set in 1938, I was limited to tunes Porter wrote up to that point. But the producer wanted the score to sound like a 1940s musical, and I enjoyed arranging Porter's music to get that sound. Going through his manuscripts and notes, I felt Cole was with me, and in a curious way I grew quite fond of him. I would love to have met him."

Although Lanchbery makes his headquarters in Spain and has a house on the island of Mallorca, where much of *Evil Under the Sun* was filmed, his conducting engagements take him as far away as Australia. For several weeks before the royal command performance of *Evil Under the Sun* in England at the end of March, he was commuting between ballet companies in London and Paris. Then, after a conducting stint in Stockholm, he was scheduled for a couple of weeks in Boston conducting the Pops.

When we talked with Lanchbery he was in New York to conduct the Boston Pops at Carnegie Hall in a concert that included a suite from *Evil Under the Sun* called *Porter Meets Poirot*. "It was hard to select the tunes. The ones I'd used under the opening titles were very strong—I *Concentrate on You* and *I've Got You Under My Skin*—so I included them. And the ones for the closing titles are jolly good—I *Get a Kick Out of You* and *Night and Day* (probably the best one). And I love a little unpublished one

called *There's Nothing Like Swimming for Trimming the Old Physique*, so I put that in the middle, composed a couple of bridges, and there's the suite. It lasts only about six minutes, but it has a terrific finish, and the Boston Pops love a big Hollywood finish."

The Carnegie Hall audience loved Lanchbery and *Porter Meets Poirot*. After the concert we followed him to a party ASCAP was giving for the cast of *Evil Under the Sun*. Songwriters Sammy Cahn, Hal David, Jule Styne, and others entertained the guests with Porter stories and music. Ethel Merman sang her favorite Porter song, *I Get a Kick Out of You*.

To keep you entertained with Porter's songs there is a good

bit of his music in the catalog, such as Ella Fitzgerald singing "The Cole Porter Songbook," the best-selling item in the Verve series of jazz reissues. Among new Porter records there is an Atlantic album of Jimmy Lyon playing Porter's music on Porter's own Steinway, and a Rosemary Clooney album of Porter songs is due from Concord Jazz. An April release in RCA's Best Buy line is "Selections Featured in the Film *Evil Under the Sun*—Music of Cole Porter," with thirteen Porter songs performed by such artists as Tommy Dorsey, Glenn Miller, and Artie Shaw. We plan to get a kick out of it because we think that Porter is the top and that a big Porter revival would be delovely. —W.L.



Gary Gerehoff/Retna

**Y**ou want an r-&b revival? Well, folks, allow me to give you... **Clarence Clemons** and the Red Bank Rockers. I caught up with the great Springsteen sax-man and his All Star Soul Review recently at New York City's fabled Roseland Ballroom (which turns out

to be a pretty good venue for rock-and-roll, by the way) and for my trouble was treated to by far the most authentic and inspiring re-creation of late-Sixties Black Pop I have ever been privileged to witness. The band (a big one, with a four-piece horn section) is rehearsed to a



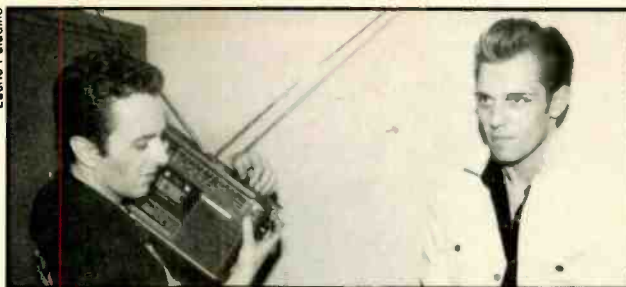
fare-thee-well, far from par for the usual run of oldies shows, and they were simply splendid, running the gamut from Ray Charles (*Georgia on My Mind*) to Otis Redding (*Can't Turn You Loose*) to Sly Stone (*Everybody Is a Star*) to make a veritable Dictionary of Soul. Clarence himself was every bit the showman you'd expect if you've seen him with Bruce, a great natural clown, and a musician worthy of the King Curtis mantle he obviously aspires to. A wonderful night. —S.S.

LAST issue, you may recall, we reported that the members of the Swedish rock group/conglomerate ABBA were each now richer than the King of Sweden. Perhaps coincidentally, news now comes from Moscow, where the official Communist Party youth newspaper, the snappily named *Komsomolskaya Pravda*, has just blasted the group after local screenings of *ABBA: The Movie*. According to Russian reviewer Ms. Olga Dmitriev, the band is guilty of "vulgarity, hypocrisy, and preaching the message that all that counts in the world is money." And, as if that weren't enough, she also adds that the film "concentrates on the rhythmic jerking of the girls' scantily-clad hips and the sensually distorted faces of the audience." Sounds like an average night at the Peppermint Lounge to me. —S.S.

THIS month two rock-and-roll novels, a collection of on-the-road photos, and a star biography have crossed our desk. The novels first.

**Platinum Logic** (Delilah, \$8.95), already a best-seller in England, is the work of Tony Parsons, a young British journalist who previously wrote *The Boy Looked at Johnny: The Obituary of Rock and Roll*. Sparing nobody, that little effort described an English punk scene peopled by hucksters, cretins, burnouts, careerists, and assorted jerks. *Platinum Logic* is just as cynical. Ostensibly the story of the rise and fall of record producer Nathan Chasen and his singer/wife Trilbee (probably based on Phil and Ronnie Spector), it also busies itself with thinly veiled portraits of about a zillion rock stars and music-biz execs with the usual array of vices. Pertinent quote: "If God doesn't destroy the Music Business, he owes a written apology to Sodom and Gomorrah." Entertaining, trashy, and a good read.

Next, there's Jerzy Kosinski's **Pinball** (Bantam \$7.95), which may be the first work by a major writer that uses rock as a backdrop. A metaphysical detective story, it concerns a down-and-out classical composer hired by a Mysterious Woman to discover the identity of Goddard, a rock superstar who has never been seen by anyone, not even the people at his record company. Kosinski fleshes out the



Joe Strummer and Paul Simonon of the Clash

story with some of his usual preoccupations about the psychology of violence, the mystery of sex, and the nature of identity, but it doesn't work. It's obvious that English is Kosinski's second language, and his take on rock is clearly that of an outsider—heavy handed, overheated, and surprisingly sophomoric. The idea that a phantom rock star might take his name from the now almost legendary Columbia Records head Goddard Lieberman could perhaps occur only to an émigré Polish novelist.

Then we have **The Clash Before and After**, a collection of four photos taken by Pennie Smith, accompanied by comments from members of the band (Little, Brown, and Co., \$8.95). Ms. Smith took the great cover shot for the "London calling" album (it's reproduced in the book), and her black-and-white work throughout is equally good. It reveals that the Clash are not revolutionary firebrands, as some

thought, but squarely in the tradition of rock-and-roll narcissism that extends all the way back to Elvis I. Four preening posers who know they are pretty boys, they are pleased enough about it to be able to laugh at themselves. I don't know what time will make of their music, but on the visual level they are *definitely* up there with the greats. Tons of fun.

Finally, we have **Barbra: A Biography of Barbra Streisand** by Donald Zec and Anthony Fowles (St. Martin's Press, \$12.95). The authors, both English, fail miserably in their attempt to penetrate the mind of their subject, and they sidestep the central question of her career: how the hell did Streisand get through the Sixties without looking like a laughable throwback to prehistory? Mawkish and gracelessly written, the book is *almost* redeemed by its closing comment that, despite all her successes, Streisand is "like Woody Allen's God, an underachiever." —S.S.

## Disc and Tape Reviews

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

Ⓢ = stereo cassette

Ⓢ = eight-track stereo cartridge

Ⓛ = digital-master recording

Ⓛ = direct-to-disc

Ⓛ = quadraphonic disc

Ⓛ = monophonic recording

The first listing is the one reviewed; other formats, if available, follow.

**AC/DC: For Those About to Rock (We Salute You)**, AC/DC (vocals and instrumentals). *Evil Walks*; *C.O.D.*; *Spellbound*; *Let's Get It Up*; *Inject the Venom*; *Snowballed*; and four others. ATLANTIC SD 11111 \$8.98, Ⓢ CS 11111 \$8.98, Ⓢ TP 11111 \$8.98.

Performance: **Rabelaisian**  
Recording: **Excellent**

Sales figures (five million copies of their last album) seem to say that AC/DC is nothing if not in the mainstream of pop consciousness. Yet this hard-rock, heavy-metal group don't get no respect no place. The pundits of the rock establishment dismiss

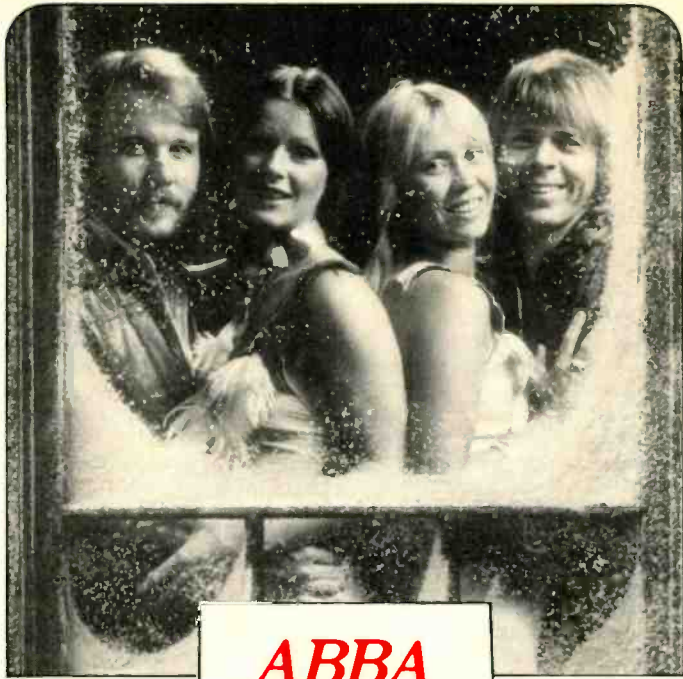
them with a brief "yecchh!" The adults who are "into" pop consider them juvenile, a dreary repeat of Led Zeppelin. And the music-biz trendies view them with the horror of an anorexic trapped in an Italian restaurant. That seems to leave only the kids and the record dealers to look forward to their new albums, but perhaps that's about to change.

This is the first AC/DC album that I've listened to with any attention, and—surprise!—I had a hell of a good time. Of course, it's hard *not* to pay attention to an AC/DC album. Even with the volume control set on "low genteel," this one is enough to rattle the ice cubes in your glass of Per-

rier. From the opening title song, which includes what sounds like cannon fire, right through the Rabelaisian grossness of *Let's Get It Up* and *Put the Finger on You* to the rambunctious inanity of *Inject the Venom*, AC/DC offers a truly roaring good time. The production and sound are spectacular, with a very fine balance for the vocals so that the lyrics can actually be heard in the midst of the maelstrom. If you're looking for intellect, sensitivity, or deep meaning, forget AC/DC. But if you're not ashamed of an occasional musical pig-out, they'll be right up your pepperoni-pizza alley. P.R.

(Continued overleaf)





## ABBA

**E**ACH successive ABBA album has been a little more gloomy than the last, despite the Swedish group's beginning as a cheerfully frivolous quartet borrowing American and British pop forms. Though ABBA is careful to include at least one potential hit single on every album (*When All Is Said and Done* and *One of Us* are the candidates on their new "The Visitors"), lately these have been ballads of remorse and regret.

There's no levity at all on "The Visitors," except perhaps for the dark humor of *Two for the Price of One*, in which a railway-station rest-room attendant answers a sex ad. The title song portrays a woman on the brink of insanity. *Slipping Through My Fingers* describes a young mother's feeling of failure with her baby daughter, and *Head over Heels* introduces a chatterbox dominatrix.

Perhaps ABBA is feeling the burdens of success. They are the most financially successful music group in the world, according to their own press handouts, with their name registered as a trademark and owner-

ship vested in a diversified holding company that actively trades on the Swedish and international stock markets. Then, too, they may be sharing their countrymen's insecurity since that Soviet submarine surfaced in a militarily sensitive Swedish harbor and was allowed to depart without being inspected ("I got lost," said the captain).

**W**HATEVER the source of their woe, with "The Visitors" ABBA has once again written, arranged, performed, and produced an album that for sophisticated pop entertainment far surpasses what most American and British groups can manage these days. —Joel Vance

**ABBA: *The Visitors*.** ABBA (vocals and instrumentals). *The Visitors; Head over Heels; When All Is Said and Done; Soldiers; Let the Music Speak; One of Us; Two for the Price of One; Slipping Through My Fingers; Like an Angel Passing Through My Room.* ATLANTIC SD 19332 \$8.98, © CS 19332 \$8.98. © TP 19322 \$8.98.

**JOHN ANDERSON: *I Just Came Home to Count the Memories*.** John Anderson (vocals); Pig Robbins (piano); Fred Carter Jr. (guitar); other musicians. *Would You Catch a Falling Star; Girl, for You; Stop in the Road; Trail of Time;* and five others. WARNER BROS. BSK 3599 \$8.98, © M5 3599 \$8.98, © M8 3599 \$8.98.

Performance: **For real kickers**  
Recording: **Good**

John Anderson is from the mold of Moe Bandy; he couldn't do anything fancy if he wanted to, but give him a good, straight-ahead tune and he'll give you an honest

roadhouse-jukebox performance. Those who want country singers to remember Hank Williams' dictum about mule manure on their boots will appreciate this; there are some mild strings in a couple of cuts, but no mushy Eddie Rabbitt-style crap. There are two or three good jukebox tunes here, and Anderson is even reasonably effective on the unlikely Bob Dylan tune *Don't Think Twice*, although there I think the sparkling guitar accompaniment by Fred Carter Jr. is the main factor. The backing is as straightforward as Anderson is. If you're pining for a country record that doesn't sound like a pop record, try this one. N.C.

**CARMINE APPICE.** Carmine Appice (vocals, drums); instrumental accompaniment. *Paint It Black; Blue Cafe; Sweet Seniorita; Drum City Rocker;* and six others. PASHA ARZ 37676, © AZT 37676, no list price.

Performance: **Skins alive**  
Recording: **Good**

Carmine Appice literally wrote the book on rock drumming. In fact, he wrote four of them, in addition to pounding the skins for Vanilla Fudge, Jeff Beck, and Rod Stewart, among other luminaries. And this album leaves little doubt that its main performer is a drummer; it comes about as close to using a drum set as lead instrument as any I've heard so far. And the drumming is something to hear, veritably taking charge of your speakers. Unfortunately, it's pretty easy to be lukewarm about the rest of it. Appice, who co-wrote eight of the songs, is an intelligent songwriter, but the material lacks the fire of his drumming. You get the feeling that if he really has something to say, it's something about the use of drums and not about the nominal subjects of these songs. He does have a decent rock voice, though, and the thought of umpteen other rock drummers turning green when they hear this is not unpleasant. N.C.

### RECORDING OF SPECIAL MERIT

**RAY BARRETTO: *La Cuna*.** Ray Barretto (congas, percussion); Joe Farrell (tenor and soprano saxophones, flute); Tito Puente (timbales); Charlie Palmieri, Carlos Franzetti (pianos); Jeremy Wall (synthesizers); John Tropea (guitar); Francisco Centeno (bass); Steve Gadd, Mark Craney (drums); Willy Torres (vocals). *La Cuna; Doloroso; Mambotango; The Old Castle; Pastime Paradise.* CTI 9002 \$8.98.

Performance: **Excellent**  
Recording: **Excellent**

The terrific Ray Barretto is the nominal leader on this 1979 date, which also features the hothouse pianistics of Charlie Palmieri, the elfin flute of Joe Farrell, John Tropea's full-hearted guitar, and the great Tito Puente on timbales. It's carefully arranged and produced, with the overall effect of a jam session in which *tipica* Latin moves easily into salsa and jazz. The three forms blend instead of making concessions, and it's all very danceable. The only disappointments are *The Old Castle*, which at times teeters on the melodramatic, and the English lyrics of *Pastime Paradise*, which are supposed to be psychosocial commentary but are just overloaded word-blurp. But the playing is really sensual, and the recorded sound is first-rate. Ay! J.V.

**BOBBY & THE MIDNITES.** Bob Weir (vocals, guitar); Billy Cobham (drums, vocals); Alphonso Johnson (bass, vocals); Matthew Kelly (harmonica, vocals); Brend Mydland (keyboards, vocals). *Haze; Too Many Losers; Far Away; Book of Rules; Me Without You; Josephine;* and three others. ARISTA AL 9568 \$8.98, © ACT 9568 \$8.98, © A8T 9568 \$8.98.

Performance: **Well intended**  
Recording: **Average**

This isn't exactly an all-star team—it's more like a convention of second fiddlers—



but it does attempt to give you some good, un gimmicky, blues-based rock. It would do it, too, if the material weren't so lifeless. I appreciate the effort to relieve us from radio drivel, but you've got to write these things before you can play them. If the group had given a little time to finding good, underexposed tunes that already exist, the project might have worked. Instead, they just dashed off a batch or—it sometimes seems—made them up as they went along after studio time was booked. Bob Weir does get to display a little more of his personality than he does in the Grateful Dead, but I was too bored by the tunes to care much. N.C.

**WILLIAM BOLCOM AND JOAN MORRIS:** *The Rodgers and Hart Album.* Joan Morris, Lucy Simon (vocals); William Bolcom (piano). *The Lady Is a Tramp; Ten Cents a Dance; Take Him; Spring Is Here; Bewitched; Where or When; This Funny World;* and six others. RCA ARL1-4123 \$9.98, © ARK 1-4123 \$9.98.

Performance: **Meticulous**  
Recording: **Good**

If this album were as good as the musicianship, the taste, the effort, and the obviously good intentions that went into it, it would be a masterpiece. As it is, it's a charming, meticulous genuflection to the popular genius of the great Richard Rodgers/Lorenz Hart songwriting team. Hart's lyrics had a remarkable suavity and sophistication somewhat like Cole Porter's, but they also expressed a wistful resignation and, at times, a dark sadness that made them unique. Such songs as *Where's That Rainbow?*, *Bewitched*, *Ten Cents a Dance*, and *It Never Entered My Mind* are only superficially caustic or amusing or world-weary; at bottom they are heartfelt cries of anguish, and Rodgers devised simple, deeply affecting melodies for them. They should, ideally, be performed by someone who is familiar with the brittle, wisecracking, tough-but-tender Thirties style.

As careful, precise, musical, and well-meaning as William Bolcom, Joan Morris, and (on two songs) Lucy Simon are here, they miss the smoky essence of these songs, substituting taste for irony and precision for emotion. If you want a quick lesson in the difference between a "good performance" and genuine popular art, I suggest you compare their versions with Ann Sothern's old MGM single of *Where's That Rainbow?*, Vivienne Segal's performance of *Bewitched* on the Columbia original-cast recording of *Pal Joey*, Ruth Etting's definitive *Ten Cents a Dance*, also on Columbia, and, finally, Frank Sinatra's superb *It Never Entered My Mind* on Capitol. P.R.

**JACK BRUCE AND ROBIN TROWER:** *Truce.* Jack Bruce (bass, vocals, keyboards); Robin Trower (guitar); Reg Isidore (drums). *Gonna Shut You Down; Gone Too Far; Take Good Care of Yourself; Fat Guy; Little Boy Lost;* and four others. CHRYSALIS CHR 1352 \$8.98.

Performance: **Pale**  
Recording: **Good**

Jack Bruce has never gotten over having been one-third of Cream. Eric Clapton has  
(Continued on page 87)

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**W**E don't often get unanimous agreement about how, when, and where a kind of American music got started. But even if it had died out, rockabilly would have earned its lines in the record book. We know exactly when it started: July 6, 1954. And where: 706 Union Avenue, Memphis, Tennessee, the address of Sun Records. And how: Elvis Presley, backed by Scotty Moore on guitar and Bill Black on bass, sang *That's All Right* and *Blue Moon of Kentucky*, blending the sounds of blues, the then-fledgling rhythm-and-blues, country, and gospel in a way that made Sam Phillips' eyes light up. Soon to be followed by a whole nation's jukeboxes.

Rockabilly did not last as the nation's hottest craze, but neither did it die out, probably because its basic elements—which Phillips had been gradually assembling, waiting for the catalyst that turned out to be named Elvis—made a collective statement that got us a little closer to understanding ourselves. It showed the inextricable mingling of our culture's black and white roots at a time when the country was ready for a change in attitude about the colors people come in (the Supreme Court's desegregation ruling was that same year, 1954). Rockabilly conveyed something of this to the young, who would have to do most of the changing. To a degree, they did. The price they exacted was that rockabilly give them a good time (which included helping them feel properly rebellious), and it did. Phillips unleashed his second wave: Johnny Cash, Jerry Lee Lewis, Carl Perkins, Charlie Rich, Roy Orbison . . . . Today rockabilly flourishes in a subdued way, but Cash continues to thrive on a smoothed-out version of it, newcomers such as Robert Gordon and Joe Ely seek to give it new blood, and its influence continues—you heard it just the other month in ELO's pop hit *Hold On Tight to Your Dream*.

**A** JUMBLE of rockabilly, old and fairly new, has been collected by Epic in two double-disc albums (and there will be another one, we are told) called "Rockabilly Stars." They purport to demonstrate, as liner-note writer Gregg Geller puts it, "how this music and its artists fared under the aegis of one company, CBS Records." Fair enough, but what about that reference in the title to *stars*? Turns out there are several names here of the . . . or . . . magnitude of Ersel Hickey, whose big moment came when he once hit No. 73 on the charts.

Certainly Cash, Carl Perkins, the Everly Brothers, and Charlie Rich were (and in some cases still are) rockabilly stars. But even in those cases these albums miss their most important or influential performances. Columbia had the Everlys *before* they were hot, and Rick Nelson long after he was; Cash had already cut his hottest stuff (for the time being) for Sun, and such stars as Elvis, Jerry Lee Lewis, Roy Orbison, and Buddy Holly were signed by other labels. Such contract vicissitudes give the collection its tone: either you don't get a seminal figure or you get him at the wrong time and don't get a seminal performance. Carl Perkins appears no fewer than nine times, but

his most influential work for some time to come was then in the past, when he was with Sun, especially *Blue Suede Shoes*. For Columbia he tried to follow that up with dreary sequels, such as *Pink Pedal Pushers* and *Pointed Toe Shoes*, that I suspect he and his fans would just as soon forget.

Such "stars" as Larry and Lorrie Collins, Sleepy LaBeef, Sid King and the Five Strings, and Ronnie Self weren't exactly household names in the heyday of rockabil-



Carl "Blue Suede Shoes" Perkins

## Rockabilly Stars

ly. They did make rockabilly music, and/or its precursors, at times (as did Little Jimmy Dickens, who is represented twice in the collection), but you might infer from the space they're given here that the Collins Kids *invented* it. You'd get a weird sense of proportion about rockabilly in general if this collection were all you had to go by.

Still, you do get some interesting music—Marty Robbins' cover of *That's All Right*, for example. Robbins had a try-anything attitude in those days (he had already tried umpteen different kinds of work before he got into music), and he did give rockabilly a go, even if his bets were hedged a bit with country-swing twin fiddles behind him. His version did go over more, as I recall, as a country record than as an example of this new thing. A lot of people had been excited

by the song but still weren't quite ready for Elvis. Whatever the ramifications, though, Robbins did a nice piece of work.

The collection even catches Carl Smith doing it. Carl, once married to June Carter before she became June Carter Cash, had started out in bluegrass and was as thoroughly hillbilly as Little Jimmy Dickens was, but he liked tinkering and is caught here singing the unlikely *Cut Across Shorty*. He sounds a bit lost, but that's the kind of little thing I like about this project.

**U**NFORTUNATELY, there aren't quite enough of such little things to overcome the dearth of *big* things. The authority of Johnny Cash's late-Seventies *I Will Rock and Roll with You* and Charlie Rich's *Big Boss Man* contrasts rather too boldly with everything else, exposing most of it as essentially me-tooism. Taken home with modest expectations, the albums won't serve you poorly. They will give you examples of rockabilly, some of them a little funky and far out, and a few tunes and performances—though not many, on a percentage basis—that still hold up admirably as music, labels aside. But if you're looking for these examples to be *definitive*, one after another down the line, you're on the wrong Yellow Brick Road. This one doesn't lead to the citadel of rockabilly, it just circles around the grounds.

—Noel Coppage

**ROCKABILLY STARS, VOLUME 1.** The Collins Kids: *Wait for the Light to Shine; Party*. Everly Brothers: *The Sun Keeps Shining*. Little Jimmy Dickens: *Rockin' with Red*. Marty Robbins: *That's All Right*. Johnny Horton: *Honky Tonk Hardwood Floor*. Billy Brown: *Did We Have a Party*. Carl Perkins: *Pink Pedal Pushers; Pointed Toe Shoes; State of Confusion; Sorry Charlie*. Scotty Moore: *Milk Cow Blues*. Link Wray: *Mary Ann; Raw Hide*. Ersel Hickey: *Bluebirds over the Mountain*. Carl Smith: *Cut Across Shorty*. Bob Luman: *Mystery Train*. Mac Curtis: *Honey Don't*. Johnny Cash: *I Will Rock and Roll with You*. Allan Rich: *Break Up*. Mickey Gilley: *Lawdy Miss Clawdy*. Charlie Rich: *Big Boss Man; No Headstone on My Grave; I Feel Like Going Home*. EPIC EG 37618 two discs, © EGT 37618, no list price.

**ROCKABILLY STARS, VOLUME 2.** The Collins Kids: *Missouri Waltz; Just Because; Mercy*. Lorrie Collins: *Rock Boppin' Baby*. Larry Collins: *Whistle Bait*. Sid King and the Five Strings: *Gonna Shake This Shack Tonight; Sag, Drag and Fall*. Everly Brothers: *Keep a Lovin' Me*. Little Jimmy Dickens: *A Hole in My Pocket*. Carl Perkins: *Jive After Five; All Mama's Children; Restless; Daddy Sang Bass*. Ronnie Self: *Bop-a-Lena*. Link Wray: *Ain't That Lovin' You Babe; Hand Clapper*. Sleepy LaBeef: *Shame, Shame, Shame; You Can't Catch Me*. Rick Nelson: *That's All Right*. Billy Lee Riley: *I Got a Thing About You Baby*. Bob Luman: *Big River*. Mickey Gilley: *I'm the Number One Rock & Roll C&W Boogie Blues Man; Rockin' My Life Away*. EPIC EG 37621 two discs, © EGT 37621, no list price.

long since gone on to other things, and Ginger Baker, the last I heard, was operating a recording studio in Nigeria, but Bruce resolutely marches on to the past.

This latest attempt to reproduce Cream features the usually abrasive and indulgent guitarist Robin Trower. On this session he plays with an unwonted but becoming modesty, deferring to Bruce, who is also cautious. The subject matter of most of the songs—emotional disintegration—has some urgency, but the music has the detachment of a routine autopsy. *J.V.*

**JIMMY BUFFETT:** *Somewhere over China.* Jimmy Buffett (vocals, guitar); Coral Reefer Band (instrumentals); other musicians. *Where's the Party; Lip Service; Steamer;* and six others. MCA MCA-5285 \$8.98, © MCAC-5285 \$8.98.

Performance: **Whimsical**  
Recording: **Good**

There was a time, not too long ago, when Jimmy Buffett was one of the more amusing musicians around. His raffish, laid-back tales of life on the Florida coast had a dark, gritty humor, and his performances were nonchalantly impertinent. His last few albums, however, have been rather coy and strained. This latest descends to a kind of whimsy that's only one or two steps above a *Beverly Hillbillies* episode or an old Charlie Weaver monologue. Buffett now seems intent on projecting the image of a down-home humorist—wise, warm, and wonderful. Just a glance over the titles here will give you an idea of what to expect. Among them are *It's Midnight and I Ain't Famous Yet, When Salome Plays the Drum, Lip Service, and I Heard I Was in Town.* Aren't they cute? He rebounds briefly in a really fine performance of the old Frank Loesser hit *On a Slow Boat to China* in which he sounds like his former disreputable self, but that arrives only at the very end of the album, which is too late. *P.R.*

**CHIC:** *Take It Off.* Chic (vocals); instrumental accompaniment. *Flash Back; Take It Off; Just Out of Reach; Telling Lies; Stage Fright; So Fine;* and four others. ATLANTIC SD 19323 \$8.98, © CS 19323 \$8.98, © TP 19323 \$8.98.

Performance: **Brittle and stylish**  
Recording: **Good**

Chic's name is apt: the group certainly fits the dictionary definition of "effective in style" and "fashionable." Chic enjoyed exceptional popularity during the reign of disco, and understandably so: their arrangements are sharply defined, crisp, business-like, and fashionably cool. This is dance music that demands a certain distance between the partners; there is no room for warmth or emotional exchange. It is designed for the stylishly dressed, sterile-looking men and women who imitate the mannequins in designer-jeans ads and hang around discos trying to appear bored when all they want is for someone to notice them. Chic's music is meant to appeal to those concerned with surfaces, for it is all clever packaging and skillfully produced effects. I find such ultra-cool, self-proclaimed lack of soul depressing, and who needs that? *P.G.*

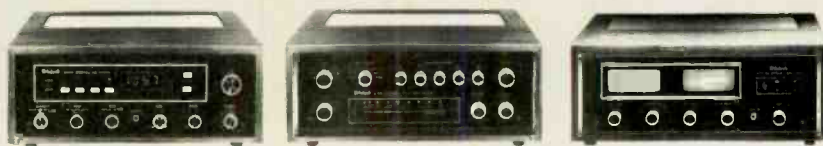
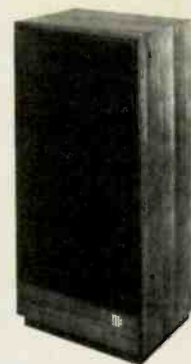
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**BURTON CUMMINGS:** *Sweet Sweet*. Burton Cummings (vocals, keyboards); vocal and instrumental accompaniment. *Real Good*; *Mother Keep Your Daughters In*; *Gettin' My Daddy's Car*; *You Saved My Soul*; *Something Old, Something New*; *Bad News*; and four others. ALFA AAB-11007 \$8.98, © ACB-11007 \$8.98.

Performance: **Good**  
Recording: **Good**

Burton Cummings, former lead singer of the Guess Who, has improved since he embarked on a solo career a few years ago. His voice is beginning to mellow and his phrasing is better. He now sounds something like a younger B. J. Thomas. Despite his artistic growth, however, Cummings may have a demographic problem. "Sweet Sweet" is a pleasant, well-produced, and well-sung collection of ballads and mild, mid-tempo jumpers for the MOR/AOR audience. But young adults have to be careful with a buck these days, so I wonder about its market chances. I hope it is successful, for there are some solid performances and ingratiating tunes here: *Real Good* (with master guitarist Steve Cropper), *Bad News*, and the title track. Cummings has proved himself a survivor so far, and this album shows he's still in there pitching. J.V.

**DEPECHE MODE:** *Speak & Spell*. Depeche Mode (vocals and instrumentals). *New Life*; *Puppets*; *Dreaming of Me*; *Boys Say Go!*; *Nodisco: What's Your Name?*; *Any Second Now (Voices)*; *Tora! Tora! Tora!*; and three others. SIRE SRK 3642 \$8.98, © M55 3642 \$8.98.

Performance: **Run-of-the-mill**  
Recording: **Okay**

The evidence from Depeche Mode (*Fast Fashion*) is that there are no new musical ideas, just new synthesizers to play the old ones on. "Speak and Spell" is a smorgasbord of electronic styles ranging from Mer-

sey Beat to schoolyard songs to Eurodisco to surfing music, all strained through a nothing-to-get-excited-about British sensibility and recorded in the latest minimalist fashion. At its best, "Speak and Spell" suggests what an AT&T switching station might sound like from inside the main transformer. At its worst, which happens more often, it recalls those mopey British bands of the Sixties who dressed in powdered wigs and livery and sang satires on tea time and Parliament in droning monotonous. M.P.

**DR. JOHN:** *Plays Mac Rebennack* (see **Best of the Month**, page 67)

**EYE TO EYE.** Eye to Eye (vocals and instrumentals); instrumental accompaniment. *Hunger Pains*; *Life in Motion*; *Nice Girls*; *More Hopeless Knowledge*; and four others. WARNER BROS. BSK 3570 \$7.98, © M5 3570 \$7.98.

Performance: **Electro-perked**  
Recording: **Good**

You might like this. Or it might drive you nuts. Or both. Julian Marshall and Deborah Berg, under the direction of Steely Dan producer Gary Katz, provide some nice vocals and a couple of songs that are more interesting than we're accustomed to, but the instrumentals sound like a combination of Morton Denny and Kraftwerk. Except in *More Hopeless Knowledge* (one of the interesting ones), the album is dominated by herky-jerky rhythms electronically enhanced, which simply means that a lot of synthesizer shrieks are superimposed. It may remind you of the singularly annoying exaggerated percolator sound in a Maxwell House commercial. Most of the material seems designed to be treated this way. It's different, but is it music? N.C.

**MICHAEL FRANKS:** *Objects of Desire*. Michael Franks (vocals, guitar); vocal and instrumental accompaniment. *Jealousy*;

*Laughing Gas; Tahitian Moon; No One but You;* and five others. WARNER BROS. BSK 3648 \$8.98, © M5 3648 \$8.98.

Performance: **Vague**  
Recording: **Very good**

Michael Franks writes some delightful lyrics, but the witty conceits and rhymes here are buried in songs that are weak on melody and further debilitated by his reedy, indecisive vocals. Great efforts have been made to surround him with sympathetic arrangements and instrumental soloists; the backup musicians fall to their task with some cheerfulness, but it is obviously something of a chore.

The material also isn't as challenging structurally as on his previous albums, and in some cases the songs are throwaways that go on too long, though one or two lines are memorable for charm and word play. The best item here, *Wonderland*, about a loser's bar, suffers from too much repetition of the chorus (two minutes out of a five-minute total). Still, there are those winning lines: "Used to be mellow/Till you got hold of me/Now I feel like Othello/I'm dyin' of jealousy" (*Jealousy*); "All the people in Wonderland have no regrets/They've all misplaced their *raison d'être*s" (*Wonderland*); "I couldn't stand another perfect day/Of living in this paradise without an end/Guess I needed to feel confused again" (*Tahitian Moon*). See what I mean? J.V.

#### RECORDING OF SPECIAL MERIT

**HOT RIZE: *Radio Boogie*.** Hot Rize (vocals and instrumentals). *Radio Boogie; Ain't Gonna Work Tomorrow; Wild Bill Jones; Just Ain't; No Brakes; Walkin' the Dog; Tom and Jerry;* and five others. FLYING FISH FF 231 \$7.98.

Performance: **Solid bluegrass**  
Recording: **Very good**

"Hot Rize" was the name of a special ingredient (Lester Flatt pronounced it "spatial") of Martha White Self-Rising Flour, which for many years sponsored Flatt and Scruggs, and later Flatt's Nashville Grass, on the radio and the teevee. So it's a name with some bluegrass tradition, and the young men in this band live up to it. In three or four years, Hot Rize has established itself as one of the best bluegrass bands in the country. Ironically, the boys are "outsiders" from the "wrong" mountains; they're from Colorado, not Appalachia, and are much better known in the West than in the East. "Radio Boogie" could change that.

Tim O'Brien is a fine singer, an excellent fiddler who'll remind you of Kenny Baker's clean counterpoint, and maybe even a better mandolin player. And the other three guys—Pete Wernick, Charles Sawtelle, and Nick Forster—may be just as good. Musicianship abounds, as it should in a bluegrass band, and here it's complementary rather than competitive (as it often is in bluegrass bands). If you're new to the form, you could take this as an example of how to do it. Flying Fish seems to be touting the group as "modern" as well as "traditional." I don't hear that—they sound pretty traditional to me. It's how it's done that counts, and Ole Lester would've liked this. N.C.

(Continued overleaf)

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## Claudia Schmidt

**H**ERE'S another example of how the most interesting stuff—maybe 80 per cent of it anyway—is happening on the small labels. Flying Fish, which seems to be mounting a folk-music revival all by itself, has another winner in Claudia Schmidt. "Midwestern Heart," her second album, reveals a musical sprite, a genuine free spirit at work—and she does good work. Accustomed to working alone, she brought in a limited number of sidemen (and one woman) for this album, and the way she uses

them parallels her unfettered approach to writing and singing. Conventional ideas about rhythm and lead instrumentation are tossed out, and each song is given a unique complement of instruments, often one that's off-the-wall by conventional thinking. *Give Me Some* has a dulcimer, a trap set, an electric bass, and a steel drum; *Man Who Visits Me* has a twelve-string guitar, a cello, and a harmonica; *Dolphin Story* has a dulcimer, an acoustic bass, and a pennywhistle; and so on.

Schmidt sounds like a committed folkie, and her voice echoes others: Joni Mitchell, Cynthia Gooding, the late Sandy Denny. Her songs (she wrote all but three here) are well crafted and wide ranging. *Man Who Visits Me* deals sympathetically with a peeping tom; *Dolphin Story* spins a myth about how the dolphin was created from a woman by a jealous god after she refused his advances; and *Vampire*, written by Michael Smith, is about the appeal of being, er... non-dead. That last one, by the way, isn't anywhere near as bizarre as you'd expect. Instead, it's folk-pretty with enough stuff in it to keep you awake and glad to be alive. And, speaking of folk-pretty, there's another song, *Broken Glass*, that's just smashing, with a dandy melody and such lines as, "My memories of you whirled me back to boiling blood and wrath/And I wonder if you've stumbled on a lighter path." Go get 'em, small labels.

—Noel Coppage

**CLAUDIA SCHMIDT: *Midwestern Heart*.** Claudia Schmidt (vocals, dulcimer, twelve-string guitar, pianolin); Kelly Sill (bass); Judy Roberts (piano); other musicians. *Give Me Some; Man Who Visits Me; The Darkening; Vampire; Broken Glass; Farewell My Friends; Alley Dancer; Coming Home to You; Afternoon on a Woodpile; Dolphin Story; This Is the Hour.* FLYING FISH FF 241 \$8.98.

**MAGIC SAM: *Live*.** Magic Sam (guitar, vocals); Eddie Shaw (tenor saxophone, vocals); A. C. Reed (tenor saxophone); Tyrone Carter (electric piano); Mac Thompson (bass, vocals); Bob Richey, Robert "Huckleberry Hound" Wright, Sam Lay (drums); Bruce Barlow (bass). *Every Night About This Time; Mole's Blues; Tore Down; You Were Wrong; Come On in This House; Riding High; I Need You So Bad; Strange Things Happening; All Your Love; Sweet Home Chicago*; and six others. DELMARK DL-645/646 two discs \$9.98.

Performance: **Exciting**  
Recording: **Okay**

Magic Sam (Samuel Maghett), the crown prince of South Side Chicago blues during the Fifties and Sixties, died of a heart attack in 1969 when he was thirty-two. He never became as well known as Muddy Waters or Howlin' Wolf, but he was a wow on the tough club circuit. In 1957 he cut *All Your Love* for the local Cobra label. Its eerie chord progression and dramatic vocal made it a regional hit. I remember it well,

having tuned in one night to black radio station WGES to be knocked almost out of my chair. In the mid-1960s Sam was signed to Delmark Records, a white-owned blues-enthusiast label, and made two albums for them. These led to his booking at the 1969 Ann Arbor Blues Festival, where his performance converted a lukewarm crowd into raving true believers. Had he lived, he would have had a comfortable career on the campus circuit and in Europe.

The first disc of this set is compiled from on-the-spot recordings at the Alex Club in Chicago in 1963-1964, the second from recordings made at the Ann Arbor Festival, where the amplifier system was designed by the same team that, a few months later, rigged up Woodstock. Despite obvious limitations, the sound is better than you'd expect.

Delmark's claim that Sam's live performances differed significantly from his studio work is proved by this album. He was an exuberant performer who obviously liked working in front of an audience. One of the pleasures of this set is comparing Sam "at

home" with a black crowd at the Alex Club and gradually adjusting to the enthusiasm of a white crowd at Ann Arbor. Most bluesmen at that time had seldom if ever played for white audiences. I can recommend this collection not only to blues fans but also to students of American popular musical history. J.V.

**CURTIS MAYFIELD: *Love Is the Place*.** Curtis Mayfield (vocals); vocal and instrumental accompaniment. *She Don't Let Nobody (But Me); Toot an' Toot an' Toot; Babydoll; Love Is the Place; Just Ease My Mind*; and three others. BOARDWALK NBI 33239 \$8.98.

Performance: **Eclectic**  
Recording: **Good**

As one of the soul survivors of r-&-b's golden age, Curtis Mayfield deserves a close listen no matter what he happens to be doing. Thistime around, he tries out a number of new directions. On the opener, *She Don't Let Nobody (But Me)*, he does a bit of scat singing à la Al Jarreau, but he seems uncomfortable and awkward with it, and that's all he does here in that style. On a couple of numbers he uses light reggae rhythms, and on *Babydoll* he talks his way into the song the way Isaac Hayes often does. About half the second side seems borrowed from the country-music repertoire, although these are original Mayfield compositions. Sound like a strange album? It is. But you won't be bored, for it's impossible to guess what's coming next.

For old Mayfield buffs, there is a more traditional treat. On the last selection, *Come Free Your People*, Mayfield stops experimenting and settles down to doing what he does best, which is to deliver one of his contemporary message songs in the gospel-flavored, full-hearted style that is his hallmark. It's the clincher for the whole set. P.G.

**JUNE MILLINGTON: *Heartsong*.** June Millington (vocals, guitar); vocal and instrumental accompaniment. *I'll Keep Holding On; Coconut Mentality; When Wrong Is Right; Trouble; Rosarita*; and five others. FABULOUS LF929 \$7.

Performance: **Good**  
Recording: **Middling**

June Millington, formerly of Fanny, an all-female rock group that achieved some popularity in the early Seventies, here steps out in her first solo album. Her music bears a superficial resemblance to that of Toni Brown. Or at least that reference will put you in the ballpark: it's a light, vaguely jazz-influenced approach. She writes and sings with some skill, although as represented here she is more musician than lyricist. Her lyrics are above average by today's standards, but below what the average has to be if people are to get as excited about pop music as they were a few years ago. But what really troubles me is the hybrid, amorphous style of the instrumentals. I get the impression they are as slick as the budget would allow and will get slicker the minute the budget is increased. So I have my good moments and my bad moments with this album, but there's a talent here that bears watching. N.C.

**T. S. MONK: *More of the Good Life*.** T. S. Monk (vocals and instrumentals); instru-



mental accompaniment. *Everybody Get Up and Dance; Too Much Too Soon; Falling in Love with You; Oh! Oh! Speedo*; and three others. MIRAGE WTG 19324 \$8.98, © D5 19324 \$8.98, © TP 19324 \$8.98.

Performance: **Polished funk**  
Recording: **Good**

Perhaps it is beside the point to note that T. S. Monk, the popular new funk group, includes both the son (Thelonius Monk Jr.) and daughter (Boo Boo Monk) of the Thelonious Sphere Monk, the great jazz pianist who died in February. Then again, probably many of the junior Monks' fans are unfamiliar with the father's historic role in the development of modern jazz. Just chalk it up to the generation gap; T. S. Monk's material is certainly not in Thelonius Monk Sr.'s league, but it is evidently what a young pop-music audience wants to hear.

The emphasis in "More of the Good Life" is on the heavy beat of black dance music. The lyrics obviously aren't intended to be memorable, yet there are many imaginative touches. A few tracks jump out with special insistence, most notably *Falling in Love with You*, which has an exceptionally appealing melodic line. Thelonius Jr., a singer-percussionist, and his vocal collaborators Yvonne Fletcher and Boo Boo Monk sing with real style and cohesion. Overall, the album evidences sound musicianship. It doesn't knock me out, but it's well done and makes pleasant listening. **P.G.**

**POLYROCK: Changing Hearts.** Polyrock (vocals and instrumentals). *Changing Hearts; Love Song; Quiet Spot; Cries and Whispers; Mean Cow; In Full Circle*; and five others. RCA AFL1-4043 \$8.98, © AFK1-4043 \$8.98.

Performance: **Very good**  
Recording: **Very good**

The accent in Polyrock is on poly, as in polyester, rather than on rock, as in down-to-earth. Recording under the aegis of New Music composer Philip Glass, Polyrock is mainstream avant-garde—no longer such a contradiction when one considers what loft apartments in New York's Soho are fetching these days. The band did do at least two things right on "Changing Hearts": they kept the tempo brisk, and they didn't wear their intellect on the inner sleeve. Rather than another pretentious art-rock statement, "Changing Hearts" stands on some solid musical merits, not least of which is a cool energy. The songs here are built up on discrete layers of synthesized keyboards and shot through with agile, inquisitive guitar lines—basically rhythm-conscious music with some interesting melodic passages. Although the vocals are of the mannered, arty sort that is rapidly wearing out its welcome on my turntable, the vigorous pacing here makes them a little easier to overlook. "Changing Hearts" won't change your mind about avant-garde music, but it's fresh and lively enough for those who like their art to rock, and it poses some questions for those who like their rock to puzzle.

M.P.

**PRISM: Small Change.** Prism (vocals and instrumentals). *Don't Let Him Know; Turn On Your Radar; Hole in Paradise; Rain; Stay; Heart and Soul*; and four others.

CAPITOL ST-12184 \$8.98, © 4XT-12184 \$8.98.

Performance: **Radio-ready**  
Recording: **Very good**

You could take the album title to mean the songs won't be very different from much of the stuff on the radio, especially Foreigner's. Prism has the same kind of strained earnestness about material that's mostly doggerel. Yet it's not every day that a band seemingly custom-made for bubblegum rock records a Jimmie Rodgers tune (*In the Jailhouse Now*), and it's rare that you hear such a band this well recorded. There's a crispness and transparency about the engineering job on "Small Change" that lets

every drop of music come through in its best light. The band takes a Led Zep approach to the Rodgers tune, incidentally, and pretty thoroughly messes it up, but the boys are competent enough at most of what they do, songwriting aside. It comes down to whether you're young enough not to have heard it all before. That would make you mighty young, but you'll get over it. **N.C.**

**JIM REEVES & PATSY CLINE: Greatest Hits.** Jim Reeves, Patsy Cline (vocals); instrumental accompaniment. *Have You Ever Been Lonely; Welcome to My World; He'll Have to Go; Crazy; Sweet Dreams; Four Walls; Golden Memories and Silver Tears*; and three others. RCA AHL1-4127

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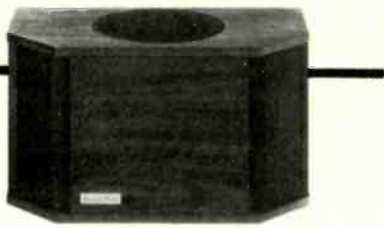


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Performance: **Okay as a sampler**  
Recording: **Well-preserved**

The gimmick here is a grafted-together duet by two singers who have been dead for years and who never recorded together while alive. Both recorded *Have You Ever Been Lonely* in the early Sixties—with two different producers—and the notes say, "It was merely by coincidence that the song was recorded almost in the same key." That must mean a half-step apart, and *that* must mean the producer and the engineer of this, Owen Bradley and Bill Harris, respectively, juggled tape speeds, as they seem to be in the same key now. They have Reeves singing a line and then Patsy singing a line and both singing the refrain—in unison. Modern technology apparently stops short of turning a lead line into a harmony line. Otherwise, you get five of Jim's greatest hits and four of Patsy's, all of which are already available in countless repackagings. But if you haven't yet added either Reeves or Cline to your collection, and want only the best of their best, 'twill serve. They were among the first of the country-politain singers—although Cline, echoing Bessie Smith, was more than that—and their work continues to be influential today. *N.C.*

**RENAISSANCE: Camera Camera.** Renaissance (vocals and instrumentals). *Camera Camera; Faeries; Remember; Bonjour Swansong; Tyrant-Tula; Okichi-San;* and three others. IRS SP 70019 \$8.98, © CS 70019 \$8.98, © 8T 70019 \$8.98.

Performance: **Good**  
Recording: **Good**

Renaissance seems to have become synthesizer-addicted since its work last came my way, and that's the biggest thing wrong with this album. As far as I'm concerned, the debate is over: the synthesizer is not a musical instrument but a gadget. If you listen to this and imagine it done George Martin-style, with a grand piano and an *Eleanor Rigby*-size string ensemble, you might see what I mean. The soullessness of oscillator-generated pure tones just doesn't benefit the program. But Renaissance continues to have good melodic ideas and write better than passable lyrics, and its feel for what the instruments ought to be doing—putting aside for a moment what instruments they are—is still good and still seemingly grounded in classical orchestration. Annie Haslam is quite effective, too, when she is surrounded by harmonies, where the brassy edge on her voice can do some proper cutting-through. Alone, she indulges a bit in mosquito-imitating vibrato. But the damned synthesizer is the main problem. *N.C.*

**SMOKEY ROBINSON: Yes It's You Lady.** Smokey Robinson (vocals); vocal and instrumental accompaniment. *Tell Me Tomorrow; Old Fashioned Love; Destiny;* and six others. TAMLA TL-6001 \$7.98, © T75-6001 \$7.98, © T8-6001 \$7.98.

Performance: **Uneven**  
Recording: **Very good**

It was almost twenty-five years ago that Smokey Robinson and the Miracles helped Berry Gordy launch Motown Records with

*Get a Job.* A local Detroit release, it was the seed that sprouted into one of the most successful independent record companies in the world. Subsequent Motown releases altered the sound of America's pop music, and all through the label's first decade Robinson played an important role in its phenomenal growth, not only as a singer and songwriter but also as a producer and guiding light for the stream of budding talent that collectively established the "Motown sound."

Robinson quit the Miracles some ten years ago, but he has continued to write songs and make albums for Tamla, a Motown subsidiary label introduced in 1959 with—not so coincidentally—a Miracles release. This new Tamla album demonstrates that Robinson, now forty-two, still has his vocal equipment, but that familiar smooth, high-pitched voice can also dull the senses when it is applied to monotonous material. Unfortunately, that happens all too often here, though not on the four songs Robinson wrote himself. The unevenness of this release makes me wonder why Smokey Robinson subjects himself to producers, arrangers, and songwriters who are much less talented than he is. *C.A.*

**SISTER SLEDGE: The Sisters** (see *Best of the Month*, page 64)

**SNEAKER.** Sneaker (vocals and instrumentals). *Don't Let Me In; More Than Just the Two of Us; Get Up, Get Out; Millionaire; Looking for Someone;* and four others. HANDSHAKE FW 37631, © FWT 37631, no list price.

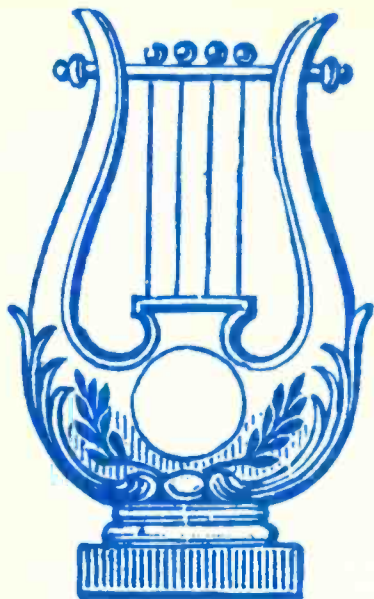
Performance: **Good**  
Recording: **Good**

Sneaker is a Los Angeles-based group with thickly layered vocal harmonies à la Air Supply, Orleans, and the Little River Band. Their material here mainly is aw-gee-you're-swell love ballads; the exception is *Don't Let Me In* by Walter Becker and Donald Fagan (alias Steely Dan), which has that juo's customary dose of vinegar. Although Sneaker's sound is smooth, it is largely derivative, and I don't advise you to wear out your best shoes running to the record store for it. *J.V.*

**AL STEWART: Live/Indian Summer.** Al Stewart (vocals, guitar, keyboards); Shot in the Dark (vocals and instrumentals). *Here in Angola; Pandora; Indian Summer; Delia's Gone; Princess Olivia; Running Man; Time Passages; Merlin's Time; On the Border; Year of the Cat;* and five others. ARISTA A2L 8607 two discs \$13.98, © A2CT 8607 \$13.98, © A28T 8607 \$13.98.

Performance: **Good**  
Recording: **Good**

Al Stewart may not use the King's English to any real purpose, but he does use it. He is one songwriter you can distinguish linguistically from the average bozo on the street. He seems fond of melodies too, and the first side of this two-disc set finds him at play again in both fields in some bright, if inconsequential, new songs. Think of it as old-time-drawing-room-chat music and you'll be all right. Since that first side was recorded in the studio, this is only a three-quarters live album. The rest is available on *(Continued on page 95)*



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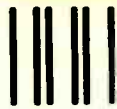
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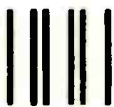
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other records, probably all owned already by the members of Stewart's sizable cult, but I'm gratified that he included the less familiar thing about Nostradamus in there with *Year of the Cat* and *Time Passages*. He and his group make a fine, scuffed-up but light sound that isn't much different from the way it sounded the first time, song for song, in the studio. But they give you actual music intelligently played. This set would serve nicely as an introduction to Al Stewart. *N.C.*

**TOMPALL AND THE GLASER BROTHERS: *Lovin' Her Was Easier*.** Tompall Glaser, Chuck Glaser (vocals); Jim Glaser (vocals, guitar); instrumental accompaniment. *Lovin' Her Was Easier; It'll Be Her; Busted; Feelin' the Weight of My Chains; Just One Time; The Last Thing on My Mind*; and four others. ELEKTRA SE-542 \$8.98, © 5CS-542 \$8.98, © 5T8-542 \$8.98.

Performance: **High plains harmonies**  
Recording: **Good**

The Glaser Brothers split up in 1973, and Tompall has had a fair-to-middling solo career since, but here is an album that suggests brothers who can sing should sing together as long as they can stand it. These boys, in case you forgot or never heard, have a high, dry, Western sound reminiscent of the Sons of the Pioneers (that's why they sounded so good backing Marty Robbins on his cowboy songs twenty years ago), which may be a natural part of their coming from the plains of Nebraska. But they like to do the more moist and emotional songs of the Southeast, making for a combination that has been missing, and missed, around Nashville.

The program here is a careful blend of contemporary songs and neglected standards and near-standards such as Harlan Howard's *Busted*, Don Gibson's *Just One Time*, Tom Paxton's *The Last Thing on My Mind*, and *Mansion on the Hill* by Fred Rose and Hank Williams. The brothers give some of these a more straight-ahead treatment than one expects, as if to simplify everything that might distract attention from the harmonies. The three Glasers (Tompall and Chuck are twins, by the way, while Jim is four years younger) have such similar vocal characteristics that their harmonies are simply tighter than three strangers could get them. The album isn't a revelation, and it isn't quite as exciting as I would like, but it shows what makes a good brother act good; I'm glad to have it. *N.C.*

**BOB WELCH.** Bob Welch (vocals, guitar); instrumental accompaniment. *Two to Do; Remember; Bend Me Shape Me; That's What We Said; Drive*; and five others. RCA AFL1-4107 \$8.98, © AFK1-4107 \$8.98, © AFS1-4107 \$8.98.

Performance: **Radio rock**  
Recording: **Very good**

The more I hear of Bob Welch's solo efforts, the more I wonder whether he and Fleetwood Mac didn't part company because he was too middle-class for the rest of them. This one is a slick and sophisticated presentation of basic bubblegum, which is to say here's Welch cheerfully putting his chips in the pot with the likes of Styx, For-

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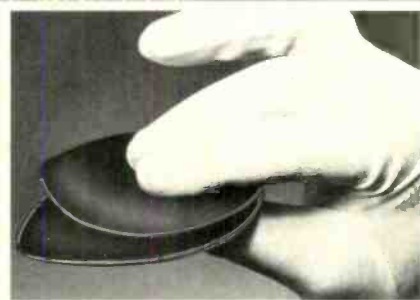
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eigner, and Supertramp. It is a little more tuneful than this kind of thing usually is, but the overriding feeling is that Welch is constantly fine-tuning to an audience quite a bit younger than he is, and I find that bothersome. Still, it's the kind of thing the radio will play, and it is well crafted. *N.C.*

**WHISPERS: *Love Is Where You Find It.*** Whispers (vocals); instrumental accompaniment. *In the Raw; Turn Me Out; Say Yes; Love Is Where You Find It; Only You;* and three others. SOLAR S-27 \$8.98, © SC-27 \$8.98, © ST-27 \$8.98.

Performance: **Smooth**  
Recording: **Good**

It's a good thing the Whispers are in a spirited mood on this album. They sing with the keen precision and sweet harmony we have come to expect from them, but since most of the selections here really couldn't jump out and grab you in their own right, they had to invest more energy in putting them across. The album is divided into a fast side and a slow side; the latter is more successful, for it enables the Whispers to play up their strongest point, the fine quality of their tone. Okay for casual listening, but not one of their best releases. *P.G.*

#### COLLECTION

**IN HARMONY 2.** Billy Joel: *Nobody Knows but Me.* James Taylor: *Sunny Skies.* Lou Rawls and Deniece Williams: *The Owl and the Pussycat.* Teddy Pendergrass: *Reach Out and Touch (Somebody's Hand).* Janis Ian: *Ginny the Flying Girl.* And six others. COLUMBIA BFC 37641, © BCT 37641, no list price.

Performance: **Mostly misses**  
Recording: **Very good**

Not to pontificate or anything, but it seems to me that most of the entertainment sanctioned for children by educators, PTA groups, child psychologists, and the like will either bore them to death, condescend in ways they are bright enough to notice, or stifle whatever sense of wonder they may otherwise have developed.

I put forward this perhaps heretical opinion after listening to "In Harmony 2," which features adults singing, ostensibly, for children. It was put together by the team responsible for 1980's Grammy-winning "In Harmony," Lucy Simon and David Levine, her producer husband. Depending on whether you agree with my view as expressed above, it will probably strike you as either cute or icky. Then again, I find many of the artists here—Janis Ian, Kenny Loggins, James Taylor—basically cute or icky when they're performing for those of us in long pants. It all goes down fairly inoffensively, though, and there are two stand-out tracks. Dr. John, bless him, does a marvelously gruff job with Bobby Darin's sublimely silly old *Splish Splash*, and even better is Bruce Springsteen's live version of *Santa Claus Is Coming to Town*, which has been widely bootlegged and makes a long-overdue official appearance here. Bruce and the E Streeters don't begin to approach the symphonic grandeur of the Phil Spector original they learned it from, but they display a heart as big as all outdoors—and only a churlish child could resist. *S.S.*



## THEATER • FILMS

**ARTHUR—THE ALBUM** (Burt Bacharach-Carole Bayer Sager). Original-soundtrack recording. Christopher Cross, Nicolette Larson, Ambrosia, Stephen Bishop (vocals); orchestra. WARNER BROS. BSK 3582 \$8.98, © M5 3582 \$8.98.

Performance: **Hot Cross, that's it**  
Recording: **Glossy**

Burt Bacharach scored the motion-picture soundtrack for *Arthur* and then portioned out various sections of it as pop singles for such singers as Ambrosia, Stephen Bishop, and Nicolette Larsen. The original instrumental score takes up side two of this album; the singles are on side one. It was when he approached Christopher Cross to collaborate on and perform the main theme, however, that Bacharach hit real gold. Carole Bayer Sager and Peter Allen are also listed as members of the committee that turned out one of Cross' biggest single hits. *Arthur's Theme (Best That You Can Do)* is one of those amorphous, almost wimpy ballads that Cross has made such a speciality of. He performs it in his broadly emotional style with his usual devotion to lyric communicativeness. There's a reason for Cross' success: he gives the impression of truly believing in his material. The rest of the album is forgettable. *P.R.*

**NAPOLEON** (Carmine Coppola). Excerpts from the soundtrack. Milan Philharmonic Orchestra, Carmine Coppola cond. CBS FM 37230, © FMT 37230, no list price.

Performance: **Blustery**  
Recording: **Adequate**

Abel Gance's 1927 movie *Napoleon*, his last big creative achievement, is a truly remarkable production. With its thousands of extras, its camera angles, its tinted scenes, its Polyvision triptychs that anticipated Cinerama by about thirty years, *Napoleon* is a startling spectacle to behold. When the four-hour version reconstructed by Kevin Brownlow was shown at Radio City Music Hall last spring and again in the fall, the final triptych scenes stretched wall to wall on the gigantic screen, and there was a symphony orchestra on hand playing the new score Carmine Coppola had composed to underline the pageantry and excitement of the action.

Now a soundtrack has been made for the movie, and this record contains an hour's worth of Mr. Coppola's music. Minus the Beethoven and Mendelssohn overtures Mr. Coppola had added as filler, though, and rather roughly played under the composer's direction by the Milan Philharmonic, the score is something of a disappointment. There are plodding marches, a terribly banal love theme, wedding music that sounds



like warmed-up leftovers from the score of *The Godfather*, and a triumphal finale that is remarkable mainly for the stirring *Marseillaise* on which it depends.

The original music for *Napoleon* was written by no less a figure than Arthur Honegger, who scored a number of Gance's movies. I am told that the use of his music is impracticable for the current film (the version he scored ran for only two and a half hours), but it would be interesting to hear how that daring modern composer handled the assignment. *P.K.*

**RANDY NEWMAN:** *Ragtime*. Randy Newman (vocals, piano); Jennifer Warnes (vocals); orchestra, Randy Newman arr. and cond. *Newsreel; I Could Love a Million Girls; Tateh's Picture Book; Delmonico Polka*; and fourteen others. ELEKTRA SE-565 \$8.98, © 5C5-565 \$8.98.

Performance: **Gentle**  
Recording: **Good**

Randy Newman was the logical choice to write the music for *Ragtime*, since his melodies regularly evoke a flavor of Americana, often recalling the era dealt with in the movie. Of course, in the film you get less than the whole Randy Newman; he's not only constrained to keep his lyrics free of their customary cynicism but constrained to avoid lyrics altogether most of the time. What he has done is to compose elegant little pieces—some of the ones on this album are from the movie itself, some not—that sound as old as they're supposed to, with the

piano generally featured. The spirit of Scott Joplin is in it, though his ragtime is not. The score is not entirely quiet and pensive, but there's no melodrama in it. It's movie music without being doggedly incidental. *N.C.*

**THE WESTERN FILM WORLD OF DIMITRI TIOMKIN.** John McCarthy Singers; London Studio Symphony Orchestra, Laurie Johnson cond. Music from *Giant, Red River, Duel in the Sun, High Noon, Night Passage, and Rio Bravo*. UNICORN-KANCHANA ● DKP 9002 \$15.

Performance: **Good**  
Recording: **Excellent**

The gigantically lush sound is the main attraction of this beautifully engineered and recorded disc. Composer Dimitri Tiomkin was a favorite of old-time Hollywood producers for his ability to provide sweeping orchestral color, large-scale themes to point up dramatic screen action, and a certain air of "importance" that psychologically upgraded low-budget movies. Even such relatively modest efforts as *Night Passage* and *Rio Bravo* got the Full Treatment. When faced with such colossi as George Stevens' sprawling soap opera *Giant* or King Vidor's murky Freudian *Duel in the Sun*, the facile Tiomkin responded with scores that made Prokofiev's *Alexander Nevsky* sound like a Bach partita. Very noisy stuff, but without the ageless, saving grace that other Hollywood thunderer, Erich Wolfgang Korngold, had in such abundance—a gift for melody. *P.R.*



**RECORDING OF SPECIAL MERIT**

**RON CARTER:** *Super Strings*. Ron Carter (bass); John Tropea (guitar); Kenny Barron (piano); Jack DeJohnette (drums); Ralph MacDonald (percussion); other musicians. *Bitin'; Uptown Conversation; No Flowers, Please*; and three others. MILESTONE M-9100 \$7.98.

Performance: **Super indeed**  
Recording: **Good**

Any Ron Carter album is a hard act to follow, but clearly not for Mr. Carter himself. Time and again he outdoes himself. "Super Strings" features the full-bodied, exquisitely plucked bass of the leader and a stellar quintet set against a soft, cushioned background of strings. It is an album of lyrical beauty and tender, meaty jazz expressions. A characteristic Ron Carter release. *C.A.*

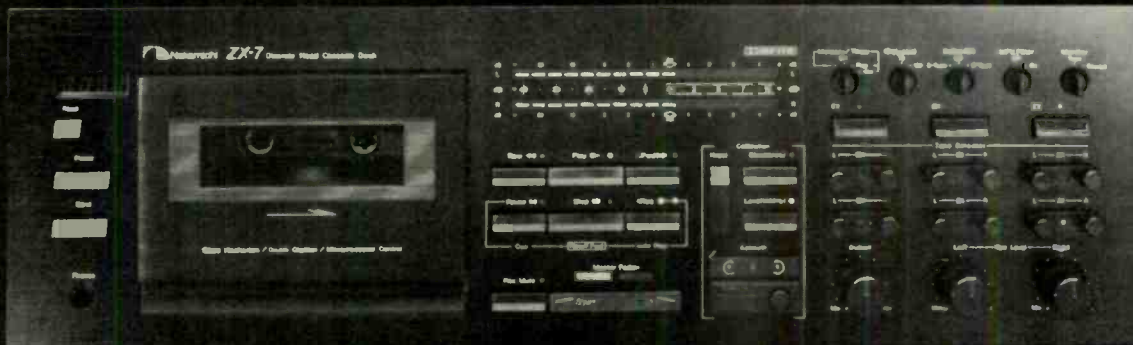
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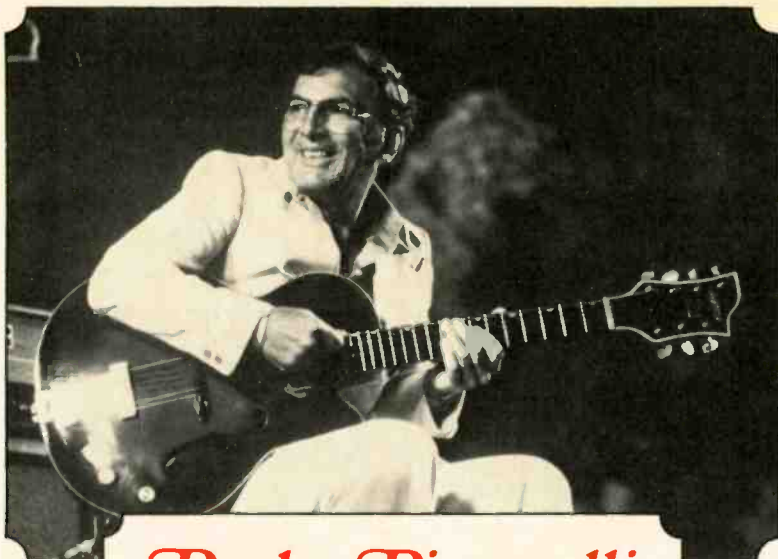
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David Redfern/Rena

## Bucky Pizzarelli

**H**AVING admired jazz guitarist Bucky Pizzarelli for several years, I'm delighted not only with the playing on his new Stash solo album, "Love Songs," but also with its basic—very basic—concept: put a musician who knows what he's doing in a studio by himself, turn on the tape recorder, and let talent take its course.

From the Twenties on, jazz solo-guitar recordings have been made either for a limited audience or at the whim of a producer, so there haven't been many of them. And most of the classics were included on the Yazoo collections "Pioneers of the Jazz Guitar" (L-1057) and "Fun on the Frets" (L-1061), which featured Eddie Lang, Carl Kress, Dick McDonough, and George Van Eps, among others. Pizzarelli's playing is in the same tradition.

The selections on "Love Songs" were

chosen with taste and care from the catalogs of Jerome Kern, Duke Ellington, Hoagy Carmichael, Harold Arlen, Vernon Duke, and others of their stature. The only thing I miss on this record is the feeling of being in a small club at the last set, when the music and the customers are at their mellowest. But this is surely the next best thing. —Joel Vance

**BUCKY PIZZARELLI:** *Love Songs*. Bucky Pizzarelli (guitar). *You Must Believe in Spring; Folks Who Live on the Hill; One Morning in May; Flashes; Sophisticated Lady/Prelude to a Kiss; Concerto for Guitar; Bad and the Beautiful; Last Night When We Were Young; Smoke Gets in Your Eyes; Autumn Leaves/Autumn in New York; Spring Can Really Hang You Up the Most*. STASH ST213 \$8.98.

### RECORDING OF SPECIAL MERIT

**RICHIE COLE:** *Cool "C."* Richie Cole (alto and tenor saxophones); instrumental accompaniment. *Autumn Leaves; On Green Dolphin Street; Back to Bop; Blue Bossa;* and three others. MUSE MR 5245 \$8.98.

Performance: **Very good**  
Recording: **Excellent**

Saxophonist Richie Cole's fascination with musical camp has at times gotten in the way of his delivering a wholly satisfying jazz performance. That can be particularly annoying because Cole has often proved himself to be a superb musician, one whose artistry is merely diluted when he shares a musical environment with such performers as Manhattan Transfer or Tom Waits.

Fortunately, there are no such distractions on "Cool 'C,'" a new album featuring Cole with an excellent orchestra of Japanese musicians. The thirteen-piece orchestra plays, with precision and swing, arrangements that stunningly complement Richie Cole's robust, authoritative saxophone. Except for the title tune, the charts were written by pianist Himiko Kikuchi, who will undoubtedly be heard from again. If I had to single out the most impressive track, it would be *Someday My Prince Will Come*, a tune that was assured a place in the jazz repertoire through the treatment given it by Dave Brubeck and Miles Davis. If there was any question of the song's fading from the jazz scene, Cole's performance of it here certainly gives it renewed life. "Cool 'C.'" lives up to its title. C.A.

### RECORDING OF SPECIAL MERIT

**AL DI MEOLA:** *Electric Rendezvous*. Al Di Meola (guitar); instrumental accompaniment. *God Bird Change; Electric Rendezvous; Passion, Grace & Fire; Cruisin';* and three others. COLUMBIA FC 37654, © FCT 37654, ® FCA 37654, no list price.

Performance: **Overwhelming**  
Recording: **Very good**

Al Di Meola plays the guitar like a man with a thousand fingers. His facility is nothing short

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of breathtaking, and his highly energized approach with its daring layered rhythms is guaranteed to generate excitement. All these familiar qualities are apparent in abundance on this new album, which otherwise differs from its predecessors in representing a sharp turn toward rock. The acid-edged texture will please or repel you depending on whether you like hard rock. Yet "Electric Rendezvous" is still close enough to fusion jazz to be appreciated more widely.

If there is a shortcoming here, it is a tendency toward bombast. Too often Di Meola throws everything he has at you, apparently trying to dazzle rather than woo. But when he settles down to a cooler mood, he shows he can be very effective in a more subtle way. Overall, the mix here is good. One particularly interesting track is a long solo selection called *Passion, Grace & Fire*, which just about describes the ingredients at the core of Al Di Meola's music. Now for just a touch more of that grace. P.G.

**ECHOES OF AN ERA.** Chaka Khan (vocals); Freddie Hubbard (trumpet, flugelhorn); Joe Henderson (tenor saxophone); Chick Corea (piano); Stanley Clarke (bass); Lenny White (drums). *Them There Eyes; All of Me* (two takes); *Take the "A" Train; I Mean You*; and four others. ELEKTRA E1-60021 \$8.98, © E4-60021 \$8.98.

Performance: **Forgettable**  
Recording: **Very good**

**RECORDING OF SPECIAL MERIT**

**THE GRIFFITH PARK COLLECTION.** Freddie Hubbard (trumpet, flugelhorn); Joe Henderson (tenor saxophone); Chick Corea (piano); Stanley Clarke (bass); Lenny White (drums). *Happy Times; Guernica; October Ballade*; and three others. ELEKTRA/MUSICIAN E1-60025 \$8.98, © E4-60025 \$8.98.

Performance: **Memorable**  
Recording: **Very good**

You may wonder what Chaka Khan, the r-&-b screamer of Rufus fame, is doing in such illustrious jazz company as the quintet that accompanies her on "Echoes of An Era." Ah, but of course: Chick Corea, Stanley Clarke, Lenny White—this is more of the old Return to Forever fusion, right? *Wrong!* This is, in fact, an all-acoustic, all-jazz group, and a most splendid one at that. The problem is that Khan is so far out of her depth here that her vocals turn what could have been a great album into a painful, embarrassing listening experience. Oh, she tries, but that is one of the major faults with her performance—she tries too hard to be a blend of Sarah Vaughan, Betty Carter, and a few other jazz singers. The result is a strenuous exercise in futility, an abrasive sound made all the more annoying by the fact that the accompaniment is so thoroughly fine.

When I first heard "Echoes," all I could think of was how wonderful it would have been if Khan had kept her vocals to herself and we could have enjoyed the instrumentals on their own. Well, wishes do sometimes come true. No, I wasn't able to erase the vocal tracks, but the mailman brought "The Griffith Park Collection," an album on Bruce Lundvall's new Elektra/Musician label (a promising venture). The GPC turns

out to be the very same quintet sensibly recorded without the pop vocals. *This* is the set to add to your collection, an invigorating exercise in the arts of improvisation and teamwork. C.A.

**BOBBE NORRIS: Close Up.** Bobbe Norris (vocals); vocal and instrumental accompaniment. *Out of This World; After You; Looking at You; You're Free; Swan; Lady Sings the Blues*; and five others. FOUR DIRECTIONS FDR-2000 \$7.98 (from Four Directions Records, P.O. Box 1028, Pacifica, Calif. 94044).

Performance: **Good**  
Recording: **Good**

Bobbe Norris had a brief go-round on a major label several years ago. The company had signed her on as a jazz singer, then changed its mind and tried to refashion her into a Vegas-style belter. Now she's back singing the kind of material she does best—big smoky ballads such as Cole Porter's *After You* and Harold Arlen's *Out of This World*—in her deep, velvet voice. Probably the best track here is Alec Wilder's *Lady Sings the Blues*, in which Norris goes beyond simple beauty of tone and sinuousness of phrasing to really act out the song. She ought to try that more often. The second side of this record is devoted to five songs by Larry Dunlap, who produced the album and provides keyboard accompaniment and background vocals on some cuts. Dunlap's material is a waste of Bobbe Norris' talents, but the other six songs are worth the price of the album. P.R.

**RECORDING OF SPECIAL MERIT**

**JIMMY ROWLES: Plays Duke Ellington and Billy Strayhorn.** Jimmy Rowles (piano). *Lush Life; Mood Indigo; Lotus Blossom; Lost in Meditation; Blood Count*; and five others. COLUMBIA FC 37639, © FCT 37639, no list price.

Performance: **Excellent**  
Recording: **Very good**

If pianist Jimmy Rowles does not have an easily identifiable style of his own, he has at least one quality that consistently marks his playing: taste. He is also extremely versatile and superbly imaginative. Rowles feels he owes a large debt to the music of the late Duke Ellington and Billy Strayhorn, and this most recent Columbia album may be considered partial payment of that debt. It is a wonderful collection of solo pieces based on the works of the two men. I say "based" because Rowles has rewritten the material, but he has done it lovingly and with respect for the original melody lines. C.A.

**GEORGE SHEARING AND MARIAN MCPARTLAND: Alone Together.** George Shearing, Marian McPartland (pianos). *Chasing Shadows; Born to Be Blue; Nobody Else but Me; Alone Together*; and six others. CONCORD JAZZ CJ-171 \$8.98.

Performance: **Elegant**  
Recording: **Very good**

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(Continued on page 102)

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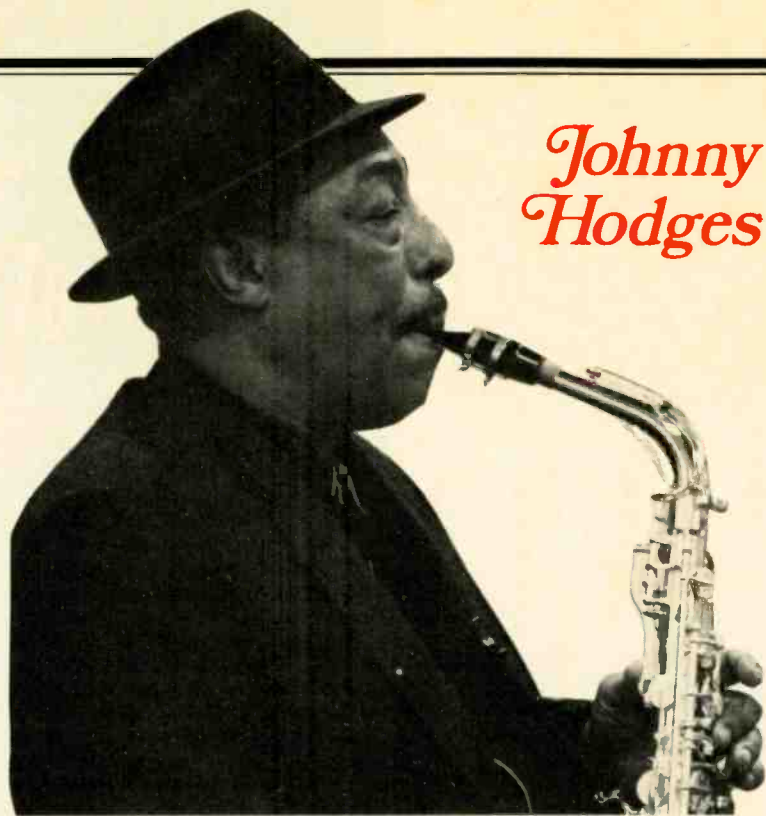
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## Johnny Hodges

**S**HORT, squat, stone-faced, and possessed of (perhaps possessed by) the most ethereally beautiful tone ever made by a human on the alto saxophone, Johnny Hodges was the prodigal star of stars of the Duke Ellington Orchestra for thirty-five years. During his lifetime he was respected by musicians and adored by the public. Now, twelve years after his death, there is a Hodges boomlet in reissues. He is the subject of a new three-disc collection in the Time-Life "Giants of Jazz" series, and a long-lost 1947 combo session has been re-packaged by Prestige.

Hodges' association with Ellington was so intimate and of such long duration—from 1928 to 1970, with a four-year defection—that his best-known solos are contained in the Duke's own classic (*Sophisticated Lady, In a Sentimental Mood*) and in the more ambitious orchestral suites (*Black, Brown and Beige*). But Hodges occasionally free-lanced with outside pick-up groups in the late Thirties as well as leading an Ellington contingent on combo sessions. If Duke's concept and command of his orchestra were imperial, Hodges was a self-governing dominion within the empire. The Time-Life and Prestige releases demonstrate how essential Hodges was to Ellington's musical thinking and how each balanced his loyalty to the other with an equal concern for preserving his individuality.

Hodges' playing, once heard, is unforgettable. His musical ideas, carried by that gorgeous tone, were stately, dramatic, tender, and wry. No one else's playing could be so openly sentimental without being bathetic. He also had a remarkable ability to sound urgent without being effusive. There was always a dignified reserve to his work that bespoke his self-confidence; he knew exactly what he wanted to say and how to

say it. Hodges never played too much or too little, just the right amount.

In his personal life, he had a healthy appetite for food, the ladies (who frequently fell for his romantic playing), and a bonus dollar. Despite Hodges' occasional skirmishes with Ellington over musical phrases appropriated by the Duke for his own compositions, each man looked out for the other's interests and reputation. They were almost symbiotic. Toward the end of his life, as he grew stouter, Hodges so much resembled Ellington facially that he was sometimes mistaken for him. "Are you Duke Ellington?" he was once asked. Giving the innocent a slow look, Hodges replied, "No. Not today." A metaphysical statement if ever there was one.

**B**ORN Cornelius Hodges—the "Johnny" was passed down from his father—he was urged to take up the piano, preferred drums, and settled on the soprano saxophone because it "looked so pretty." He practiced to records by his idol Sidney Bechet. At the age of thirteen he was playing professionally in his native Boston and had already developed the "singing" tone and quiet assurance that, many years later, led Charlie Parker to describe him as "the Lily Pons of the alto" and the young John Coltrane to wish he could play with the same confidence. (Coltrane was in Hodges' 1951-1955 combo.) Tony Bennett once called Hodges "the best singer in the world."

Hodges took his tonal inspiration from Bechet and transferred it to the alto; he also retained, for the rest of his life, some of Bechet's stylistic signatures, especially the sudden, propulsive, exuberant wail. His transferral of the soprano tone to the alto was so complete that even as late as 1947 (on *Frisky* in the Prestige reissue) it is dif-

ficult to believe that he isn't playing soprano, though he never used the instrument after 1940—much to Ellington's regret.

But in 1928, when Hodges joined the Duke, Ellington was anxious to feature his new prize on both horns as well as clarinet. Hodges obliged with his customary gentle glee. *Tishomingo Blues* (1928), *Flaming Youth* (1929), *Old Man Blues* (1930), and *Echoes of the Jungle* (1931) on the Time-Life set are simply dazzling. Hodges sounds sassy and subtle, calm and challenging all at once. Unfortunately, the recording techniques of that period could not capture the full beauty of his tone. Not until the late Thirties was Hodges' angelic sound caught with some accuracy on discs. The first such instance in the Time-Life package is *Blue Reverie* from Benny Goodman's 1938 Carnegie Hall concert, one of those performances where Hodges' alto sounds like a soprano. The concert was casually recorded (as Chris Albertson pointed out in his article on Goodman in the February issue), but the superb acoustics of the hall made a difference. *Finesse (Night Wind)*, recorded in 1939 with Ellington at the piano and Billy Taylor on bass, is another example of the classic Hodges tone.

**I**HAVE dwelt on Hodges' tonal quality, but he would not have been a major jazz musician if his ideas had not matched his embouchure. The personality in his playing was virtually unique in jazz because of its stability. At no time did he suggest turmoil or doubt; there was no anxiety, no anger. That may sound like a recipe for dullness, but Hodges added a critical ingredient: humor.

By the late Thirties Hodges was such a well-known voice in the Ellington orchestra that he was called in for outside dates. *On the Sunny Side of the Street* (1937), made with Lionel Hampton as leader of a pick-up group, was such a success that Hodges was forever after expected to duplicate his solo in it. Teddy Wilson considered him to be the guest star on *I Cried for You* (1937), which also features a Billie Holiday vocal. A year later Hodges began recording under his own name using Ellington musicians, sometimes with Duke at the piano and usually collaborating with him on tunes created in the studio. The Time-Life collection ends with *Beale Street Blues* (1959), made under Hodges' name with Ellington as pianist (Hodges literally rubbed Duke's back to relieve his shyness about taking piano solos), and *Isfahan* (1966), an Ellington tone poem in which Hodges' feeling for and understanding of Ellington's ideas are indispensable elements.

The Prestige issue is made up of sessions for two Ellington-owned labels, Sunrise and Mercer. All the Hodges sessions, done in 1947, are on the first disc; the material for the second was recorded in 1950-1951 without him. Both use Ellington musicians, both feature compositions by Duke and Billy Strayhorn, and both sound a bit frantic. The immediate postwar era was a terrible time for big bands. Ellington's was one of the few survivors, but even he was insecure, so there is in these cuts a sense of urgency,



of a need for a commercial hit. Everyone seems a little worried, in fact, except Hodges, who, typically, sounds like he doesn't want to be rushed. He scores brilliantly with *A Flower Is a Lovesome Thing*, *How Could It Happen to a Dream*, *Violet Blue*, *A Little Taste*, and *Let the Zoomers Drool*.

**B**OTH the Time-Life and Prestige packages were carefully remastered, though both occasionally suffer from the variable state of the sections transferred from 78-rpm originals. The biographical booklet by Stanley Dance and the critique by Gary Giddins for Time-Life and the liner notes by Leonard Feather for Prestige are informative and evocative. Johnny Hodges might have dismissed all the fuss, but as these collections make plain he was, and is, worthy of a great deal of it—*dignified* fuss, to be sure.

—Joel Vance

**GIANTS OF JAZZ: Johnny Hodges.** Johnny Hodges (alto and soprano saxophones). Duke Ellington and His Orchestra: *Tishomingo Blues*; *The Blues with a Feelin'*; *In a Jam*; *Hy'a Sue*; *Isfahan*. Duke Ellington and His Cotton Club Orchestra: *Flaming Youth*; *Cotton Club Stomp*; *Echoes of the Jungle*. The Jungle Band: *Rent Party Blues*; *When You're Smiling*. Harlem Footwarmers: *Old Man Blues*. Duke Ellington and His Famous Orchestra: *The Sheik of Araby*; *Bundle of Blues (Dragon Blues)*; *The Gal from Joe's*; *Grievin'*. Duke Ellington's Sextet: *Tough Truckin'*. Teddy Wilson and His Orchestra: *Sugar Plum*; *Why Do I Lie to Myself About You?*; *I Cried for You*; *Jungle Love*. Lionel Hampton and His Orchestra: *On the Sunny Side of the Street*; *I Know That You Know*. Benny Goodman and His Orchestra: *Blue Reverie*. Johnny Hodges and His Orchestra: *Jeep's Blues*; *Empty Ballroom Blues*; *The Jeep Is Jumpin'*; *Krum Elbow Blues*; *Hodge Podge*; *Wanderlust*; *Dooji Wooji*; *Finesse (Night Wind)*; *The Rabbit's Jump*; *Day Dream*; *Good Queen Bess*; *That's the Blues*. *Old Man*; *Squaty Roo*; *Passion Flower*; *Things Ain't What They Used to Be*; *Goin' Out the Back Way*. Duke Ellington's All-Stars: *Beale Street Blues*. TIME-LIFE STL-J19 three discs \$19.95 (plus \$2 postage and handling charge from Time-Life Records, 541 North Fairbanks Court, Chicago, Ill. 60611).

**JOHNNY HODGES ALL-STARS: Caravan.** Johnny Hodges (alto saxophone); instrumental accompaniment. *Frisky*; *Longhorn Blues*; *A Flower Is a Lovesome Thing*; *Far Away Blues*; *How Could It Happen to a Dream*; *Who Struck John?*; *June's Jumpin'*; *Lotus Blossom (Charlotte Russe)*; *Violet Blue*; *Searsy's Blues*; *A Little Taste*; *Let the Zoomers Drool*. Duke Ellington and Billy Strayhorn All-Stars: *Night Walk*; *She*; *The Happening*; *Moonlight Fiesta*; *Sultry Serenade (How Could You Do a Thing Like That to Me)*; *Britt and Butler Blues*; *Indian Summer*; *Swamp Drum*; *Caravan*; *Hoppin' John*; *Alternate*; *Jumpin' with Symphony Sid*. PRESTIGE P-24103 two discs \$8.98.

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P.R.

**MCCOY TYNER: *Reflections*.** McCoy Tyner (piano); instrumental accompaniment. *Ebony Queen; Native Song; Rebirth; Nebula; Afro Blue; Desert Cry; Impressions*; and six others. MILESTONE M-47062 two discs \$17.96.

Performance: **Pre-treadmill Tyner**  
Recording: **Good**

"Reflections," a reissue of recordings McCoy Tyner made between 1972 and 1975, serves to remind us that this pianist was creating music of substance only a few years ago. If you have heard Tyner's recent albums on Milestone and liked them, then chances are that this one is not your cup of tea. On the other hand, if your taste runs deeper, back to the Tyner that was, then this is the perfect album, for it features the once dynamic pianist in a nice variety of settings, ranging from solo (*Naima* and *The Offering*) to various small groups and a big band. I say "once dynamic," because I have been sorely disappointed by the blandness of Tyner's recent recordings and by his (or his producer's) apparent quest for a more middle-of-the-road audience. The enormous intensity and drive of these older selections are what originally elevated Tyner from being known mainly as John Coltrane's pianist to a prominent place of his own. He ought to climb back up and soar beyond.

C.A.

## RECORDING OF SPECIAL MERIT

**JESSICA JENNIFER WILLIAMS: *Organomic Music*.** Jessica Jennifer Williams (piano); instrumental accompaniment. *The Weapon of Truth; Krieselwelle; Up the Entropy Slope; Experiment XX; Longing; Dear Lord*; and two others. CLEAN CUTS CC 703 \$8.98.

Performance: **Spirited**  
Recording: **Crisp single take**

Why does so much good jazz have to go begging for an audience? It took about two years from the time this music was recorded for it to make it onto a disc, and it probably won't find its way into one record store in a hundred, while some slick, antiseptic, die-cut session by a jazz group with one eye on its next TV sitcom theme will get into ninety-nine of them. Yet I can't imagine any jazz lover not being totally absorbed by this heady, very moving music.

"Organomic Music" is jazz composed and played with a keen intelligence, calculated recklessness, and concentrated emotion that suggest the kind of highwire act Charles Mingus' best bands used to present

or the bold geometries of one of Keith Jarrett's solo excursions. The ensemble of trumpet, tenor saxophone, bass, drums, and guitar is fronted by pianist/composer Jessica Jennifer Williams. The sextet is capable of dizzying ensemble blowing and thoughtful accompaniment, but Williams holds center stage. She's an adventurous soloist who's not afraid to stray from a safe path. She has lots of technique, and it's all sharply focused on *expression*. You may have to hunt a bit for this record, but if you like good jazz, you're probably used to that.

M.P.

**PAUL WINTER: *Callings*.** Paul Winter Consort (instrumentals); voices of sea mammals; instrumental accompaniment. *Magdalena; Love Swim; Otters in the Kelp; Sea Storm; Blues Cathedral; Sea Wolf; Sea Joy; Talking Bells; Dance of the Silkies*; and six others. GRAMAVISION/LIVING MUSIC GR/LMR-1 two discs \$17.98.

Performance: **Very good**  
Recording: **Excellent**

Paul Winter, a superb saxophonist who with his "family at large" of musicians, the Paul Winter Consort, has made a number of distinguished popular albums, got the idea for this one when he met a sea-lion pup in the dunes of Magdalena Island in Baja California one warm evening while filming some grey whales for a wildlife documentary. This encounter led him to embark on a series of expeditions over three years to study the sounds and the lives of sea mammals and sometimes to play his saxophone for them in locales as far-flung as Newfoundland, Vancouver Island, the Bahamas, the California coastal islands, and the Inner Hebrides of Scotland. At length, with funding from a number of conservation groups and equipped with the taped calls of fifteen different sea creatures, Winter and his musicians gathered under the vast vault of the Cathedral of St. John the Divine in New York to create a "musical novel" about the adventures of a young sea lion named Silkie who journeys around the coast of North America.

I have heard other efforts to interpolate the songs of whales and wolves with music that were downright numbing, but "Callings" is seldom dull and never shoddy. The *Sea Storm*, with Winter on the conch shell and a thunderclap courtesy of "the Great Drummer in the Sky," is spine-tingling; the dialogue between a polar bear and a cello is perfectly enchanting; an ocarina and an otter make wonderful music together; and the passages from Bach, Scottish folk tunes, and the sound of what one of the musicians characterized as a "whale-tempered clavier" are always intelligently woven into the texture of a highly imaginative sonic tapestry. The digital recording does full justice to the spacious sound. The two-record set comes with a twenty-page booklet that is in itself a whale of an achievement. With institutions as worthy as the New York Zoological Society, the Human-Dolphin Foundation, the Friends of the Sea Otter, and the building fund of the cathedral where it was recorded to share in the royalties, I can only hope that "Callings" will catch on with the ecological public.

P.K.

(Continued on page 105)



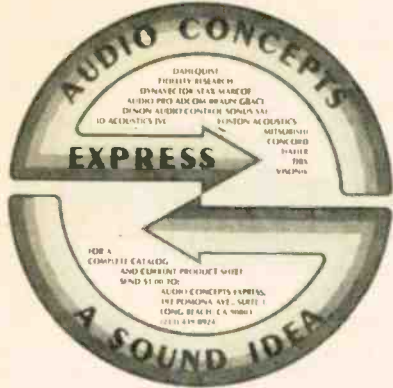
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# FOLK



**ALLEN GINSBERG: First Blues.** Allen Ginsberg (vocals, Benares harmonium). *4 AM Blues; Come Back Christmas; CIA Dope Calypso; Put Down Yr Cigarette Rag;* and four others. FOLKWAYS FSS 37560 \$9.98.

Performance: **Hard to believe**  
Recording: **Moot**

The Folkways catalog is a veritable Smithsonian of music history; all the great movements and minor byways of America's musical journey have found their representations on Folkways discs over the years. Like any museum, it has its masterworks and its oddities. At the risk of making light of one of the best minds of the beat generation, I will suggest that this record may best be taken as a landmark in comedy. For Dadaist humor, Allen Ginsberg's Tibetan-monk-like "blues" singing makes Andy Kaufman's controversial, numbing night-club act pale in comparison. "First Blues" is laughable both for its hopelessly inept tinker-toy performances and for the deadly seriousness of Ginsberg's liner notes and between-song discourses.

The notes do confirm something that astute listeners will already have suspected after the first one or two songs, that *Ginsberg knows only three chords*. The poet thus chronicles his musical development: first he experimented with the C chord in 1963, added F late in 1968, and finally ventured G in 1971. He admits to not having mastered the C-F-G transition when these recordings were committed to tape, and, indeed, his droning, tentative singing betrays a preoccupation with just getting through the next chord change. At Ginsberg's current rate of development, we can expect "Second Blues" sometime in the next decade. *M.P.*

**DAVID HOLT: It Just Suits Me.** David Holt (vocals, banjo, hammered dulcimer, harmonica, hambone, paper bag); instrumental accompaniment. *Morning Blues; Dinah; Lost John; Ragtime Annie; Little Stream of Whiskey; The Old John Hardy; Cotton-Eyed Joe;* and seven others. JUNE APPAL JA 038 \$7 (from June Appal Recordings, P.O. Box 743, Whitesburg, Ky. 41858).

Performance: **In the Foxfire mode**  
Recording: **Good**

Like the *Foxfire* projects, this album has a joy-of-preservation attitude about things folk—music in this case—that you may find catching. It is listenable largely because David Holt has a pleasant, natural singing voice and because his main accompanists, guitarist Mike Hunter (who used to play in Jimmy Martin's bluegrass band)

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Try any of their previous releases and I'll bet my favorite Chico Freeman record you'll like it, but I would feel safe staking my entire Ellington shelf on "Tanuki's Night Out," an almost overwhelmingly exciting album that features Tabackin's compositions in Akiyoshi's arrangements. This album is a creative high from the title tune's drum intro to the very last note on side two. There is a rich array of solos and stunning passages from Akiyoshi's pen (check out the trombone arrangement at the beginning of *Tanuki's Night Out*). There is earthiness (*Lament for Sonny*), humor (*A Bit Byas'd*), beauty (*Falling Petal*), and—to coin a word—stompacious energy (*Lew's Theme*). Tanuki is a badger in Oriental myth who is said sometimes to take on human form and come down from the hills to party—we should all have such a night out!

—Chris Albertson



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**TOSHIKO AKIYOSHI/LEW TABACKIN BIG BAND: *Tanuki's Night Out*.** Toshiko Akiyoshi/Lew Tabackin Big Band (instrumentals). *Tanuki's Night Out; Falling Petal; A Bit Byas'd; Yet Another Tear; Lament for Sonny; Lew's Theme (Let the Tape Roll)*. JAM 006 \$8.98.

and bassist Buddy Davis, are rock solid. Holt, who lives near Asheville and teaches at Warren Wilson College, is variously accomplished on various instruments—smoothest on the hammered dulcimer, middling on banjo, and almost as bad as Neil Young on the harmonica, possibly because he insists on duplicating the "authentic" old-time country (read white) style, which is too idiomatic for its own good. Holt is a native of Texas, where the music tradition is quite different from what he discovered in the moist Southeast, so there is a freshness in his performances that you can hear. Much of this stuff, of course, is already preserved on various recordings, but the homemade touch, as *Foxfire* readers know, does add something. N.C.

**LORRAINE LEE AND ROGER NICHOLSON: *An Exultation of Dulcimers*.** Lorraine Lee (dulcimer, vocals); Roger Nicholson (dulcimer); Jean Ritchie (dulcimer, vocals); other musicians. *La Volta; How Should I Your True Love Know; Blarney Pilgrim; Bonaparte's Retreat; Black Sarah; The Bellringing; One, I Love*; and seven others. GREENHAYS GR707 \$7.98.

Performance: **Neat**  
Recording: **Good**

In its basic form, the mountain dulcimer has just three strings, and the purist way of

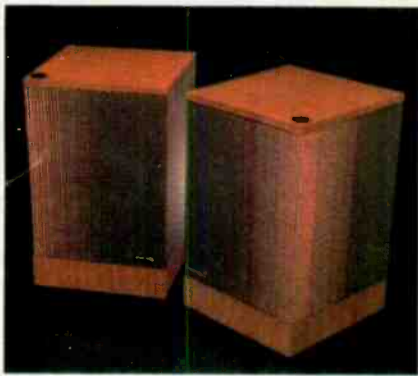
playing it is to fret one string with a little wooden stick, letting the other two function as drone strings (typical tuning: C, G, G), and using a goose quill as a pick. But many dulcimers have four or more strings—John Jacob Niles used to put seven or eight on his—and a number of different playing techniques and tunings have evolved over the years.

On this album Lorraine Lee, from Massachusetts, merges the traditional approach with mandolin pick technique, while Roger Nicholson, from England, uses fingerpicking—and Jean Ritchie, who has done the most to repopularize the dulcimer in our time, displays the old-timey approach in a couple of guest appearances. Ritchie is also the model of a female mountain folk singer; just ask Lorraine, or listen to her vocals. Backing instruments—such as a recorder, a cittern, a guitar, a bass—are used sparingly, and all the music has a fragile beauty whose main appeal may be abstract. If you're into sound, there's plenty to get into here. The droning is a lot easier on American ears than the droning of bagpipes, and here it's softened anyway by Nicholson's emphasis on melody. It's quite a fetching mix, good for cleaning radio noises out of your head. N.C.

**JEAN REDPATH: *Lowlands* (see Best of the Month, page 65)**

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