Stereo

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MEMORIES OF ELVIS

HEAD-TO-HEAD TESTS:3 TOP A/V RECEIVERS

60

ALSO TESTED: Technics CD changer, Harmon Kardon

Spe

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a lot of people already

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speakers - and created

have - a good color

even a receiver and

a fairly miraculous

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Cover

Digital technology's impact on today's audio is demonstrated by our cover system: the Technics SL-PD827 CD changer with 1-bit MASH digital-to-analog coversion, the Onkyo Integra TX-SV909PRO audio/video receiver with digital Dolby Pro Logic decoding and ambience enhancement, and the Philips DSS930 Digital Speaker, a powered system with a D/A converter and digital crossover.

Photograph by Roberto Brosan

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Advances in digital technology promise a truly wondrous audio/video future • by Ken C. Pohlmann



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Pope 72

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Remasters Collection

Memories of Elvis

A charter member of Presley's "inner circle" remembers his days with the King of Rock-and-Roll • by Alan Fortas

Best Recordings of the Month.

James McMurtry, Claudio Abbado's Brahms Fourth, André Watts's Chopin, and the Gin Blossoms





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<u>Hughes and General Motors have taken a giant step toward becoming leaders</u> in the electric car industry. Having recently finished designing an electronic motor control system for GM's sporty new electric car, the Impact, Hughes will soon begin mass producing these systems. They will also produce the Impact's power inverter and charging system, and eventually, electric drives for industrial motors. To accommodate electric car owners, Hughes is also developing an elaborate electric car service infrastructure throughout Southern California.

TV viewers in all parts of the country are getting more and more regional coverage, as networks are increasingly turning to satellites for maximum flexibility. Hughes has been a major player in Cable TV distribution, and now will enter into the broadcast network market by teaming with CBS. CBS will purchase 12 transponders on two new Hughes satellites, planned for launch in mid and late 1992. On a given Sunday afternoon, CBS supplies affiliates with as many as 16 different football game feeds. This enables viewers to get programming most suitable to their interests. CBS began converting from land lines to a satellite-based distribution system in 1982, and now almost all affiliates have their own earth station.

In a dramatic breakthrough that will help save the earth's ozone layer, Hughes has developed an alternative manufacturing process that does not require rosin-based fluxes in soldering circuit card assemblies. The new process uses a citric acid-based substance called HF1189, which provides a higher quality bond during soldering, yet requires only water to clean off the completed circuit board. Until now, conventional rosin-based fluxes were cleaned with solvents containing ozone-depleting chlorofluorocarbons (CFCs). Of the 3 billion pounds of CFC-based chemicals used each year, 16% — or roughly 500 million pounds — can be linked to industrial solder fluxing and cleaning operations. As Hughes makes this new process available industry-wide, these statistics are likely to drop considerably.

<u>A Hughes ID card used in security systems has several novel features</u>, which give it an advantage over many electronic scanning systems. The microelectronic features of this Proxcard^m are so fine that its antenna and computer chip can be embedded in a card fabricated almost as thin as a credit card. In addition, by using RF signals, it outputs its data without direct contact with the reader, and is extremely reliable. The Proxcard, which can help companies save on security costs, has already been a tremendous asset to Quotron Systems, a global supplier of financial data and services to brokers.

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LETTERS

Burnt-Out Tweeters

Ulian Hirsch's excellent article "Power: How Much Is Enough?" (August) makes the point that driving an amplifier to clipping tends to burn out tweeters because of an increase in average power. It is more correct to say that tweeters burn out because a clipped waveform contains much more high-frequency energy than the same waveform unclipped. The abrupt change in slope of the waveform when clipping begins and ends produces very strong harmonics of the sinusoidal fundamentals that make up the unclipped waveform, and it's these additional high-energy, high-frequency harmonics that burn out tweeters.

BRUCE SAMPSELL Chapel Hill, NC

Julian Hirsch replies: I suspect that both explanations are applicable. There may be high-level signals below the tweeter's frequency range that, when clipped, can over-drive the tweeter in its range. There may also be high-frequency signals, not normally strong enough to damage the tweeter, that when clipped approximately double their average power and thereby cause the damage.

Low-Impedance Loads

In the June issue, in a review of Boston Acoustics' Voyager speaker, Julian Hirsch says that "... the speaker's 8-ohm rating is not justified by our actual measurements. It would be more accurate to call it a 4-ohm speaker, [but] it should not overstrain any amplifier likely to be used with it." Does he mean that a 4-ohm speaker could be used safely with an amplifier rated for 8-ohm speakers?

> SUDHAKAR DESHPANDE United Arab Emirates

Modern amplifiers seldom have trouble driving 4-ohm loads, even if they are rated only for 8ohm operation. A 2-ohm or highly reactive load is another matter, however, and quite a few will be unhappy with that. There are speakers that exhibit such impedances at some frequencies, but, fortunately, not very many.

Bit by Bit

ow many bits is a compact disc capable of storing? How many bits will be on a Mini Disc? I recently heard a Bell Labs spokesman say that the semiconductor industry expects to put *ten billion* transistors on a chip by the year 2000. At that density it appears a solid-state ROM (read-only memory) device would be a better carrier than a compact disc. It would be smaller, cheaper, lighter, and nonmechanical. Could the CD be shorter lived than the LP?

ROB CAVE Princeton, TX

A compact disc can store more than six billion bits (that's about five times the capacity of a Mini Disc). Current music media will eventually be replaced by a solid-state system of some sort (see "The Sound of Things to Come," page 62), but that probably won't happen until early next century, giving the CD a lifespan similar to that of the LP.

Queen

Steve Simels's August review of Queen's "Live at Wembley '86" is totally wrong about the album's "cashing in" on Wayne's World and Freddie Mercury's death. Plans for its release were well under way long before either of those events. JAMES C. SMITH Farmington Hills, MI

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S-Video Connections

Michael Riggs's "Making the S Connection" on page 47 of the August issue has set back video improvements at least twenty years. My VCR and videodisc player are some 16 feet from my amplifier, and my TV set is 10 feet away. I tried both line connectors and Svideo connectors and found the S-connectors superior. WILLIAM PENNY Cheektowaga, NY

have tried using regular A/V connectors instead of S-video connectors between my laserdisc player and monitor, but solid colors appear sort of runny or unstable and oversaturated, and fancy borders seem to jitter or shimmer. I can't believe the color-separation circuitry in my two-year-old laserdisc player could be that superior to the circuitry in my brand-new 35-inch monitor. What gives?

A. J. LEHE Talladega, AL

Laserdiscs (unlike videocassettes) record composite video directly. Consequently, the picture from a laserdisc player will look better with an S-video connection than with a regular composite-video connection only if the color-separation circuitry in the player is better than that in the monitor or if there is some impairment to the composite-video connection. This does happen sometimes, but in other cases the composite connection will perform as well or better. With VCR's, on the other hand, the picture from an Svideo connection should always look at least as good as or better than that from a compositevideo connection.

Snell DSP Demo

would like to clarify a few points regarding the Snell demonstration at the Summer Consumer Electronics Show that Julian Hirsch reported on in August "Technical Talk." The equipment that Snell used so successfully to improve listening conditions in its room at CES was the AEC-1000 acoustic environment correction system made by Cambridge Signal Technologies of Cambridge, Massachusetts. This product—which is designed to correct listening-room acoustics, speaker-to-room in teraction, and speaker-response irregularities in recording environments—is available today to anyone willing to purchase or rent a unit. My company uses an AEC-1000 daily for location recording in the U.S. and Europe. JOHN NEWTON

President, Soundmirror, Inc. Jamaica Plain, MA

Left-Handed Musicians

n the August issue, both the Boston Early Music Festival (page 79) and the Leningrad Symphony (page 81) apparently use left-handed violins and violas and are led by left-handed conductors. I have seen only one left-handed conductor, and he was incompetent.

> BURTON E. HARDIN Charleston, IL

We apologize for these flopped photos, which several other readers also noticed.

Correction

The Sony STR-D1090 receiver shown on the cover and page 45 of the August issue was misidentified as an "ES" model. There is no ES version of this receiver. We very much regret the error.

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RECORD

by Robert Ripps, Maryann Saltser, and Steve Simels

DOP albums benefiting good causes continue to proliferate, as witness the release of "Say What U Want" on Mercury and "'Til Their Eyes Shine (The Lullaby Album)" on Columbia. "Say What U Want" was produced by Rock the Vote, a nonprofit music-business organization working to encourage voter registration. Artists include the Dan Reed Network. Gang of Four, Phranc, the Soup Dragons, and Vanessa Williams, and \$1 from the sale of each album will go to Rock the Vote. "The Lullaby Album" features top female artistsincluding Rosanne Cash, Gloria Estefan, Dionne Warwick, and Emmylou Harris-singing children's songs, and a portion of the profits will go to the Institute for Intercultural Understanding, which teaches children who are victims of war or ghetto violence to express themselves through art and poetry.

aniel Barenboim, now in his second season as music director of the Chicago Symphony Orchestra, has a way with words as well as with



music, and his autobiography, A Life in Music, is being published by Scribner's this fall. His latest record release, an all-Ravel disc with the CSO on Erato, is due out this month. Last month Barenboim and the orchestra were scheduled to record the Brahms German Requiem, with the soprano Edith Wiens, the baritone



S ten new CD's this past summer in its Vivarte series of early-music recordings on original instruments, bringing the total to thirty-four. Some of the works included have never been recorded before. and several are rarely performed. The latest batch includes works by Praetorius, Geminiani, and Stamitz as well as some familiar pieces by Vivaldi, Beethoven, and Schubert given original interpretations by such early-music proponents as the Classical Band, led by Bruno Weil, and Canada's Tafelmusik, an original-instruments orchestra.

o paraphrase Mark Twain, the death of the big band is greatly exaggerated. Case in point: the GRP All-Star Big Band. Formed to celebrate the jazz label's tenth anniversary, it includes such renowned players as Randy Brecker, George Bohanon, Ernie Watts, Alex Acuna, Tom Scott, Kenny Kirkland, Lee Ritenour, Gary Burton, and Dave Grusin (who's also the "G" in GRP). The band's first album features compositions by Sonny Rollins, John Coltrane, Charlie Parker, Thelonious Monk, and Chick Corea. The players "came together

GRP All-Stars: no egos aloud



with a common musical goal," according to Grusin. "Forget about egos—this was an ensemble gig."

RS

K

E

SEX, Drugs, and Violence in Spanish Harlem. Greed and Lust in Trump Tower. Infidelities at a Suburban Diner. While these may sound like tabloid headlines, they describe the director Peter Sellars's updated and Americanized settings for three of Mozart's greatest operas: Don Giovanni, The Marriage of Figaro, and Così Fan Tutte. "These operas are as current today as when they were written," Sellars has said. "Issues such as rape and infidelity have hardly gone out of date." Originally staged at the Pepsico Summerfare festival outside New York City in the 1980's, the Sellars produc-



Den Giovanni in Harlem

tions were videotaped in 1990 with the help of Austrian television and have now been released on videotape and laserdisc by London/PolyGram Video. The conductor, **Craig Smith**, leads the Vienna Symphony and ensemble casts as-

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RECORD



Kevin Eubanks: free at last

sociated with these productions since their creation.

AZZ guitarist Kevin Eubanks, currently seen in the house band of the new *Tonight Show* with Jay Leno, has just released "The Turning Point," his debut album on



The Kirov's Gergiev

Blue Note. It marks a departure for the guitarist, whose previous albums (on GRP) were determinedly commercial. "The opportunity to record with Blue Note puts me in a situation where I'm free to play whatever I'm hearing now," Eubanks explained. "Coming out of what I had been doing for the last four years, I was just so ready for that." Joining Eubanks on the

14 STEREO REVIEW OCTOBER 1992

record are the bassists Dave Holland and Charnett Moffett and the drummers Marvin "Smitty" Smith and Mark Mondesir.

HE Kirov Opera of St. Petersburg made its North American debut this past summer when it appeared for two weeks at the Metropolitan Opera House. In time for their arrival, Philips released the Kirov's recording of Mussorgsky's Khovanshchina on both CD and videodisc. This is the label's first opera recording with the company and its artistic director and principal conductor since 1988, Valery Gergiev. A recording of Tchaikovsky's Sleeping Beauty is due this fall, to coincide with a U.S. tour by the Kirov Orchestra under Gergiev. Their complete recording of Prokofiev's Romeo and Juliet was released by Philips last year, and the same composer's monumental opera War and Peace is due in January 1993. Like Khovanshchina, it will be available on both CD and videodisc.

ATEST in the great tradition of Wilson Phillips, Jason Bonham, Ziggy Marley, and Julian Lennon—that is, singing kids of Sixties and Seventies popicons—is Jenni Muldaur. Her mom is, of course, Maria Muldaur, who sang with the Kweskin Jug Band in the Sixties and had a huge hit with *Midnight at the Oasis* in 1974. Jenni's debut album, scheduled for release this month on Reprise, features the Blue Nile's Paul Buchanan. The producer is Russ Titelman, who's provided similar services for the Doobie Brothers and Michael Mac-Donald.

HE Beaux Arts Trio's T new member, the violinist Ida Kavafian, joins the cellist Peter Wiley and the pianist Menahem Pressler (the only original member of the group) in their first performances together this fall. Their first recordings on Philips, for which the Beaux Arts records exclusively, will be an "American disc" of works by George Rochberg, Ned Rorem, and David Baker and a "Russian disc" of music by Borodin and Arensky, both due in 1993. Philips recently released a Mendelssohn/Smetana CD by the "old" trio (with the violinist Isidore Cohen), and there's a Fauré/Saint-Saëns disc still to come

GRACENOTES. The legendary San Francisco rockers the Flamin' Groovies are back with their first new recording in ten years, a CD single of Bryan Hyland's 1962 kitsch classic Sealed with a Kiss (National 031). An album will follow later this winter. . . The tenor Jerry Hadley, recently signed to a longterm contract with RCA Victor, was in the studio last June for his first crossover disc for the label, "Jerry Hadley: Standing Room Only." He will also record classical repertory for RCA's Red Seal label. . . Chicago-based indie label Pravda Records is



WARNER

Muldaur and Buchanan

issuing a tribute to the K-Tel compilations of late-night TV fame. Entitled "20 More Explosive Fantastic Rockin' Mega Smash Hit Explo-sions," the album features the Posies doing the Five Stairsteps' Ooh Child, Poi Dog Pondering covering George McRae's Rock Your Baby, the Smithereens reviving Ringo Starr's It Don't Come Easy, and John Wesley Harding and Kelly Hogan making like the Osmonds on A Little Bit Country, A Little Bit Rock 'n' Roll.





Rule #23 All drivers are not created equal.



NEW PRODUCTS

COUNTERPOINT

The Clearfield Metropolitan speaker from Counterpoint features two 6-inch midrange drivers, a 1-inch tweeter, and two 8-inch long-throw woofers in separate vented sub-enclosures. The speakers stand 62½ inches high and are available finished in walnut, oak, cherry, or black. Price: \$6,000 a pair. Clearfield Audio, Counterpoint Electronic Systems, Dept. SR, 2610 Commerce Dr., Vista, CA 92083.

JASCO The Mega Memory remote

control from Jasco can operate as many as eight different audio or video components, including TV's, VCR's, CD players, and receivers. It comes factory preprogrammed for "virtually all" brands and models, so you don't need the original remotes for setup. Price: \$89.95. Jasco Products, Dept. SR, P.O. Box 466, Oklahoma City, OK 73101.

• Circle 121 on reader service card

V PIONEER

The Pioneer CLD-S201 combination CD/laserdisc player features a separate CD tray that emerges from the middle of the door of the 12-inch unified disc tray. The player shuts off all video functions during audio-only play in order to avoid possible interference. Price: S535. Pioneer, Dept. SR, 2265 E. 220th St., P.O. Box 1720, Long Beach, CA 90801-1720.



NILES AUDIO

The NSW-100 in-wall amplified subwoofer from Niles Audio consists of the stackable SA-100 amplifier and the NSW-8 acoustic-suspension subwoofer, which has an 8-inch driver and includes its own enclosure. The SA-100 amplifier can be driven from a preamplifier or the speaker outputs of a receiver. Price: S995. Niles Audio, Dept. SR, 12331 SW 130th St., Miami, FL 33186.

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Barber, Knoxville, Summer of 1915 • Dawn Upshaw, soprano. (Nonesuch) 73954

Ashkenazy In Moscow Beethoven, Piano Concerto No. 3, more. (MCA) 54421 The Music Of Leroy Anderson • Fennell conducts. The Typewriter, The Syncopated Clock, more. (Mercury Living Presence) 73545

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Mahler, Symphony No. 5 N.Y. Philharmonic/Mehta. "The best-played Mahler Fifth on record." - Musical America (Teldec) 63874 Beethoven, Piano Sonatas Nos. 21 (Waldstein) & 30

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NEW PRODUCTS



A NHT

The magnetically shielded VT-1C center-channel speaker from NHT is designed to complement the company's VT-1 tower speakers in a complete surround-sound system. Price: \$300. NHT Inc., Dept. SR, 537 Stone Rd., Bldg. E, Benicia, CA 94510.

· Circle 123 on reader service card

BRINKMAN

The Endymion speaker system from Britain's Brinkman fits an upward-firing woofer and a downward-firing tweeter into an urn-like ceramic structure. It is available in several colors and measures 18 inches high (stands are not included). Price: \$850 a pair. Brinkman Loudspeakers, Dept. SR, 301 E. 10th St., Brooklyn, NY 11226.



V ONKYO

The Onkyo Integra P-388F preamplifier has nine inputs, including moving-magnet and moving-coll phono inputs, a balanced CD input, and two tape loops with an independent

recording selector. The supplied remote control includes volume adjustment via a motorized knob. Price: \$1,200. Onkyo U.S.A. Corporation, Dept. SR, 200 Williams Dr., Ramsey, NJ 07446.



VO'BRIEN DESIGNS

The Display Your Play CD holders from O'Brien Creations display one or as many as five jewel cases. Price: \$5.95 plus \$2.55 shipping and handling for singledisc holder, \$15.95 plus \$3.50 for multidisc holder. O'Brien Creations, Dept. SR, P.O. Box 538, New Paltz, NY 12561. · Circle 124 on reader service card



OMAL V

The Silhouette loudspeaker from Jamo is a stylish three-way bassreflex speaker with a 51/4-inch woofer, 51/4-inch midrange driver, and 1-inch dome tweeter. Available with a white or black

lacquer finish, it stands 28 inches high. Price: \$798 a pair. Jamo Hi-Fi U.S.A. Inc., Dept. SR, 425 Huehl Rd., Bldg. 8, Northbrook, IL 60062.

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NEW PRODUCTS

V DENON

Denon's AVC-3030 audio/video receiver features advanced Dolby Pro Logic decoding circuitry for optimal channel separation and nine non-Dolby ambienceenhancement modes. It is rated

for up to 110 watts each to the three front channels and 35 watts to the surround channel. Price: \$1,300. Denon, Dept. SR, 222 New Rd., Parsippany, NJ 07054. • Circle 133 on reader service card

ADVENT

The In-Wall Mini Advent, part of the Gallery Series, has a 5¼-inch woofer. Its white finish is paintable, and it comes with mounting hardware. Price: S200 a pair. Advent, Dept. SR, 25 Tri-State Int'l Office Center, Suite 400, Lincolnshire, IL 60069.

• Circle 132 on reader service card

- YAMAHA

DOLBY PRO LOGIC

The CDC-835 five-disc carousel CD changer from Yamaha features S-Bit Plus, the company's 1-bit digital-to-analog couversion system, and PlayXchange, which lets the user change discs while one is playing. Price: S549. Yamaha, Degt. SR, 6660 Orangethorpe Ave., Buena Vista, CA 90620. • Circle 134 on reader service card

CERWIN-VEGA

Cerwin-Vega's L-9 bookshelf loudspeaker, 22 inches high, has a long-throw woofer and a 1-inch tweeter. Price: S255 each. Cerwin-Vega, Dept. SR, 555 E. Easy St., Simi Valley, CA 93065. • Circle 135 on reader service card



BANG & OLUFSEN

The Beocom 1500 telephone from Bang & Olufsen has buttons in its base that give the user remote volume control for B&O audio/ video systems. Price: S199. Bang & Olufsen of America, Inc., Dept SR, 1150 Feehanville Dr., Mount Prospect, IL 60056. • Circle 136 on reader service card

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Because, during a live performance, what you experience is the combined effect of the orchestra *and* the hall. Re-creating that experience is what Bose[®] 901[®] Direct/Reflecting[®] speakers are all about.

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To read more about the Bose 901, see future issues of *Stereo Review*. Or, for an informative brochure, and names of Bose dealers near you, call toll free:

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30 years ago

In the October 1962 issue, critic David Hall reviewed the first 12-inch 45-rpm stereo classical records from Connoisseur Society and declared that "anyone who invests \$6.98 in these discs will get his money's worth."

Installation of the Month: Sidney Solomon of Skokie, Illinois, a merchandising manager for hi-fi manufacturer Allied Radio Corporation, had his system—a turntable, two open-reel tape decks, a 37watt-per-channel stereo amplifier, and a "partly transistorized" FM tuner—in a room divider that created a foyer. The components, of course, were "wholly of the company's own Knight equipment."

Best of the Month: George Jellinek, knocked out by Otto Klemperer's new Angel recording of Beethoven's *Fidelio*, said it was "an emotional experience nothing less than uplifting," and Nat



Hentoff showed critical prescience by endorsing "Hammer and Nails," a gospel album by the (then) only slightly famous Staple Singers. Elsewhere in the review section, Robert Offergeld, after listening to Vladimir Horowitz's first Columbia recital disc, urged the label to "chain Mr. Horowitz to a piano and thenceforth lovingly record any noise he might care to make."

Traditional Family Values? An ad for the elegant Sonorama speaker system by Rek-O-Kut showed an audiophile husband and his presumably nonaudiophile wife under the condescending headline, "She Looks, He Listens."



20 years ago

Singer-songwriter Cat Stevens, sixteen years away from calling for the death of the author Salman Rushdie, told interviewer Robert Windeler, "You Americans have this lust for demolishing something you've built up ... next you'll be going to Carnegie Hall to see the President die."

Test Reports: Julian Hirsch reviewed the AR-LST speaker system and concluded that "Few speakers in our experience are so totally free of irritating qualities," although he noted that at \$600 apiece it was "not a speaker for everyone." He also reviewed the Lafayette LR-440 SQ quad receiver ("In short, we liked it") and the Dual Model 1229 automatic turntable ("one of the finest automatic turntables available has been made even better").

Editorially Speaking: Commenting on the Scott Joplin revival, Editor in Chief William Anderson observed that "Great composers—and great listeners—need minor composers."



The Basic Repertoire: Martin Bookspan, pondering recordings of Tchaikovsky's *Capriccio Italien*, praised Kiril Kondrashin's early-Sixties RCA version for its

"remarkable spontaneity and vitality." Since that performance had been deleted from the catalog, however, he opted instead for versions by Leonard Bernstein and Antal Dórati.

10 years ago

In an article titled "Sense and Nonsense in High-End Hi-Fi," author Alan Lofft said that "for most of us the World of the High End will continue to be Tweaksville, a sort of Lotus Land populated by a dreamy lunatic fringe."

Among the new products noted for the month were the Thorens TD 226 turntable, which had provisions for mounting two different tonearms, the Kenwood KVR-510 audio/video receiver with an "enhancer" circuit for simulated stereo from mono sources, and the JVC HR-2650U portable VHS stereo VCR with Dolby B. In test reports, Julian Hirsch called the \$360 Adcom GFA-2 power



amplifier both a "state-of-theart" product and "a genuine bargain in today's market."

In record reviews, Joel Vance conferred "Best of the Month" status on a new album by veteran blues singer Sippie Wallace (with back-up by Bonnie Raitt, before her Grammies). On the classical side, George Jellinek nominated a recording of Madame Butterfly on Hungaroton despite it's lack of "bankable" name performers. Later on, Peter Reilly suffered through an album by exercise guru Richard Simmons, noting that he'd "have to become as huge as Orson Welles before I would even vaguely consider listening [to it] again."



Just Say No: Paul Kresh reviewed the then-popular disco medley "Hooked on Swing" but made no mention of a hot rumor of the day—that a follow-up medley of psychedelic Sixties songs would be called "Hooked on Drugs."

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In a test report published in the July 1992 issue of *Stereo Review*, noted audio critic Julian Hirsch commented "We found the RV-6010R to be a highly listenable receiver, with more power than most people will ever need and enough operating features to satisfy a confirmed button-pusher and knob twister...Few people will need more than it can deliver."

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check or money order for \$3.99, which includes postage and handling.

STEREO REVIEW's special CD offers are designed to help our readers stretch their ears by exploring different kinds of music at minimal cost. In these samplers the editors insist on music of high quality in each of the fields, and therefore we are particularly pleased to add to the series "The Rhino Atlantic Remasters Collection." It highlights the best in rhythmand-blues, soul, and rock over the last twenty years, covering everything from Ray Charles to Detroit heavy metal to disco, with a lot of other things in between—country, blues... well, just about everything. It is an unparalleled survey.

Rhino prides itself on being the record industry's leading reissue label and says it is the natural reissue outlet for Atlantic's historic catalog, featuring rock-and-roll classics of the 1960's and 1970's, the Atlantic and Atco Remasters series, and treasures from the Stax/Volt labels.

Atlantic, which started as a jazz and r-&-b label, quickly branched out from there. In more than forty years of working with enormously talented writers, musicians, and other artists



the company produced a body of work that had a staggering influence on American popular music. Much of it has been out of print for years.

The first batch of Rhino Remasters is devoted to 1960's icons of soul: Wilson Pickett, Solomon Burke, Percy Sledge, and Clarence Carter. All four artists are included in this sampler. Other tracks are drawn from collections by Aretha Franklin, the Drifters, Dusty Springfield, MC5, Doug

Sahm, Buddy Guy and Junior Wells, Average White Band, Sister Sledge, Firefall, Ray Charles, LaVern Baker, the Clovers, Sonny & Cher, and the Spinners. Sonny & Cher? You heard me, Sonny & Cher! And tracks from two new deluxe anthologies featured on the sampler present the Rascals and Manhattan Transfer.

Are you impressed with that line-up? We are. Rhino boasts of its state-of-the-art analogto-digital conversion and equalization equipment used in remastering this music from the original master tapes. And it all adds up to a total playing time of a bit more than 64 minutes.

Around the world this year people are contemplating the results of the synthesis of European, Native American, and African culture that eventually resulted from Columbus's first voyage to the Western Hemisphere. American popular music, which in modern times has circled the globe, is one of the most positive artistic results of that encounter of two worlds back in 1492.

As STEREO REVIEW approaches its thirty-fifth birthday (Feb-

proaches its initry-inith birthday (Pebruary 1993), we feel a little nostalgic about all the popular music we have praised since our first issue. Rhino talks of its near-fanatical love of America's pop heritage, and our editors and critics share that love. Rhino's CD sampler of the roots of rock-and-roll offered in our April 1990 issue was a big hit with our readers. We feel sure you will like this new sampler equally well. Send for your copy today.

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The Quest for Audio Perfection

NEVER-ENDING drive for improvement of our lives seems to be an intrinsic part of human nature. The process of improvement was glacially slow in prehistoric times, when it took eons to develop simple tools, but it now seems to be accelerating at an exponential rate.

Narrowing our field of view to highfidelity sound reproduction, we can see a microcosm of that process on a greatly compressed time scale. In the 1930's, after decades of acoustic recordings played through crude mechanical phonographs, "electronics" (the name followed the technology by a number of years) made it possible to expand the frequency range of recordings to cover at least the fundamentals of musical sounds. The World War II years brought great technological advances, principally for military purposes. At the war's end, this energy became directed to civilian needs. Both CBS and RCA saw a large potential market for improved record systems, and their rivalry resulted in the 33¹/₃-rpm LP and the 45-rpm record. The 78-rpm disc was doomed by those developments, whose sonic benefits and other advantages (especially the longer playing time of the LP) were obvious to everyone. The seeds of today's high-fidelity industry had been sown, although I doubt that anyone realized how large it would grow.

In the late 1940's, when I was bitten by the hi-fi bug, a buyer could choose from a number of amplifiers and speakers, sold mostly by manufacturers of public-address systems. The amplifiers were, to put it charitably, unexciting components, not very expensive, and they had sound quality to match. Similarly, many speakers were basically PA drivers installed in sealed or vented ("bass-reflex") cabinets. "Mediocre" would be the most flattering adjective one could apply to them by today's standards. For a turntable, one could choose among Garrard, Webcor, and V-M changers, and the phono cartridge was usually either a GE or a Pickering.

TECHNICAL TALK

JULIAN HIRSCH

There were two roads one could take for better sound. It was possible. in those pre-microcircuit times, to build your own amplifier and preamplifier. The development of a truly high-quality amplifier by D.T.N. Williamson in England was for me, as for many others, the path to high-quality amplification. I still have my Williamson amplifier, circa 1949, although it is no longer playable. Its 10 watts of output was not unusual, but the distortion of less than 0.1 percent and a frequency response extending from well below 10 Hz to beyond 100 kHz set it apart from the dressed-up publicaddress amplifiers of the time. So did its size: two chassis each measuring 10 x 2 x 17 inches and a combined weight of something like 60 or 70 pounds.

Other excellent amplifiers soon became available, first from McIntosh and later from Marantz, that would do justice to any of today's systems. All that was needed was money—lots of it. In that respect, the situation hasn't changed much over the last forty-odd years, although the numbers have. Roughly \$200 for a power amplifier and \$150 for a preamplifier was a good month's income for most people in those days.

As high fidelity attained a massmarket status in the 1960's and larger companies found it worthwhile to enter the field, the exclusivity of the audio fraternity weakened. No longer was it necessary to build your own components. The wide availability of kits, principally from the Heath Company (which only recently abandoned the kit business), gave many people a sense of "rolling their own" that was not quite realistic but satisfying. A variety of audio components from large Japanese companies began to appear on store shelves, and the exclusive character of high fidelity was further diluted.

Nonetheless, there is a common human need to possess things that differ from ordinary examples of their genre. We see this in automobiles, clothes, and other areas where little-known, usually more expensive products are considered superior to those available at any nearby store. The same situation exists in audio, and a large number of hi-fi products have been created to meet that demand.

But despite the widespread belief that truly great audio advances arise from the high end of the industry, most major developments have, in fact, come from large mainstream companies. After the LP record, stereo was the next advance that universally changed the character of home audio reproduction. Although the specific phonograph record and broadcast stereo systems (both FM and AM) used in this country were developed here, most recent advances have come from foreign companies.

The analog tape cassette was a Philips development, as is its possible successor, the Digital Compact Cassette (DCC). The compact disc, a joint development of Philips and Sony, made the LP record almost completely obsolete in less than ten years, in addition to setting new standards of audio quality. Sony has promised its recordable Mini Disc (MD) for later this year, and other advances, though perhaps not as important, can be expected to come along periodically.

For some people, this constant change is disturbing. When stereo records came along, there were diehard music lovers who maintained for years that their quality was far inferior to that of mono LP's. When the CD appeared, similar criticisms were heard relative to the stereo LP, and still are. Some users of the early acoustic phonographs considered electrical recordings to be inferior; you would have a hard time finding anyone to defend that position today.

Human nature being what it is, there will always be changes, and over the long run they will be improvements. As good as the CD is, efforts are now being directed toward increasing storage capacity by data compression (as in DCC and MD) without loss of sound quality. We have already heard the outcry from purists who object to the performance of the new systems even before they are available for evaluation. I suspect that most people will find the next generation of digital recordings to be quite satisfactory, but I am sure that criticisms will still be strenuous and vocal. \square

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CD Connection

My receiver does not have CD inputs, and I am concerned about exceeding the maximum levels for the phono, tape, or auxiliary inputs. What's the best way to connect my CD player to this old but still reliable piece of ANDREJ ZAKITIS equipment? Stone Mountain, GA

RV

Forget phono; if you connect your CD player to the phono input you will get incorrect frequency response, gross distortion, and levels high enough to risk damage to your equipment. The rest of your receiver's inputs are for components that put out what is loosely called "line level," which includes CD players. (A CD input is just an auxiliary input with a different label.) It's possible that the relatively high output of a CD player might overload such an input on an old receiver, but it's very unlikely.

Lens Cleaner

I have been told that using a laser-lens cleaner in my CD player will result in higher sound quality. Is this true? RICH LEONETTI San Jose, CA

It may reduce the incidence of skipping or muting caused by the laser's failure to read the data, although the lens would have to be extremely filthy to have much adverse effect. As long as the bits-or most of them-are getting through, a lens cleaner will have absolutely no effect on sound quality.

Laserdisc Soundtracks

My laserdisc player lets me select either a digital soundtrack or an analog one. Although I do hear a slight difference between the two, I don't understand what's happening. How is it possible to get analog sound from a digital format? CARL R. PIAZZA, JR. Philadelphia, PA

Easy: It isn't a digital format. Although the optical videodisc was the precursor of the compact disc, which often gives rise to the misconception that it, too, is digital, both picture and sound in the older format were originally strictly analog. In fact, the audio soundtracks were recorded using a technique, called audio frequency modulation (AFM), that was later adapted for hi-fi videotapes

The laserdisc had sufficient bandwidth from the start to accommodate a lot of extra information-in fact, a whole second video signal would fit, if anyone could figure out a reason to put it there. When a workable standard for digital audio was established, a digital soundtrack could easily be added to videodiscs, and today one almost always is. Since the digital audio standard is the same for laserdiscs and CD's, almost all current laserdisc players can also play CD's. The analog soundtracks are still included on laserdiscs so that older players will still work with them, and all modern players can play both (although they default to the digital version if there is one).

Although the two tracks are usually identical in content, they are technically unrelated, so laserdiscs do exist that contain entirely different material on the analog and digital tracks.

Moving-Coil Cartridges

Why aren't many moving-coil phono cartridges produced any more? And why can't they be used with a lot of receivers? MARTIN MELUCCI Lodi, NJ

While the amount of equipment available for playing vinyl recordings is certainly shrinking, the moving-coil (MC) cartridge has more than held its own, at least in terms of models available. One might speculate that this is because the last pro-analog holdouts are among the high-end audiophiles, and they have always favored moving-coil cartridges. Or it may be that inexpensive cartridges are usually moving-magnet (MM) designs, and the segment of the market that used to buy them has largely switched to compact discs. Whatever the reason, there are still lots of MC cartridges on the shelves.

As for their use with receivers, MC cartridges typically produce lower outputs than MM cartridges and require an extra stage of amplification to bring them up to a level appropriate for most phono inputs. A few receivers and integrated amplifiers incorporate this extra stage, but most don't, so an outboard transformer or "head amplifier" is required to match the cartridge to the input.

Skinny Speaker Connectors

My speakers are biwired, with heavy-duty cables going to the woofers. I have had to use very thin cable to the midrangeltweeter terminals, however, because my receiver's speaker outputs will accept only bare wire or small pins. How can I arrange it so that the same gauge of wire can be used for both sets of RIC ALLEN drivers? Venice, FL

The copper or other metal used in speaker cables presents a small resistance to an amplifier's output-not much compared to a speaker's voice coil, but some-which results in a certain amount of signal loss. If the resistance is large enough, it may affect the system's frequency response somewhat, depending on the design of the amplifier and the impedance characteristics of the speakers. The longer the cable run, the greater the resistance, but this can be offset by making the

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AUDIO Q&A

wire thicker, which is the main reason heavy cables are often recommended for connecting speakers. In fact, the main advantage of biwiring is to increase the effective thickness of the speaker cables by adding more wire, although whether that results in audible improvement under normal conditions is open to debate.

It's natural to think that a piece of wire acts like a pipe, that inserting a narrower section

will somehow "choke" the flow of electrons, but that's not the way it works. Thickness is valuable only in compensating for distance, so inserting a few inches of thin wire will have little deleterious effect (the wires inside amplifiers and speaker cabinets, in fact, are often skinny compared to the cables that connect the two together). The simplest solution to your problem, therefore, would be to insert



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short bits of thin wire into the receiver's output connectors and solder the heavy-duty cables to them, or just trim down the ends of the big cables to fit the connectors.

Distortion and Speakers

I recently purchased a collection of CD rereleases that, because of the poor quality of the original masters, have fairly high levels of audible distortion even at normal listening levels. Can these discs harm my loudspeakers? SCOTT WATERS Valley Village, CA

It's highly unlikely. Forms of distortion included within recorded material may be annoying to your ears, but to the playback equipment they are indistinguishable from music. One exception might be the square waves caused by clipping somewhere in the recording chain, but that's probably not the kind of distortion contained in old master recordings, and if it were it would be eliminated by the filters in the analog-to-digital (A/D) converter used to make the transfer to CD.

Dolby and Dubbing

I want to dub the audio portion of a VHS Hi-Fi tape to a conventional cassette. Both my VCR and my cassette deck have Dolby noise reduction. When copying, which Dolby circuit should be active? The VCR's? The cassette deck's? Both? DAVID DUNCHAK Youngstown, OH

As for the cassette deck, it's simple: Make sure the noise reduction is switched on. The Dolby circuits on your VCR, however, apply only to the linear soundtrack and have no effect on the hi-fi (AFM) audio. Before VHS Hi-Fi was introduced, several manufacturers added Dolby B to clean up the atrocious linear audio a trifle, and some early hi-fi machines retained this feature for the sake of compatibility. To dub an older tape's Dolby-encoded linear soundtrack, the VCR's Dolby circuits should be switched in too.

Video Connection

Currently I have only the audio outputs of my hi-fi VCR connected to my surroundsound processor. Does neglecting to plug the VCR's video output to the video input on my audio equipment have any effect on the quality of the Dolby Surround? WILLIAM J. LANE Camp Humphreys, South Korea

No. The audio and video circuits are completely separate and have no effect on each other. A/V receivers and amplifiers offer video inputs and outputs as a convenience, as they enable both picture and sound signal to be switched together, but the video circuitry usually just passes the signal through to the monitor without affecting it in any way. Patching the VCR directly into your monitor's inputs is electrically identical.
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Blily Ray Cyrus—Some Gave All. Achy Breaky Heart; etc. (Mercury) 441-451

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Firehouse-Hold Your 439-448 Fire (Epic) Carpenters—The Singles 1969-73 (A&M) 236-885 The Cover Girls-Here It le (Epic) 441-840 John Williams Conductor-The Green Album (Sony Classical) 441-824

Santana-Milagro 441•527 Kiss-Revenge (Mercury) 441•436

Ringo Starr-Time Takes Time (Private Music) 441•154

Steely Dan-Gold-Grt. Hits (MCA) 435-693

The Byrds-20 Essential

Tracks (Columbia/ 426-940

Rod Stewart-Downtown

(Warner Bros.) 425-322

Rush-Chronicles (Mercury)423-780/393-785

Lee Ritenour Collection

Tom Scott—Bom Again (GRP) 440-636

Judges Ruth (MCA) 440-479

Tanya Tucker—Collection

George Strait-Holding

My Own (MCA) 440-396

Midnight Oll—Scream in Blue (Columbia) 439-687

Willie Nelson-Greatest Hits (And Some That Will B

Beastie Boys-Check

(Columbia)311-001/391-003

Lyle Lovett-Joshua

Train/Selections From

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Hits (Polydor)

(GRP)

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-Grt.

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Er. Vogue—Funky Divas. My Lovin' (You're Never Gonna

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Cece Peniston-Finally (A&M) 433-805

Garth Brooks-Ropin' The Wind. The River Get It); etc. (Eastwest) 435-750 more. (Liberty) 428-862

Sawyer Brown—The Dirt Road (Capitol/Curb) 433-656

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Rooms-Songs of Elton John & Bernie Taupin 430-421 (Polydor)



Bonnie Raitt-Luck Of Bonnie Ram-Luc The Draw (Capitol) 423-186

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Whenever We Wanted (Mercury) 430-231 Brooks & Dunn-Brand New Man (Arista) 429-969

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308-049

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305-672

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TEST REPORTS



Technics SL-PD827 Compact Disc Changer

JULIAN HIRSCH HIRSCH-HOUCK LABORATORIES

HE Technics SL-PD827 is a versatile five-disc carousel-type CD changer offering excellent performance and operating flexibility at a moderate price. Unlike toploading carousel changers, the SL-PD827 has a carousel that emerges from (and retracts into) the front panel at the touch of a button, eliminating any need for clearance above the player to load or remove discs.

When open, the carousel extends only 6 inches from the panel, revealing two of its five loading trays (which accept either standard or 3-inch CD's). Touching the DISC SKIP button rotates the carousel for access to the next two trays.

For playback, the SL-PD827 transfers the selected disc from the loading carousel to an internal turntable, enabling the carousel to be extended and rotated while a disc is playing so that discs can be removed or added without interrupting the playing process. Uninterrupted programs of any length are thus possible.

The display shows the status of the

HOTOH

player's various programming modes and special features as well as the current disc, current track number, and elapsed time on the track. The number of the current disc flashes to identify it.

The SL-PD827 has two randomplay modes: random selection of both disc and track each time a track is completed, and a random sequence of tracks from one disc at a time. There is also a "spiral" mode in which the first tracks of all the discs are played (in their loaded sequence), followed by their second tracks, third tracks, and so on.

A convenient CD Edit-Recording mode provides two methods for auto-

Dimensions 17 inches wide, 5½ inches high, 15½ inches deep Price

\$230

Manufacturer Technics, Dept. SR, One Panasonic Way, Secaucus. NJ 07094 matically selecting the tracks on a disc that can be dubbed to fit onto a cassette. When the SL-PD827 is used with a compatible Technics tape deck, this feature automatically switches the deck between recording and pause modes.

The SL-PD827 can be programmed to play up to thirty-two selections in any order from any combination of discs. Alternatively, it can be programmed to *delete* up to thirty-two selections from the playback sequence. A Direct Access mode allows play to be started with any track on any disc, continuing in the normal sequence from that point. Like most CD players, the SL-PD827 has fastsearch and track-skipping modes in either direction.

All playback and programming operations can be performed either with front-panel pushbuttons or from the supplied remote control. In most cases, because of the grouping of its buttons, the remote control is more convenient to use.

The SL-PD827 uses the Technics MASH 1-bit digital-to-analog (D/A) converters, and its technical specifications are typical of CD players in its price range. On the test bench, its output, from a 0-dB test track, was 1.997 volts, almost exactly matching the CD standard of 2.000 volts. Its frequency response was almost perfectly flat from 20 to 6,000 Hz, rising to

TEST REPORTS

MEASUREMENTS

Maximum output level. 1.997 volts	
Frequency response	
20 to 20,000 Hz +0.3, -0.03 dB	
Channel separation	
100 Hz 95 dB	
1.000 Hz 117 dB	
20.000 Hz 86 dB	
Dynamic range 96.7 dB	
Distortion (THD + N)	
1,000 Hz (-70 to 0 dB) 0.0028 to 0.003%	
20 to 20,000 Hz (0 dB) 0.003 to 0.03%	
Signal-to-noise ratio (A-weighted)	
103.5 dB	
Maximum interchannel phase shift (at	
Maximum interchannel phase shift (at 20,000 Hz)	
20,000 Hz)	
20,000 Hz) 1.5° Linearity error -60 dB + 0.18 dB -70 dB + 0.08 dB -0.45 dB	
20,000 Hz) 1.5° Linearity error - - 60 dB + 0.18 dB - 70 dB + 0.08 dB - 80 dB - 0.45 dB - 90 dB + 2.7 dB	
20,000 Hz) 1.5° Linearity error -60 dB + 0.18 dB -70 dB + 0.08 dB -80 dB -0.45 dB -90 dB + 2.7 dB Defect tracking 2,400-	
20,000 Hz) 1.5° Linearity error - - 60 dB + 0.18 dB - 70 dB + 0.08 dB - 80 dB - 0.45 dB - 90 dB + 2.7 dB Defect tracking 2,400- micrometer errors, Pierre Verany #2 test disc	
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20,000 Hz) 1.5° Linearity error -60 dB + 0.18 dB -70 dB + 0.08 dB -80 dB - 0.45 dB -90 dB + 2.7 dB Defect tracking 2,400- micrometer errors, Pierre Verany #2 test disc Slewing time less than 1 second Cueing accuracy A	

+0.3 dB at 20,000 Hz. The low-level linearity of the D/A converters was very good (within about 0.4 dB) down to a -80-dB level, but at -90 dB the output was about 2.6 dB high. This is nothing serious (few multibit converters in equipment of this price class can do any better), but it was surprising in view of the frequently near-perfect linearity of today's 1-bit converters.

Channel separation was excellent in the midrange, with 1,000-Hz readings of about 117 dB, falling to 95 dB at 100 Hz and 86 dB at 20,000 Hz. Power-line hum, at 60 Hz, was a very low -110 dB on one channel and completely undetectable (under -120 dB) on the other channel.

Total harmonic distortion (THD) plus noise at a 0-dB level was -90 dB (0.003 percent) between 400 and 2.000 Hz, rising smoothly to -80 dB (0.01)percent) at 20 Hz. The distortion readings rose at higher frequencies, with a maximum of -70 dB (0.03 percent) at 10,000 Hz. At 1,000 Hz, the distortion was typically about -91 dB (0.0028 percent) at levels from 0 to -70 dB. We also measured the frequency accuracy of the player's output at 20,000 Hz, which showed a surprisingly high error of +0.34 percent (most CD play-

In our disc-handling tests, the SL-PD827 proved outstanding. It had one of the fastest slew times between tracks that we have vet measured, not more than 1 second (it was really too small to measure reliably with a stop watch). Even the time needed to change discs was not unduly long, about 9 seconds. Moreover, the changer appeared to be impervious to physical shock. To induce a momentary skip in its output required a blow with fist or palm that threatened to dent the top cover.

The SL-PD827's bulletproof character was further demonstrated by an ability to play the 2,400-micrometer calibrated defects on the Pierre Verany #2 test disc without any audible dropouts. Even with two closely spaced defects, the player produced only an occasional faint click at the 2.400-micrometer level.

Like many of today's complex consumer products, the Technics SL-PD827 may not be easy to master during a casual acquaintance. Fortunately, it does have a rather complete manual, though considerable study plus hands-on practice will be needed if you hope to use some of its special operating modes. On the other hand, simply loading and playing CD's is not difficult, and the overall performance of the machine was exemplary.

Laboratory measurements of a CD player give surprisingly few clues to its performance when compared with measurements on other machines. They serve mostly to confirm the engineering excellence of a design, and sometimes to verify the manufacturer's specifications. Such audible differences as may exist are usually so subtle that they cannot easily be quantified and therefore must be judged by subjective criteria.

Nevertheless, there are real, substantial differences between CD players in the way they respond to certain conditions, such as information-layer defects on a disc or physical shock applied to the player itself. In these respects, the Technics SL-PD827 proved to be extraordinary, although you might have to install it in a disco or at a rock concert to verify the extent of its isolation from the outside world. It's an interesting and in many ways a unique product, and an excellent value at its price.

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TEST REPORTS



Harman Kardon Model Thirty Loudspeaker System

JULIAN HIRSCH HIRSCH-HOUCK LABORATORIES

OR the first time in about sixteen years, the Harman Kardon name is gracing a series of loudspeaker systems. There are currently four newly designed models in the series; the Model Thirty is next to the top of the line.

The Harman Kardon Model Thirty is a two-way system designed for stand-mounting. Its 8-inch woofer operates in a vented enclosure, with the port on the front panel just below the woofer. The 1-inch soft-dome tweeter is above the woofer, near the top of the cabinet. The binding-post terminals, recessed into the lower rear of the cabinet, accept wires, lugs, and single or dual banana-plug connectors.

The owner's manual supplied with the speakers was sketchy, containing no specifications, only instructions about placement, connecting wires, and mounting. The speakers are not designed for placement close to a wall but for use on stands (floor spikes are recommended). The manual also recommends "breaking in" the speakers for at least 3 hours at medium volume before attempting critical listening.

The Model Thirty is handsomely styled and finished. The sides of the cabinet are glossy black, the rear panel

> Dimensions 91/8 inches wide, 23 inches high, 10¾ inches deep

> > Finish Black piano lacquer

> > > Price \$449 a pair

Manufacturer Harman Kardon, Dept. SR, 8380 Balboa Blvd., Northridge, CA 91325 is flat black, and the top and bottom are covered with a black cloth similar to the front grille. The edges of the cabinet are beveled, and the grille fits flush with the front panel to minimize diffraction of the sound around its periphery.

We mounted the H/K Thirty speakers on stands about 27 inches high and several feet from any room walls. Our composite response curve (formed by splicing the speakers' average room response with a close-miked wooferresponse measurement) showed a gentle downward slope with frequency, although the output varied only 3 dB from 150 to 1,500 Hz. There was a drop of about 5 dB from 1,500 to 10,000 Hz and a return to the midrange level between 12,000 and 20,000 Hz.

Although the composite curve, whose maximum point was between 70 and 80 Hz, could be interpreted as covering 20 to 20,000 Hz within ± 5 dB, that would not be consistent with the sound we heard from the speaker (or the capabilities of its drivers). As we have noted before, the anechoicequivalent bass-response curve of a vented speaker, made by combining the outputs of the cone and vent in proportion to their sizes, frequently gives an overly optimistic impression of the speaker's true bass performance in actual use.

A response measurement made with one-third-octave bands of pink noise gave more realistic results. The curve was roughly similar to the midrange and treble portions of the composite curve, but the bass was more believable: $\pm 3 \text{ dB}$ from 60 to 2,000 Hz.

Quasi-anechoic response measurements made with the MLS program of the Audio Precision System One showed a variation of about ±4 dB from 300 to 20,000 Hz. The response was within ± 2 dB from 400 to 2,500 Hz, with a narrow dip of 6 dB at 4,000 Hz and smaller variations from 5,000 to 15,000 Hz.

Horizontal dispersion was good, with output variations over a 45-degree angle off the forward axis of about ± 3 dB up to 7,000 Hz, -5 dB at 10,000 Hz, and -14 dB at 20,000 Hz. Impedance was a minimum of 4.8 ohms at 40 and 150 Hz and a maximum of 20 ohms at 70 Hz; it reached 12.3 ohms at 1,300 Hz. A 6-ohm rating could probably be justified by these measurements.

Sensitivity was 89 dB sound-pres-

sure level (SPL) at 1 meter with an input of 2.83 volts of pink noise. The woofer distortion with 3.2 volts applied (corresponding to a 90-dB SPL in a sensitivity measurement) was between 1 and 2 percent from 48 to 2,000 Hz and rose to 7 percent at 30 Hz.

With single-cycle tone-burst signals, the Model Thirty's woofer reached its excursion limits with a 100-Hz input of 720 watts into its 5-ohm impedance. At 1,000 Hz, the waveform began to distort gradually at about 200 watts, although the speaker absorbed the 550-watt clipping-level output of the amplifier without excessive signs of overload. The tweeter

The Harman Kardon **Model Thirty speaker** sounded smooth and free of peaks, with a slight warmth but very little upper-bass emphasis.

had no problem with the 840-watt maximum output of the amplifier at 10.000 Hz

The Harman Kardon Thirty sounded very much the way its measured response would suggest. It was very smooth and free of peaks, with a slight warmth but very little upper-bass emphasis. The highs were smooth and totally devoid of harshness but noticeably less crisp than those of several other speakers with which we compared it.

Visually, the Model Thirty presents an exterior as smooth and finished as its sound. The mirror-like sides contrast with the texture of the clothcovered top, bottom, and front. This design offers practical advantages as well: The cloth bottom will not scratch a surface on which it is placed (or be scratched by it), and the top is similarly immune to scratches and spilled liquids. We expect that these stylish and sophisticated new speakers will find a warm reception, even in a market crowded with competitors.

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MTX Soundcraftsmen P100 Preamplifier

JULIAN HIRSCH HIRSCH-HOUCK LABORATORIES

HE Soundscraftsmen name has been associated with quality American-made audio components for more than twenty-four years. The California-based firm. now known as MTX Soundcraftsmen, recently announced a new line of components consisting of a preamplifier and several power amplifiers, including the A200 amplifier we reviewed in June (a tuner and other products are also planned).

The P100 preamplifier is a low-profile unit measuring 17 inches wide, 10% inches deep, and only 1¼ inches high. Though not starkly minimalist, it provides only the basic preamplifier functions of source selection, volume, balance, and tone control, tape monitoring, and headphone output.

Finished entirely in black, the P100 has black knobs and pushbuttons, the latter for power switching and tapemonitor selection, clearly marked with white characters. The top and bottom edges of the panel, as well as the controls, are beveled, relieving the otherwise austere appearance. The source selections are marked CD, tuner, phono, and A/V (all of them except phono are interchangeable line-level inputs).

On the back panel are phono-type

jacks for the various inputs, plus line and tape outputs. One of the two AC outlets is switched. The unusually high total rating of 1,150 watts enables the P100 to switch almost any power amplifier likely to be used with it.

The P100's specifications include a frequency response of 20 to 20,000 Hz ± 0.5 dB, less than 0.008 percent harmonic or intermodulation (IM) distortion (at an unspecified output level), and a maximum output of 8 volts at less than 0.02 percent harmonic distortion. The A-weighted noise level is specified as 100 dB below full output (presumably 8 volts), which would be 74 dB below the EIA reference output of 0.5 volt. The phono-input capacitance is stated as 200 picofarads (pF). The tone-control range is specified as ±10 dB at 50 and 10,000 Hz.

Complementary metal-oxide semiconductor (CMOS) electronic signal

> Dimensions 17 inches wide, 13/4 inches high, 10% inches deep

> > Price \$360

Manufacturer MTX Soundcraftsmen, Dept. SR, 220 S. Ritchey St., Santa Ana, CA 92705

switching is used in the P100 so that the switches can be located close to the circuits that they control, thereby minimizing noise and interchannel crosstalk.

In our tests, the P100's basic frequency response measured within ±0.1 dB from 20 to 20,000 Hz. With the balance control at its center detent, the channel levels differed by about 0.4 dB over much of the audio range. RIAA phono equalization was accurate within 0.5 dB above 1,000 Hz, but the response sloped off below that frequency to -2 dB at 20 Hz. The bass tone control met its rated range of ± 10 dB at 50 Hz, but the treble control was a trifle shy of the stated range at 10,000 Hz, where it varied the output by ± 9 dB. The treble curves were hinged at 3,500 Hz, and the bass control had a sliding turnover frequency from approximately 50 to 200 Hz. The midrange, from 300 to 2,000 Hz, was unaffected by tone-control settings.

The P100's output clipped at about 9 volts. Total harmonic distortion (THD) plus noise was 0.006 to 0.008 percent from 1 to 2 volts output, increasing to 0.033 percent just before clipping. The A-weighted noise level, referred to a 0.5 volt output, was -98.4 dB through a high-level input and -86.7 dB through the phono input. A spectrum analysis of the preamplifier output at levels of 0.5, 2, and 5 volts at 1,000 Hz showed six or seven odd harmonics at each level, with a total rms value of 0.004 percent.

Sensitivity, for a reference output of 8 0.5 volt, was 123 millivolts (mV) for the high-level inputs and 1.95 mV for

TITILLATE YOU

the phono input. The phono preamplifier overloaded at 1,000-Hz-equivalent inputs of 134 mV at 20 Hz, 100 mV at 1,000 Hz, and 85 mV at 20,000 Hz. Phono-input impedance was 46,000 ohms at 1,000 Hz.

The Soundcraftsmen P100 provides very good performance at one of the lowest current prices for a good separate preamplifier. The most obvious measurable differences between it and most higher-price preamps are in the

MEASUREMENTS

Output level at clipping.	9 volts
Sensitivity for a 0.5-volt output	
CD	. 123 mV
phono	1.95 mV
A-weighted noise	
(referred to a 0.5-volt output)	
CD	-98.4 dB
phono	-86.7 dB
1,000-Hz distortion (THD)	
0.004% from 0.5 t	
Phono overload (referred to 1,000 h	
20 Hz.	
1,000 Hz	
20,000 Hz	
Phono-input impedance	
46,000 ohms at	
Frequency response	.,
CD	+0.1 dB
phono 20 to 20,000 Hz +0.5	
Tone-control range	, 200
	+ 10 dD
50 Hz.	
10,000 Hz	

accuracy and precision of its components and circuits (such as the RIAA phono-equalization error below 1,000 Hz and the slight channel imbalance).

Its sound quality left little to be desired. Noise and distortion were totally inaudible, the controls operated with a positive action and smooth rotation, and there were no audible switching transients. Headphone volume from the front-panel jack was adequate (with medium-impedance phones) but not the equal of a headphone output driven from a poweramplifier stage, as in a receiver or integrated amplifier.

The P100's appearance, compactness, and general performance, combined with its smooth operation and bargain price, make it a fine value in today's market.

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CIRCLE NO. 18 ON READER SERVICE CARD

TEST REPORTS



MB Quart Quart One Loudspeaker

JULIAN HIRSCH HIRSCH-HOUCK LABORATORIES

HE well-known German speaker manufacturer MB Quart recently introduced its lowest-priced product to date, the Quart One, which is assembled in the United States using German and North American components. A small, twoway bookshelf speaker, the Quart One has a 61/2-inch woofer with a butylrubber surround that crosses over at 2.800 Hz to a 1-inch titanium-dome tweeter. A seven-element crossover network cuts off the woofer's response at 12 dB per octave and the tweeter's response at 18 dB per octave.

Nominal impedance is 4 ohms, and the bandwidth is given as 49 to 32,000 Hz. Rated sensitivity is 88 dB soundpressure level (SPL) at 1 meter with an input of 2.83 volts, and the powerhandling rating is 60 watts.

The black cabinet, constructed of $\frac{3}{4}$ -inch high-density particle board, has injection-molded top and bottom plates and a removable black cloth grille. The woofer operates in a bass-reflex enclosure.

We placed the Quart Ones on 26-inch stands for our room-response mea-

IOOK P.

surements, with the microphone on the axis of the left speaker and about 12 feet away from it. The response was unusually smooth and uniform, with very small differences between the left and right curves from 400 to 20,000 Hz. Floor reflections and other roomboundary effects introduced some irregularity between 400 and 150 Hz.

A separate, close-miked measurement of the woofer-cone and port outputs produced a somewhat optimistic picture of the speaker's bass performance (combining port and cone outputs often exaggerates a low-frequency response curve). The best splice we could make between the bass and

> Dimensions 8¼ inches wide, 13½ inches high, 9½ inches deep Finish

> > Euro Black

Price \$379 a pair

Manufacturer MB Quart, Dept. SR, 25 Walpole Pk. S., Walpole, MA 02081

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TEST REPORTS

room-response curves made the Quart One's useful output appear to extend to below 30 Hz, which our ears and other measurements contradicted.

Response measurements at 1 meter with an input of one-third-octave random noise, stepping through the audio range, showed a relatively uniform output from 20,000 Hz down to about 60 Hz, with a variation of less than ± 4 dB over that range. Horizontal dispersion was very good; the difference in output on-axis and 45 degrees off-axis was only 4 dB at 10,000 Hz and 8 dB at 20,000 Hz.

Quasi-anechoic response measurements at 1 and 2 meters also showed about a ±4-dB variation from 300 to 20,000 Hz. There was a drop of 4 dB between 2,000 and 3,000 Hz (the crossover region), a return to midrange levels between 4,000 and 6,000 Hz in a smooth 8-dB rise, and an almost perfectly flat output from 8,000 to 20,000 Hz. Group delay (an indication of phase linearity) varied only about 150 microseconds overall in the tweeter range of 3,000 to 19,000 Hz, and even through most of the woofer range the total delay shift did not exceed 700 microseconds.

The Quart One's impedance curve showed minimum readings of 3.1 ohms at 180 Hz and 3.4 ohms at 50 Hz. Impedance rose to 11 ohms at the two bass resonances of 24 and 90 Hz and to 17 ohms at 1,900 Hz. It exceeded the 4ohm rating over most of the range.

Sensitivity was 89 dB, slightly better than rated, and with an input of 3.17 volts (equivalent to a 90-dB SPL) the woofer distortion was between 0.5 and 1 percent at frequencies in the range of 100 to 2,000 Hz, averaging about 0.7 percent. At low frequencies the distortion increased smoothly to 4 percent at 50 Hz and 7.5 percent at 40 Hz.

The Quart One was able to handle a healthy power input without serious distortion or damage in our singlecycle tone-burst tests. The woofer cone reached its 100-Hz excursion limits at 330 watts, where the sound became noticeably hard. At higher frequencies, the limiting factor was our amplifier, which clipped at outputs of 700 to 1,100 watts without any prior signs of overload from the speaker.

The Quart One was as listenable as its measurements would imply. Its sound was balanced and uncolored, without artificial upper-bass boom. The highs were crisp but not at all shrill. In A/B comparisons with other small speakers, the Quart One sometimes had a bit more sparkle, possibly reflecting its slightly elevated output (about 5 dB) in the top octave.

The MB Quart One is more expensive than some other small speakers, but its sound is generally commensurate with its price. In side-by-side comparison with two similarly sized but somewhat lower priced models reviewed in recent issues-the Signet SL250B/U (August, \$300 a pair) and the Paradigm Titan (September, \$199 a pair)-the Quart One delivered lower lows and higher highs. Based strictly on sound. I would rate it as the best of the three, and since the other two are excellent speakers in their own right, that makes the Quart One an outstanding performer in its class.



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COMPARISON TESTS

LAST spring I had the opportunity to set up and man the Electronic Industries Association's home theater demonstration booth at several home-improvement shows around the country. I was there to answer questions about home-entertainment technology, and I didn't get much rest—interest and enthusiasm were high. The questions were plentiful and, in many cases, remarkably detailed. Clearly, people are getting hip to home theater.

The core of most home theater systems is an audio/video receiver, which is usually very much like an ordinary audio receiver with the addition of video switching, a built-in surround processor, and two or three extra channels of amplification. The three reviewed here—the JVC RX-905VTN (\$1,100), the Marantz SR-92 (\$1,099), and the Pioneer VSX-D9C1S (\$1,140)—are fairly typical high-end models, near the tops of their manufacturers' lines. In many respects they are quite similar, testimony to

how mature and competitive this field has become Each offers Dolby Pro Logic decoding for the Dolby Surround soundtracks or most videodiscs and prerecorded v deocassettes (and some TV broadcasts), as well as electronically synthesized surround-sound modes for music listening and five amplifier channels left and right for front and rear, plus center-the min mum for correct presentation of a Dolby Surround sound field.

Even in their main-charnel power ratings, the three contestar.ts are pretty well matched: 120 watts per channel for the JVC, 110 watts for the Marantz, and 125 watts for the Pioneer When you translate the power difference to dec bels—a more meaningfu way of comparing power because it corresponds better to how we hear-they all come out within half a dec bel of each other, too small a difference to be heard. The surrour d-char

The latest generation of multichannel receivers expands the range of surround-sound alternatives.

nel ratings are also comparable at 30, 35, and 45 watts per channel, respectively—a total spread of 1¼ dB, which, though large enough to be audible when the power is called for, is not exactly earthshaking.

Don't be surprised that the surround-channel amplifiers provide less bomph than the main charmels. The differences—in these cases ranging from 4½ to 6 dB—are sensible and appropriate. In a properly set-up home theater system, you should not be aware of the surround speakers—until, hat is, you turn them off! If you're playing the surround speakers so loud that they call attention to themselves, you've turned them up too far. Consequently, if the sensitivity of the rear (surround) loudspeakers is approximately equivalent to that of the ones in front, you don't *need* as much power for them. I, for one, am perfectly happy with the front/back power ratios of these receivers.

The center channel is another story. It is there for one very important surpose: to lock dialogue and other sounds originating from center-screen to the screen. The center speaker is used primarily for Dolby Pro Logic reproduction and occasionally in the ambience-enhancement modes for music playback, but not for conventional stereo.

It is difficult to specify exactly how much power should be devoted to the center channel relative to that for the main stereo pair. To the extent by Edward J. Foster

JVC RX-905VTN (\$1,100)



HE RX-905VTN's front panel is the least busy-looking of the three receivers reviewed here. All functions are operated by digital touch pads (no knobs), and many of the controls are hidden behind a flipdown panel. With the door closed, the visible controls are for power. volume, muting, speaker selection, and input selection, plus buttons to activate the on-screen display, to switch between Dolby Pro Logic and the Digital Acoustics Processor (DAP)-JVC's lingo for ambience enhancement via digital signal processing (DSP)-and a pair of buttons to activate and change the mode of **JVC's CompuLink Source Related** Preset (CSRP) system. CSRP enables you to store three different

settings of the controls for volume, balance, loudness compensation, equalization, Dolby Surround decoding (Pro Logic or Dolby 3 Stereo three-channel decoding, centerchannel mode, center-channel level, surround level, and surround delay). and DAP (mode, DAP level, rear level, and room size and liveness) for each source-select button except TAPE 2 and for each tuner preset. Furthermore, you can assign a fivecharacter name (albeit in a painfully slow manner) to each combination of control settings. When the TEST key is pressed, the receiver cycles through every source-select key and every tuner preset regurgitating every bit of data you've programmed in. If you've pressed on SCREEN, all this appears against a blue background on your video monitor. Enough aiready!

In what is now a long-standing JVC tradition, the RX-905VTN features a button-activated seven-band S.E.A. (in JVC-speak) graphic equalizer in lieu of conventional tone controls. If desired, the equalization can be applied when recording a tape as well as when playing any source-a feature many recordists greatly appreciate. The equalizer is controlled by six touch pads-S.E.A. (on/off), RECORD (inserts the equalizer in the taperecording path), FLAT (restores flat response), REVERSE (inverts the equalization), PRESET (recalls a preset EQ setup), and MEMORY (stores an EQ setup)-along with two dual-action pads for moving from band to band and for adjusting the level within a band. When you touch any of these controls, a graphic display of the current equalizer setting appears for a few seconds on the front panel. At other times the display shows a dynamic spectrum analysis of the audio signal.

JVC provides a rather novel "twolevel" programmable remote control with the RX-905VTN. At first glance, it seems a relatively simple device. There are power buttons for the recelver, a TV, and a VCR; nine sourceselect touch pads (plus TAPE-2 MONI-TOR); buttons to switch the surround processor and equalizer on and off and to select an equalizer preset; pads to turn the CSRP on and off, to display its settings, and to change its mode; front and rear up/down volume pads; mute, sleep timer, and onscreen display pads; and a four-pad multifunction group used for basic operation of the source equipment selected with the source-select keys. In addition, the remote control has three Sequential Program Keys, each of which can store as many as sixteen individual program steps-for example, the sequence needed to turn the system on, select CD as a source, and commence playback.

But it doesn't end there. The remote's control panel is hinged and opens like the cover of a book to reveal a host of additional touch pads on the lower level. In addition to giving you control over center-channel volume, these pads enable you to program the Digital Acoustics Processor, set surround-channel delay in Dolby Pro Logic mode, and to control connected source components in almost every particular. The remote comes preprogrammed for JVC components but can learn the commands for other brands as well.

that power-hungry sound effects are kept out of the center channel, one might assume that it could get by with less power than the main channels. But there is usually a lot more than just dialogue in the middle, and it is not uncommon for the center channel to dominate a Dolby Surround soundtrack, which would suggest that you need at least as much power for the center as for the front left and right. It depends on the movie and how the sound engineer directed the mix. My druthers are to have as much power for the center channel as possible: I'd rather be safe than sorry. This is a matter on which sensible engineers can disagree, however, and some philosophical differences are apparent in these three receivers. JVC and Marantz designed the center channels of the receivers we tested to provide substantially more power than their surround outputs and almost as much as the front left and right. The JVC RX-905VTN carries a 70-watt centerchannel rating, the Marantz SR-92 a 75-watt rating (the 5-watt difference between them is inconsequential). The Pioneer VSX-D901S, on the other hand, which provides the greatest power to the front left and right and the rear, provides the least in the center: 55 watts. Still, 55 watts is nothing to sneeze at, and it's only 1.35 dB less than Marantz's 75 watts—a perceptible difference but, again, not earth-shaking. Although none of these receivers has a built-in power amplifier

for a subwoofer, each has a line-level output to feed a powered one or a separate subwoofer amplifier.

In the Marantz SR-92 and the Pioneer VSX-D901S, each power-amplifier channel is connected individually to its drive preamplifier with a removable jumper. This enables you to add an external speaker equalizer or to replace the internal amplifiers with external power amps. The JVC RX-905VTN has a center-channel line output and one stereo pair that can be switched from front to rear channels as desired. With it, therefore, you can equalize or separately power either (but not both) the front or rear pair. All three receivers have connections for two pairs of main speakers (selected by a front-panel switch), one pair of surround speakers, and one center speaker. In all cases, the center and rear outputs are push-to-insert clips. The center and main front speakers are connected via more substantial binding posts.

The Marantz and Pioneer receivers also have options for multiroom operation. The Pioneer VSX-D901S provides a second pin-jack video output specifically for driving a video monitor in a second room. It also has an extra pair of power-amplifier outputs to drive speakers in this other room, and it can be controlled from the remote room via an optional MR-100 infrared sensor. There are some restrictions on multiroom operation, however: It's

MARANTZ SR-92 (\$1,099)

not possible when recording, for example, or when the surround system is on in the main room (because the surround amplifiers are used to drive the remote speakers).

Marantz's multiroom options are fairly similar. The SR-92 has a second pair of power-amp outputs, and you can buy an optional IR-92 remote sensor to relay commands back to the receiver from the other room. When the SR-92's multiroom function is activated, it automatically reconfigures its internal amplifiers to power the second pair of speakers, opting for a "phantom" center channel if the Dolby Pro Logic system has been activated.

All three receivers include AM/FM tuners and phono preamplifiers suit-

F you're tired of basic black, you may find the Marantz SR-92's gold-anodized front panel and beige side panels a pleasant alternative. In addition to its dedicated cable-FM hookup, the SR-92 has a few more unusual goodies: a built-in clock for unattended recording or wake-up listening, a Bass EQ button that provides a 13-dB boost at 53 Hz and a sharp rolloff below that frequency to snap up the bass response of small speakers, and switchable IF bandwidth in the FM tuner so that you can choose the appropriate selectivity for the station you are trying to pull in. The receiver has both S-video and pin-jack composite-video monitor outputs plus an extra pin-jack video output driven exclusively from

the front-panel video Input. Marantz also seems to have paid attention to Its audio p's and q's when designing the SR-92. The receiver has separate high-current power supplies for the main, center, and surround channels and knobpotentiometer volume and tone controls for the main stereo channels. Although digitally controlled attenuators have improved markedly and do greatly facilitate remote control, the solid-state switches used in them could add noise and distortion. Many audiophiles prefer conventional analog controls such as those used on the SR-92 for volume, tone, balance, and Dolby input level and balance setup.

Despite the real estate occupied by these controls, Marantz managed to design a clean, unintimidating front panel with a very legible dis-

play. A string of thirteen buttons is used to select among the various program sources (including tuner band, off-the-air or cable FM antenna, and FM reception mode), turn multiroom operation on and off, choose the surround-sound operating mode (Dolby Pro Logic, Matrix, Hall, or simulated stereo), and, for Dolby Pro Logic operation, select the center-channel mode (normal, phantom, or wide). Buttons for tape dubbing, Dolby test tones, and speaker selection are below the display, and to the right are a touch pad (used to enter numbers and letters when selecting or identifying stations, setting the clock, and so forth) and numerous small buttons mostly related to tuner and display functions.

Marantz's sixty-four-key programmable remote control is relatively conventional, but from a humanengineering standpoint it's no match for the SR-92's front panel. Although controls are clustered by function, all of the buttons are the same size, color, and shape, which makes the remote harder to use than it might be. If you can find the right button, you can do most of the things you'd want to do from a remote. What you can't do is adjust left/right channel balance, bass, treble, or the Dolby Pro Logic input settings, since these functions are controlled by nonmotorized potentiometers (the main volume-control knob *is* motorized). Don't lose this remote! It's your only means of adjusting center and surround volume, which are set via digital atlenuators.



PIONEER VSX-D9015 (\$1,140)



CIONEER takes the middle ground on mechanical vs. electronic controls. In the VSX-D901S, master volume is set by a motorized potentiometer, whereas bass, treble, and balance are set by electronic attenuators.

Of the three receivers reviewed, the Pioneer accommodates the greatest number of program sources. It also provides a rather broad selection of surround-sound modes: JAZZ, OANCE, CHURCH, HALL, and THEATER in addition to Dolby Pro Logic and Dolby 3 Stereo (which is essentially Pro

able for moving-magnet (MM) cartridges. The Pioneer receiver's phono preamp has a separate rear-panel level control to match its output level with those of other audio components, and its tuner has separate connectors for 75-ohm coaxial and 300-ohm twin-lead antenna wiring. The JVC receiver also accommodates both types of antenna cable, but the center wire of the coax must be stripped and connected to one of the 300-ohm binding posts. And the Marantz SR-92 provides both a 75ohm coax FM-antenna input and a 75ohm coax CATV input, to enable cable FM reception as well as off-the-air reception without a switch box.

Speaking of station presets, the Ma-

round channel, leaving that information in the front left and right). Since most of this versatile receiver's controls are on both the front panel and the remote, both are rather busy. One aid in cutting through the clut-

Logic without extraction of the sur-

ter is a front-panel jog dial that can serve five functions: manual station tuning, selection of letters for station naming, effect-level adjustment for the video enhancer (usable for playback and recording), surround-channel delay adjustment, and surround effect level. Since some of these adjustments are infrequently used, the dlal itself is not replicated on the remote. The *lunctions* are accessible, however.

The video-enhancer circuit operates on composite-video signals only and has no effect on S-video outputs. To ald in evaluating the quality of the enhancement, the receiver provides split-screen operation with the unenhanced plcture on the left and the enhanced one on the right. After you've adjusted the picture to your satisfaction, you can store the setting in one of five "enhancer memories."

In a similar way, the receiver provides five "acoustic memories" wherein you can store your favorite tone-control settings. Finally, if you are using the VSX-D901S with other Pioneer SR-compatible components, you can automate the system to perform a series of commands at the touch of a button—to select the CD player and begin playback, for example. Pioneer calls this feature Auto Source.

Of the three receivers reviewed here, Pioneer's is the only one with a source-direct function to connect input signals straight through the volume control to the power amplifiers, bypassing all other circuits. Of course, this is possible only in the stereo listening mode—not with any sort of surround-sound processing.

Buttons on the learning remote control are clearly labeled and differ in size, shape, color, and sometimes background in accordance with function. On the upper half of the remote are buttons that can be used to control multiple components. With the translucent white buttons on the left, you select which of nine devices you want to operate, then use the orange power button, twelve-digit keypad, and other buttons to work the VCR, audio tape deck, videodisc player, or whatever else you've selected.

The component you choose to control need not be the one that you're playing at the time. Source selection is via twelve buttons in the Receiver Control area on the lower half of the remote. Here you'll also find master volume buttons, front/rear and left/ right balance buttons, a muting button, the jog buttons, and so forth.

rantz provides for as many as thirty with user-selectable five-character station names. JVC's accommodates forty station presets, which are identified by channel number and can be tagged with an additional five-character code as part of its CompuLink Source Related Preset system. The Pioneer stores tuning frequencies for as many as thirty stations, each of which can be tagged with its call letters or format (jazz, rock, etc.).

At minimum, each receiver provides rear-panel inputs (and recording outputs where appropriate) for one moving-magnet phono cartridge, a CD player, at least one audio tape deck, a laserdisc player, two VCR's, and a TV set. Except for the Marantz SR-92's VCR-2 connections (which are all pin jacks), both S-video and pin-jack composite-video sockets are provided for all video inputs and outputs. To this basic complement Marantz adds a front-panel audio/video input (with an S-video connector as well as pin jacks). JVC provides connections for two additional audio tape decks (TAPE-2 and DAT), and Pioneer goes whole hog with an extra front-panel audio/ video input connection (S-video and pin jacks), two more back-panel audio/ video inputs (pin-jack only), record/ play connections for an extra audio tape deck (TAPE-2), and an additional uncommitted audio input (LINE).

LABORATORY MEASUREMENTS					
AMPLIFIER SECTION	JVC RX-905VTN	MARANTZ SR-92	PIONEER VSX-D9015		
Output power at clipping (1,000 Hz)					
main channels, 8 ohms	140 watts	125 watts	160 watts		
main channels, 4 ohms	200 watts	170 watts	125 watts*		
rear channels, 8 ohms	35 watts	45 watts	50 watts		
center channel, 8 ohms	80 watts	90 watts	60 watts		
	00 "14:13	Jo watts	oo watts		
Clipping headroom (relative to rated output)					
main channels	+0.7 dB	+0.6 dB	+1.0 dB		
rear channels	+0.8 dB	+1.1 dB	+0.5 dB		
center channel	+0.5 dB	+0.7 dB	+0.2 dB		
Dynamic power output (main)					
8 ohms	180 watts	140 watts	185 watts		
4 ohms	275 watts	200 watts	145 watts*		
2 ohms	340 watts	210 watts	170 watts*		
Dynamic headroom (main, 8 ohms)	+1.8 dB	+1.1 dB	+1.7 dB		
bynamic nedaroom (main, 8 onnis)	+1.6 dD	+1.1 GD	+1,7 db		
Maximum full-power distortion	0.037% at 120 watts	0.087% at 110 watts	0.028% at 125 watts		
(20 to 20,000 Hz into 8 ohms)	(20,000 Hz)	(20,000 Hz)	(20,000 Hz)		
Sensitivity (for 1 watt output into 8 ohms)					
CD	22.7 mV	17.9 mV	15.0 mV		
phono	0.255 mV	0.315 mV	0.335 mV		
A-weighted noise (referred to 1-watt output)					
CD (direct on/off)	-81.1 dB	- 90.4 dB	-82.8/-73.9 dB		
phono (direct on/off)	- 79.6 dB	-75.8 dB	-81.3/-68.7 dB		
Phono-input overload (MM, 1,000 Hz)	110 mV	100 m V	1 60 mV		
Phono-input impedance (MM)	47,000 ohms/115 pF	49,000 ohms/160 pF	51,000 ohms/340 pF		
the second se	And a state of the	of the local division of the local divisiono	the second s		
RIAA equalization error (20 Hz to 20,000 Hz)	+ 0.5, −0.2 dB	+0.2,-1.7 dB	+0.2, -0.1 dB		
Frequency response	+0.0, -0.3 dB	+0.4, -0.5 dB	+0.0, -0.2/		
(20 Hz to 20,000 Hz, direct on/off)			+0.2, -2.8 dB		
Tone-control range	±10.3 dB at 63, 160, 400, 1,000,	+11.0, -9.4 dB at 20	+8.0, -11.2 dB at 20 Hz;		
tone tonrorrange	2,500, and 6,300 Hz;	Hz; +10.6, -9.0 dB at	± 9.8 dB at 20.000 Hz		
	+9.5, -10 dB at 16,000 Hz	20,000 Hz	_ 7.0 ub at 20,000 tiz		
	17.5, 10 ab at 10,000 112				
FM TUNER SECTION	JAC	MARANTZ	PIONEER		
50-dB quieting sensitivity					
mono	18.5 dBf	15.7 dBf	16.2 dBf		
stereo	43.5 dBf	39.5 dBf	39.5 dBf		
Circuit As unless antis					
Signal-to-noise ratio	68.1 dB	70.8 dB	74. 9 d B		
stereo	65.8 dB	68.5 dB	68.9 dB		
sicico	05.0 db	08.5 05	06.9 00		
Harmonic distortion (THD + noise at 65 dBf)					
mono (wide/narrow)	0.17%	0.15/0.17%	0.21%		
stereo (wide/narrow)	0.39%	0.47/0.59%	0.14%		
Capture ratio at 65 dBf (wide/narrow)	0.8 dB	1.3/2.0 dB	1.0 dB		
Selectivity (alternate-channel, wide/narrow)	60 dB	66.8/71.4 dB	57.6 dB		
Stereo threshold	29.3 dBf	27.4 dBf	22.5 dBf		
Pilot and subcarrier leakage					
19 kHz	-64.8 dB	-40.8 dB	-60.2 dB		
38 kHz	-75.2 dB	-43.4 dB	-67.9 dB		
	and the second se				
Stereo channel separation					
100 Hz	49.0 dB	46.2 dB	42.3 dB		
1,000 Hz	53.8 dB	48.7 dB	47.3 dB		
6,000 Hz	43.9 dB	52.7 dB	47.1 dB		
Frequency response (30 to 15,000 Hz)	+0.4, -1.1 dB	+0.2, -1.0 dB	-0.7, -0.2 d₿		

*Speaker-impedance switch at low setting; see text.

With such a busy rear panel, the VSX-D901S has little room left for accessory outlets, but Pioneer managed to squeeze in three, two of them switched (200-watt total rating) and one unswitched (200-watt rating). JVC provides only a pair of unrated switched outlets. The Marantz SR-92 has the most outlets: one unswitched (150-watt rating) and three switched (100 watts total).

On the Test Bench

All three receivers performed well in the lab. Although none met its total harmonic distortion (THD) specification at rated power at 20,000 Hz, they did meet spec over much of the frequency range, and where they missed it was not in a way that would be audible. In total available power (at clipping level into 8-ohm loads), they were virtually identical: 255 watts for the JVC RX-905VTN, 260 watts for the Marantz SR-92, and 270 watts for the Pioneer VSX-D901S. They distribute their power differently, however, with the Marantz devoting more of its available output to the center and rear than do the other receivers.

The receivers also differed in their response to low-impedance loads (4 and 2 ohms). The JVC's output held up the best, though the Marantz was certainly no slouch. When interpreting the Pioneer's comparatively poor showing into 4- and 2-ohm loads, you should consider that it was the only receiver in the group with a rear-panel "speaker impedance" switch, which we set to its low-impedance position (thus reducing internal supply voltages and available output power) for testing with 4- and 2-ohm loads. This feature is designed to prevent overheating of the receiver or damage to its output transistors because of excessive current flow, even though it might be able to safely deliver more power into these loads for brief periods at the high-impedance setting.

Perhaps because of its "purist" approach to control design, the Marantz SR-92 had the lowest noise of the three (by a wide margin) through its high-level inputs. In its "direct" mode, the Pioneer VSX-D901S came in second here, and it was substantially quieter than the others through the phono input. When its tone controls and other signal-processing circuits were switched in, however, the VSX-D901S's noise level rose by almost 10 dB on the high-level inputs and by almost 13 dB on the phono input, moving it down into last place for both.

The measured sensitivities of these

receivers were all within normal bounds, and their phono-input impedances were close to target as well, although the capacitive component in the Pioneer VSX-D901S was a bit higher than I'd like to see. Phonoinput overload margin was adequate on all three receivers, with the Pioneer offering the greatest margin of safety. It also delivered exceptionally accurate phono equalization, although the JVC was certainly adequate in this regard, and the 1.7-dB discrepancy in the Marantz occurred only at the highfrequency extreme.

From line-level inputs, the JVC's frequency response was almost perfectly flat across the audio range. The Marantz exhibited an error of approximately $\frac{1}{2}$ dB, which presumably is attributable to its nondefeatable tone controls. In "direct" mode, the Pioneer's response was even flatter than that of the JVC, but with tone-control and other processing circuits active, it was down 2.8 dB at 20,000 Hz.

Marantz nosed out Pioneer for top honors in mono FM sensitivity. The two were identical in stereo sensitivity and beat out the JVC entry by a substantial 4 dB. Pioneer turned the tables on Marantz in FM signal-to-noise ratio (S/N), with JVC again a somewhat distant third. The Marantz's FM tuner had the lowest distortion in mono but the greatest in stereo. Overall, I'd give the nod for distortion control to the Pioneer's tuner section.

The JVC had the best capture ratio—a remarkable 0.8 dB—followed closely by the Pioneer, with the Marantz bringing up the rear. The Marantz took the honors in selectivity, however, which even at the receiver's wide IF-bandwidth setting was significantly better than that of the JVC or the Pioneer.

Pilot and subcarrier leakage were adequately low in the Pioneer and JVC receivers; the Marantz could stand some improvement here if you plan to record from FM to a cassette deck with inadequate filtering of its own. Stereo separation varied from receiver to receiver and from frequency to frequency but was more than adequate across the board on all three. The Pioneer's FM tuner had the most extended frequency response, but the Marantz and JVC tuner sections were only 1 dB down at 15,000 Hz, and from just slightly below 15,000 Hz they were quite flat.

Conclusion

When you are evaluating comparably equipped high-quality components such as these three A/V receivers, it's often impossible to declare an overall winner. Each of these products has its strengths relative to the others, and each its weaknesses.

I like the looks and sound of the Marantz SR-92. I like its legible display and its clean front panel. It's got a good Dolby Pro Logic decoder and, to my way of thinking, proper power distribution for Dolby home theater. It has quiet electronics and, overall, a very good tuner. And the Bass EQ feature can come in handy with small speakers. The SR-92 will not accommodate as many program sources as the Pioneer VSX-D901S or the JVC RX-905VTN, however, and I am not in love with its remote control.

The JVC RX-905VTN offers the greatest control of the sound field with its Digital Acoustics Processor (DAP). Not only does it provide four distinct modes-SYMPHONY HALL, PAVILION, STADIUM, and LIVE CLUB-but you can modify the apparent size and liveness of each simulated space to suit your taste or the characteristics of a particular recording. You can even record using the DAP enhancements. The lowest band of JVC's S.E.A. equalizer can serve the same purpose as Marantz's Bass EQ and is adjustable to boot. Basic tone controls may be easier to use than the JVC equalizer, but they don't approach it in flexibility. The JVC also has enormous dynamic power reserves for a receiver of this type, especially when driving low-impedance speakers. And though its tuner doesn't quite match the others in performance, its remote control has a lot to recommend it.

The Pioneer VSX-D901S is arguably the most fully equipped and flexible of the three receivers in accommodating present and future program sources. Except for selectivity, it has a fine FM tuner section, and except for its relatively high shunt capacitance. an excellent phono preamp-the only one, in fact, with its own level control for matching listening levels with other sources. Its remote control is competent and fairly easy to use. And it has a good assortment of ambienceenhancement modes in addition to Dolby Pro Logic decoding. On the other hand, its signal-to-noise ratio and frequency response deteriorate when you switch it out of its sourcedirect mode, which you will have to do to use most of its features. And with the embarrassment of riches Pioneer provides, some may find the VSX-D901S's very appearance daunting and its use difficult. П



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The Acquistimass-7 home theater speaker system delivers lifelike sound for TV and video viewing as well as stereo music listening. It includes three Direct/Reflecting cube speaker arrays and a patented Acoustimass bass module (shown bottom of page).

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channels. The compact bass module adds clear, deep bass – free of audible distortion. The result is a wide stereo image with clean, low tones that heighten the drama to keep you on the edge of your seat. And, when you add compatible Bose VS-100[™] rear channel speakers, you hear Bose quality sound in a complete surround sound system.

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THE word "digital" is to this decade as "transistor" was to the Fifties and Sixties, with implications and resonances that reach beyond the specific technology it names. It gleams with the promise of a cleansed, transformed future, of something new under the sun and better on the horizon.

That's probably too much to expect from a bunch of integrated circuits, but digital technology, like the transistor before it, has transformed the way we listen to music. Digital audio's first beachhead was in the recording studio. Mammoth, elaborate, and finicky, the early digital tape machines built by SoundStream, 3M, Denon, Sony, and others produced recordings of unprecedented fidelity. The big breakthrough, however, was the compact disc, which captured audio signals in a completely new way: Its playing surface was covered with a dense spiral of microscopic pits representing the binary zeros and ones of digitized sound. This surface, known as the information layer, was covered by a reflective coating that enabled the pits to be read by a laser beam. No more needle tracking a groove, no more surface noise, and, at least with digitally recorded material, no more tape hiss. For the first time ever, you could go into a store and walk out with perfect duplicates of original studio

THE MANY FACES OF CD







The Eclipse ECD-411 in-dash car CD receiver (\$700), with dual 18-bit D/A converters, can control Eclipse CD changers and digital signal processors.



Onkyo's DX-705 single-disc CD player (\$330) features a Music File system that can memorize the user's preferred track sequences for as many as 204 discs.

> Harman Kardon's TL-8500 top-loading fivedisc carousel CD changer (\$549), with 1-bit D/A converters, has duplicate programming controls on the top and front.



Aiwa's XP-7 portable CD player (\$280) has a built-in battery that can be recharged in only 30 minutes. There's a wired remote control in its headphone cord.



Nakamichi's Model 100 cdc/i Acoustic Isolation trunk-mount ten-disc CD changer (\$3,000) has a one-piece aluminum chassis that is said to fight "digital jitter."



The Proceed CD Library (\$14,000), which holds up to one hundred discs, enables the user to select discs and tracks by title, artist's name, or musical genre.

DIGITAL AUDIO

recordings. A major cause of sonic degradation was eliminated.

CD's didn't just change the sound of our music-they also made it more convenient to listen to. A CD can hold at least 74 minutes of music (and some run as long as 80 minutes), so you can listen to a whole LP's worth of songs-and more-without changing sides. The small size of the discsabout 4³/₄ inches—and their great durability has made it easy for manufacturers to build multidisc changers. Carousel changers, which hold five or six discs in lazy-Susan fashion, and magazine changers, which hold six, ten, or sometimes more discs in removable cartridges, enable users to enjoy continuous background music or to listen with uninterrupted concentration. Being able to listen to a multidisc Ray Charles or Jeff Beck boxed set without getting up every 20 minutes or so to change sides or records makes the experience much more enjoyable. Some recent changers accept multiple magazines for playback of as many as eighteen discs-an all-night party showcasing the Atlantic Rhythm & Blues Series and the Complete Stax/ Volt Singles seems in order here! There are even some juke-box changers that hold a hundred discs ready for near-instant access.

The compact disc has also brought new wrinkles to car and portable audio. The first car CD players were single-disc units, but trunk-mounted magazine changers soon followed, and now high-end head units often include controls for such changers. Very recently, however, Alpine introduced a head unit with a built-in three-disc changer, and Denon has brought out a small separate changer that can be mounted in a dashboard or glove compartment or under a car seat. It's a good bet we'll be seeing many more such products in the months to come.

There are still no *portable* changers, but that doesn't mean there has been no progress since the days of the original, now rather clunky looking, Sony Discman. Today's portable CD players are sleek mini-marvels of engineering. Few are really portable in the fullest sense, however: They are usually not shock-resistant enough to be taken on brisk walks and jogs without mistracking. But this problem is now being addressed in players with buffer memories that enable them to read a few seconds ahead on the disc and keep the music flowing from the buffer when the laser pickup gets jolted out of position momentarily.

Digital audio tape (DAT) was supposed to do to the cassette what CD did to the LP, but between the high cost of the technology and the legal tangle it encountered on its way into this country, that wasn't to be. The format survived, however, and has even flourished among serious tape enthusiasts and professionals.

Meanwhile, digital audio technology has been making a big move into signal processing, with the result that you can now find digital circuitry in almost every type of audio component. Digital signal processing (DSP) in amplifiers, receivers, and outboard processors enables listeners to recreate the acoustical ambience of various performance spaces in their own homes. Some use DSP for Dolby Pro Logic decoding as well, or even for signal-processing more mundane tasks such as equalization and dynamic-range compression and expansion.

Signal-bending applications of this type have an almost limitless potential that manufacturers are only beginning to take advantage of. A recent loudspeaker introduction by Philips reveals some tantalizing new directions—digital crossover networks, a DSP circuit that extends frequency response and provides phase compensation, and more. Since the input to the powered DSS930 speaker is a digital bit stream, multiple speakers can be daisy-chained for multiroom installation with a single thin optical cable.

Sony's DST (Digital Signal Transfer) system brings similar convenience and quality advantages to a multiroom setup, using digital signal compression and transmission techniques to lash several separate digital audio signals together and send them out across a single two-conductor cable. It can distribute feeds from multiple components, plus video, to as many as sixteen rooms.

Digital audio has brought many wonders over the past ten years, and more are on the way (see "The Sound of Things to Come," page 62). Though not the stuff of great world changes, these developments have made, and will keep making, our private worlds more fun to live in.





Sony's multiroom Digital Signal Transfer system combines multiple audio and video signals and sends them to different rooms via a single 75-ohm coaxial cable.



The CD-I (Compact Disc Interactive) system from Philips (\$699) plays regular CD's as well as special audio/video discs for games, education, and entertainment.



The Technics RS-DC10 DCC deck, expected to be available later this year, records and plays Digital Compact Cassettes. It also plays standard analog cassettes.





Pioneer's CLD-701 CD/laserdisc combiplayer (\$1,200) features a digital memory chip for freeze-frame and motion effects with laserdiscs recorded in the CLV format.

> JVC's XD-Z507TW (\$1,000) digital audio tape deck features a 1-bit D/A converter and can record in a long-play mode that puts 240 minutes of music on a tape.

> > The Philips DSS930 powered loudspeaker (\$1,200 each) accepts digital input signals. Speakers can be daisy-chained from room to room using a single thin cable.





Lexicon's CP-1 (\$1,395), one of the first outboard digital ambience processors, can be upgraded with a plug-in circuit chip now

available from the manufacturer.

Denon's AVR-3000 A/V receiver (\$1,300) uses digital signal processing to create nine different ambience modes besides the standard Dolby Pro Logic modes.





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Julian Hirsch, after reviewing the Polk S4 in Stereo Review, also invites comparison: "The S4 is an outstanding contender in its class, and it should be heard (you might be surprised by it in a side by side comparison with some much larger and more expensive speakers)."

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THE SOUND OF THE S

surface glows, and a voice emanates from the ring. The novel on which the movie is based, written by H. G. Wells in 1895, when wax cylinders were high-tech, does not mention future audio systems, but the idea of shiny talking rings must have seemed fantastic indeed to the film's screenwriter in 1960.

well as some talking rings. They spin a ring on a glass surface, the

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As Einstein said (way back in 1916), it's all relative. The future that lies before us is fascinatingly unpredictable until we experience it. Then it flies by us as the present and is transformed into the past, becoming something tedious we have to study in high school. Technology evolves similarly. No one can resist the promise of future technology. After it becomes reality it will be superseded and will inevitably become covered with dust. And our great-grandchildren may make a killing in the antiques market.

Audio technology follows this time line religiously. We fear that our cherished gear will grow obsolete, yet we fulfill that destiny by clamoring for next year's products. But our consumer weakness is the fuel that powers the evolution of audio technology and enables the





technology to get better and better. In other words, we are future junkies, particularly when it comes to audio, but that isn't really a bad thing. Best of all, the future is filled with cool new audio toys. Although sound rings are still a few years distant, other great stuff is just around the corner.

The Future of Home Recording

The first new technology, being launched this fall, is Digital Compact Cassette (DCC), brought to you by Philips, the same folks who invented the analog cassette. DCC is a digital tape format that seeks to succeed where DAT failed by providing something that DAT did not-backward compatibility. Specifically, all DCC decks will play both DCC tapes and ordinary analog cassettes. This regard for the past is uncharacteristic for a future technology and DCC's greatest asset. More than 2.5 billion analog cassettes are sold every year, and though the format's market share is declining, it is still a force to be reckoned with. With DCC, people will have a choice. They can continue to enjoy their analog tape libraries while gradually switching over to digital.

DCC will also cost less than DAT. which is expensive because of its intricate mechanical design. DCC uses a simple analog cassette transport and relies on digital signal processing to make the bit stream more manageable through low-bit-rate "perceptual" coding (see the box on page 66). By using relatively inexpensive electronics to reduce the number of bits that must be recorded, the cost of the entire system is reduced. Even better, Philips promises that the fidelity achieved through perceptual coding will rival or perhaps surpass that of CD or DAT. With a combination of backward compatibility and improved digital sound quality, DCC could very well succeed in its goal of replacing the analog cassette.

OLLOWING close on the heels of DCC is the Mini Disc (MD) format. This Sony brainchild uses an optical disc about 2¹/₂ inches in diameter encased in a protective cartridge. Prerecorded discs hold data impressed on a reflective layer (much like CD, though incompatible with it) and are played back with a laser beam that reads the disc through a shutter in the cartridge.

Recordable/erasable MD's use magneto-optical technology (like some computer drives). With magneto-optics, shutters on each side of the disc



cartridge open to give access to both a magnetic head and a laser. The laser momentarily heats the recording surface while a flux field from the magnetic head writes data to it. Like DCC, MD employs perceptual coding to store audio information more efficiently on the disc, with fidelity, according to Sony, that approaches that of CD.

DCC and MD will have both home and portable applications, but they are designed primarily to ride the trend to more and more listening on the move, whether on foot or in the car. With its small size and robust medium, MD, in particular, is clearly aimed at the portable-sound market. Disc tracking is greatly facilitated by a look-ahead memory that stores 3 seconds of audio data. If mistracking occurs, the music continues to play while the pickup is repositioned.

The Future of Radio

The king of mobile audio, of course, is radio. Compared with high-tech products such as CD, DCC, and MD, today's radio is ancient stuff indeed. With this in mind, the broadcasting industry is working on digital audio broadcasting (DAB), also known as digital audio radio (DAR). DAB is designed to eventually replace analog AM and FM transmission, providing digital audio quality without reception problems such as multipath interference. The evolution of a DAB standard is incredibly complicated because broadcasting is regulated by the federal government, which in turn is swayed by powerful lobbies, but current developments point toward an "in-band" system in which DAB signals would be broadcast along with AM and FM signals in the same bands of the radio spectrum. In this way, existing radios would still receive conventional AM and FM programs, while new DAB radios would receive both digital and analog transmissions. The path to DAB is labyrinthine, however, and some other transmission method may ultimately win out.

Like analog radio, DAB will be broadcast from transmission towers, but it will be much more efficient: Instead of the 100,000 watts used by a strong analog station, a DAB station may require only 1,000. In addition, DAB can be broadcast directly from satellites or routed into homes via cable. Digital radio channels could flourish in much the same way as cable television channels-with a hundred stations to choose from. The timetable for DAB is vague. Some cable systems are already on-line with digital music services in selected areas in the United States, and other countries already have direct satellite broadcast services, but the first digital radio stations may not appear on the American airwaves for another five years or more.

The Future of the Compact Disc

Meanwhile, the audio CD will continue to dominate the high-fidelity market, providing an unbeatable mix of durability, convenience, and sound quality, but new wrinkles will certainly appear. Write-once CD recorders (you can make a recording on a disc, but you can't erase the disc and reuse it) are already available. Although costly now, their prices will fall as sales volume increases, but because the discs are unerasable, these recorders will probably continue to be used mainly by recording professionals.

Eventually, however, recordable/ erasable CD's, known as CD-E's, may come to market. Since Mini Disc is already knocking on our door, it might seem that CD-E should be also. Unfortunately, magneto-optical discs like those used for current CD-E devices and Mini Disc cannot be played back on ordinary CD players (as CD-R's can), although it would be easy to design a CD-E recorder that could play regular CD's as well as its own recordings. There is no CD-E standard yet, and at the moment nobody seems to be working hard on developing fully backward-compatible CD-E technology, so our crystal ball is a little cloudy on this one.

Record companies will improve the signal quality of standard CD's by making them from 18- and 20-bit mas-

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PERCEPTUAL CODING

HE earliest digital audio systems, including fairly recent ones such as CD and DAT, use linear coding, a straightforward, brute-force method in which the analog input signal is sampled and the amplitudes of individual sample points are measured and recorded in data words of a fixed length. For example, in CD, samples for each channel are taken 44,100 times per second, each yielding a word comprising sixteen binary digits (bits). Such a system is relatively easy to design and works well, but it is inefficient because most of the data bits generated are extraneous from the standpoint of human hearing. For example, on a CD, perhaps three-fourths of the data is devoted to audio signals that are inaudible to even the keenest listeners.

Newer digital audio systems such as DCC, MD, and DAB will employ perceptual coding techniques (sometimes known as data compression, data reduction, or low-bit-rate coding) instead of linear coding. With perceptual coding, the human hearing mechanism itself is used as a model, and audio signals are digitized according to the way we hear. For example, there is a threshold of hearing below which soft low- or highfrequency sounds are not audible to us. so they are discarded before coding. In addition, other sounds are inaudible (and therefore expendable) because of a phenomenon known as masking, in which a loud sound aurally cloaks a softer sound nearby in time and frequency.

Just throwing away signals representing sounds that one expects to be masked by other sounds may seem dangerously radical, but it's really not if done carefully and conservatively. Consider a visual analogy. Lay your hand over this magazine. Can you see the page through your hand? Of course not. Aural masking is just as reliable. Incidentally, many video systems will use perceptual coding as well, and many text and data storage systems already use compression in which redundancy is eliminated but all significant data are preserved.

Perceptual coders use digital signalprocessing algorithms to evaluate an incoming audio signal according to the threshold-of-hearing curve, masking, and other psychoacoustic parameters. Storage efficiency gets an additional boost from use of variable-length data words that tailor the digitized signal according to its content. For example, prominent sounds are given many bits, whereas barely audible sounds are given fewer bits because they don't really need any more to be recorded accurately. This reduces storage requirements without loss of fidelity.

Through these and other advanced techniques, perceptual coders can operate very efficiently-so efficiently, in fact, that many fewer bits are needed to record a signal with fidelity that is equal to or greater than the fidelity of one recorded with linear coding. A DCC tape, for example, stores only one-fourth as many bits as a CD of the same material but can achieve sound quality that rivals or perhaps surpasses that of the CD. Perceptual coding is more than just a clever way of digitizing audio signals so fewer bits are needed-it is a technique of great sophistication and finesse. It is truly a second-generation coding method that makes the first-generation linear coding systems look positively antiquated. _K.P. ter tapes, and it is even possible (though not terribly likely) that "highresolution" CD's may be introduced. Such a format could use linear 18- or 20-bit encoding to improve low-level performance, but playing time would be reduced. Alternatively, a new CD format could employ perceptual coding to increase both performance and playing time. A major problem, however, would be incompatibility with existing CD players.

Compact disc applications will also diversify as CD-Interactive (CD-I) takes off. Using data reduction and compression techniques, CD-I can cram an enormous amount of digital audio and video onto a single 4³/₄-inch disc, expanding the compact disc's horizons to encompass not only music but also games, interactive educational and reference programs, and other audio and video material. In particular, music videos and feature films will become available on CD, each disc holding 74 minutes of approximately VHS-quality digital video with a highfidelity stereo digital soundtrack. This full-motion video (FMV) option is not yet available, but the only currently available CD-I player, the Philips CDI-910, has a back-panel socket to accept a plug-in FMV upgrade module. Within a few years, most CD players could be CD-I players-the added cost will be so small, and the added benefits so great, that only the lowest-end models will have to be audio-only players.

The next step in CD-I's evolution? Look for more home models, some with full-motion video capability, and the first portable CD-I players with flip-up color LCD screens. In addition, CD-I software companies are developing interactive CD-I movies for distribution in places like the Blockbuster Video stores.

DSP Takes the Lead

Digital signal processing (DSP) is the engine that will drive future generations of audio technology. DSP has already made possible error correction, digital filtering, 1-bit analog-todigital (A/D) and digital-to-analog (D/A) converters, digital ambience enhancement, digitally compensated loudspeakers, digital equalization, and perceptual coding. The future will bring further refinements of all these existing DSP applications, and audio engineers will use DSP to invent entirely new processes and products and to make them portable and affordable. Theoretically possible, but practically unobtainable, products such as digital
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power amplifiers may soon leave the laboratory and reach store shelves, thanks to progress in DSP.

That will leave only the heaviest, least efficient, and worst-sounding component primarily in the analog domain. Even the best loudspeakers introduce hundreds of times more distortion than a CD player and convert most of the amplifier power reaching them to useless, potentially destructive heat. DSP has recently helped loudspeakers to overcome some of their nonlinearities by reducing frequency-response and phase anomalies, but an entirely new type of transducer will be needed to take advantage of all the advances that digital audio has brought upstream. The problem of moving air both accurately and efficiently is perhaps the most basic one in audio, and the engineer who solves it will indeed be a friend to us all. Incidentally, another friend we could use is the engineer who perfects a better battery-one that's smaller and longer-lasting than current batteries.

Turning the Century

So-where are we, and what comes next? The remainder of the twentieth century will see the compact disc as the dominant medium. Without guestion, CD wins the award for best audio technology not invented by Thomas Edison. As an audio and multimedia carrier, it will not be seriously challenged in this century. The twentyfirst century is only eight years away. however, and by then the DCC and MD formats may be competitive (or one or both may already have fallen by the wayside). The analog cassette will be well on its way out the door, if not almost completely gone, by the year 2000, and certainly DAB will be on the air by then, delivered via terrestrial transmitters, satellites, and cable. Audio-only reproduction systems will have become as scarce as spotted owls: All home (and many portable) systems will also incorporate video playback. And, after many fits and starts, HDTV should finally take firm hold early in the twenty-first century, bringing the quality of home video closer to that of audio.

A completely solid-state audio storage format could be introduced sometime early in the twenty-first century. At last freed from spinning discs and rotating hubs, a medium with no moving parts would be small and portable, with low power consumption. The audio/video program will be stored in memory that's either hard-wired into the player or contained on credit-card-



size modules. New generations of memory technology will provide the enormous storage capacity demanded by digital audio and video, and perceptual coding and other forms of data compression will decrease memory requirements, at last providing a workable, cost-effective solution to the problems of mobile media.

But even with data reduction and compression, a solid-state medium would need to provide very inexpensive storage to be useful. To be competitive, the memory should cost only a dollar or so per several hundred megabytes-equivalent to the cost of manufacturing a CD, which efficiently stores 650 megabytes for a buck. Currently available memory isn't even close, but new technologies, such as photorefractive volume holographic storage (sometimes called holostore), may do the trick. This random-access memory stores data as three-dimensional optical holograms, is nonvolatile and removable, and-keep your fingers crossed-may be ready in a decade or so.

So what will products embodying the audio format of the next century be like? They will make CD, DCC, and MD obsolete by providing compact, robust solid-state data storage, they will provide entirely new kinds of convenience through integration of hardware and software, and they will handle many kinds of program material. One can imagine a wallet-sized package containing a digital recorder and player with built-in nonremovable memory. The memory will store 100 gigabytes of multimedia software. Thanks to highly efficient coding of text, audio, and video data, hundreds of hours of audio/video programs or

the text of thousands of books can be stored in it. The wallet is battery powered and has a color viewing screen, and it can be inserted into car or home systems. The wallet can be used to digitally copy any software from any electronic source. A computer program embedded at the source keeps track of copied material and routes royalties to the appropriate copyright holders.

My crystal ball is glowing red-hot now! It shows prerecorded music and video formats disappearing altogether in favor of program downloads by phone line from central archives; most record shops will switch to selling personal helicopters. Although the A/V wallet's memory is erasable, most people will prefer to simply buy a new wallet when the old one is full. Programs may be transferred from one wallet to another without a fee, but copyright law requires that you avert your eyes while the data is copied. There are no speakers or headphones. An accidental scientific breakthrough involving leftover airline meat loaf, a Paula Abdul CD, and a microwave oven enables the wallet to transmit its data directly into the brain's frontal lobe. The bad news: You must wear a tin-foil hat. The good news: If you switch off your player, even in a room full of people rocking to loud music, you will hear complete silence-except for the clatter of all those damn personal helicopters overhead.

TOPIAN? You bet. The future could instead be a nightmare of incompatible formats and connectors, products with so many features you need a six-week course in night school to use them, and government regulatory forms to be filled out in triplicate whenever you make a recording. Personally, I prefer a more optimistic scenario. I bet that future audio products will be small, affordable, easy to use, and universally compatible, and they will provide stunning sound quality that is almost indistinguishable from the real thing. Furthermore, I bet that we will reach those goals surprisingly soon. You see, sometimes even the crystal balls of futurists like H. G. Wells were unnecessarily pessimistic. In 1900 he predicted that heavier-thanair powered flight would not be achieved until 1950. Orville and Wilbur Wright proved him wrong just three years later. On the other hand, until someone invents a time machine. we won't know the future for sure until it becomes the present, at which time it immediately becomes the past. \square

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TELEVISION

TELEVISION: Call Mr. Lee Capitol

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BODY COUNT

BODY COUNT: The Winner Loses Sire/Warner Bros Ice-T (lead vocals), Emie C. (lead and

acoustic guitars), Mooseman (bass), D-Roc (rhythm guitars) and Beatmaster "V" (drums) are the revo-lutionary metal band Body Count. At 1991's showstopping Lollapalooza appearances, on their debut album and on their around-the-world 1992 tour, Body Count's words and music are as tough as they are smart

TORI AMOS LITTLE EARTHQUAKES: Crucity Atlantic

Juxtaposing images of Charles Manson and ice cream, purring winsomely about crucifixion and violation. Through Tori Amos the rumblings of a soul are exposed. Her poetry persists, naked in its frank attempts to reconcile, or at least recognize, the disparities that surround her. Her music is unnerving, discomforting, yet absolutely compelling.

AZTEC CAMERA hish Horses Sire/Reprise Spa

Aztec Camera return to the spotlight with "Spanish Horses," the first release of their fifth Sire album. Singer/song-writer/guitarist Roddy Frame has been crafting soulful, smart pop songs for over ten years, and once again he demonstrates his talents with a beauti-ful collection of tunes. ful collection of tunes.

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A charter member of Presley's "inner circle" remembers his days with the King of Rock-and-Roll.

Forta

HE summer of 1957 was one of the steamiest on record. It was especially sweltering in Memphis, my home town, and the place I'd come back to after I quit Vanderbilt [University], where I'd gone to play football. I'd just turned twenty-one, and like a lot of twenty-one-year-olds, I wasn't sure what I was going to do with my life.

KADU

One night I got a call from George Klein, a guy I'd known during high school, even though George had gone to Humes, a technical and vocational school, and I had gone to Central, one of the largest high schools in Memphis. George was in the radio business, a job that behooved him to stay in contact with Elvis Presley, the most famous guy to ever come out of Memphis. In fact, George traveled with Elvis when his schedule permitted.

George had never learned to drive, and he said if I'd carry him out to Graceland, Elvis's mansion in the Whitehaven section, he'd introduce me to him.

The Elvis Presley I met that night was about as jovial a guy as you'd ever hope to find. Handsome, well-dressed, with his trademark pompadour greased with Royal Crown Pomade (Elvis called it his "Tony Curtis Cut"), he was friendly and accommodating—none of that "big shot" stuff. He tried to make me feel at ease, told me to take a load off.

Even though I knew George went out to Graceland all the time, I was surprised to find that Elvis had a kind of "inner circle," a group of guys who either lived there with him or went everywhere he did, a sort of fraternity of bodyguards. I've forgotten exactly who was there that first night, but it was

Excerpted from Elvis from Memphis to Hollywood: Memories from My Twelve Years with Elvis Presley, © 1992 by Popular Culture Ink



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4. Elvis out back of Graceland. This is apparently a post-army birthday shot, or so l'm told yes, Sgl. Presley's hair was *that long* when he returned in March 1960. But it has an earlier feel to it as far as l'm concerned.

5. Elvis and his pet chimp Scatter (anticipating Michael Jackson by two decades). Forty pounds of trouble.

6. This was taken in the back yard of the house in Perugia Way in Bei Air in May 1961, when we were filming indoor scenes for *Blue Hawoil*. Notice the little cigar in his hand—you hardly ever see a picture of Elvis with a cigar, because he thought cigars looked too much like the real Mafia.

1. Elvis and Alan Fortas on the set of Wild in the Country (1960).

2. Elvis was pretty much a regular on the "Louisiana Hayride" radio show from October 16, 1954 to April 7, 1956.

3. The L.A. airport was mobbed when Elvis arrived to begin work on Love Me Tender in August 1956. likely Lamar Fike, Elvis's cousins Gene and Billy Smith and Cliff Greaves. As time went by, the guys who traveled with Elvis would have a fast turnover rate, and some would come and go three or four times.

Hanging around Elvis Presley was about the coolest thing a guy could do in Memphis, or anyplace else, for that matter. By January of 1958, I'd been going out to Graceland every night for six or seven months, and each time I was about to leave, Elvis would look at me and say "See you tomorrow." Then, on January 12, he asked me what I was up to these days.

"I'm still just working for my father, Elvis."

"Can you get off for a little while?"

"Sure," I said. I was well aware that Elvis was set to do *King Creole* soon.

"Good," Elvis said. "We leave tomorrow for California."

The Colonei

I'd get to spend a fair amount of time with Colonel [Tom Parker, Elvis's manager], since Colonel didn't like to drive, and I'd chauffeur him between Los Angeles and his home in Palm Springs. Some people say Colonel is a cross between W. C. Fields and P. T. Barnum. They also say he's the shrewdest huckster ever to walk down the pike, and that he's the con artist's con man. I say he's a genius.

Marty Robbins used to tell a tale about how Colonel went down to a real small town in Mississippi, buying the big billboard at each end of town. Both billboards displayed only two words, "It's coming." Ten days later, he changed them to read, "It'll be here— December 4." By the time the date was announced, everybody got to wondering, "What *is* it? What's going to be here?"

Elvis the way I want to remember him sitting on a beach, looking out to sea, his arm around a pretty girl's waist.





Finally, the time came for *it* to be on stage. The theater was packed, the money had already been put in the black bag, the back door was open, and the driver was in the car. And Colonel went in and pulled back the curtain, revealing only a big sign that said, "It's gone." Marty didn't think the story was true, but that it was a perfect example of how far people thought Colonel would go to get something done. In other words, Colonel is as good in his field as Elvis was in his, and neither one of them would have been nearly as big without the other.

Brando

We found out that Lilliane Montevecchi [one of the co-stars of King Creole] was a good friend of [Marlon] Brando. As the movie progressed and we got to know her better, we pumped her for Brando stories more and more. Elvis, after all, had gone to see The Wild One in 1954, and immediately flipped out, later posing for pictures on his Harley Davidson with his motorcycle cap pulled down low on his forehead.

It got to the point where Elvis was dying to meet Brando. And Lilliane found out that Brando wanted to meet Elvis, too. The problem was, neither one would go to the other.

I went crazy over this, saying "C'mon, Elvis, let's go see him!" But Elvis, a novice actor who would have given a lifetime of record royalties to be thought of in the same category as Brando, steadfastly balked. "If it ever happens, it'll just happen," he said.

Finally we were having lunch at the studio one day. All of a sudden a hush fell over the place. Then a kind of silence moved toward us with the weight of a freight train.

We looked up, and there stood Marlon Brando. Lilliane happened to be at our table, and as Brando walked by, she turned around and said, "Marlon Brando, Elvis Presley." It was just a nod, or a hello. I don't think they even shook hands. Brando just kept walking, and Elvis kept eating....

Dressing Up

One of my jobs was to buy Elvis's clothes for him. But two things I never bought: underwear and blue jeans. I didn't buy underwear because he didn't wear any, except in the army. As for jeans, I never bought those because he didn't like them and refused to wear them. I suppose it reminded him of having to go to grade school in overalls. It even bugged him when a couple of the guys would wear jeans.

One day Elvis decided to put a stop to it. He called us all together and said, "Boys, I've decided everybody's going to wear suits and ties."

And so, like some ragamuffin army, we all marched into a high-priced men's store in Beverly Hills. Elvis bought himself twenty-five or thirty narrow-lapel suits and skinny ties, and the rest of us four or five suits, ties, and dress shirts. "We're gonna dress accordingly," he beamed.

For a couple of days we all sat around like funeral-home attendants, dressed in somber dark suits and shoes. Nobody complained, because it wouldn't do any good. Then one day, Elvis took off his tie. The next day, he didn't wear one at all.

I said, "Elvis, wait, we're all wearing ties and suits but you're not."

"Okay," he said, "we're going to change it. If I come down in a suit and tie, y'all be in one. If I come down in casual clothes, y'all do the same."

Pretty soon, it got to where we were changing wardrobes twenty times a day. After a while, Colonel saw us and nearly dropped his stogie. "Forget them suits, boys," he said, chuckling. "Make y'all look like you're ninety years old."

The Beatles

The Beatles weighed on Elvis's mind in 1965. He began to fantasize about what they were like, even if he didn't like it when Colonel got togeth-



Henry Kloss has demonstrated a rare talent for sporting important new concepts and protocorreging them into readily Henry Kloss has demonstrated a rare talent for sporting important new concepts and into readily Henry Kloss has demonstrated a rare talent for sporting important new concepts and into readily Henry Kloss has demonstrated a rare talent for sporting important new concepts and into readily Henry Kloss has demonstrated a rare talent for sporting important new concepts and into readily Henry Kloss has demonstrated a rare talent for sporting important new concepts and into readily Henry Kloss has demonstrated a rare talent for sporting important new concepts and into readily Henry Kloss has demonstrated a rare talent for sporting important new concepts and into readily Henry Kloss has demonstrated a rare talent for sporting into readily Henry Kloss has demonstrated a rare talent for sporting into readily Henry Kloss has demonstrated a rare talent for sporting into readily Henry Kloss has demonstrated a rare talent for sporting into readily Henry Kloss has demonstrated a rare talent for sporting into readily Henry Kloss has demonstrated a rare talent for sporting into readily Henry Kloss has demonstrated a rare talent for sporting into readily Henry Kloss has demonstrated a rare talent for sporting into readily Henry Kloss has demonstrated a rare talent for sporting into readily Henry Kloss has demonstrated a rare talent for sporting into readily Henry Kloss has demonstrated a rare talent for sporting into readily Henry Kloss has demonstrated a rare talent for sporting into readily Henry Kloss has demonstrated a rare talent for sporting into readily Henry Kloss has demonstrated a rare talent for sporting Henry Kloss has demonstrated a rare talent for sporting into readily Henry Kloss has demonstrated a rare talent for sporting into readily Henry Kloss has demonstrated a rare talent for sporting Henry Kloss has demonstrated



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The real difference is in the subwoofer.

ers. We believe Ensemble II is a better system than the new Bose[®] AM-5 Series II. And because we sell it factory-direct, it's half the price. *Stereo Review* said "Ensemble II performs so far beyond its price and size that it can be compared only with much larger speakers at substantially higher prices." We agree with the writer who said, "It's hard to imagine going wrong with Ensemble." The question is, which Ensemble system is right for *you*?

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er with their manager, Brian Epstein, in 1964, and that Colonel had extended an invitation for the Beatles to stay at Graceland, something they allegedly declined for security reasons.

We were making Paradise-Hawaiian Style in late August 1965 when the two managers arranged for the Beatles to come by while they were in Los Angeles on their second American tour. It was weird to see them introduced to each other, "Elvis Presley ... Ringo Starr," and see them shake hands. It was a little awkward because everybody was nervous, and finally Elvis broke the ice by saying, "Look, guys, if you're just going to sit there and stare at me, I'm going to bed."

Strangely, I don't remember too much about that night. I know that Elvis and the Beatles got into a hell of a jam session, oddly more instrumentals than singing. I remember, too, that we had the juke box on, and that we got the Beatles into a crap game that went on for quite a while. It was a fun night. in which we told stories and jokes and watched TV, Elvis drinking Seven-Up, and the Beatles downing Scotch and bourbon. They came at ten o'clock and left at two in the morning. And that was that.

The sad part is that in years to come, Elvis would get drugged up and denounce the Beatles, and the Beatles would put down one of his latest records on British TV.

Trouble

Many times when I'd drive Colonel to Palm Springs he'd ask me questions about what Elvis was up to. He was crafty, of course, but I knew that he wanted me to rat on Elvis's drug use. I just said, "I don't know, Colonel. I don't know nothin'." After awhile, he quit asking. If it had leaked to Elvis that I'd told Colonel something, Elvis would have fired me.

Things came to a head in 1967, shortly into production on Clambake. One night, Elvis, stoked full of pills and woozy, got up to use the bathroom, when he lost his balance and hit his head on the side of the tub. He lay motionless for hours before anyone knew what had happened.

When Elvis was discovered, all hell broke loose. Joe [Esposito] hurriedly got Colonel on the phone, and somebody called one of Elvis's private doctors. Elvis had suffered only a mild concussion, but it meant that filming on the movie had to be postponed for at least a week, and that one of the guys had to follow behind Elvis in case he pitched and fell again.



Colonel exploded in rage. He lashed out at the other guys for allowing Elvis to get into such a state, and then ranted, "This could cost us millions!"

When Colonel came back to the house in a few days, what happened threw everybody for a loop: Colonel told Elvis that if he didn't stop doing drugs, he would not only drop him as a client, but ruin Elvis's career.

And then the kicker. Instead of taking 25 percent of Elvis's gross already astronomical—Colonel informed Elvis that he would now siphon off exactly half of every dollar that came in. Before expenses, before anything. And Elvis, who sat there like a whipped dog, merely nodded his head. In many ways, it was one of the bleakest days of Elvis's life. Not because of the money, so much. But because Elvis had become a total puppet, silently jumping in any direction that Colonel pulled the strings.

The Comeback Special

In January 1968, Colonel held a press conference to announce that NBC-TV would produce a one-hour Elvis special to be shown during Christmas. The news was a total surprise to most of the guys, since Colonel had Elvis locked into the movie mill to such an extent that he hadn't appeared on stage since 1961.

The director of the show was Steve Binder. Binder knew that if the show were simply a Christmas special, as Colonel planned, it would be hokey and sanctimonious. Binder sat down with Elvis, and learned that he was a lot more hip than the movies made him out to be, but that he still needed a jolt of reality. To that end, Binder took Elvis out for a walk on the Sunset Strip, where not one soul recognized the King of Rock-and-Roll. It shattered Elvis's illusions, but it also drove home the ephemeral nature of fame. From then on, the two were in cahoots to do the show of Elvis's career.

Still, Elvis was scared, worried about the fact that he was a decade older than the newer rock acts. As such, he bolstered his shaky ego by bedding a number of young women. Joe and I would run girls in and out of the NBC dressing rooms as if the place were equipped with conveyers.

Binder's choice of settings—the black-leather stand-up performance in front of a live audience—was nothing short of inspired. I don't know if Elvis had in mind Jim Morrison's blackleather slither, but whether Binder prompted him or not, he realized it was imperative he sustain the old erotic tensions his movies had effectively sanitized.

Colonel didn't like it one bit that he was being overruled about a Christmas theme. Yet he accepted the premise of the show, even embracing the idea of Elvis closing the hour not with a traditional Christmas song, but with *If 1 Can Dream*, a rhythm-and-blues tune with a humanistic theme. But Colonel finally drew the line when Binder shot his boy in a bordello sequence. It wasn't anything terribly suggestive, really. Still, Colonel said "Definitely not!" even though it was the best thing in the show.

When we finished production, everybody knew we had something extraordinary. That December, it earned a 32 rating and a 42 share, the highestrated program of the week. Somebody figured out that more women aged eighteen to forty-nine watched it than any other special of the year.

But for Elvis it meant something greater. He had faced a challenge and triumphed in ways he didn't think possible. For me, the "Comeback Special" was surely the most exciting and important moment of my dozen years with Elvis. Component System.

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Alan Fartas's *Elvis from Memphis to Hollywood* (242 pages, 90 photographs) has just been published. The first edition is available by mail for \$40 plus \$3 shipping and handling from Popular Culture Ink, P.O. Box 1839, Ann Arbor, MI 48106; telephone, (800) 678-8828.



TECHNOLOGICAL BREAKTHROUGH

At the 1990 Consumer Electronics Show the convention floor was buzzing with the news of Datawave's WS7 Wireless Speaker System. This product has been touted in a number of electronics magazines as one of the most exciting new products of the 90's. The heart of Datawave's breakthrough design is a patented FM technology which broadcasts music wirelessly from a small transmitter to satellite speakers. The transmitter, about the size of a paperback book, broadcasts music from virtually any sound source to a receiver built into the speaker - no speaker wires are needed!

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Stereo Review's critics choose the outstanding



current releases

McMurtry: journalistic

switchblade

distance

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and

James McMurtry's Unsettling American Stories

IKE his friend and benefactor John Mellencamp, James McMurtry puts lots of store in geography, in how the landscape, with its natural borders (or lack of them), frames the personalities of its people, making enemies out of neighbors, loners out of lovers, and pull-together friends out of strangers. And then, of course, there's the even stronger arbiter of psyche, described by one of McMurtry's zonkedout characters, a thirty-year-old former whiz kid gone havwire as "iust life"

whiz kid gone haywire, as "just life." In his second album, "Candyland," the son of novelist Larry McMurtry proves a better short-story writer than in his 1989 debut, "Too Long in the Wasteland." The mainstream America he serves up in the title track, where an icecream vendor, driven nuts by the tingling of his circus music, "clips his roach" while dispensing goodies to children, and phony, "smooth young faces" read copy on the TV news, is as unsettling as anything by the director David Lynch.

McMurtry is equally effective in the subtler Hands Like Rain, a silhouette of an old man still remembering the longago touch of a woman who nourished his personal drought in August fields. Pure poetry, the song manages to distill a lifetime of hidden hope and longing in just a few lines.

Not everything here delivers what it promises. Backed by the various members of Mellencamp's sinewy band, McMurtry—with his monotone voice giving his conversational readings a journalist's detached distance—punches out literate story songs that sometimes get their extra bite from David Grissom's switchblade guitar rather than from the writer's pen. Such vignettes as Vague Directions, in which a man may be having a conversation with his heretofore unseen illegitimate son, don't come to a fine enough point.



But when McMurtry really connects, as he does in *Safe Side*, a harrowing account of interaction between the haves and the have-nots on either side of the Rio Grande ("Stay off the side streets.... There's a whole lot of hungry people / Looking to share some wealth"), he positions himself right there in Mellencamp territory.

McMurtry's received a lot of elegant press in the last couple of years, the kind that insists he'll be a cult favorite and not a dilettante's toy. The songs on this memorable record will likely satisfy both camps, and several in between as well. Alanna Nash

JAMES McMURTRY Candyland

Where's Johnny; Vague Directions; Hands Like Rain; Safe Side; Candyland; Don't Waste Away; Good Life; Save Yourself; Storekeeper; Dusty Pages COLUMBIA CK 46911 (43 min)

A Stirring Conclusion to Abbado's Brahms Cycle

HE final installment in Claudio Abbado's Brahms symphony cycle with the Berlin Philharmonic is for me the finest. As with the others in the series, he has included one of the lesser-known choral works, the somber, elegiac Nänie (Lament), to a text by Schiller evoking ancient Greece, and the CD opens with the "Haydn" Variations. But the real substance is the

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Fourth Symphony in a performance of surpassing breadth and ardor—a far cry from the somewhat clipped and understated versions of, say, Christoph von Dohnányi or Günter Wand.

The yearning lyricism imparted to the very opening theme of the symphony sets the tone, but there is no wallowing in sentiment. Rather, a splendid momentum is sustained throughout the first movement. The same sostenuto quality informs the slow movement, where the Berlin strings achieve an almost Stokowskian lushness. A splendid defiance keynotes the scherzo, and the passacaglia finale, though beginning in a mode of Classical restraint, develops terrific tension in the final pages after the central lyrical variations. Altogether, this is an eminently satisfying realization.



The exemplary orchestral playing is enhanced by a new recording locale, the Berlin Schauspielhaus, which to my ear is perceptibly kinder to the strings than either the Philharmonie or the Jesus-Christus Kirche. The "Haydn" Variations and Nänie, both beautifully performed, were recorded at the Philharmonie, and if you want a basis for comparison, try the final pages of the variations, then the scherzo of the symphony, both scored for substantially identical forces. In any event, Abbado's latest from Berlin presents him and the orchestra in top form and rates the highest recommendation. David Hall

BRAHMS

Symphony No. 4; Nänie; Variations on a Theme by Haydn

Berlin Radio Choir; Berlin Philharmonic Orchestra, Abbado DEUTSCHE GRAMMOPHON 435 349 (74 min)



The conductor Claudio Abbado

André Watts Plays Chopin

HE new André Watts recording on EMI is titled simply "The Chopin Recital." Calling it "The Chopin Recital." would be thoroughly justified by the altogether extraordinary performances. Some of us can remember back nearly thirty years ago, when Watts, then all of sixteen years old and totally unknown, was brought in to substitute on short notice for an indisposed Glenn Gould as soloist with Leonard Bernstein and the New York Philharmonic. A recording was made then of the Liszt E-flat Concerto, but in the decades since Watts has not recorded a single Beethoven sonata cycle or gone through all the Mozart concertos even once. He has, if anything, been rather under-



if his recordings have been less numerous than we might have expected, the artistic advantages of this restraint have been striking. Watts has not been compelled to learn and record, for the sake of commercial competitiveness, pieces that hold no interest for him but has been able to focus on the music with which he chooses to live and express himself. "The Chopin Recital" is perhaps the most stunning vindication of this approach, a release that enhances the composer's discography as significantly as it does Watts's own.

exploited by the record companies. But

The big work is the Second Sonata, which is given a performance of the sort of absolutely nonindulgent integrity one might welcome in, say, Beethoven's "Hammerklavier" or "Waldstein." Watts does honor to Chopin and to himself by focusing on musical substance rather than accumulated lavers of romantic patina. The famous Funeral March emerges with both a nobility and a songfulness that go beyond ordinary notions of poignancy and communicativeness. The incredible tastefulness evident in the presentation of this single movement could be profitably studied and wondered over by dozens of pianists regarded as Watts's peers. Of course, it is only one of the four movements that make up the sonata, and the greater wonder, perhaps, is the unfailing certainty with which they relate to one another here. I have not heard, and do not expect to hear, a more persuasive case for Chopin as master of the larger form.

It would have been foolhardy to follow such a performance with another work of similar proportions, so Watts fills out the disc with an imaginatively varied sequence of nocturnes and etudes, and at the end he gives us a magnificent realization of the G Minor Ballade (Op. 23)-again with the noblest regard for musical content and an apparently instinctive elegance that cannot fail to win new respect as well as new affection for that supposedly thrice-familiar piece. The overall feeling of solidity and substance throughout this wonderful hour is enhanced by a sonic focus almost as unusual in a Chopin recording as the kind of performance Watts gives us: nothing gossamer or unmoored here, but real flesh-and-blood sound, sound that, to use H. G. Wells's wonderful phrase about the Marseillaise, "warms the blood like wine." **Richard Freed**

CHOPIN

Piano Sonata No. 2, in B-flat Minor, Op. 35; Ballade No. 1, Op. 23; Nocturnes, Op. 27, No. 1, and Op. 48, No. 3; Etudes, Op. 10, Nos. 9 and 12, and Op. 25, Nos. 1 and 7 André Watts EMI 54151 (61 min)



The Gin Blossoms' Jangfest

N some quarters "jangle" has almost become a dirty word, connoting an incurable fixation with Byrds-style pop and an inability to progress from simple chords to the gratuitous complexity of the Berklee-schooled mindset. Let the cranks complain. Those of us who can't get enough of this stuff will rhapsodize about the Gin Blossoms' disarmingly titled "New Miserable Experience," a guitar-filled jangfest that leaves in the dust all recent competition, including the overrated Teenage Fanclub.

Gorgeous, chiming folk-rock fixes like Allison Road and Pieces of the Night bump up against forays into country (Cheatin') and Cajun (Cajun Song) without straying too far from the Gin Blossoms' base in the early Byrds and their spiritual stepchildren, Tom Petty and R.E.M. The Blossoms' vocalist, Robin Wilson, suggests both the baleful warble of Gene Clark and the keening, burry voice of Roger McGuinn. The casual interplay of the guitarists and the tasteful restraint of the rhythm section establish the Gin Blossoms as a member of that increasingly endangered species, the egoless rock-and-roll band. Okay, maybe they're a little limited in the lyric department (the first three songs all allude to alcohol from a bored-teen perspective),



and it must be noted that the intro to *Hey Jealousy* sounds uncannily like R.E.M.'s *Losing My Religion* speeded up. So they're not the world's most original band. But the Gin Blossoms are carrying on a great tradition, and as far as I'm concerned that's an eminently worthwhile pursuit. *Parke Puterbaugh* THE GIN BLOSSOMS New Miserable Experience Lost Horizons; Hey Jealousy; Ms. Rita; Until I Fall Away; Hold Me Down; Cajun Song; Hands Are Tied; Found Out About You; Allison Road; 29; Pieces of the Night; Cheatin' A&M 75021 5403 (47 min)

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JOAN AR MATRA DING Square the Circle A&M 75021-5388 (43 min) Performance: UnInspired Recording: Very good

Joan Armatrading, who paved the way for Tracy Chapman with her deathly serious songs of politics, social reform, and feminism in the Seventies and Eighties, hasn't had much luck denting the consciousness of any audience in the past few years, mainly because her songwriting fragmented in her search for the right producer and the proper musical vehicle. This time out, she walks the same pop path she's taken before, but with a jazzier, more r-&-b twist and a production that's far too reliant on the use of synthesizers and drum programming.

The worst thing about this is not that Armatrading now makes mindless pop fit for the blandest MOR station, but that she seems to have lost her earlier convictions and selfrespect. In both Crazy and Wrapped Around Her, for instance, she is perfectly willing to stick with an unfaithful lover who tells her degrading things, as long as he holds her in his arms. And when she tries to be passionate, as in True Love, she's fairly unconvincing. She hits her stride only in the dark and dangerous Sometimes I Don't Wanna Go Home, where an "obsessed and emotional" man whose "love is a chain" waits for her, and in the feminist reggae of If Women Ruled the World. But in the end, not even the guitar solos, which at times seem to scream bloody murder, can save this

TALES FROM THE VAULTS

DAVID JOHANSEN

Live If Up. RAZOR & TIE RE 1994. A highly diverting 1982 concert album by the future Buster Poindexter and an excellent band featuring Huw Gower of the Records. The hit Animals medley is the main selling point, of course, but nearly everything here is terrific, particularly a remake of the New York Dolls' Personality Crisis.

FRANK ZAPPA

Boat the Boots, Volume 2. RHINO R2 71017/71023 (eight discs).

Another collection of bootleg Zappa recordings, made between 1968 and 1978, reclaimed and rereleased by the artist himself, with the original sometimes cool, sometimes dingy artwork and highly vari-



able sound quality left intact. It pales compared with FZ's carefully compiled "You Can't Do That on Stage Anymore" series, but the package has a strange appeal, like a reprocessed piece of underground pop-culture history. Steve Simels



Discs and tapes reviewed by Chris Albertson, Phyl Garland, Ron Givens, Roy Hemming, Alanna Nash, Parke Puterbaugh, and Steve Simels

latest collection from Armatrading's own troubling artistic apathy. A.N.

B-52'S Good Stuff WARNER BROS. 26943 (56 min) Performance: Serious fun Recording: Very good

The last B-52's album, 1989's "Cosmic Thing," might well be an unduplicable high point for the band from Georgia. Sobered by the death of founding member Ricky Wilson, but uplifted by their own creativity, the survivors made "Cosmic Thing" not so much a party album as a glittering remembrance of party-days past, deepened by an emerging concern with the environment and their own inner selves. The cosmic congruity between the two halves of the band members' personalities—party animals vs. pantheistic New Agers—made for a memorable album. With "Good Stuff," however, the knot binding the halves together is starting to fray.

Good-fun, party-time blowouts like Hot Pants Explosion and Is That You Mo-Dean? don't mix comfortably here with more serious numbers like Revolution Earth and the Indianflavored Dreamland. And the absence of Cindy Wilson tilts the group balance, favoring the faux Southerners (Fred Schneider, Kate Pierson) over the born-and-raised Dixie natives (now down to one, Keith Strickland). Band chemistry is a fragile thing, and the old mix of three who lived in Georgia and two who loved and adopted it made the B-52's the magical entity they were.

That's not to say the party's over altogether. The title track cooks up a saucy groove that's within spitting distance of *Love Shack. Breezin'*, a Fred Schneider showcase, is as freeflowing and unfettered as its title. *Revolution Earth* works as a cautionary hymn, and even the less serious numbers are cute, if a little forced. It's only when the album is considered as a whole that it seems less than the

sum of its parts, a somewhat awkward mixture of New Age agenda pushing and by-the-numbers party tunes.



ELTON JOHN The One MCA 10614 (58 min) Performance: Smooth Recording: Good

f Elton John just wants to have a good time, who are we to quarrel? With more than twenty-five albums and more than forty hit songs under his belt, he's entitled. So maybe "The One" doesn't exactly explode with energy, but it does provide solid, tuneful entertainment. Most of the songs cruise along at a casual pace no matter what John is singing about. He always hits the notes in his inimitably winning way, even if he may not convey much of the emotion in the lyrics by his usual, somewhat unfocused collaborator, Bernie Taupin. Two songs, however, are heartfelt exceptions: The North, in which a young man's escape from his rural upbringing becomes a metaphor for the liberating effect of growing up, and The Last Song, about a reconciliation between a father and a son. Add to these a special duet with Eric Clapton in Runaway Train, complete with 8 some powerhouse guitar work, and you've got one of the most satisfying Elton John albums R.G. 3 in years.



POPULAR MUSIC



HE Troggs are a lovable, paradoxical relic of the British Invasion. One minute they're neck-deep in a steamy, heavy-breathing frenzy, growling and playing lasciviously. The next, singer Reg Presley is crooning his undying love for someone to a musical accompaniment that's delicate, even pretty. There's not much difference between the Troggs of 1966 and 1992. Age hasn't mellowed the rockers in them, nor has it allowed cynicism to intrude on their dreamier side. The blg news about their new album, "Athens Andover," is their accomplices, R.E.M.'s Peter Buck, Bill Berry, Mike Mills, and Peter Holsapple (but no Michael Stipe), who contribute all manner of stringed instruments and percussion. (Curiously, the name R.E.M. appears nowhere in the package; the performers are named and cryptically referred to as "certain musicians from Athens, Georgia.")

The five Reg Presley originals are delightful, from the heavenly pop of Together-the "aaahs"s will make your knees weak-to the jaunty skiffle beat of Suspicious, wherein he pronounces the tag line, "It worries me," the way Elmer Fudd might. The long-time producer Larry Page co-wrote Tuned into Love, a driving number based on a blues riff that has just the right amount of tremolo and reverb applied to the guitars and voices. Holsapple wrote I'm in Control in the mock swaggering style of the Troggs' roustabout early days. Déjà Vu, written by one Tony James Shevlin, manages to cram a batch of actual Troogs titles into its lyrics, and Presley's Don't You Know actually quotes the melody of Love Is All Around. To top it all off, Chip Taylor, who wrote the Troggs' all-time classic Wild Thing, contributes Crazy Annie, another sex-mad number that allows Presley to leer ("Hot legs, hot pants / Crazy Annie and her devil dance"), though to an acoustic backing this time.

Retro à-go-go is what it's all about, and it sounds just fine to me. Just goes to prove that what goes around, comes around. *P.P.*

THE TROGGS Athens Andover

Crazy Annie; Together; Tuned into Love; Déjà Vu; Nowhere Road; Dust Bowl; I'm in Control; Don't You Know; What's Your Game; Suspicious; Hot Stuff RHINO R2 71064 (45 min)

NILS LOFGREN Crooked Line RYKO RCD 10238 (55 min) Performance: Still hanging in Recording: Good

Unfortunately for Nils Lofgren, everything he's recorded since 1975 has been measured against his magnificent first solo album ("Nils Lofgren"), which set an almost impossibly high standard. His subsequent releases have been hit or miss, and he hasn't turned out to be the major artist his early boosters prophesied (though his prominent role in Bruce Springsteen's and Neil Young's bands is nothing to sneeze at). "Crooked Line" is, alas, another album full of guitar doodling and good intentions but never quite hitting the mark with the sort of sharp, power-pop material Lofgren turned out with such accomplished ease way back when.

On the positive side, it's a pleasure to hear him pick up an acoustic guitar and lose the gruff, macho edge in his voice in You, a simple, pretty pop song. Blue Skies bears another positive message, via some of Lofgren's best lyrics, as he looks for the silver lining in the world's dark cloud: "What about the people that ain't been swallowed up? / The children born to two people in love? / The hurting who choose to fight instead of die? / Won't you look up and see blue skies?" On his third pass at that chorus, he hits a high note and holds it in an impressive display of vocal agility. Then there's Someday, a well-constructed match of words and music with a blue, plaintive cast to it and some fine-and all too rare-Lofgren piano playing.

Those two cuts aside, "Crooked Line" offers fairly ordinary scenery: clotted, draggy rock (*Walk on Me, Misery*), enervated neorockabilly (*I'll Fight for You*), a ponderous Beau Brummels cover (*Just a Little*), and so forth. (Note to Neil Young fans: Your man pops up here and there on guitar, harmonica, and vocals.) If only Lofgren could loosen up, lighten up, and make an entire album worthy of his prodigious talent, the world would be a better place. *P.P.*



THE NEVILLE BROTHERS Family Groove A&M 7502-15384 (55 min) Performance: Fire and soul

Performance: Fire and sou Recording: Very good

When it comes to eclecticism, few groups can compare with the Neville Brothers, who have drawn from the multicultural flavor of their native New Orleans to forge a style that blends elements of the blues, r-&-b, soul, and jazz with Creole and Caribbean influences. In live performance, they can create such a spell that you suspect they're using voodoo. That level of magic is hard to capture on disc, but there are moments when it shines through in "Family Groove," their latest album. It opens with a blistering new version of Steve Miller's Fly Like an Eagle, one of the best items on the disc. Hunger and homelessness are addressed in One More Day, which features a brief rap by two of Aaron Neville's sons. Aaron's shimmering falsetto tenor is featured in True Love, and there's a touch of calypso in On the Other Side of Paradise. Much more effective are the stomping, bluesflavored Day to Day Thing, It Takes More, and the ominously stalking Let My People Go.

The best songs here were written by others, which means that the Nevilles' compositional juices might not have been at their peak when they put the set together. Fortunately, their performance skills were just fine. It adds up to a very satisfying recording. P.G.

MICHAEL PENN

Free for All RCA 61113 (38 min) Performance: Eccentric Recording: Good

f Michael Penn is angling for cult status, as opposed to the top of the charts and high rotation on MTV, he's pretty much written his own ticket with his iconoclastic second album. "Free for All." From the sound of it he's been going through some weird, testy times. "Free for All" is not so much an album as a fever chart, a freewheeling documentary of delirium in which the titles tell the tale: Drained, Slipping My Mind, Strange Season, Seen the Doctor, Long Way Down. Get the idea? The lyrics are cryptic and incomprehensible, and the music shifts between sunny coherence and cloudy confusion as fast as the weather on an unsettled day. Free Time, for example, zigzags from tart, focused pop with bristling guitar hooks to dissonant oddness in the few seconds it takes to sing, "I was handed free time." "Free for All" might be viewed as some-

"Free for All" might be viewed as something like Big Star's legendary third album, except that Penn slid off the main road onto the gravely shoulder of weirdness a lot faster and a lot more self-consciously than Alex Chilton did. Getting familiar with this album's twists and turns is admittedly taxing, but those with the fortitude for adventurous, outer-limits pop may well find it worth the effort. *P.P.*

> RAMONES Mondo Bizarro RADIOACTIVE/MCA 10615 (38 min) Performance: Mature, unfortunately Recording: Okay

don't know which is more depressing—that Joey Ramone turns forty this year or that he's been a punk rocker for nearly twenty years. "Mondo Bizarro" shows that Joey and his fellow Ramones can still whip their guitars into a snarling merengue. But man—even punks—cannot live by power chords alone. Joey has to sing about *something*, and that's where this album gets a little cheesy. There's a dreadful maturity at work here.

Of course, it's unfair to expect these guys to sing about adolescent alienation all the time, but the best moments here extrapolate from



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MARTY STUART This One's Gonna Hurt You MCA 10596 (34 min) Performance: Ambitious

Recording: Good No one could accuse Marty Stuart of hiding his light under a bushel. In Me & Hank & Jumpin' Jack Flash, the first tune in this new album, Stuart dreams of visiting Hank Wil-

album, Stuart dreams of visiting Hank Williams, Sr. up in Hillbilly Heaven and getting the country immortal's endorsement and blessing. The arrogance might be a little too much if "This One's Gonna Hurt You" weren't such a romping good time.

Although Stuart's solo career extends back to the Seventies, when he was an instrumental prodigy, he has never melded bluegrass, country, and rock in an album with this much spunk before. Hair-raising backwoods harmonies top off the loping rock guitars of *High on a Mountain Top*, and the flinty, twangy guitars of *Now That's Country* give way to some choice Chuck Berryisms and then some ethereal dobro counterpoint. Even when he does country by the numbers, as in the title tune, a belt-it-out duet with Travis Tritt, Stuart can't



help but put a little extra edge on it. As a songwriter, he may stay within the boundaries of Nashville, with conventional attitudes toward the conventional topics of bad love and the good life. But when Stuart straps on a guitar, he slams on out of Music City USA and takes us along for the ride. *R.G.*

JENNIFER WARNES The Hunter

PRIVATE MUSIC 01005-82089 (46 min) Performance: In splendid voice Recording: Very good

Jennifer Warnes's first release since "Famous Blue Raincoat," her 1986 collection of Leonard Cohen songs, doesn't quite measure up for pure drama and anxious, naked emotion, but there's still plenty to recommend it. It's especially worthwhile when Warnes turns her shimmering soprano to such material



as Donald Fagen and Marcelle Clements's Big Noise, New York, a splendid, jazzy swirl that captures the stomach-churning loneliness of love lost in the big city, and Lights of Lousianne, a lovely, though arch, parlor piece about court and spark of a different ilk. Warnes, who co-produced "The Hunter" with C. Roscoe Beck and Elliot Scheiner, may veer too far off the VH-1 pier occasionally-her rendering of Todd Rundgren's Pretending to Care is heartbreaking in its pain and confrontation, if also a tad on the chanteuse side. But with Fagen, Richard Thompson, Blondie Chaplin, and Van Dyke Parks along, she never comes truly close to drowning. Still, this is undoubtedly a record for those who favor misery and upheaval over boredom and contentment-implicit in the radio-ready Rock You Gently is the suffering that starts when the rocking eventually stops. A.N.

JAZZ

REBECCA COUPE FRANKS All of a Sudden JUSTICE 0902 (59 min) Performance: Crisp and bouncy

Recording: Excellent

Il of a Sudden" is an apt title for the Atrumpeter Rebecca Coupe Franks's album, because she seems to have come out of nowhere. Of course, that isn't so, because you don't learn to play this well overnight. Unfortunately, scant information is to be found in the album notes, mainly a list of influences ranging from Miles Davis and John Coltrane to Horace Silver and Chaka Chan (sic), a pop singer whose brief flirtation with jazz a few years ago was an unmitigated disaster. As it happens, none of these influences are detectable in Franks's performances, which is not to say that she is wholly original (a good thing, because wholly original players are usually a pain in the ear). What we have here is a fine quintet that plays straight-ahead modern jazz, sometimes embellished with a poppish touch by tasteful and well-integrated vocal arrangements. I rather like this record, and I suspect we will be hearing much more from Ms. Franks. CA.

NNENNA FREELON

COLUMBIA 48981 (50 min) Performance: Pretty Recording: Excellent

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BOBBI BAIRD & MIKE RENZI Irving Berlin: Let's Go Back to the Waltz. PREMIER PRCD 1007 (54 min).

This delightful sleeper of an album proves that the waltz is still a viable contemporary form for imaginative instrumentalists and vocalists who know how to free it from the standard oom-pah-pah-as Baird, Renzi, and their collaborators do here in fresh, insightful ways. R.H.

THE BATS

Fear of God. FLYING NUN/MAMMOTH D30567 (41 min).

Cute jangly guitars, cute pop hooks, cute rough-hewn vocals . so how come this New Zealand band along the Chills/Verlaines axis does nothing for me? Perhaps because (as Lou Grant used to say on the old Mary Tyler Moore Show) some days I hate cute. 2.2.

BUFFY THE VAMPIRE SLAYER

COLUMBIA CK 52854 (43 min). Take a little alternative rock (Mary's Danish), add a dash of dance music (C&C Music Factory), and garnish with a soupcon of lite metal (Ozzy Osbourne). The result: perhaps the blandest demographically programmed movie soundtrack album of the decade. Note to fans of Matthew Sweet and Susanna Hoffs: Forgive themthey'll do better later. 2.2

EDAN

Dead Flowers. HOLLYWOOD PRCS-61329 (53 min)

Yet another rock star's kid, in this case Edan Everly, son of Don (and nephew of Phil). As the Stones title reference suggests, the basic sound is late-Sixties British blues rock à la the Faces-not as good as the Black Crowes but more credible than Nelson and raunchier than Wilson Phillips for sure. S.S.

P J HARVEY

Dry. INDIGO/ISLAND 162-555 001 (40 min). Some British critics have proclaimed this guitar-wielding post-punk poet a latter-day Patti Smith. Actually, she sounds to non-Brit ears more like Sandra Bernhard with warmth. S.S.



BILL HICKS

Relentless. INVASION INV-35003 (60 min). Scabrously funny musings on sex, drugs, rock-and-roll, Yul Brynner, antismoking fanatics, Dan Quayle, and more (such as



making terminally ill patients do stunts in Chuck Norris films) by the most nearly Swiftian comedian now breathing. The truth shall make you laugh. S.S.



WILLIE NILE

Willie Nile. RAZOR & TIE RE 1997 (42 min). Golden Down. RE 1998 (40 min).

"Willie Nile" is an almost perfect recordgreat Dylanesque songs, a guitar band that could be Television in folk-rock drag, and Nile's inimitable wounded-ferret vocals. The overproduced "Golden Down" is a letdown in comparison, but it does contain Les Champs Élysées, one of the funniest rock songs ever penned. For my money, restoring these two records to the catalog constitutes a public service. S.S.

JIMMY SILVA AND THE GOATS

Heidi. EAST SIDE DIGITAL ESD 80562

(76 min)

The opening words are, "We're an experimental band," but this is actually haunting, melodic pop-rock from the space between Brit Invasion jingle-jangle and Richard Thompson's Celtic folk. Pick hit: the achingly poignant From Every Doorway, which I assumed was about the Irish Troubles but turns out to be about the Vietnamera draft. Not to be missed. S.S.



THE TRASHMEN Tube City! The Best of the Trashmen.

SUNDAZED SC 11011 (50 min). If, as Spinal Tap observed, there's a thin line between clever and stupid, then this tough-as-nails Sixties surf-guitar outfit from Minneapolis walked it like nobody's business, before or since. Clearly the reissue of the millennium. S.S.

IZA TROJANOWSKA

Independence. TRIPINDICULAR/ CONTINUUM 19207 (49 min).

Highly efficient, big-voiced, state-of-theart dance-rock by the Madonna of Poland (the pop star, not the religious icon). One wonders, however, if this is what the Solidarity movement really had in mind. S.S.

musical clan, and her debut album was supervised by Dr. George Butler, who shaped the career of the trumpeter Wynton Marsalis and built him into a jazz and classical superstar. Butler outfitted her with lush string arrangements and accompanists on the level of the bassist Ron Carter and the drummer-vocalist Grady Tate. The celebrated writer Maya Angelou contributed liner notes.

Freelon's vocal quality is, at times, reminiscent of the young Ella Fitzgerald, although, like other mere earthlings, she does not possess Fitzgerald's improvisational brillance. And, yes, there is a touch of the late Sarah Vaughan in her thoughtful approach to a melody, the emphasis she places on shaping her notes, sometimes squeezing them to alter their value or stringing syllables into extended arpeggios to create graceful, gliding effects. She gives an elegant treatment to classic ballads like Stella by Starlight and Skylark, and she demonstrates a subtle sense of swing in her uptempo version of Yesterdays. But we could have done without her three original compositions here, though Future News Blues has a certain bluesy charm.

While Freelon has considerable talent, she lacks true depth of feeling. Her performances are consistently pretty, but she never invites you into herself. Nothing strikes that special chord of response that makes you want to play a song again. Perhaps all the extra trappings made her hold back too much, but lovely sound does not necessarily add up to great music. P.G.



MCCOY TYNER The Turning Point VERVE 513 163 (55 min) Performance: Dynamic Recording: Very good

hen McCoy Tyner was establishing himself on the Impulse label as a member of the John Coltrane Quartet in the Sixties, I found his music exciting and promising. I looked forward to an even more exciting fulfillment of that promise, but he let me down by hopping on a tedious, tinkly treadmill. Well, he's off it now, and I'm very glad.

"The Turning Point" features a big band with some of New York's most able studio jazz musicians. It's a well-disciplined, spirited fifteen-piece frame for the pianist's renewed vitality. Four of the seven selections are Tyner compositions, including Fly with the Wind and Passion Dance, which he gave radically different treatments on previous recordings. If you once tired of Tyner, as I did, this album ought to-restore him to your favor. C.A.

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BARTÓK: Violin Concerto No. 2 MORET: En Rêve Mutter: Boston Symphony Orchestra, Ozawa

Mutter; Boston Symphony Orchestra, Ozawa DEUTSCHE GRAMMOPHON 431 626 (58 min) Performance: Brilliant

Recording: Very good

Anne-Sophie Mutter, with splendid collaboration from Seiji Ozawa and the Boston Symphony, delivers a stunningly volatile performance of Béla Bartók's formidable 1939 Second Violin Concerto. The quarter-tone episode in the first movement is handled with unerring finesse, and the variation-style finale is tremendously taut and full of energy. There are highly competitive CD versions with Kyung-Wha Chung and Solti, Midori and Mehta, and Zuckerman and Slatkin, and one's



Seiji Ozawa and Anne-Sophie Mutter

choice might be based on the couplings. Chung and Midori give us the First Violin Concerto, Zuckerman the Viola Concerto. Mutter goes a very different route with En Reve by the little-known Swiss composer Norbert Moret (b. 1921). The score was commissioned for the 1988 Ascona Festival and dedicated to Mutter. Its three movements-Lumière Vaporeuse, Dialogue avec l'Étoile, Azur Fascinant (Sérénade Tessinoise)-strongly reflect Moret's Parisian training with Messiaen, Honegger, and René Leibowitz, and it serves Mutter as a fabulous virtuoso vehicle. The orchestral lines and texture strike me as very "Messiaenic" indeed, with much emphasis on small metallic percussion. Certainly it is a great audio showpiece, and Deutsche Grammophon's recording makes the most of it. D.H.

> BEETHOVEN : String Quartets Nos. 1 and 15 Artis Quartet SONY SK 48058 (67 min)

> > Performance: Intense Recording: Spacious

For their first Beethoven recording, the Vienna-based Artis Quartet has chosen opposite poles of the composer's stylistic spectrum. The young players are very much in their element with the Classically constructed Quartet No. 1, wonderfully nimble in the fast



Discs and tapes reviewed by Robert Ackart, Richard Freed, David Hall, George Jellinek, Eric Salzman, and David Patrick Stearns

movements and intensely ardent in the slow movement. The Fifteenth Quartet, one of those Beethoven works "for a later age," is rather a different story. The first movement sounds driven and the second exaggerated in its swooping crescendo-diminuendo figure. The famous slow movement-"A recovered man's devout song of thanks to the Deity, in the Lydian mode"-lacks nothing by way of intensity in this performance, but it also needs an element of repose to make its point fully. Things fare better in the two final movements, where the Artis players' theatrical sense helps to communicate both expressive content and musical essence. Sony's recording has lots of acoustic elbow room, but not too much. D.H.

CRESTON: Symphony No. 3 ("Three Mysteries"); Partita for Flute, Violin, and Strings; Out of the Cradle; Invocation and Dance Seattle Symphony, Schwarz

DELOS DE 3114 (67 min) Performance: Strong Recording: Dry

G erard Schwarz, a student of Paul Creston (1906-1985), has become that composer's staunchest advocate. The sources of inspiration for the works on this CD include Catholic mysticism, Bach, Walt Whitman, and Martha Graham. In this collection of old-fashioned and eclectic music, the Symphony No. 3 stands out for its qualities of invention and feeling. The other, lesser works also get strong performances; conviction counts for a lot here. The dry, plain recorded sound is adequate if not sexy. E.S.

DVOŘÁK: Dimitri

Soloists; Prague Radio Chorus; Czech Philharmonic Chorus and Orchestra, Albrecht SUPRAPHON 11 1259 (three discs, 190 min)

> Performance: Committed Recording: Good

Mussorgsky's *Boris Godounov* concludes with the death of that troubled Tsar as the Pretender Dimitri marches on to Moscow to be received by a demoralized populace. The action of Dvořák's 1882 opera Dimitri (based on various literary sources) starts with the Pretender's coronation. Initially his claims to the throne go unchallenged, but he is eventually brought down by his amorous entanglements. Dimitri is a large-scale grand opera somewhat in the manner of Verdi's Don Carlos. It is mature Dvořák, contemporaneous with his Sixth Symphony and the Hussite Overture. so melodic richness and felicities of orchestration may be taken for granted, and the same goes for choral mastery (already evidenced by the earlier and beautiful Stabat Mater). While Dvořák lacked a natural theatrical gift, Dimitri is an eminently worthy opera. He succeeded in characterizing his principal characters by way of identifying motives, and he made effective use of contrasting Russian and Polish elements to highlight ethnic conflicts.

Gerd Albrecht and the Czech Philharmonic outdo themselves in this demanding score, the double-size chorus performs commendably, and all the principals sing with involvement. Particularly outstanding is Drahomira Drobková, whose high mezzo creates a commanding Marfa Ivanovna, and Ivan Kusnjer, a solid and ringing baritone Shuisky. Leo Marian Vodička excels in the lyric portions of Dimitri's music, but his tone hardens and turns unsteady under pressure.

The notes accompanying this first complete recording describe the various revisions Dvorák made between 1882 and 1885 and identify



the elements of the "critical edition" that was used. Unfortunately, only the Czech libretto is provided; the trilingual synopses are too terse to be satisfactory (though there are ample cueing points). Nevertheless, *Dimitri* is a major addition to the recorded repertory. *G.J.*

HAYDN: Symphonies Nos. 83 ("La Poule") and 87

Saint Paul Chamber Orchestra, Wolff TELDEC 73133 (51 min) Performance: Solid, witty

Recording: Sunlit

These are two of Haydn's six "Paris" symphonies (so-called because they were commissioned by a Parisian orchestra named La Loge Olympique), and they belong with the best of his late work. No. 83 got its nickname, "La Poule," because some wag claimed to hear a hen clucking in the first movement; it is, in fact, a dark and dramatic work in G Minor. Along with its bright A Major companion, No. 87, it gets a solid and witty reading here, perfectly captured in brilliant, sun-lit recorded sound. *E.S.*





CLASSICAL MUSIC

MORAN: Desert of Roses—Arias, Interludes, and Inventions; Ten Miles High over Albania; Open Veins

West; Balanescu; Falcao; Piano Circus Band; Smith, Moran (conductors) ARGO 436 128 (66 min)

> Performance: Intense Recording: Delicate, exquisite

Robert Moran, long known for his multime-dia, performance-art spectaculars, has evolved into a lyrical/rhythmic purveyor of inner intensity and a sort of exquisite embroidery-certainly one of the more extraordinary turnarounds in contemporary music. The suite of five delicate "arias, interludes, and inventions" from his opera Desert of Roses, based on Beauty and the Beast, is sung here by the soprano Jayne West and conducted by Craig Smith. Ten Miles High over Albania for eight interwoven harps (here Mario Falcao overdubbed seven times) was written for the Phyllis Lamhut Dance Company; the title is otherwise unexplained. Open Veins is described as "based on the story of the suicide of Petronius" and has something to do with the debaucheries of the Emperor Nero-exactly what would be hard to guess from this harddriven dance-like instrumental work, a relentless rhythmic juggernaut that is very different from everything else in the album.

In a general way, this music relates to the minimalists, but it has its own richness of texture and some very personal qualities. There is something elusive about all of it, a quality of mysteriousness that is at once strong, quirky, and hard to pin down. E.S.

MOZART: Piano Concertos Nos. 23 and 24 De Larrocha; English Chamber Orchestra, Davis RCA VICTOR 60989 (58 min) Performance: Wise

Recording: Elegant

he perennial Alicia de Larrocha never fails us with her knowing and felicitous playing. Her current concerto series with Colin Davis and the English Chamber Orchestra features a wise and worldly Mozart that gives the lie to that Amadeus image of the divine dolt. The Mozart of the late concertos-he was, after all, writing music for and about himself-was sage beyond his years and bursting with the joy and the tragedy of this our life: joy in A Major, tragedy in C Minor (to oversimplify a bit). There is hardly another Mozartian around who understands him so well in these matters, and De Larrocha's supporting team in this endeavor is right with her. E.S.

Alicia de Larrocha

CHRISTIAN STEINER/BMG



6



John Ostendorf, Patrick Romano, Linda Russell, Frederick Urrey, and Rudolph Palmer, piano

Dolitical songs of the nineteenth century dealt with such timely topics as ethics, racial equality, sectional conflict, foreign wars, and leaders "with an itching palm to finger the nation's cash." Sounds famillar. "Tippecanoe and Tyler Too-A **Collection of American Political Marches.** Songs, and Dirges" reveals, however, that the music of that time was sweetly naïve compared with the accompaniments to today's elections. The Chestnut Brass Company plays such authentic instruments as saxhorns and keyed bugles, and the singers (including Linda Russell, John Ostendorf, and others) manage an agreeable period style.

There is variety in the recital because songs exhorting the citizens to vote for one candidate or another alternate with such dances as the *Clay Gallopade* and the *Fillmore Quick Step* and with dirges for Presidents Harrison and Lincoln. All told, the collection is a pleasant reminder that politics don't change much.

-William Livingstone

TIPPECANOE AND TYLER TOO Chestnut Brass Company and Friends NEWPORT CLASSIC NPD 85548 (75 min)

MOZART: Symphony No. 38 ("Prague") DVOŘÁK: Symphony No. 9

("From the New World") Czech Philharmonic Orchestra, Kubelik DENON CO-79728 (69 min)

Performance: From the heart Recording: Vivid live concert

Following his triumphant return to Prague for the 1990 Spring Festival, documented in Supraphon's stunning recording of Smetana's Má Vlast, Rafael Kubelik was there again on October 11, 1991 to conduct the Czech Philharmonic in the Mozart "Prague" and Dvořák "New World" symphonies, works with which he has been closely identified since the early 1950's. Clearly, the Czechs and Denon hoped to repeat Supraphon's lucky strike, but given Kubelik's Berlin recording of the "New World" for Deutsche Grammophon and his three versions of the "Prague," on Sony, Angel, and Orfeo, I would have to call this release a near miss.

The Mozart fares better here, with a reading characterized by strong dramatic contrasts-

notably a portentous opening movement and a blisteringly dynamic allegro. The contrast is equally strong between the slow movement and the finale. The Dvořák, for all the beauties of the famous largo, fares somewhat less well. The finer points of phrasing and inflection tend to get lost in the concert ambience. If you own the DG "New World" or the Sony "Prague," hang on to them. D.H.

SCHNITTKE: Collo Concerto No. 2; In Memoriam . . .

Rostropovich; London Symphony, Ozawa SONY SK 48241 (65 min)

Performance: Inflamed Recording: Good but constricted

SCHNITTKE: Cello Concerto No. 2; Concerto Grosso No. 2

Thedéen; Krysa; Malmö Symphony, Markiz BIS CD 567 (78 min)

Performance: Architectural Recording: Good depth

Alfred Schnittke has reached the enviable position of having his Cello Concerto No. 2 of 1990 recorded simultaneously by two different creative teams. This may have to do in part with the piece's directness and emotional heft: It contains few of Schnittke's usual collage effects or unorthodox instrumentation, and it is more deeply felt than many of his works. I am reminded of the Berg Vioin Concerto, not simply because of the emotionalism but because the passacaglia in the fifth movement is vaguely similar to Berg's use of a Bach chorale at the end of his work.



The two recordings represent vastly different interpretive viewpoints, Mstislav Rostropovich's being the more viscerally compelling. The piece was written for him, and he gives it a highly personal performance. coloring every phrase with his distinctively rich palette and squeezing out every last ounce of drama. Seiji Ozawa is in some ways the perfect conductor for this project. His coolness and clarity reveal Schnittke's orchestral mastery and make a wonderful foil to Rostropovich's emotional effusiveness. Unfortunately, the recording seems a little boxy.

The Swedish Bis recording featuring the cellist Torleif Thedéen and the conductor Lev Markiz downplays the drama and rhetoric of the piece and emphasizes its purely musical value, which is considerable. Choosing between the two CD's, however, isn't simple. While the Sony is the clear-cut choice for the concerto, its filler, *In Memoriam*..., Schnittke's somewhat tedious answer to La Valse, isn't as substantial as the Concerto.



CLASSICAL MUSIC

Grosso No. 2 on Bis. Featuring the violinist Oleh Krysa, the concerto grosso is vintage Schnittke with its humorous, ironic counterpoint of styles, including references to everything from Bach's Brandenburg Concertos to *Silent Night*. Passionate Schnittketonians will simply have to have both recordings. *D.P.S.*

> SCHUBERT: Symphonies No. 4 ("Tragic") and No. 6

> London Classical Players, Norrington EMI CDC 54210 (60 min)

Performance: A hit and a miss Recording: Excellent

Roger Norrington's no-nonsense approach to Schubert, with layers of excessive indulgence scrubbed away, might have worked excitingly well in the overtly (if somewhat artificially) dramatic Fourth Symphony, but in the event it only leaves that work with neither, its accustomed charm nor a new dimension of power, simply . . . well, rather faceless. This is not a consequence of excessive briskness, by the way; the tempos are, in fact, more expansive, closer to traditional ones, than we've come to expect from Norrington. It's just that there seems to be no real sense of affection for the piece or conviction in it.

The Symphony No. 6, on the other hand, seems to come from a different world—a world of sunshine and sparkling good cheer and almost daredevil wit, as well as honest sentiment that can enjoy poking a bit of fun at itself (even to the point of allowing the finale to become a little mechanical as it rounds its familiar bends), and all from musicians reveling in the sheer deliciousness of their sound. EMI has recorded both performances with a breathtaking transparency that stresses their relative strengths and weaknesses. *R.F.*

VILLA-LOBOS: Piano Concertos Nos. 1-5

Ortiz; Royal Philharmonic, Gomez-Martinez LONDON 430 628 (two discs, 139 min)

> Performance: Valiant Recording: Excellent

n its eternal search for fresh, attractive repertory, London Records has happened upon Heitor Villa-Lobos's five neglected piano concertos, written between 1945 and 1957. Those expecting an ingratiating journey through Brazilian exotica similar to his popular Bachianas Brasileiras may feel bewildered. These are dense works where a plethora of musical ideas and Latin rhythms vie for attention. They would be more intoxicating if the ideas were halfway memorable. Many are not, and they are so similar to each other in chord structure and character that your can hardly tell them apart. The concertos often seem to have no particular organization-like musical counterparts to a Brazilian rainforest-even to the extent of lacking the traditional sense of give-and-take between the soloist and the orchestra. In fact, sometimes it's hard to tell one concerto from another, not just because the ear has so few memorable points of reference but also because all five are so uniform in character.

The pianist, Cristina Ortiz, and the conductor, Miguel Gomez-Martinez, often seem too preoccupied with accuracy to project any strong interpretive point of view, and the Royal Philharmonic audibly struggles with the feverish, polytonal orchestral textures. More analytical listeners will probably want nothing to do with this music, but those who aren't particularly attached to conventional form may find lots of momentary thrills. Except for most of the Second Concerto and some isolated movements in the last three, it's like classical MTV: a series of hot moments that don't form any cohesive whole. D.P.S.

Collections

RODGERS AND HAMMERSTEIN: Opening Night (The Complete Overtures)

Hollywood Bowl Orchestra; Mauceri PHILIPS 434 932 (67 min)

Performance: Bright and jounty Recording: Front-row center

What a pleasure to hear the well-crafted curtain raisers to Oklahoma!, South Pacific, The King and I, and all the other Rodgers and Hammerstein musicals gathered together




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on a single disc and played uncut in their original arrangements with melodic sweep, rhythmic snap, and luxuriant sound! Strictly speaking, not everything here is an overture, since The Sound of Music is represented by its Act Il entr'acte and the movie State Fair with a suite arranged by Sid Ramin. But even the lesser scores (Pipe Dream, Me and Juliet, Allegro, and TV's Cinderella) remind us that no other show composer has yet equaled Richard Rodgers's seemingly boundless flow of appealing melody. And in John Mauceri we finally have the first pops conductor since Arthur Fiedler who has an identifiably individual style-with an emphasis on bright, jaunty, clean-lined, warmly engaging zing and zip. Roy Hemming

THE SYMPHONIC TANGO

Quinteto Buenos Aires; Royal Philharmonic Orchestra, Stratta TELDEC 76997 (53 min) Performance: Best of B.A.

Recording: Full, fitting

lthough it was not exactly planned that Away, this recording turns out to be a memorial-fitting, let it be added-to the great modern tango master Astor Piazzola, who died last July shortly before its appearance. The lead-off cut, Adios Nonino, was Piazzola's greatest hit. Oblivion is a number literally rescued from oblivion-in this case. Piazzola's soundtrack for an obscure Marcello Mastrojanni movie. Astoreando is a tribute to the master, fugue and all, by the conductor, Ettore Stratta, and Jorge Calandrelli, the principal arranger and orchestrator. The players are all Astoreans-for example, Pablo Ziegler, Piazzola's long-time pianist, who also contributes his Milonga en el Viento. There are classics like Caminito, El Choclo, and Cumparsita,



two tangos by Piazzola's predecessor, Enrique Discepolo, and even one by the great tango singer Carlos Gardel.

There is a trend in the modern tango to go big-band or orchestral, a tendency shared by Piazzola himself. Personally, I prefer the simpler, old-fashioned, hard-edged, poor-man's tango using only violin, piano, and bandoneon (even the voice is optional). Some of this collection, mainly the tangos from the 1930's and 1940's, is franky schmalzy, but most of these artful arrangements are faithful to the old traditions and to Piazzola's modernizations-which, like so many avant-garde movements, have rescued and renovated the very traditions against which he rebelled. Even with the quite un-Astorean schmalz, it makes a nice tribute to a great man. E.S.



C. P. E. BACH: The Resurrection and Ascension of Jesus. Collegium Vocale, Ghent; Orchestra of the Age of Enlightenment, Herreweghe. VIRGIN 91498 (76 min)

C. P. E. Bach's 1760 oratorio is full of startling, downright futuristic ideas, and the scale is unusually grand. But despite the sympathetic performance, his feverish expressiveness, which led to the *Sturm und Drang* ("storm and stress") movement in German music, seems hamstrung by formalities of the period and a dearth of genuinely memorable material. *D.P.S.*

BERLIOZ: Harold in Italy; Waverly and Benvenuto Cellini Overtures. Caussé; Orchestre du Capitole de

Toulouse, Plasson. EMI 54237 (61 min). Gérard Caussé's throatily expressive solo viola in *Harold in Italy* strongly characterizes the protagonist. The conductor, Michel Plasson, provides expert orchestral collaboration as well as alert readings of the overtures. The recorded sound seems somewhat deficient in bass, though. D.H.

CHOPIN: Scherzos; Polonaise No. 6; Ballade No. 4; Andante Spianato and Grande Polonaise. Sultanov. TELDEC 46463 (74 min).

Alexei Sultanov has fistfuls of technique and no little sensitivity and imagination, but he gives the impression in this program of forming his interpretations bar by bar rather than having a clearcut interpretive design. The "Heroic" Polonaise is particularly wayward, the F Minor Ballade the best of an uneven lot. R.F.

MENDELSSOHN: A Midsummer

Night's Dream. Leipzig Gewandhaus Orchestra, Masur. TELDEC 46323 (63 min). Kurt Masur's Mendelssohnian credentials are superbly in evidence in this presentation of the absolutely complete Midsummer Night's Dream score. Edith Wiens (soprano), Christiane Oertel (mezzo), and the Leipzig Radio Chorus are as beguiling as one could wish in the German text for which Mendelssohn wrote his music, but the spoken text in that language may be offputting to non-German listeners. R.F.

MOZART: Serenades for Winds, K. 375 and 388. Orpheus Chamber Orchestra. DEUTSCHE GRAMMOPHON 431 683-2 (48 min).

There's excellent playing here, particularly

from the clarinets and horns, and the disc is handsomely recorded, but there is disappointingly little in the way of character definition. I miss a sense of contrast between the ebullient E-flat Serenade (K. 375) and the darker, more intimate one in C Minor (K. 388), which Mozart subsequently transcribed for string quintet. *R.F.*

SMETANA: Má Vlast ("My

Country"). Milwaukee Symphony Orchestra, Mácal. TELARC CD-80265 (74 min).

Moravian-born Zdenek Mácal turns in a fine reading of Smetana's great symphonic cycle, notably in the last two of the tone poems, *Tábor* and *Blanlk*. The sonics are pristine, but the performance is no match for Rafael Kubelik's blazing Supraphon recording from the 1990 Prague Spring, nor is the Milwaukee orchestra a match for the Czech Philharmonic, or, for that matter, the Vienna Philharmonic under James Levine on Deutsche Grammophon. If sound quality is your prime consideration, however, this version of *Má Vlast* may be the one for you. D.H.

R. STRAUSS: Orchestral Songs,

Vol. I. Lott; Scottish National Symphony, Järvi. CHANDOS CHAN 9054 (64 min)

Richard Strauss's lifelong infatuation with the soprano voice is lavishly documented here in twelve songs that represent him at his lyrical best. In *Mein Auge* and *Waldseligkeit* in particular, Felicity Lott sings rapturously. In the celebrated *Four Last Songs* she soars and floats with the best (Schwarzkopf, Janowitz, Popp, Price), admirably supported by Neeme Järvi, whose sensible pacing resists overindulging the sentimentality. *G.J.*

TCHAIKOVSKY: Symphony No. 6 ("Pathétique"). WAGNER: Tristan und Isolde, Prelude and Liebestod. Frankfurt Radio Symphony, Inbal.

DENON 9715 (68 min).

There is not much volatility in Eliahu Inbal's reading of the "Pathétique," but there is a good deal of gear-shifting in tempos, especially in the middle movements. The *Tristan* music is decidedly more up his alley, and certainly the Frankfurt orchestra has it bred in the bone. It is a pleasure to hear the tempo maintained at a steady pulse throughout. The sound is good but not spectacular. D.H.



Arleen Auger

NYBODY whose record collection contains more than a smattering of classical vocal music is almost sure to have some discs by Arleen Auger. Her discography is thicker than some small-town phone books, ranging from Bach cantatas (ninety-four of them, but who's counting) to Schoenberg. Like so many American singers, the stately blonde soprano from Los Angeles began her career in Europe, and she did not perform extensively in the United States until she was already well established as an international star. Over the past decade, Auger became the first choice of many of the world's leading conductors as a soloist in the Baroque concert repertory, and her performances in the operas of Mozart and Handel and as a song recitalist earned her a firm position at the top of those fields.

Then, last February, Auger suddenly canceled her entire schedule of stage appearances and recordings. A press release was issued with the shocking news that the fifty-three-year-old singer had a malignant brain tumor. She has since undergone surgery and radiotherapy. This interview, the first she has given since her illness, took place in the shady garden of a friend's home near New York City, where she was convalescing.

Arleen Auger's recording career gives the lie to the conventional wisdom that a singer must sign an exclusive contract with a major record label in order to attain a position of preeminence. "As a freelance," she declared, "you have to work a little harder, and you have to accept certain conditions-you're not going to get the same publicity that your colleagues who have exclusivity will get. But the great advantage is that I can say yes or no to a project. I don't want to lose that freedom. Also, some of the smaller companies, such as Hyperion, Virgin, Chandos, and Delos, give artists like me a chance to do some of the literature the big companies are not doing, or which they're giving to their exclusive artists.

Auger's career began prestigiously, with a debut at the Vienna State Opera in 1967 as the Queen of the Night. She said that doing her apprenticeship at Vienna "had its advantages and its disadvantages." Among the former was the opportunity to work with such legendary conductors as Karl Böhm and Josef Krips, who were from the old school and, as she says, "understood something about vocal production," as



well as how to guide a young artist. Under their tutelage, Auger was able to learn a lot of parts without being pushed into major roles too soon. The principal disadvantage, as is generally the case for a house singer, was that she was given little choice in what parts she sang.

Auger's association with Karl Böhm gave her her first break in the recording business. "Yes, my first major recording role was the Naiad in his Ariadne auf Naxos. Later, I sang the Italian Soprano in his Capriccio, and then Constanze in The Abduction. Those early recordings on Deutsche Grammophon gave an important boost to my recording career—which in turn gave me a boost in the concert appearances. It was the career development that gave me the chance to go freelance."

In recent years, Auger has been sparing in her opera recordings, but some of them have become classics. Her performance in the title role of *Alcina*, in a 1986 version conducted by Richard Hickox, remains one of the great Handel opera recordings. Inexplicably, despite the enormous number of reissues from EMI in recent years, the set is available in this country only as an import. Another widely admired Auger recording is her performance as the Countess in *The Marriage of Figaro* on L'Oiseau-Lyre, with Arnold Ostman conducting an orchestra of original instruments in Drottningholm, Sweden. Although the cast was assembled especially for the recording, Auger said, "What was important was the idea of bringing the right people together to build an ensemble, as the record companies did years ago. I wish more recordings were done that way."

Her newest recording, her last before falling ill, is a disc of Wolf lieder accompanied by Irwin Gage, on the Hyperion label. "I have been singing Hugo Wolf throughout my entire career," she said. "I sang Wolf on my first lieder recording, for CBS. Hyperion would like to have another Wolf record, but . . . we don't know now. Irwin and I chose literature we had done often and loved, and added some important songs with texts by Goethe and Morike. The two Schubert records I have made in the last couple of years were also for Hyperion, with Graham Johnson. Graham has a wonderful way of bringing together important music in important ways."

Auger looked tan and vigorous, and there was nothing of the invalid in her demeanor. When I asked her to comment on what the future holds, she replied with a gutsy, characteristic laugh, "Everyone wants to know that—so do I! But it is still too early to say what the final result will be. I have good reports from a throat specialist, and the vocal cords are working well. But I don't want to come back if it's not satisfying to the audience, and satisfying to me. I've had a wonderful career, and I've enjoyed *almost* every minute of it." She paused to laugh again, heartily.

"There are many other things I could do. I've always enjoyed teaching, and I would have many possibilities for teaching in America and Europe. But I do want to go on with the singing. The record companies have been very kind and sympathetic, waiting until I say 'Let's talk.' And I would like to talk."

Jamie James is a free-lance writer based in New York City. His book The Music of the Spheres will be published next spring by Grove Weidenfeld.

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No Specs

NOTHER preamplifier came in for appraisal yesterday with absolutely no specifications except for 120 volts, 60-cycle AC. It is getting to be quite the fashion to challenge the consumer to identify merit by ears alone, and the numbers be damned. When you ask a manufacturer why he hasn't bothered to certify the performance of his product, he will usually tell you that the specifications will tell you nothing about how it actually sounds, and its sound is what he's selling.

There's a morsel of truth here. You could gather together a bunch of speaker systems rated for a frequency response of 40 to 18,000 Hz ±3 dB (highly respectable) and heartily dislike at least half of them. There's 6 dB to be played around with, and where in the frequency spectrum that variance occurs, and how pervasive it is, will make one loudspeaker sound like no other, for better or worse. And the presentation of the response spec strongly suggests a free-field on-axis measurement-an utterly artificial situation, even when the axis can be identified. As equipment reviewers will testify, they see many speaker systems with purported "sweet spots" (listening angles at which they sound best), but the manufacturer is not always helpful in suggesting how they can be located.

Then there's the amplifier designer who strives for the purest possible open-loop circuit performance so he can avoid the use of feedback that could aggravate slew-induced dynamic distortions. He'd typically be able to claim 0.01 percent total harmonic distortion, whereas his competitor, who employs a sloppy circuit and fixes the resulting problems with heavy feedback, can claim 0.001 percent. Naturally, the first manufacturer is not going to be eager to talk specifications. And, again, the relevant measurement is based upon artificial, nonmusical conditions.

Today's standard measurements evolved out of a growing understanding of what could make audio equipment sound *really* wrong, and they were mitigated in accordance with what a tester could affordably and conveniently do. They are not completely adequate, and as things currently stand, many of them are largely irrelevant. It has become rather easy for equipment to do well in the tests from which specifications are derived, and serious misbehavior in any of them is a cause for genuine surprise. Yet that is only how things *currently* stand.

THE HIGH END

RALPH HODGES

One major risk of dealing with products that are unspecified is that you don't really know what you have, or are supposed to have. This probably complicates life for reviewers more than anyone else, but it's worth everyone's attention. Since most things audio come with at least two channels, a tester can compare one with another to judge the degree of consistency the measurements are achieving. But because he's normally using, say, just a single distortion analyzer, the absolute numbers read are subject to error. If a capacitor in the instrument is getting a little tired, the tolerances will slip, if only subtly, and the resulting number, which might look perfectly fine, will not be as fine as it should be. Usually the manufacturer will note the discrepancy; even if he doesn't supply the reviewer or buyer with specifications, he tends to have a pretty good idea of what they should be, and his respect for the reviewer therefore evaporates. What happens next generally depends upon the temperaments of the parties involved, which is a shame. The paying customer for audio goods has enough to cope with without having to witness emotional outbursts where he's been placing trust. A few advance specifications could have resolved the matter before it arose.

Another risk is slippage of quality, which is usually inadvertent but always possible. As businesses go, the audio industry is exceptionally ethical and conscientious, if only because it has undergone the fiercest scutiny from formal and informal review. This aggressive oversight has been a most successful safeguard against lapses, but some loopholes have been discovered, sometimes accidentally. Take the excitement a decade ago over moving-coil phono cartridges. It expanded the horizons of record-playing technology considerably, and it brought many talented amateurs into the field of audio design. It also resulted in a number of inappropriate products, however—cartridges that progressively destroyed the recordings they were intended to play.

The most relevant phono-cartridge specifications for record wear are static compliance and effective tip mass. The former is the easier to measure and, normally, the less important. The latter is extremely troublesome to deal with and difficult to control from product sample to sample, and its consequences are hugely complicated by the use of exotic stylus shapes. It was not unusual to have a test record wiped

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clean of frequencies above 15,000 Hz by a single play with a cartridge whose designer meant well but was not in control of the final specifications.

For the moment, specifications are the central issue in the transition to digital audio, with some believing data compression is appropriate and others that data expansion is essential. All of us should now be paying special attention to specs, because the future of audio media is at stake.

In conclusion, I suggest that specifications are hardly an adequate religion to embrace, but that they are better than nothing. I'd like to see more of them, not fewer. ī.

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