

LOUDSPEAKERS: The inside story

SUBWOOFER/SATELLITES Today's Solutions to the Bass-vs-Space Problem

TEST REPORTS Pioneer Elite CD Player Bose Speaker System Teac Tape Deck B·I·C Speaker System

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What am I looking at? A hubcap from the Stealth Bomber? Buckminster Fuller's geodesic beltbuckle?

NO. WHAT YOU SEE HERE IS FORTY YEARS OF TRADITION PUSHING THE LAST INSTANT OF TECHNOLOGY. INTRODUCING XPL: THE FIRST SPEAKER TO MARRY THE 3-INCH TITANIUM MID-RANGE PICTURED HERE TO THE HIGH-FREQUENCY TITANIUM DRIVER THAT'S NOT. THE ACCURACY OF THE XPL EXTENDS TO 27 kHz. MEANWHILE, THE RIBBED DOME AND DIAMOND



The crossover network in the XPL costs more than some systems: Low-loss, high-current bypass capacitors. Low distortion inductors. Gold-plated connectors.

TRANSIENT DETAILS SO OFTEN BLURRED IN SOME OTHER DIAPHRAGMS ARE ROUTINELY REPRODUCED BY THIS REMARKABLE TANDEM. BREAKTHROUGH FOLLOWS

BREAKTHROUGH. THE XPL'S STEPPED BAFFLE ALIGNS THE LOW, MID AND HIGH-RANGE SIGNALS. THIS ENABLES THE SOUND FROM EACH DRIVER TO ARRIVE AT THE LISTENER'S EAR AT PRECISELY THE SAME TIME. THE ENCLOSURE? IT'S DESIGNED TO PRODUCE NO SOUND OF ITS OWN. THANKS TO A ROUNDED BACK AND NON-PARALLEL SIDES, IT BREAKS OUT OF THE BOX. SUBTRACTS THE INTERNAL STANDING WAVES ASSOCIATED WITH IT. AND THE BLACK LACQUER FINISH DOES A PERFECT IMITATION OF A CONCERT GRAND. AUDITION XPL AT YOUR FAVORITE STEREOPHILE STORE SOON. YOUR TURNTABLE WILL THANK YOU. YOUR CD COLLECTION WILL THANK YOU. ABOVE ALL, YOUR EARS WILL THANK YOU.

OPTINUS LIVE IN CONCERTISM

he performance begins, and the crowc starts swingin' to a sound that's powerful, dynamic and expressive. The instrument that brings performance to life is the Optimus[®] STAV-3200 stereo audio/video receiver.

You get 100 watts of pure power per channel for music that's alive with energy. Dolby Surround[™] brings you dramatic "3-dimensional" movie theater presence, and Hall effect recreates the ambience of the concert venue. There's even a motor-driven master volume control and a wireless remote.

The Optimus brand is designed, crafted and tested to the highest quality standards in consumer electronics. It's technology that performs for you. Hear it today.





Cover

The Boston Acoustics SubSat Six and Bose Acoustimass 5 Series II three-piece systems and the Polk Audio SRS-3.1 tower are some of today's exciting loudspeaker options. See articles on pages 40 and 45 and test report on page 32.

Photograph by Hing/Norton

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Stereo Review.

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Legacy's "Music for the Next Generation"



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Introducing the New Bose[®] Acoustimass[®] 5 Series II Speaker System.

The part you see.



The part you don't see.

Three acoustic masses provide 36dB/octave acoustic crossover rolloff! Benefit: Soundstage determined by cube speakers. Complete freedom to hide the bass module anywhere in your room.

New system protection circuit. Benefit: More system protection at high output volumes. Increased reliability.

New elliptical toroid conduit for the radiating air mass provides for laminar air flow. Benefit: No audible noise caused by turbulence, even at high loudness levels. Three acoustic compression chambers. Benefit: Reduced cone motion providing virtual elimination of audible distortion.

(Plexiglass model for illustration purposes only)

Your eyes won't believe your ears.

When you place an Acoustimass-5 speaker system in your home, all you see are two tiny cube speaker arrays (shown left). You can easily hide the compact bass module (lower left) anywhere in the room, out of view.

You may find it difficult to believe the small size because of what you hear: sound so spacious and lifelike, it approaches the realism of a live performance.

The cube speaker arrays feature Bose Direct/Reflecting[®] speaker technology. They can re-create a natural balance of reflected and direct sound that conventional speakers cannot match. Rotate the arrays to cause big rooms to sound more intimate, or small rooms more spacious. You can listen from almost anywhere in the room and still hear full stereo. All the music, even the lowest bass notes, appears to come from the small cubes, regardless of where the bass module is hidden.

The Acoustimass bass module contains technology unlike that of any conventional speaker. It launches sound into the room by an air mass, rather than directly from a vibrating surface. Some benefits of this patented Bose technology are shown in the pictorial on the lower left.

Compare the sound to conventional speakers costing far more.

The best way to appreciate the benefits of this technology is to ask your dealer to demonstrate it side by side with conventional speakers costing far more. For more information about Bose products, and names of Bose dealers near you, call toll-free;

1-800-444-BOSE Ext. 27

USA 8:30AM-9:00PM (ET) FAX 508-872-9657 Canada 1-800-465-BOSE 9:00AM-5:00PM



by Rebecca Day and William Livingstone

Royalty Compromise

The Electronic Industries Association, the Recording Industry Association of America, and the Copyright Coalition of songwriters and music publishers agreed in July to seek legislation that clarifies the legality of home audio recording for private, noncommercial use. The proposed legislation would impose royalties, based on manufacturers' prices to dealers, of 2 percent on consumer digital audio recorders and 3 percent on blank digital media. The royalties would be collected from manufacturers and importers and distributed to music creators and copyright owners on the basis of record sales and airplay. In addition, the legislation would require consumer digital recorders to include the Serial Copy Management System, which limits digital copying of commercial recordings to a single generation.

"We have always believed and still do believe that consumers have the right to record for their own personal use," said Gary Shapiro, vice president of EIA/CEG, "but a legislative compromise... may facilitate the access of consumers to emerging digital technologies. It is time for this digital recording stalemate to be broken."

As a result of the accord, a pending class-action lawsuit brought against Sony for copyright infringement resulting from its sale of DAT recorders was "dismissed without prejudice" at the request of the plaintiffs, the National Music Publishers Association.

Design Awards

A 20-inch RCA color TV set with remote control was a

winner in the Industrial Design Society of America's annual program of awards this year. Created by the designer Thomas E. Renk and the engineer Robert Ramspacher, the RCA F20706FT was the only television set among the winners. It retails for \$499. The Museum of Modern Art in New York has added two Bang and Olufsen products to its permanent design collectionthe VX 5000 Super VHS VCR and the Form 2 headphones. This brings the number of B&O products in the museum's collection to sixteen.

Music Notes

BMG Classics has reissued on RCA CD's several recordings by the Japanese synthesizer artist Isao Tomita, a grandfather of New Age music. Among them are Mussorgsky's Pictures at an Exhibition, Stravinsky's Firebird, and "Kosmos." All have been digitally remastered and encoded with the Dolby Surround system. ... Pearl has issued a CD of vintage recordings from the 1930's, "Koussevitzky Conducts American Music." . Denon has released the first classical performance it has recorded in the United States, Mozart's Requiem by the Boston Early Music Festival Orchestra conducted by Andrew Parrott.

Classical Crossover

The ex-Beatle Paul McCartney, forty-nine, was commissioned by the Royal Liverpool Philharmonic to write a large composition for its 150th anniversary. In collaboration with the American composer/conductor Carl Davis, McCartney produced Liverpool Oratorio, a large-scale, 1½-hour work for

soloists, boy choir, chorus, and orchestra. The audience at the world première in Liverpool in June gave it a standing ovation, but the response from critics was guarded and mixed. The Times of London called it "a worthy, sincere endeavor," and the New York Times commented on its coherence. McCartney's gift for melody, and various "lovely touches." EMI recorded it with the première forces, including the soloists Kiri Te Kanawa and Jerry Hadley and the Royal Philharmonic under Davis. It is scheduled for fall release.

Equipment Notes

The Luxman RV-371 receiver (\$1,400) has Dolby Pro Logic surround circuitry and a fivechannel amplifier. . . . Kenwood's new KA-V9500 fivechannel audio/video receiver (\$1,500) offers six ambience modes, Dolby Pro Logic, and inputs for twelve source components. . . Boston Acoustics offers a \$900 surround-sound version of its SubSat 6 system, called the T6, that includes five satellites and a bass module.

Tape Athletics

TDK is sponsoring the Third International Amateur Athletic Federation Congress and World Championships in Athletics in Tokyo, Japan, from August 23 through September 1. The competition, which is also known as "Tokyo '91," will bring together about 1,200 athletes from 182 countries. More than 120 television networks will cover the championships, which will be seen by an estimated three billion TV viewers around the world. In the U.S., highlights of the events will be broadcast by NBC-TV.

Learn to play Bach

CD Menu 1 Program Magazine 2 Title Magazine 3 Record CD to Tape 4 Disc Sequence 5 Random Play 6 Intro Scan Time Set

Press number to select Press MENU to exit menu

CD Magaz Mag Tit 46 CHOPIN 47 BACH 48 HANDEL 49 STRAVIN 50 BARTOK Use ADJUST t Then press E Press MENU f

It may have taken a musical genius to write the *Toccata and Fugue in D Minor*, but it shouldn't take a technical genius to play it.

Or at least, that's the thinking behind the Mitsubishi M-C6010, the world's first CD changer with on-screen commands.

The way we see it, you shouldn't have to spend the best years of your life figuring out how to work your audio equipment. So we've put the directions right on the TV screen in



The M-C6010 CD changer.

front of you, in the form of menus that lead you through every function, step by step. And confirm what you're doing while you're doing it. There are menus that cover all the usual functions, like programming discs and recording them to tape.

And then there are menus for things that aren't usual at all. For instance, imagine being able to customize your CD library according

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The M-R8010 Home Theater receiver.

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CIRCLE NO. 12 ON READER SERVICE CARD

in three easy steps.



to category. You name each magazine, and the next time you insert it into the changer, your title—"Sixties Classics" or "Elevator Greats" will appear on the screen. Or if you feel like browsing, you can call up the names of every magazine in your library with a quick flick of the remote control.

As a piece of video equipment, our CD changer is pretty impressive. But we could hardly expect you to buy it on looks alone, so we gave it all the technology any right-minded audiophile would insist on. Dual 18-bit linear D/A converters. 8-times oversampling during the filtering process. And digital de-emphasis, a special circuit for accurate playback of the high frequencies present on compact discs.

Of course, the best way to get the most out of all this technology is to make it part of a Mitsubishi Home Theater System, so your audio and video components can work together as a cohesive unit. Everything in the system—from our big screen TVs and VCRs to our CD changer and Home Theater receiver—operates the same way and can be controlled by a single learning remote.

With all of this in mind, picking out your next CD changer should be as easy as playing "Chopsticks."



Stereo Review.

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LETTERS

CD-I and Laserdisc

As a long-time leader in laser-optical technology, Pioneer Electronics shares Ken Pohlmann's enthusiasm for the CD-I (compact disc interactive) format that is now being developed. But his recent comparison of CD-I video quality with that of S-VHS (July "Signals"), coupled with his reference to movies being available on CD-I by mid-1992, is misleading.

The first major step for CD-I will be the establishment of an international standard. In the case of the laserdisc. which is the highest-quality audio and video laser-optical format on the market today, it took ten years for standardization. While MPEG-1, the Motion Picture Expert Group's full-motion video standard, is anticipated for enactment as an international standard in late 1992, it currently utilizes only one-fourth of the luminance resolution and one-eighth of the chrominance resolution of today's NTSC television standard. Another important measure of resolution (detail) is the number of pixels. Under MPEG-1, the pixels number between 60,000 and 80,000, compared with 120,000 pixels in standard VHS and 240,000 in laserdisc.

The CD-I format has wonderful applications such as education, information, interactive games, etc., but at this stage it will not be able to deliver the experience of the laserdisc, which remains the reference standard for home-entertainment media.

> MIKE FIDLER Senior Vice President Pioneer Electronics (USA) Long Beach, CA

Having seen MPEG-1 compression in action, we agree that it will degrade fullmotion video signals to a level inferior to that of standard VHS videotape playback and well below that of S-VHS or laserdisc playback, and CD-I will use MPEG-1 for full-motion video. We apologize for any misunderstanding on this point.

I found Ken Pohlmann's description of CD-I sound quality to be unclear. Will a CD-I disc of a movie have the same sound quality as a laserdisc of it?

GREGORY WRAY Cincinnati, OH

Philips says that it will.

Maura O'Connell

Ron Givens's June review of Maura O'Connell's album "A Real Life Story' was a nice piece of music criticism, striking as it did at the "cult of the singersongwriter." I hope O'Connell and others continue to show us that fruitful collaborations between excellent singers

and superior songwriters can yield beautiful, thoughtful music.

One question, however: Mr. Givens says that this album is O'Connell's second solo effort, following "Helpless Heart." Where does that leave "Just in Time," her 1989 Philo/Rounder release? DAVID J. BURNS

Spring Arbor, MI

"Just in Time" slipped our memories, but it's still available from Philo/Rounder.

Amplifier Sound

Brad Meyer's article about the sound of amplifiers ("The Amp/Speaker Interface") in the June issue is the best I've seen for a long time on the topic. Commendable work.

> **DUNG THI DO** Los Angeles, CA

CD Magic

As a technical consultant to Allsop, I would like to comment on Ken Pohlmann's July article on CD enhancement devices ("CD Magic"). He argues that "remarkably impressive technical performance is delivered by even modestly priced CD players" and concludes that most are immune to tweaking. The tests described in the article, however, were all conducted using an \$800 Philips CD-80, which is well beyond the "modestly priced" category.

Unlike most of the mass-market players for which Allsop's products were designed, the Philips CD-80 features a die-cast transport for high vibration immunity, vibration-decoupling feet, and a particularly stable laser-tracking mechanism. 1, too, would be underwhelmed by the results from using CD enhancement products with the CD-80, but most people don't own \$800 CD players.

With regard to Mr. Pohlmann's comments on the Allsop CD Plus Stabilizer, I would point out that a stabilized disc teeter-totters (like a warped record) less than an unstabilized one, and therefore peak corrective movements of the servo are reduced when tracking it. When the servo system tracks a disc that is not stable, it draws current irregularly from the CD player's power supply, which may cause modulation of the hum field, motor EMI/RF radiation, and ground currents. Once again, an \$800 player will have built-in safeguards and should not fall prey to these gremlins. But with the

We welcome your letters. Please address correspondence to Editor, STEREO REVIEW, 1633 Broadway, New York, NY 10019. You should include your address and telephone number for verification. Letters may be edited for clarity and length.



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LETTERS

vast majority of players Allsop's product has value.

> MICHAEL KLASCO Berkeley, CA

Ken Pohlmann replies: Vibration characteristics vary from player to player, but even low-price players successfully track discs under normal playing conditions. It is only when a player is undergoing extraordinary vibration that stabilizers or isolators may play a role. Based on our tests, however, microphonics in the analog section appear to be a greater problem than mistracking of the pickup mechanism or servo errors.

Ken Pohlmann's "CD Magic" is just too much protestation. He in no measure disproved the existence of sonic im-provements by the use of his "objective means." Nor did he prove by "objective means" that sonic improvements are the result of a placebo effect on the impressionable listener. Rather, he engaged in yet another attempt to "prove" that "bits is bits." He then, again, concludes that since "bits is bits," all bits sound alike.

STEPHEN BOSCH Bala Cynwydd, PA

The tests reported in "CD Magic" were not designed to be definitive-only to seek measurements that might support the claims made for the various products examined. In the case of the surface treatments, the results strongly suggest that there is no real audible benefit because there were no changes in the data read from the disc, which is the only mechanism by which such treatments could alter the sound. The placebo effect was brought up because it has been demonstrated to influence the judgments of even experienced listeners in uncontrolled listening tests.

There is more to the music produced by a CD player than bits and harmonic distortion. There is jitter in the digital bit stream to consider and account for, and that is exactly what many of the tweaks claim to affect.

Second, a green Sharpie pen is entirely different from the one product I'm aware of that's sold explicitly for treating the edges of CD's, the CD Stoplight by AudioPrism. Its effects are guite audible to anyone willing to listen with an open mind.

In addition, it should have been mentioned that applying Armor All to a CD has been found to cause decomposition of the polycarbonate if it's left on for a period of time. AudioQuest's Laser-Guide provides similar benefits (yes, I can hear them) with no danger to the CD. Another product I've found to make an improvement is the TDK Digital Noise Absorber. These fit over interconnect

and power cables and work by trapping RF noise generated by a CD player's digital circuits. The improvement ranges from very subtle to incredible, depending on the system they're installed in and the CD being listened to.

The bottom line is that each of these tweaks is relatively inexpensive. You can CD Stoplight and LaserGuide a disc for less than 30¢. At that price, questions about their effectiveness are academic.

ALAN WESTENBROEK Columbia, MO

Jitter does cause distortion in digital-toanalog (D/A) conversion, but it is important to understand how it arises. Bits read from a CD accumulate in a small memory buffer from which they are clocked out at precise intervals to the decoding circuitry. Mechanically induced variations in the data rate are eliminated at this stage; any jitter seen by the conversion circuitry results solely from instabilities in the player's internal sampling-rate clock, which are very, very small and not linked to motion of the disc.

The original reports that green ink on the edge of a CD affected its sound were based on the use of an ordinary marking pen like the one employed in our tests. At 30¢ per disc, \$100 would treat slightly more than three hundred discs. The same money could buy six to ten CD's.

Animal Lovers

Please correct an absolutely false statement made in a letter printed in the July issue and signed "Name Withheld." The writer claimed that the chairman of People for the Ethical Treatment of Animals (PETA), Alex Pacheco, had "staged" a photograph he took in a Silver Spring, Maryland, laboratory where he worked undercover for four months. The photograph, showing a monkey in a restraining device, was taken during a routine experiment.

Regarding the quote attributed to PETA's national director, Ingrid Newkirk, her full statement was: "When it comes to having a central nervous system and the ability to experience pain, hunger, and thirst, a rat is a pig is a dog is a boy." Anyone with a rudimentary understanding of science should concur that these animals can have similar feelings of physical discomfort.

CHRISTINE JACKSON Senior Staff Writer, PETA Washington, DC

Addendum

In last month's review of the Atlantic Technology Pattern Surround Home Theater System, we neglected to give the manufacturer's address: Atlantic Technology, Dept. SR, P.O. Box 9124, Norwood, MA 02062-9124.

Definitive Technology Authorized Dealers

AZ- Audio Video Emporium: Tucson- Hi Fi Sales:

CA- Audio Concepts: Long Beach, San Gabriel. Creative Stereo: Santa Barbara, Ventura-Pacific Coast A/V: Corona del Mar-Paradyme: Sacramento, Modesto.- Performance Audio: San Francisco- Shel-ley's Stereo: Canoga Pk., Santa Monica- Sound Co.: Escondido, San Diego- Sound Goods: Campbell, Manation Views Sustame Depaigne, Badonada Baceth Escondido, San Diego- Sound Goods: Campbell, Mountain View- Systems Design: Redondo Beach. <u>CO</u>- Listen Up: Denver, Boulder, Colorado Springs. <u>CI</u>- Al Franklin's: Hartford- Audio, Etc.: New Haven-Carston's: Danbury- Robert's Music: New London. <u>DC Suburbs</u>- Audio Associates. <u>FL</u>- Absolute Sound: Winter Park- Audio Ctr.: Ft. Lauderdale- Sound Ideas: Gainesville- Sound In-sight: FL Pierces: Sterentynes: Davigna Resch. Stere

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D&M Sound: Columbia. Primus Audio: Kansas MO-City Sound Central: St. Louis.

NC- Audio Video Systems: Charlotte• Stereo Sound Greensboro, Winston Salem. NE- Custom Electronics: Omaha, Lincoln. NJ- Sound Waves: Northfield• Soundworks: Cherry

Hile Woodbridge Stereo: Montclair, Princeton, W. Caldwell, W. Longbranch, Woodbridge. <u>NM</u>- West Coast Sound: Albuquerque, Las Cruces, Santa Fe.

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Stereo Loft: Eugene.

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aletown. <u>SC</u>- Dashboard Stereo: Charleston. <u>IN</u>- Hi Fl Buys: Nashville+ Lindsey Ward: Knoxville-Movieland Elect.: Johnson City. <u>IX</u>- Audio Tech: Temple, Waco+ Audio Video: Col-lege Station+ Bunkley's Sd. Systems: Abilene+ Con cert Sound: San Antonio+ Harold's Electronics: Odessa, Midland+ Sheffield Audio: Houston. <u>UT</u>- Broadway Music: Salt Lake+ Stokes Bros.: Lo-con

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NEW PRODUCTS

Mitsubishi

Mitsubishi's M-T5010 dual-transport autoreverse cassette deck has a video output to display programming instructions on a TV set. A menu helps the user adjust and select all functions. Features include Dolby B and Dolby C noise reduction, Dolby HX Pro headroom extension, variable-length intro scan, blank-skip, and repeat and relay play. The deck has twin amorphous tape heads, a manual bias control, and a timer-standby switch. Price: \$699. Mitsubishi, Dept. SR, 5757 Plaza Dr., Box 6007, Cypress, CA 90630-0007. Circle 120 on reader service card





NAD

NAD's Model 5425 compact disc player incorporates MASH 1-bit digitalto-analog converter circuitry to reduce low-level distortion. It uses a low-inertia three-beam-laser-pickup/disc-drive subassembly to provide fast search speeds and "rock-stable" playback. Power supplies are separately filtered and regulated for the converter, the analog output circuits, and the servo controls. Operating features include sixteen-track random-access programming and bidirectional track skip. A remote control is included. Price: \$299. Distributed by Lenbrook Industries Ltd., Dept. SR, 633 Granite Ct., Pickering, Ontario LIW 3K1, Canada.

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Pointsource

The Pointsource Model 200 stereo power amplifier is rated at 200 watts per channel from 20 to 20,000 Hz with less than 0.1 percent total harmonic distortion. There is no current limiting, and the rated peak current capability is 40 amperes. The amplifier features a high-bias Class AB output stage, which is said to eliminate crossover distortion, dualmono construction with independent 1kVA power-supply transformers, and 1percent-precision metal-film resistors and polypropylene capacitors. There are no relays, switches, or mechanical contacts used anywhere in the signal chain. The five-way binding-post speaker connectors are gold-plated. Price: \$795. Pointsource, Dept. SR, Box 788, Whiting, IN 46394.

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JBL

JBL's XPL160 loudspeaker has a 1inch titanium-dome tweeter, a 3-inch titanium-dome midrange driver, and a 10-inch woofer with a tuned rear port. Frequency response is given as 40 to $25,000 \text{ Hz} \pm 6 \text{ dB}$ and sensitivity as 90 dB. Nominal impedance is 6 ohms. Low-loss, high-current bypass capacitors and low-distortion inductors in the crossover networks are said to insure smooth transitions between drivers (at 800 and 4,000 Hz). The cabinet's Neoprene finish and beveled edges are said to reduce diffraction, and its rounded back and nonparallel sides are designed to break up internal standing waves. Dimensions are 331/8 x 143/4 x 127/8 inches. Price: \$1,249 each. JBL, Dept. SR, 240 Crossways Park W., Woodbury, NY 11797.

Circle 123 on reader service card



Altec Lansing

The Altec Lansing AHT-2100 was designed to be used as the side speaker in a THX home-theater setup. Each speaker has two 4-inch front-firing woofers, four $3\frac{1}{2}$ -inch midrange drivers, and two $\frac{3}{4}$ inch polyimide ferrofluid-cooled dome tweeters. The midranges and tweeters are at a 125-degree angle to eliminate localization of sound in the surround channel. Designed to be mounted in or on a wall, the speaker measures $15\frac{3}{8} \times 10\frac{1}{2} \times 6$ inches. Price: \$800 a pair. Altec Lansing, Dept. SR, Rts. 6 & 209, Milford, PA 18337.

Circle 124 on reader service card

Bell'Oggetti

Bell'Oggetti's Model B-400 Piramide audio/video stand is made of heavygauge metal with tempered-glass shelves. Adjustable floor levelers are attached to the base. Dimensions are 29½ x 30 x 18½ inches, and weight is 48 pounds. The Piramide's frame is black, and the base is available in a red or gray high-impact finish. Price: \$400. Bell'Oggetti International, Dept. SR, 711 Ginesi Dr., Morganville, NJ 07751. Circle 126 on reader service card



Quasar

Quasar's LD500 combi-player features a 1-bit MASH digital-to-analog converter and a magnetic disc-clamping mechanism. The video section has a digital time-base corrector to reduce uneven coloring (horizontal line noise) and a three-line digital luminance and chrominance separation circuit to suppress streaking at color borders. The player has a shuttle ring on the front panel to help users find a desired point on a disc quickly and easily. Other features include an edit-guide function for recording CD's on cassette, intro scan, and twenty-track programming. The unit has standard and S-video outputs and comes with a remote control. Price: \$650. Quasar, Dept. SR, 1325 Pratt Blvd., Elk Grove Village, IL 60007.

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Boston Acoustics

The Boston Acoustics PV300 subwoofer was designed to be mounted in a floor or ceiling and vented through a standard 2 x 12-inch air-conditioning register. The passive bandpass design is said to eliminate the need for a separate crossover or amplifier. Frequency response is rated as 45 to 140 Hz, sensitivity as 89 dB. Recommended amplifier power is 15 to 100 watts per channel, and nominal impedance is 4 ohms in mono, 8 ohms in stereo. The speaker comes with four L-brackets and a foam gasket for installation. Price: \$400. Boston Acoustics, Dept. SR, 70 Broadway, Lynnfield, MA 01940.

Sherwood

The Sherwood XM 700 car compact disc changer features a four-times-oversampling digital filter and dual 16-bit digital-to-analog converters. The sixdisc changer can be mounted vertically or horizontally and is designed to be used with the CMX-20 remote commander (not shown). The CMX-20 controls power switching, disc and track selection, programming of up to thirty tracks, and random play, play/stop, and time/pause functions. The complete XM 7000 changer system also includes an outboard module with line-level outputs and an RF modulator for connection to a head unit's FM antenna input. Price: \$700 for complete system. Sherwood, Dept. SR, 14830 Aldondra Blvd., La Mirada, CA 90638.

Circle 128 on reader service card



Progressive Designs

Progressive Designs' CDV 5000 storage cabinet holds 182 CD's, and its shelves can be adjusted for audio or video cassettes as well. The cabinet, made of solid oak and oak veneer, has a 1/4-inch tempered-glass door. The separately packaged base mounts with four supplied screws. Dimensions are 64 x 121/2 x 101/4 inches; total shipping weight is 85 pounds. The CDV 5000 is available in a medium-oak or black finish. It comes with a one-year warranty against defects in materials or workmanship. Price \$359. Progressive Designs, Dept. SR, 61 E. Lake St., Northlake, IL 60164. Circle 129 on reader service card



All product information is provided by the manufacturers and does not represent the results of tests or evaluations by STEREO REVIEW. Suggested retail prices were current as of press time but are subject to change without notice.



Thin Cables

I recently upgraded my system with high-quality interconnects, and I noticed that the cable that came with my turntable is very thin. The dealer says the cable is fine, and I have no doubt that he is right, but why is thin wire acceptable with one component and not with others?

TERRENCE G. KOLTON Wyandotte, MI

Audiophiles disagree on the desirability of using exotic wire rather than **n** the standard patch cables supplied with most components, but even the doubters will admit that the specialty cables seldom do any harm (except, perhaps, to the wallet). But the benefits of the expensive interconnects, if any, would not necessarily relate to their bulk. The main consideration for phono cables (and sometimes for long links between line-level components) is internal capacitance, which usually should be kept fairly low. If you're still worried, however, it's no big trick to detach the supplied wire from the turntable and replace it with another one.

Universal EQ

1 am looking for an equalizer that can sense the tonal balance of a signal from a cassette, say, or an LP, and automatically adjust it to resemble that of a CD. It should correct for azimuth and bias problems, LP faults, and even some poorly balanced CD's without having to be set by trial and error. Does any such thing exist?

ANTHONY HUDAVERDI Santa Monica, CA

A The difference between digital and analog sound doesn't necessarily have to do with spectral balance. Distortion and noise levels, speed stability, dynamic range, and a number of

AUDIO Q&A

by Ian G. Masters

other things contribute to digital superiority, and none of them is affected by equalization. An equalizer operates only on frequency response.

The magic machine you propose would work only if there were a constant, predictable tonal balance that applied to all signals; a sensing device might well be able to detect variances between the incoming signal and the ideal and make the necessary corrections. But no two pieces of music, no two recordings, no two studios, have anything like that standard balance, so any automatic adjustment would undoubtedly result in an arbitrary balance that would sound awful. The only real way to make the sorts of adjustments you want is by ear. That's no more haphazard than an "automatic" system would be, and an you will probably end up with a sound that you like.

Cleaning Vinyl

D The LP cleaning devices I have tried don't seem to have any effect on dirt ground into a record's grooves, and I haven't had much success with gently washing such records either. Is there a particular device I should be using? Will it work with mild soap and water without harming the record?

> ANTHONY D. BAKER Arlington, VA

In my experience, the more advanced cleaning systems (the best known is Discwasher, but there are others) are very effective in removing accumulated grime from a record's grooves, although several applications are sometimes needed for really serious cases. Washing with soap should be avoided at all costs, as that is sure to gum up the fine undulations of the grooves. A very weak solution of dishwashing liquid and lukewarm water is sometimes effective with absolutely filthy discs, and it is often possible by this method to get one or two plays, enough to make a satisfactory tape of the material. But the technique may do irreparable damage to the vinyl and so should be used only as a last resort.

I suspect, however, that what you are hearing is not dirt at all, although that was probably its cause originally. Playing a record with dirt in its grooves almost always damages the surface. Dust particles are actually little bits of stone, and the passage of the stylus tends to grind them into the soft vinyl surface. Later cleaning will do little to remove the audible effects of such damage. I have yet to meet the audiophile, however careful, who doesn't have some examples of such hygienic lapses in his collection. But while good cleaning won't undo the abuses of the past, it will minimize future problems, so it is an important part of the audio routine.

FM on a VCR

Q Someone once told me that a VCR could be programmed to tape FM broadcasts. Now that I would like to try such a recording, no one seems to know how to do it. Can it be done? HENRY BASEDOW

Dublin, GA

A Easy! You can't use the VCR's internal tuner to do it, of course, because that only picks up the TV band. But if you feed the output from an FM tuner to the audio inputs of the VCR, the timer will record it just as it would a television picture. You'll have to make sure that you leave the FM tuner on when you set things up, however, as a VCR's timer usually can't turn on any other components. And don't forget to switch the VCR to its external inputs.

Headphone Isolation

When using my lawn tractor, which has a very loud motor, I wear over-theear hearing protectors, with a pair of earbud headphones inside, connected to my tape player. This works but is inconvenient. Is it possible to buy ear protection with audio capability built in?

JAY BOWERS Onalaska, WI

Years ago, one prominent company did exactly what you suggest and п used airport-style ear defenders as the shells for its headphones, achieving something like 40 dB of isolation from outside sounds. That outfit is now defunct, and the market preference has shifted largely to very light supra-aural (on-the-ear) phones that block practically no ambient sound. But closed phones do exist in considerable variety, and a pair of these should do what you want. The trouble is that some phones that look like they are sealed are in reality open at the rear, so some caution must be exercised in making a selection. And very few closed phones actually specify just how much they attenuate outside noises, so you will probably have to do quite a bit of listening before you find what you need. But persevere; such phones are available.

If you have a question about hi-fi, send it to Q&A, STEREO REVIEW, 1633 Broadway, New York, NY 10019. Sorry, only questions chosen for publication can be answered.



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<u>The Expensive Sound of</u> <u>the Affordable Monitor Series</u>

In 1972, Polk Audio created a new standard for high performance and affordability with the

introduction of its original Monitor 7 loudspeaker. Audiogram Magazine said, "we were so impressed we could not believe the prices...they're a steal." Also referring to the Monitors, Musician Magazine said, "If you're shopping for stereo, our advice is not to buy speakers until you've heard the Polk's."

Today, Polk Audio furthers this tradition of offering state-of-the-art sound at affordable prices with its new Monitor Series 2

Loudspeakers. All of these affordable speakers have one thing in common- the unmistakable, exciting sound of Polk. (ultra-low viscocity) magnetic fluid which enables the SL 2500 to exceed normal listening levels without loss of performance or reliability. The resulting dynamic range is dramatic, indeed unique for speakers in this price range.

The compact Monitor 4 features an all new tweeter, the SL 1500 hemispherical, 1" soft dome driver. It delivers superb definition and smooth extended response, all resulting from Polk's exhaustive testing and computer-aided design analysis.

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The Polk Monitors have always been recognized for their exciting bass performance. The Series 2 loudspeakers sound even better. Each low frequency system was redesigned to provide

Expensive Sound, Affordable Price

Polk's High Performance at High Frequencies

Featured in the Monitor 4.6, 5jr+, 5, 7, 10 and 12, the SL 2500 makes a major contribution to the improved performance of the Monitor Series 2. Sharing much of the technology of the incomparable SL 3000 tweeter used in the Polk flagship SRS series, the SL 2500 is a highly refined, technically advanced driver.

The voice coil, wound around an aluminum voice coil former, is cooled by an exotic ULV

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Where to buy Polk Speakers? For your nearest dealer, see page 102.

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Things to Come

HE semiannual Consumer Electronics Show (CES), held in January and June in Las Vegas and Chicago, respectively, is the industry's showplace for its latest products, ranging from watches and calculators to the most sophisticated audio and video components for the home. The editors of STEREO RE-VIEW use the CES to plan our testreport schedule for the following months, since many products that appear at the show do not actually reach dealers' shelves for some time (a few *never* do).

For my part, I do not concentrate on specific products but prefer to look and listen in order to get an overall sense of the direction of new home hifi product development. Although I occasionally find a component that seems so far ahead of its predecessors or competitors that I am impelled to urge its selection for review, that is not my primary goal. For the most part, competitive products share more similarities than differences. I am more interested in the products of tomorrow, or the next several years, which should represent a distinct advance over today's. At this June's CES I saw several products-or rather, prototypes, since they are not yet in production and may not be available for a couple of years-that may indicate some future trends in video as well as audio applications.

At a Sony press conference, I saw a

TECHNICAL TALK

by Julian Hirsch

demonstration of a unified audio/video control system, called SIRCS-II (Sony Infrared Remote Control System II), that will be built into a wide range of Sony audio and video components now under development. It features interactive connections between components that provide almost total command of a system with, in most cases, one or two touches on a remote control or the front panel of the currently active component.

It is hardly possible to describe the operation of SIRCS-II in a few words, but it appears to solve the problem of human-to-system interface complexity that has been increasing, seemingly out of control, for a number of years. While SIRCS-II will be limited to Sony components, it is only reasonable to expect comparable, even if noncompatible, systems from other manufacturers to appear on the market as well. Indeed, some already have (JVC's CompuLink system, for example), though none yet appears to be quite as sophisticated as SIRCS-II.

The next prototype that Sony pulled from its bag of tricks was the Mini Disc (MD), yet another entry in the looming battle between digital recording formats. We have seen impressive miniaturization of CD players to create "personal portable" versions, and some of the DAT recorders now becoming available are similarly scaled down in size without sacrifice of performance. Last January, at the Winter CES, Philips created a stir with the DCC (Digital Compact Cassette), also a nonproduct at this time, which was introduced as a strong contender for the market once expected to exist for the DAT format.

TESTED THIS MONTH Pioneer Elite PD-75 CD Player Bose Acoustimass 5 Series II Loudspeaker System Teac V-5000 Cassette Deck

B·I·C Venturi V-820A Loudspeaker System Now Sony has thrown its hat in the ring with the demonstration of palmsize prototypes of its revolutionary Mini Disc, a miniature optical digital disc system that is claimed to provide nearly the listening quality of a CD and essentially the same playing time, but with the advantage of being userrecordable.

The MD is $2\frac{1}{2}$ inches in diameter and is permanently mounted in a protective plastic case about $2\frac{3}{4}$ inches square; the resulting package looks like a $3\frac{1}{2}$ -inch computer floppy disc that shrank a little. Shielded from damage by a sliding metal cover like that of a computer disc, an MD can dispense with the CD jewel-box case. An identifying label can be affixed to its back surface.

Sony plans two versions of the MD hardware, one for playback only and the other with a recording capability. The apparent miracle of fitting the playing time of a 4³/₄-inch CD onto the 21/2-inch MD was performed by a datacompression system called ATRAC (Adaptive Transform Acoustic Coding). Making use of the characteristics of human hearing and the masking effects of complex program material, Sony's ATRAC apparently functions much like the Philips DCC compression system (PASC) to store about five times as much digital data on the disc as would otherwise be possible. In playback, the compressed data is restored to standard digital form, with a 44.1-kHz sampling rate and 16-bit linear PCM coding, and is processed by a digital-to-analog converter in the conventional manner.

The MD system actually uses two different forms of technology, a purely optical playback system compatible with current CD technology and a new magneto-optical system for recording. To make a magneto-optical recording, a polarizing magnetic field from a magnetic head on one side of the disc records digital data while a laser on the other side heats that portion of the disc to approximately 400° F to enable erasure of old data and recording of new.

To play commercially prerecorded MD's, a conventional laser pickup and photodiode combination senses the presence of pits on the disc surface, exactly as with a CD. To play back a magneto-optical recording, a low-

It's not just the technology; it's the application of the technolo rate to eliminate phase shift for a more accurate sound stage with true three-

Denon's "Design Integrity" philosophy has always held that the way a technology is employed is as important as the technology itself.

To test this premise, Denon digital audio and studio recording engineers compare their own vast library of digital master tapes with the Compact Discs releases of the same material. This on-going listening and measurement research reveals that at present the finest CD quality can be obtained by the meticulous application of 20-bit digital-to-analog conversion.

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20-bit SLCs enable Denon to offer Variable Pitch, which lets you compress recordings, tune your CD player to musical instruments, adjust tempo for dancing, create perfect segues while mixing, etc. Peak Search finds the point in a disc with the highest level to set recording levels most accurately. Auto Space inserts four second pauses between tracks to help locate selections. A Digital Fader fades recordings in and out while dubbing. Time Edit allows you to input the tape length you are using. Pick enhances this function by letting you rearrange the order of tracks for the best fit on the tape. Link extends the process over 2 CDs for longer tape lengths.

The critically-acclaimed Denon DCD-2560. A reaffirmation of one of life's oldest adages: It's not only whether you win the technology race, but also how you play the game.

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As Len Feldman wrote in <u>Radio</u> <u>Electronics</u>, "The demonstration was so dramatic and effective that people couldn't help but look for additional hidden speakers." Ken Pohlmann in <u>Stereo Review</u>, said "...the effect blew me away." Daniel Gravereaux, former president of the Audio Engineering Society said, "...knocked my socks off." So forget expensive decoders and multi-speaker matrices. To restore 3-D audio realism, you don't need to discard your present hi-fi system or sacrifice a lot of living space for a room full of speakers. All you need is (\bullet) .

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power laser beam is focused on the MD's magnetic layer. The polarization of the reflected light is affected by the presence of a magnetic signal, and the direction of polarization is sensed by a pair of diodes and converted to an electrical signal.

Another novel feature of the MD system is the way it deals with shock and vibration, a chronic problem with portable CD players. A 1-megabit memory chip stores up to 3 seconds of digital information before it is processed into analog form (this is made practical by the 5:1 compression of the basic signal). Any dropouts or momentary interruptions caused by physical shock or another factor are automatically filled in from the 3-second reservoir of data, essentially eliminating audible dropouts.

Sony representatives demonstrated a prototype MD player briefly at CES, tossing it in the air and catching it while it was playing to show its immunity to physical interruptions. It appeared to cope with this treatment quite well, and its sound could have passed for "real CD" sound under the far-from-ideal conditions of the demonstration. Presumably the MD system will reach the marketplace by late 1992. Given the likely appearance of the Philips DCC system earlier the same year, it appears that interesting times are in store for audiophiles.

Two other intriguing items at the show were not in the audio field per se. One, also from Sony, was the Data Discman, a handheld functional equivalent of a CD-ROM player, computer, and LCD screen. It can retrieve data almost instantly from a library of text, graphics, or both, stored on an optical disc that, like the MD, is slightly smaller than a standard $3\frac{1}{2}$ -inch computer floppy disc.

The disc, known as the Electronic Book, uses a Sony standard that is based on existing CD-ROM standards. According to Sony, it would be easy to transfer existing libraries of CD-ROM data to Electronic Book discs. The Data Discman is able to search in a number of ways for any specified data, and it can be connected to an external video monitor or used with its own small, backlit LCD screen. A slightly less refined form of the Data Discman has been on sale in Japan for more than a year, but no date has been set for introduction of the newer version in the United States.

Finally, I was astounded when I dropped into the Sharp exhibit expecting to see the company's compact portable LCD video projectors, which have been available for several years. The portable projectors were indeed there, but they were completely overshadowed by a new high-definition TV (HDTV) LCD projector that created the most incredibly bright, sharp, and naturally colored wide-screen picture I have ever seen. The screen was perhaps 10 feet wide. Startled by the unexpected display, I felt that I had never seen a projected color motion picture, from either an optical or electronic source, with as much impact as this one.

Although Sharp's new projector is a real product, not a prototype, and is presumably available in Japan, don't rush out to buy one just yet. Aside from its bulk (considerable) and cost (if you have to ask how much, you can't afford it), there is likely to be a dearth of HDTV program material for some time. Still, it was obvious that video technology is moving ahead at an impressive pace.



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The woofer cone, for example, is carbon graphite filled to set a new standard for bass quality and authority in a system of this size. The voice coil of this woofer is vented for increased power handling and effortless reproduction of dynamic musical passages.

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TEST REPORTS



Pioneer Elite PD-75 Compact Disc Player

Julian Hirsch, Hirsch-Houck Laboratories

Provide a closer approach to ideal performance than has previously been available in a CD player.

For maximum isolation between the player's analog and digital sections, their power supplies (including power transformers) are completely separate. A new Pulse Flow 1-bit digital-toanalog (D/A) converter circuit developed by Pioneer is said to be simpler than the 1-bit systems used by other manufacturers and to exhibit lower noise and distortion and less phase shift.

The mechanical aspects of the PD-

JOOK P. 1

HOTO:

75 have received equal attention. The heavy steel chassis and cabinet, with a multilayered honeycomb-plastic base, is supported on large vibration-isolating feet. A unique Stable Platter drive mechanism is said to effectively eliminate disc wobble by firmly clamping the disc to a rotating turntable, with only a thin rubber pad separating the two. Unlike almost all other CD players, the PD-75 requires the disc to be inserted with the label side *down*; its drive motor, disc clamp, and laser pickup are located *above* the disc.

The rotating metal platter is supported on isolating springs from the frame of the drive mechanism. The Hall-effect motor has no brushes or other mechanical contacts associated with its rotor, and it provides approximately five times the starting torque of conventional CD player motors. Its highly rigid shaft, more than twice the diameter of those used in conventional motors, is claimed to provide a smoother, more constant disc rotation. The combined rotating mass, about three times that of conventional CD mechanisms, further enhances the smoothness of the disc rotation. The entire motor assembly is isolated from the drive frame on separate springs.

After a disc is loaded, the motor assembly descends to place its oversize clamper on the disc, exerting four times the force used in previous Pioneer players. Because of the support afforded by the Stable Platter disc drive, this added pressure can be applied without warping or otherwise affecting the disc. The principal benefit of the design is said to be the virtual elimination of disc wobble, which Pioneer says enables more accurate reading of the digital program information. Pioneer claims another advantage as well: Any dust particles within the machine will be drawn by gravity away from the critical laser lens, rather than toward it as in more conventional designs.

Pioneer's laser measurements and FFT analysis comparing the rotation and vibration patterns of a CD in a conventional disc drive and in the Stable Platter disc drive clearly show a dramatic reduction of vibration fre-

TEST REPORTS

quencies and amplitudes with the Stable Platter design.

The PD-75 is a highly versatile player, yet it is simple to operate. The disc drawer, in the lower center portion of the panel, extends at the touch of a button and retracts at a second touch after the disc has been loaded. Like the drawer button, the play and pause controls are large and well marked. The only other operating controls on the panel are the stop and track-skipping buttons. To the left of the disc drawer are three buttons that activate the digital and analog outputs on the rear apron (individually or together), switch the display on and off, and turn the power on and off.

Above the disc drawer is the display, which normally shows, in large orange numerals, the current track and index numbers and the elapsed time on the track. Other information. such as the status of programming and repeat modes, appears in small letters.

Most of the Pioneer PD-75's functions are accessible only from its infrared remote control. In addition to duplicating the few front-panel operating controls (including the drawer open/ close button), the remote offers a twospeed fast-search function (with sound), index selection, random play, and repeat of the current track, entire. disc, or selected sequence of tracks.

A numerical keypad on the remote control provides direct access to any track up to No. 99. Any or all tracks on a disc, to a maximum of twenty-four, can be programmed to play in any sequence. Pauses can also be programmed into the sequence so that playback will halt at desired points and resume when the pause button is pressed. Other buttons are used to check the programmed sequence and

FEATURES

- Stable Platter drive mechanism
- Heavy-duty brushless spindle motor; separate linear motor for laser pickup
- Separate power supplies for analog and digital circuits
- Twin 1-bit Pulse Flow D/A converters
- Copper-shielded chassis with layeredhoneycomb construction
- Fluorescent display with twenty-track music calendar; can be switched off

LABORATORY MEASUREMENTS

Maximum output level: 2.57 volts Frequency response: +0, -0.09 dB

from 20 to 20,000 Hz

De-emphasis error: 0.16 dB at 16.000 Hz

Channel separation: 108 dB at 100 Hz, 107 dB at 1,000 Hz, 99 dB at 20,000 Hz

Dynamic range (EIAJ): 95.6 dB

Signal-to-noise ratio (A-weighted): 117.5 dB

Total harmonic distortion plus noise at 1,000 Hz: 0.0038% at 0 dB, 0.0035% at -20 dB, 0.0038% at -40 dB

- Optical and coaxial digital outputs. balanced and unbalanced analog outputs
- · Programmable to play up to twentyfour tracks in any order; nonvolatile program memory
- Random play
- · Repeat of track, disc, or programmed sequence
- Can be connected to compatible Pioneer cassette deck or amplifier for synchronized dubbing or system remote control

Low-level linearity error: -0.03 dB at -70 dB, +0.3 dB at -80 dB. +0.09 dB at -90 dB

Maximum interchannel phase shift: 1.1 degrees at 20,000 Hz

Defect tracking: tracked 1,000micrometer error on Pierre Verany #2 test disc

Slewing time (Track 1 to Track 15 on Philips TS4 test disc): less than 1 second

Cueing accuracy: A

Impact resistance: top, A+; sides, A

to clear the program memory. Unlike most other programmable CD players, the PD-75 has a nonvolatile memory that retains the program for as long as several days after power is removed and resumes playback from where it left off when the player is next turned on. The clear button on the remote, however, will permanently remove any or all programmed steps.

Finally, the TIME button steps the display from elapsed time on the current track to remaining time on the current track, remaining time on the disc, and total playback time on the disc. The PD-75 can also display the playing time of any track (up to No. 30) if you press the track-selector button in stop mode, and it can start play from any desired point on a track or disc reached by using the scanning buttons in stop mode.

The PD-75's rear apron has conventional analog audio outputs as well as both optical and coaxial digital outputs. There are also separate balanced analog outputs (using Cannon connectors) for professional recording and broadcast applications. A jack can connect the PD-75 to a compatible Pioneer cassette deck for synchronized recording, and another jack can connect the player to a Pioneer SR series amplifier so its remote control can operate the CD player as well.

The Pioneer PD-75 measures 18 inches wide (including the furnished woodgrain side panels), 14 inches deep (including the balanced-output rear extension to the chassis), and 51/8 inches high. It is finished in glossy black, with contrasting gold markings, and weighs 26 pounds. Price: \$1,200. Pioneer Electronics (USA), Inc., Dept. SR, 2265 E. 220th St., Long Beach, CA 90810.

Lab Tests

The maximum (0-dB) output voltage from the Pioneer PD-75 was 2.57 volts, slightly higher than the normal 2-volt standard. With most amplifiers, this poses no problem, although there are a few receivers whose electronic volume-control circuits could be overloaded by that much signal.

The player's frequency response was almost literally ruler-flat, within +0, -0.09 dB from below 20 Hz up to 20,000 Hz. Interchannel phase shift varied linearly from zero at 5 Hz to 1.1 degrees at 20,000 Hz. Channel separa"Quality is important to me and my customers. That's why I wear Jockey brand underwear. For style, fit and comfort. Just Jockey."

Phone

David Hauenstein Account Sales Representative Rockford, Mlchigan



A

RUCEEY

HACKS

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TEST REPORTS

tion was excellent, varying from slightly more than 100 dB at 100 Hz to just slightly less than 100 dB at 20,000 Hz. Dynamic range (EIAJ) was 95.6 dB, and the internal emphasis-correction response error was less than 0.16 dB. Frequency error was a barely detectable + 0.0008 percent.

Total harmonic distortion plus noise (THD + N) at 1,000 Hz was about 0.0035 percent at levels from 0 to -70dB. At a 0-dB level, it was less than 0.004 percent from 20 to 20,000 Hz. We also measured the harmonic distortion alone (without noise) using the digital signal processing capability of our Audio Precision test equipment. At a 0-dB level, most harmonics from the third to the fifteenth were barely measurable, mostly around -100 dB, resulting in a THD reading of only 0.0023 percent (-92.7 dB).

Since the most striking performance advantage of a 1-bit D/A converter, compared with most conventional multibit converters, is excellent linearity at low signal levels, we measured the PD-75's departure from an ideal output signal at recorded levels from -70 dB to -90 dB. At -70 dB, the error was essentially zero, and it reached a maximum of +0.3 dB at -80 dB; at -90 dB, the error was a mere 0.09 dB. These results, typical of good 1-bit converters, surpass those from nearly all conventional multibit converters.

The A-weighted noise level, referred to a 0-dB output, was -117.5 dB. The reading did not change when we shut off the display, which is often said to contribute significant noise to the audio output. A spectrum analysis of the noise also showed no difference over the 20- to 20,000-Hz range when the display was switched on and off.

The player's laser tracking was extremely fast: It slewed from Track 1 to Track 15 of the Philips TS4 test disc in less than 1 second (too fast to measure with a stopwatch). Tracking ability was good though not exceptional. The PD-75 played the 1,000-micrometer signal interruption on the Pierre Verany #2 test disc with no audible mistracking and emitted only a single barely audible "tick" on the transition between the 1,250-micrometer and 1,500-micrometer interruptions. At the 2,000-micrometer interruption, the player clearly mistracked (as do virtually all others we have tested).

In view of Pioneer's claims to having achieved a stable disc platform, we were curious to see how the PD-75 stood up under impact. On our test bench (a sturdy, heavy platform), it took a *very* hard slap on one side of the player to induce a momentary signal interruption. No amount of fistpounding on the top of the player caused any audible effect (I was limited only by concern for damage to the top plate or, worse yet, my wrist!).

Comments

Clearly, the Pioneer PD-75 is an exceptional CD player. Given the inherent performance capabilities of the CD system, it is often difficult to measure, let alone *hear*, the benefits of the design refinements incorporated in some of the top models. In all honesty, we could not positively identify any *audible* benefits of the PD-75's special construction and circuitry, but it certainly sounded at least as good as any other player we have used.

There was no doubt about its bulletproof construction, however. It is the first home CD player we have tested that could not be made to mistrack when we pounded on its top cover, even with unreasonable force, while it was sitting on a rigid, massive surface. When it was placed on a relatively flexible steel shelf, it could be made to mistrack with moderate blows, but the same applies to any other CD player we have used, no matter how immune to impact it was on the test bench.

The PD-75's operating simplicity is one of its major attractions. There is no need to search through a panel full of buttons to enjoy the benefits of its versatility. Not all of its special features are obvious from the front panel (or even the remote control), but the manual is clear and complete.

By now, most audiophiles are well aware of the degree to which CD player measurements transcend those of many other audio components. Our measurements of the PD-75 further emphasize those differences. Without an impractical item-by-item comparison against test data from other players, we cannot say in which respects the PD-75 is "the best." but few of its measurements were less than outstanding. And the more we used it, the more its versatility became apparent. The upside-down disc loading arrangement seemed strange at first, but it soon became perfectly natural.

We never had occasion to use either the balanced outputs or the digital outputs, but it would be hard to imagine any situation in which using the digital outputs and an outboard D/A converter would provide an improvement on the sound quality delivered by the player's internal 1-bit converters. All in all, the Pioneer PD-75 is a handsome, versatile, and satisfying component. Truly "Elite"!



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TEST REPORTS



Bose Acoustimass 5 Series II Loudspeaker System

Julian Hirsch, Hirsch-Houck Laboratories

UST over four years ago (April 1987), we reviewed the speaker system that sparked the subsequent explosion of "three-piece" speaker designs. The Bose Acoustimass 5, or AM-5, was not the first speaker system to use two small satellites and a separate bass module to provide maximum flexibility in placement with minimum visual impact, but it carried "invisibility" to new extremes while delivering surprisingly good sound quality and selling for a very attractive price.

Bose has now announced an improved version of this system, called the Acoustimass 5 Series II. The satellites have been restyled and actually reduced in size. Each measures only 63/8 inches high and consists of two roughly cubical enclosures about 31/8 inches square and 43/4 inches deep. The cubes can be independently rotated through almost 360 degrees, permitting the spatial properties of the speaker's sound to be modified by reflecting some of its output off nearby walls. (Controlling the ratio of direct to reflected sound in the listening area has long been a Bose feature.)

Each sealed, molded-plastic cube contains a 21/2-inch driver that operates above approximately 200 Hz. The enclosures are filled with sound-absorbing material. Unlike the satellites in the original AM-5, the Series II satellites cannot be taken apart; the two cubes are permanently attached. Several types of brackets and stands are available for mounting the satellites in a variety of positions. The drivers are magnetically shielded so they can be placed close to a TV monitor without distorting the color.

Much of the special quality of the Acoustimass system derives from its unique bass module. In the original system, the module contained two 61/2inch drivers whose front and rear outputs were loaded by separate cavities of different volumes. These cavities, resonant at frequencies about an octave apart, were ported to the room through a pair of 21/2-inch holes. The bass enclosure was equivalent to a bandpass filter, about one and a half octaves wide, whose steep high-frequency cutoff slope effectively prevented harmonics of the bass frequencies from being propagated into the room

Bose engineers had determined that when these harmonics were audible. they enabled listeners to localize the bass source in a three-piece system if it was placed at some distance from the satellites. The Acoustimass bass module's complete freedom from this effect made it possible to place it anywhere in the room without degrading the front stereo image.

In the original AM-5, however, there was a slight gap between the lowfrequency limit of the satellites and the high-frequency limit of the bass module, producing a measurable "hole" in the system's frequency response in the vicinity of 200 Hz. With many types of program material the hole was not noticeable, but at times it could be heard as a somewhat disembodied low-bass presence.

This problem has been eliminated in the Series II. The upper limit of the bass module's frequency response was extended while retaining (and even increasing) its very steep cutoff slope. The result is said to be a smooth, undetectable transition from the bass module to the satellite drivers together with an actual extension of the low-bass response.

The new bass module contains two 5¹/₄-inch drivers (slightly smaller in diameter than the 61/2-inch drivers of the original AM-5) in a dual-cavity acoustic structure similar to the original design. But rather than each cavity's having its own port to the room, both cavities are coupled to a third one, which in turn connects to the listening area through a molded plastic duct whose diameter flares smoothly from about 21/2 inches to about 4 inches at its exit from the box. The bass module's frequency range is roughly 50 to 250 Hz.

The new Acoustimass bass module is approximately the same size as that of the original AM-5: 191/4 inches long, 14 inches high, and 7¹/₂ inches wide. It can be placed almost anywhere, on any of its surfaces, as long as the vent is unobstructed (the opening should be at least 2 inches from other surfaces).

One end of the bass module contains a group of spring-loaded connectors for the input signals from the amplifier












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and the outputs to the satellites (the crossover system is built into the module). The system's automatic protection against overload damage reduces the signal level until the overload has been removed.

The Acoustimass 5 Series II is rated for operation with amplifiers able to drive loads of 4 to 8 ohms (the system is nominally 6 ohms) and with power ratings between 10 and 200 watts per channel. The Acoustimass bass module is available in a scratch-resistant black or white satin finish, and the satellites are finished in a black or white polymer. Cables (about 18 feet long) are supplied for connecting the bass module to the satellites. The complete system, in its shipping carton, weighs 30 pounds. Price: \$799. Bose Corp., Dept. SR, The Mountain, Framingham, MA 01701-9168.

Lab Tests

We placed the Acoustimass 5 Series II satellites on 26-inch stands, about 30 inches from the wall behind them and 4 to 5 feet from the side walls, for both measurements and listening tests. The bass module was placed on the floor about midway between the satellites and also about 30 inches from a wall.

We made room-response measurements first with both parts of each satellite facing directly forward, then repeated them with the drivers angled 45 degrees outward from the forward axis. The bass module's output was measured with the microphone at its port opening.

With the satellites facing forward, the composite frequency response was very uniform in their range, varying ± 2.5 dB from 280 to 20,000 Hz. When the drivers were angled outward, a rather extreme condition of operation, the output level was slightly lower above 1,500 Hz. The response curve ran parallel to the forward-facing response curve but 2 to 5 dB below it all the way to 20,000 Hz. Clearly, one's choice of angles for adjustment of reflected sound is not going to affect the system's basic sound qualities.

There were two points of maximum output in the range of the bass module, at 120 and 55 Hz. Between 50 and 250 Hz the output varied only ± 3 dB. It fell off at about 24 dB per octave below 50 Hz and at a remarkable 50 dB per octave from 250 to 330 Hz. There was a narrow band of high output, between 450 and 600 Hz, where the level was comparable to that of the satellites in the same range.

The sensitivity of the Acoustimass 5 Series II was a good 90 dB soundpressure level (SPL) at 1 meter when it was driven by 2.83 volts of pink noise. Though this figure is slightly higher than the 87-dB SPL measurement obtained by Bose (using pink noise limited to a 200- to 20,000-Hz band), the difference is probably explained by our measurement signal, which extended down to 20 Hz, and our placement of the Acoustimass bass module near the satellite being measured.

The bass module's distortion at a 2.83-volt drive level was about 0.5 percent over much of its range (130 to 230 Hz), increasing to 2 percent at 95 Hz and 4 percent at 65 Hz. Satellite distortion at the same level was 0.6 percent from 500 Hz to 3,000 Hz and increased to 4 percent at the 230-Hz crossover frequency. The satellite's low-frequency response dropped at a rate of 15 dB per octave below 300 Hz (excluding the effect of the system's crossover network).

The system's impedance reached its minimum of 4.7 ohms at 300 Hz and remained under 9 ohms throughout the satellite's operating range. The maximum impedance of 30 ohms was at 53 Hz, with smaller peaks at 28 and 130 Hz. The impedance phase angle was less than -25 degrees above 130 Hz. At lower frequencies it increased to -180 degrees (lagging) at 20 Hz, with variations corresponding to the response variations in that range.

The Bose Acoustimass 5 Series II, like its predecessor, was able to handle enormous power inputs without damage or serious distortion. At 100 Hz, there was no sign of speaker overload or "bottoming" at 790 watts into its 8-ohm impedance, the point where our amplifier clipped. Similarly, the amplifier clipped at 810 watts into 8.5 ohms at 10,000 Hz and at 1,100 watts into 6 ohms at 1,000 Hz.

Measurements with our IQS FFT analysis system showed that the frequency-response curves of the satellites measured on-axis and at 45 degrees off-axis diverged smoothly above 2,000 Hz, with a difference of 6 dB or less up to 8,000 Hz. The gap widened to about 12 dB above that frequency and still more above 12,000 Hz. This is perfectly natural behavior for a $2\frac{1}{2}$ -inch cone driver, and in the Acoustimass 5 Series II system it presents no problem. If desired, the user could aim one driver in each pair at the listening location, to obtain a full-range response, and the other at the wall behind for ambience enhancement by reflection.

Comments

When we tested the original Bose AM-5 in 1987, we were impressed by its ability to sound like a very large system, much larger than its tiny satellites and inconspicuous Acoustimass bass module would suggest. It proved able to absorb the output of some very large amplifiers without damage or audible distress and was clearly a step forward from any previous three-piece system we had heard.

The tendency to produce a disembodied bass (in the frequency domain, not spatially) was perhaps the AM-5's greatest weakness. When we heard the Series II version at a press conference, it appeared that the problem had been solved. Now that we have had the opportunity to test a production system, we can verify that the Acoustimass 5 Series II is free of that effect.

The Series II has the essential qualities of a first-rate conventional speaker system. Its frequency response is smoother than many highly regarded systems we have tested, and it spans the 45- to 20,000-Hz range with excellent dispersion. Its stereo imaging is very good, with accurate positioning laterally and vertically.

Listening to a wide variety of compact discs, we were constantly impressed by how much this system sounded like a larger, much more expensive speaker. There is no way that a person hearing (but not seeing) the Acoustimass 5 Series II would suspect that its powerful, room-filling sound emerges from satellite speakers that could easily be held on the palm of one's hand and a compact bass module that can be hidden under or behind almost any piece of furniture.

Readers of STEREO REVIEW are aware that three-piece speaker systems are now available from almost every speaker manufacturer. Of the many we have tested, all of them very good, the Bose Acoustimass 5 Series II is one of the most expensive—and also one of the best. Hear it and be convinced for yourself.



Teac V-5000 Cassette Deck

Craig Stark, Hirsch-Houck Laboratories

HE new Teac V-5000 provides an unusually attractive combination of features and performance in a midprice cassette deck. Starting with a solid dual-capstan, threehead design, Dolby B and Dolby C noise-reduction systems, and Dolby HX Pro headroom-extension circuitry, the V-5000 adds such graces as a really accurate method of optimizing bias and tape-sensitivity adjustments, a fifteen-selection playback search facility, and a wireless remote control.

The V-5000 employs no fewer than four DC motors to handle its mechanical functions. The dual capstans, used to minimize wow and flutter, are driven by a servomotor; a second DC motor turns the reel hubs. The third motor operates the mechanism that pulls the tape heads and rubber pinchrollers into place, and the fourth provides a power assist for opening and closing the cassette-well door. The separate record and erase head elements, mounted within a single unit,

permit direct comparison between the signal source and the recorded result.

As in a number of recently designed decks, in the V-5000 a spring-loaded stabilizer platform is attached to the rear of the cassette-well door. Its intent is presumably to absorb any mechanical vibrations that might otherwise be transmitted to the tape through the cassette shell. The cassette well also contains the usual sensors that detect the type of cassette inserted so that the equalization and bias can be set accordingly. An illuminated fluorescent-orange tab in the rear of the well makes it easy to determine the relative amount of tape on each reel hub of the cassette, though label visibility is slightly restricted. The door of the well is easily removable for the usual head-cleaning and demagnetizing chores.

Signal levels are registered on two sixteen-segment-per-channel fluorescent peak-indicating displays. These are calibrated from -40 to +10 dB,

and in designing the V-5000 Teac had the good sense to set the 0-dB marking on its display scale at the IEC-recognized 0 level, 250 nanowebers per meter. This means that you can actually use the 0-dB reading (with occasional peaks a little higher) as your guide in setting the proper recording level.

A four-digit electronic readout displays elapsed tape time in minutes and seconds, though to maintain reasonable accuracy you must select the appropriate tape length from a list of four choices: C-60, C-90, C-46, and the large-hub C-46L. A handy RTZ (return to zero) button fast-winds the tape to 00:00. You can skip to recorded selections in either direction by pressing the appropriate Computomatic Program Search button. The usual record-mute button inserts the necessary 4-second blank spaces between selections.

Although the center-detent positions of the bias and sensitivity controls usually produce satisfactory results, slight brand-to-brand differences between tapes can dictate user adjustment of these parameters. The tape-calibration system in the Teac V-5000 lets the user optimize both bias and sensitivity settings with a minimum of effort. You simply put the deck into record, press the CAL. START



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Professional type, balanced output jacks are grounded, and shield the signal against noise.

newest CD player, the Elite® PD-75, its rock-solid stability has rocked the world of music lovers and audio critics. As the reviews have rolled in and the

Next, the stable platter, by supporting the entire area of the CD disc, minimizes wobble and chatter.

A wobbling disc presents a difficult target for the laser, while a chattering disc creates resonance, distorting the signal, which distorts the sound.

Another problem for CDs is gravity. Spinning above the laser pickup and supported only in the center, the



HOWACONCEPT CALLED THE STABLE PLATTER TURNED THE CD UPSIDE DOWN.

awards have been bestowed, it is apparent that the standard for CD players has been advanced dramatically. Behind this success lies a principle that Elite has brilliantly exploited: The mechanical elements of a CD player are just as critical to its quality as its electronic components.

The first significant innovation to come out of this insight is at the heart of the PD-75. The stable platter.

Two basics of physics - mass and inertia - combine to make the stable platter an obviously superior platform to support a disc spinning at high velocity.



. The Elite PD-75 Compact Disc Player. Its elegant urusbi finsb reflects technical elegance within



An advanced linear drive motor moves the laser pickup with smooth speed

and precision.

disc sags microscopically. Which to a laser beam is significant degradation.

But on the Elite CD platter, the disc is turned upside down—that is, label down, information side up. The disc lies firmly clamped to a solid surface.

Meanwhile, the laser pickup reads

the disc's digital code from above, where it is immune to dust settling on the laser optics.

We invite you to bring your favorite CD to an Elite dealer and demonstrate the advantages for yourself. Give

that disc an audience on the PD-75 for what one critic called



"a dimension of sound that you have never heard before." And usher in a new era of stability.

FEATURES

- Separate record and playback heads
- · Four-motor, dual-capstan transport
- User-adjustable bias and sensitivity
- Fifteen-selection program search
- Dolby HX Pro headroom extension
- Dolby B and Dolby C noise reduction
- Four-digit fluorescent tape timer

Fast-forward time (C-60): 87 seconds

Rewind time (C-60): 87 seconds

Speed error: +0.36%

Dolby tracking error: Dolby B, ±1 dB; Dolby C, $\pm 2 \text{ dB}$

Wow-and-flutter: 0.033% wrms, 0.056% DIN peak-weighted

Line input for indicated 0 dB: 100 mV

Line output at indicated 0 dB: 714 mV

Meter indication at IEC-standard 0 dB: 0 dB

• Tape: TDK AD (Type I, ferric)

IEC 0-dB distortion: 0.47%

Meter indication at 3% THD + noise: +5 dB

Signal-to-noise ratios (in decibels):			
	Unwtd.	A-wid.	CCIR/ARM
No NR	56. 6	60.2	56.5
Dolby B	65.2	70.2	67.2
Dolby C	68.0	77.5	76.8

- Sixteen-segment-per-channel peaklevel indicators
- Powered cassette-well door with stabilizer
- Switchable CD Direct input
- Switchable FM multiplex filter
- External timer operation

LABORATORY MEASUREMENTS

• Tape: TDK SA (Type II, chromeequivalent)

IEC 0-dB distortion: 1.8%

Meter indication at 3% THD + noise: +2 dB

Signal-to-noise ratios (in decibels):			
	Unwid.	A-wid.	CCIR/ARM
No NR	56.6	6 0 .7	57.4
Dolby B	63.8	6 9. 9	67.8
Dolby C	66.3	77.1	77.1

• Tape: TDK MA (Type IV, metal)

IEC 0-dB distortion: 1.6%

Meter indication at 3% THD + noise: +3 dB

Signal-to-noise ratios (in decibels):				
	Unwid.	A-wid.	CCIR/ARM	
No NR	57.2	60.8	57.5	
Dolby B	64.8	70.3	68.1	
Dolby C	67.5	77.9	77.4	



button (first for level, using a 410-Hz test tone, then for bias, using an 8,750-Hz tone), and adjust the knobs for each channel to produce a reading at the marked calibration point on the level display. The whole procedure takes less than 20 seconds, during which the output from the deck is muted. Then just rewind to where you started (so the test tones will be erased when you begin recording), and you're set.

The single record-level control for the V-5000 is calibrated as an attenuator, complete with markings from 0 dB (full clockwise) to ∞. (Teac has long been involved in making professional recorders, and this is the way things are done in the studio.) The level knob is supplemented with the usual small channel-balance control. The frontpanel headphone jack has its own level control, but playback level at the normal outputs is not adjustable. There are the usual line inputs and a switchselectable CD Direct input (for recording straight from a CD player).

A three-position slide switch selects no Dolby, Dolby B, or Dolby C noise reduction. The Dolby HX Pro system, which extends the treble storage capability of all cassettes by momentarily lowering the bias in the presence of high-level high-frequency signals, is not switch-defeatable. The FM multiplex filter can be switched off-and should be, unless you're recording a stereo FM broadcast, as it cuts off response above 16,000 Hz. The usual timer-activation switch is provided, as are buttons that facilitate dubbing from specific Teac CD players.

The Teac V-5000 measures 171/8 x 51/8 x 14 inches, and it weighs 171/2 pounds. Price: \$650, including wireless remote control. Teac America, Inc., Dept. SR, 7733 Telegraph Rd., Montebello, CA 90640.

Lab Tests

The V-5000's playback response, measured with our calibrated IEC (BASF) test tapes, was commendably flat. As is shown in the graph, the response with 70-microsecond equalization (chrome/metal tape) was within +0.6, -0.7 dB from 31.5 to 18,000 Hz, and with 120-µs EQ (ferric tape) it showed only a very slight additional rolloff, to -1.7 dB, at 20,000 Hz. Few prerecorded cassettes come close to that accuracy.

On an overall record-playback ba-

sis, using our standard samples of TDK AD (ferric), TDK SA (chromeequivalent), and TDK MA (metal), frequency response was also very good. At the bass end, response went down to 24 Hz (-3 dB) with all of the tapes. At the customary -20-dB test level, response extended to 20,000 Hz (-1.5 dB) with the metal tape and was down by only 3 dB at 18,500 and 18,700 Hz with the SA and AD tapes, respectively. When we used TDK MA with Dolby C noise reduction, response went out to 20,000 Hz (-1.7 dB) even at a 0-dB input level. Aweighted signal-to-noise ratios for the three tapes were very good.

The wow-and-flutter of the V-5000 measured 0.033 percent wrms and 0.056 percent on the more stringent IEC/DIN peak-weighted basis. These figures approach those of the most expensive decks. High-speed winding time for a C-60 cassette was a rapid 87 seconds in either direction. The speed error of ± 0.36 percent will be of concern only to those possessed of absolute pitch or who need to match playback from the deck against fixed-pitch musical instruments. Sensitivity and output levels were entirely normal, as was the Dolby tracking accuracy.

Comments

JOOK P.

An examination of the inside of the V-5000 disclosed that Teac paid an unusually high degree of attention to proper parts layout and (expensive) shielding. No fewer than four of the front-panel controls and switches, for example, are operated through long extension shafts so that the components they control can be mounted at the rear of the unit, where they are shielded and well away from hum fields, without using long wire runs.

Moreover, while the measured performance of the Teac V-5000 was impressive-especially for a midprice unit-it did not prepare us for the transparency, clarity, and superb imaging we found when we began dubbing our favorite CD's. In this respect the deck ranked with the finest we have tested. Again and again I found the copy audibly indistinguishable from the original, and even in passages where a difference could be detected. it was so slight that I have no hesitancy in recommending the Teac V-5000 cassette deck for consideration by the most serious audiophiles.



B·I·C V-820A Loudspeaker System

Julian Hirsch, Hirsch-Houck Laboratories

HE V-820A is one of B·I·C's Venturi line of loudspeakers, whose tapered woofer ducts and vent design are said to provide relatively deep bass response from a given enclosure volume, together with higher efficiency than is usually found in speakers of their size. The V-820A is a two-way system with an 8inch woofer crossing over at 2,500 Hz to a 1-inch soft-dome tweeter. The woofer, which has a carbon-impregnated cone and dust cap and a butyl surround, is located about halfway up the front panel, with the tweeter above it. A large rectangular port opening and a pair of gold-plated multiway binding-post connectors are recessed into the rear panel near its bottom.

The cabinet measures $26\frac{3}{4}$ inches high, $10\frac{1}{4}$ inches wide, and $11\frac{1}{2}$ inches deep, and it has attractively beveled

front side edges that help reduce diffraction. The cabinet is veneered on all sides in a handsome black or oak laminate, and the black cloth grille is easily removable. Each speaker weighs about 28 pounds.

The system's specifications include a bandwidth of 40 to 22,000 Hz (-6 dBat 32 Hz) and a sensitivity of 91 dB sound-pressure level (SPL) at 1 meter with 1 watt into its nominal 8-ohm impedance. The V-820A is recommended for use with amplifiers rated between 20 and 150 watts output per channel. Price: \$439 a pair. B·I·C America, Dept. SR, 895-E Hampshire Rd., P.O. Box 1709, Stow, OH 44224.

Lab Tests

For best results, B·I·C recommends that the V-820A speakers be placed on stands betweeen 6 and 9 inches in

height. We used $7\frac{1}{2}$ -inch stands placed about 3 feet from the wall behind them and 4 feet from the side walls. The speaker's average room response was very broad, though with the usual irregularities due to reflections from room boundaries. There were prominent dips (10 to 12 dB from peak to valley) in the curve at 500 and 2,500 Hz.

The close-miked woofer response, after being combined with the port output, reached its maximum level between 70 and 300 Hz and from 700 to 1,200 Hz. A 10-dB dip at about 500 Hz coincided with the dip in our room measurements, but the falling output above 1,200 Hz in the close-miked measurement was an artifact of the size of the woofer cone relative to the wavelength of sound at those frequencies rather than a true indication of the response.

The low-bass response, including the contribution of the venturi port, sloped off gently below the 70-Hz effective crossover between the cone and port outputs and was down only about 10 dB at 20 Hz. Splicing the close-miked and room-response curves was simplified by the presence of the 500-Hz hole in both curves. The resulting composite response curve varied only ± 4 dB from 32 to 20,000 Hz. Most of that variation was due to the dips at 500 and 2,500 Hz, each of them about one octave wide.

Because this sort of response irregularity is often caused by room reflections, we hoped to determine its source by our FFT measurements, which are able to exclude most (though not all) room-boundary effects. At a 1-meter distance, the 2,500-Hz dip was clearly present, so it must be presumed to be a crossover artifact. probably resulting from phase shift in the crossover region. This conclusion was supported by our horizontal-directivity measurement, at 1 meter, of the system's response on its forward axis and at a 45-degree angle off that axis. There were appreciable differences in the output on-axis and offaxis between 2,000 and 3,500 Hz (the off-axis high-frequency response began to fall off at 7,000 Hz and dropped rapidly above 10,000 Hz).

The 500-Hz dip is less easily explained, since it appears in several of our measurements, but not in all, and was not readily identifiable in listening tests. That it appeared in our roomresponse curves, from both speakers, indicates its reality but not its cause.

Impedance was 7 ohms at its first minimum above the bass resonance (about 200 Hz), confirming the validity of the system's 8-ohm rating, although it fell to 4.4 ohms between 10,000 and 20,000 Hz. The two bass resonances were at 73 and 22 Hz, with respective readings of 25 and 30 ohms. The speaker's sensitivity was as rated, 91 dB SPL at 1 meter with a 2.83-volt input of pink noise.

At 2.55 volts (corresponding to a 90dB SPL), the woofer distortion was between 0.4 and 1 percent over most of the range from 75 to 1,000 Hz. It rose to about 4 percent from 40 to 25 Hz. The distortion at the port was about the same as from the cone through its operating range (below 75 Hz). Group delay was constant within ± 0.1 millisecond from 30,000 Hz down to about 5,000 Hz, and it varied less than 1 ms from 5,000 to 200 Hz.

The V-820A had no difficulty handling high power levels in our singlecycle pulse tests. At 1,000 and 10,000 Hz our amplifier clipped, at 850 and 1,375 watts, respectively, without evident overload of the speaker system. At 100 Hz, the woofer cone reached its mechanical limits at about 95 watts into its 9.5-ohm impedance.

Comments

The B·I·C V-820A sounded very good indeed, with a smooth, well-

balanced sound character and a lowbass output that was unusual for a speaker in its price range. When we played some low-frequency test tracks from a CD, it produced a powerful, very clean 32-Hz output, whereas most speakers at or near the price of the V-820A have little useful output below 50 Hz.

The bass sounded much like the response curve looked, with no lowermidrange hump or other evidence of trying to get more apparent bass than the speaker could actually deliver. The smoothness of the V-820A's sound, despite the two measured response dips, was an excellent demonstration of the fact that reduced output over a limited frequency range (less than an octave) is less audible than enhanced output (a peak) over the same bandwidth.

The B-I-C V-820A would seem to be a logical choice for someone on a limited budget who wants to enjoy deep, true bass response without significant sacrifice at other frequencies and who would appreciate not having to invest in a powerful amplifier to achieve a healthy volume level. It is also one of the few low-price home speakers with a combination of clean, deep bass and high sensitivity. And it is one of the most attractive speakers we have seen in some time. It actually looks good without its grille-only the four rubber grommets that retain the snap-in grille disturb the lines of its handsome oak-grain cabinet.



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LL loudspeakers are transducers. That is, they change energy from one form (electrical signals from an amplifier) into another (sound waves in air). Beyond that, they diverge into enough variants to stagger even the long-term audio enthusiast. Of course, when you're choosing loudspeakers, your first consideration should be how they sound to you. But knowing something about what distinguishes one speaker from another-the advantages and tradeoffs of different design approachescan help you get through sales-floor iargon and make an informed choice.

Virtually every speaker made falls into one of two major categories, depending on how it changes—transand they present some rigorous engineering hurdles. But they have some unique characteristics, and hence are found in a number of specialized, usually expensive, "esoteric" speakers (see box, "On a Different Plane").

Dynamic Drivers

Dynamic speakers have achieved their overwhelming dominance by virtue of their relatively low cost, high reliability, and high overall performance. They come in many different configurations. Cone drivers are almost universally employed to reproduce low frequencies, since cones can handily excite the large volumes of air that bass sounds require. But at higher frequencies cones have several problems. They deform in complex, fast-

A three-way speaker includes a third driver along with the woofer and the tweeter. Usually called a midrange, it can be a smaller cone or, less frequently, a large dome. A cone midrange can work low enough to keep the woofer's operating range away from troublesome highs, but blending its directivity (imaging characteristics) with that of a dome tweeter at the opposite end can be a challenge. Dome midranges, on the other hand, have broad, smooth dispersion but are usually not large enough to work very low, so the woofer-midrange transition can be tricky.

The Boxes

Virtually every dynamic system needs an enclosure. A speaker's box

LUUDSPEAKERS Inside Story

duces-electricity into sound. The vast majority use dynamic drivers, those familiar cones and domes. These air-exciting diaphragms are driven by an electromagnetic assembly of voice coil and magnet that receives the amplified signal and moves back and forth in response. It's essentially the same as the electric motor in your food processor, except that it's a reciprocating design rather than a rotary one, and it is driven by an audio signal rather than alternating current from a wall outlet. The cone or dome fixed to the coil moves with it, setting up vibrations in the air both in front and behind. The result: sound waves.

The second, much rarer type of transducers lacks a universally accepted appellation. Let's call them planar designs: electrostatic, ribbon, planar-magnetic, and other panel variants. These omit the separate voicecoil-and-magnet assembly in favor of a flat surface—square, rectangular, circular, or a long ribbon-like strip that's directly driven by the audio signal in one of several ways. As a rule, planar drivers are more expensive to produce than dynamic drivers, moving ways that induce various sorts of distortion. And since they must be rather large, they can't properly disperse high frequencies, behaving like sonic flashlights and beaming treble only to a fairly narrow area directly in front of the speaker. This limits stereo coverage in a normal listening room and impedes the open, spacious stereo image most listeners want.

Therefore, high-frequency drivers-tweeters-are usually domes. The smaller radiating surfaces of domes are unsuitable for bass, but they have some powerful treble advantages. A spherical section is by nature immensely strong, so dome drivers can resist breakup and deformation over a wide frequency range even though their diaphragms must be extremely low in mass (to reverse directions some 40.000 times per second at 20,000 Hz). A small dome also has inherently broad dispersion: Sound tends to be radiated comparatively evenly over its forward-facing hemisphere, even at very high frequencies. This yields good stereo imaging at multiple listening positions and helps spread out the sound.

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serves an important function beyond simply being an attractive piece of furniture that keeps the drivers off the floor. All drivers radiate sound behind as well as in front. As a driver vibrates back and forth, its rearward wave (back wave) is exactly opposite to its forward one, which means that the acoustic energy delivered forward into the listening space is neatly canceled by the opposite wave. The end result is no sound, or little sound, over a fairly broad range of important frequencies. Back-wave cancellation is really problematic only in the bass region because of the relation between the bass wavelengths and the size of bass drivers.

On the facing page are some of today's loudspeaker options (clockwise from top left): Monitor Audio's two-way bookshelf MA700 (\$1,100 a pair), Magnepan's planar-magnetic SMGa (\$575 a pair), and two floor-standing dynamic speakers, Acoustic Research's M4 (\$600 a pair) and Paradigm's two-way, twinwoofer Model 11se Mk II (\$870 a pair).

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A compact bass-reflex speaker with a frontpanel vent, the Energy 22.1 (\$1,000 a pair) also uses a special tweeter.



JBL'S XPL 90 (\$649 each) is a bassreflex bookshelf speaker with a powerhandling capacity of 400 watts.



The Bose 901 Concerto (\$2,200 a pair), which aims some drivers to the rear to enhance ambience, comes with its own dedicated equalizer.

Acoustic Suspension

The most popular solution to backwave cancellation is the acoustic-suspension, or sealed-box, speaker design developed in the 1950's. In an acoustic-suspension speaker, the woofer is simply mounted in an airtight enclosure: Its forward surface radiates freely out into the room, while its back wave is lost in the internal volume of the box. Since the back wave cannot radiate out into the room. it cannot act to cancel the front wave, and deep, powerful bass becomes possible from relatively compact designs. (Acoustic suspension has an added benefit of providing an "air spring" that damps the woofer.)

There is a drawback, though. Because the woofer must continuously compress and recompress the volume of air within the box, and since half of its acoustic potential (the back wave) is lost, an acoustic-suspension speaker theoretically requires more amplifier power than an otherwise equivalent unsealed box to achieve a given loudness. But the use of dynamic drivers that are optimized for sealed boxes and careful calculation of enclosure volume can achieve good efficiency.

The Infinite Baffle

In an infinite-baffle arrangement, which predated sealed-box designs, the woofer is mounted in a panel wide enough that the back wave can't chase its way around front in time to be destructive. Since the lowest bass frequencies have wavelengths of several yards, that effectively means flushmounting the woofer in the listeningroom walls. It's an old trick from the mono age of hi-fi, but it's making a big comeback in the form of in-wall speakers. While the design of in-wall speakers has evolved considerably, it's based on the same physics.

The Vented Box

Despite the sealed box's success, a large proportion of today's loudspeakers-perhaps a third of the most popular models, including plenty of the finest-employ enclosures in which a carefully designed opening "vents" the woofer's back wave to the listening room. These bass-reflex designs strive to put the woofer's back wave to work, manipulating it to reach the listening area in phase with the front wave, thus reinforcing rather than attenuating the overall sound. The obvious benefit is improved efficiency. All other things being equal-a very broad caveatvented speakers deliver more volume



Polk Audio's SRS-3.1 (\$2,000 a pair) uses one of its five bass/midrange drivers for interaural-crosstalk cancellation.

per amplifier watt than acoustic-suspension speakers.

There are numerous wrinkles in vented design. Ducted-port systems have an internal tube, usually cylindrical, connected to the port. Along with box size and driver design, this tube or duct "tunes" the system to the particular frequency band at which the woofer's back wave will be in phase with the front and thus extends usable bass below the range the speaker would otherwise produce. Passive-radiator systems substitute a relatively high-mass diaphragm—essentially, a thick, heavy woofer without a voice coil or magnet-for the port-and-tube arrangement, but the general goal is the same. Transmission-line designs force the back wave through a labyrinthine path so that its entry into the room is sufficiently delayed to be in phase at the desired frequencies.

The weaknesses of vented speakers include an inherently steep rolloff below the range in which the port augments the woofer's output and a tendency to "ring" or boom near the enclosure's natural resonance. But with computer-aided design to crank the complex math of driver-enclosure-port "alignment," good vented models can produce extended, accurate bass from compact enclosures.

Another box wrinkle is the bandpass-woofer design, most often encountered as the bass element of a three-piece compact speaker system. This approach pursues the best of both worlds by mounting the low-frequency drivers entirely within an enclosure that is divided internally into two or more differently aligned chambers that radiate sound into the room via ducted ports. The output covers a range of frequencies determined by the exact design of the enclosure, above and below which the response rolls off sharply-hence "bandpass." Bandpass-woofer boxes-of which numerous variations exist-can combine the virtues of very small size. reasonable efficiency, and notable bass extension, with an added bonus of low distortion and simplified crossover needs.

Two-Way, Three-Way, and More

The ideal loudspeaker would be a single driver reproducing the entire audio range. For myriad technical reasons, that is impractical, so most models use two drivers (woofer and tweeter), three drivers (add a midrange), or more (add a "mid-bass," "supertweeter," or what-have-you) to reproduce the ten octaves of musical sound.

Additional drivers can, in capable hands, yield more extended and better balanced full-range sound. They also simplify achieving broad, even dispersion for open, spacious imaging. Also, multiway systems can as a rule play



Horn-loaded drivers rather than cones or domes handle the mid and high frequencies in the Klipsch Forté II (\$1,198 a pair).

On a Different Plane

FLAT-PANEL loudspeakers have a special place in the hearts of many committed audio fans, who claim for them a long list of virtues. These may include subjectively improved transient response, more realistic spaciousness, greater definition of complex musical sounds, and enhanced transparency (or "air").

The oldest planar principle—dating back to the nineteenth century—Is used in the electrostatic loudspeaker, which is in effect a giant capacitor. A thin conductive membrane is suspended between two perforated plates and charged with high-voltage direct current. When an audio signal is applied to the plates, their opposite, constantly varying charges interact with the fixed charge on the diaphragm, causing it to vibrate and generate sound.

Next came the ribbon speaker. Essentially, a ribbon works like a conventional dynamic driver except that the voice coil is etched in a serpentine pattern on a ribbon of aluminum or other lightweight material suspended in a magnetic field induced by magnets along the edges. The ribbon itself sets up the acoustic action directly. Planar-magnetic speakers use a larger etched sheet stretched over an array of magnets.

Many planar speakers have inherently lower distortion than dynamic drivers, particularly at the middle and high frequencies. And as a general rule, planar speakers yield clear, well-defined sound. They also feature very particular dispersion characteristics. Most have a fairly narrow horizontal spread, resulting in a fairly small "sweet spot" for listening. Planar speakers that are fairly tall, upright structures deliver even, wellcontrolled vertical dispersion-sound is radiated equally from the entire surface. What's more, most planars are dipole radiators: Unrestricted sound is delivered from the rear and the front (a panel's large surface helps in part to mitigate the cancellation effect that conventional woofers are subject to), but there Is very little output to the sides, minimizing early Martin Logan's CLS II (\$3,500 a pair) is a full-range electrostatic speaker with a 2 x 4-toot diaphragm between curved panels.



reflections from nearby walls. These characteristics can combine to deliver very precise instrumental location with a notable sense of depth.

Planar speakers are more difficult to design for flat response, however, as there's just the one driver to work with (several models employ multiple planar drivers of different sizes partly for this reason). Further, most planar designs have a hard time reproducing deep bass. thanks to their limited excursion and dipole radiation. They are also usually very dependent on proper room size and room acoustics for good sound. Planars can also be painfully inefficient, requiring watts in the hundred-plus-per-channel range, and are still frequently unable to match the peak loudness of equally expensive dynamic speakers. Consequently, "hybrid" designs mating a conventional dynamic woofer with electrostatic, planar-magnetic, or ribbon midrange and high-frequency sections are fairly common. Hybrid speakers can produce good low bass, play loud, and permit more placement flexibility than pure planars.



KEF's floor-standing Model 104/2 (\$2,200 a pair) uses coupled-cavity woofer loading: two internal drivers in sealed subenclosures, both radiating into a central cavity that vents just below one of the midrange drivers.



The two-way Sonance Model 45 (\$650 a pair), designed for mounting in walls, represents the infinite-baffle principle.

louder: More transducers doing more work equals more acoustic output. On the down side, a multiway design means more work for the amplifier. Generally speaking, two-way designs are somewhat more efficient than otherwise equivalent three-, four-, or more-way models. More drivers also implies more complexity—more opportunities for design flaws or compromises—and greater expense.

Size and Sonics

Another way to categorize speakers is according to their intended place-

ment. Bookshelf designs—compact two-way or three-way speakers—are the classics: rectangular-profile cabinets 3 feet or less on the longest side. Meant for installation on shelves or stands, they are usually engineered to provide the smoothest and most accurate bass in that kind of placement that is, well off the floor and directly against a wall. Since the interaction of any speaker with the room in which it plays will affect bass performance (among many other sonic variables), true bookshelf speakers should be mounted as intended. The obvious bookshelf-speaker benefit is space saving—at the expense (as a broad rule) of some peak loudness, efficiency, and deep bass.

Larger, floor-standing speakers, on the other hand, take more space. In return, their bigger cabinets can usually yield greater efficiency and deeper bass, so where these characteristics are vital, a floor-standing speaker is a virtual must. The most common arrangement is the upright tower with three or four drivers, which demands relatively little floor space yet provides generous box volume for excellent deep bass. It also naturally places the important midrange driver (if there is one) and tweeter at the ear height of a seated listener.

An increasingly popular variant is the subwoofer/satellite arrangement. This combines a single, on-the-floor bass module, usually relatively uncritical in terms of location, with two small satellites—essentially very compact two-way bookshelf speakers. The advantage is obvious: A subwoofer/ satellite system combines the unobtrusiveness and placement flexibility of tiny bookshelf speakers with the full bass and high output of a larger design.

Compared with full-size systems of equivalent cost and complexity, the liabilities can include slightly limited dynamic range and power handling, because of the tiny satellites' limited output abilities, and possible slight midbass or lower-midrange anomalies. Since the woofer in the bass module has to go high enough in frequency to blend with the diminutive "woofers" in the satellites, and since their positions relative to each other are not strictly defined, bass-to-midrange transitions-in terms of both imaging and musical balance-can be rather difficult to perfect compared with more conventional systems.

While most speakers have simple driver arrays aimed straight at the listener, some provide more complex sonic routing. A few speakers aim some drivers directly forward and some to reflect off walls beside and behind the cabinets. Others have extra tweeters that "crossfire" toward opposite room corners, while still others use acoustic "lenses"-vanes or other reflectors or diffractors-to redirect acoustic energy. For the most part, the common goal is a spacious, widespread stereo image. The variety of unconventional designs is large and the subjective results equally diverse. But the bottom line-how natural the speakers sound-is, like so much else in hi-fi, largely a matter of taste.



FROM the rumbling timpani of Holst's The Planets to the thumping electronic percussion of Public Enemy's "Fear of a Black Planet," low-frequency sounds are essential to music's elemental force. But loudspeakers capable of rendering that elemental force in your living room have tended to dominate that space in a way that renders it, well, unlivable. Subwoofer/satellite speaker systems came to prominence as a way of making big sound all but invisible. True subwoofers, which reproduce the very lowest range of the audio spectrum, below 40 Hz or so, have been around for a long time. The separate woofers used in the threeand four-piece systems of today are called subwoofers even though their response is seldom flat below 50 Hz or so. It would be more accurate to call these speakers bass modules, but the subwoofer tag has stuck.

Although far from the first of the genre, Bose's original Acoustimass system, introduced in 1986, was the first to achieve great popularity. It produced convincing bass sound along with lively midrange and high frequencies in an array that could fit intc any

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room, since the speakers were meant to be more or less hidden—the bass module under a piece of furniture, the tiny stereo satellites tucked unobtrusively on bookshelves or mounted on walls or even the ceiling. Other manu-

facturers soon followed suit with variations on the idea, notably Atlantic Technologies, which added built-in amplification to its Pattern speaker system.

Bose has continued to refine the Acoustimass system (see the test re-

Altec Lansing's System 3 (\$300) features a bass module with response extending down to 28 Hz. The tiny satellites are only 8½ inches high.

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STERED REVIEW SEPTEMBER 1991 45

The subwoofer in Polk Audio's RM 3000 Reference Monitor system (\$750) has two 6½-inch woofers in a completely sealed section coupled to a 10-inch Sub-Bass passive radiator in the bottom of the module. This design is said to deliver precise bass response, low distortion, and reduced boominess.





M&K's MX-100 powered subwoofer (\$1,295) can be mated with a pair of the company's S-100 bookshelf speakers (\$850 a pair). The subwoofer's amp is rated at 200 watts, and the satellites can handle 400 watts.



NHT's SubZero system combines two of the company's small Zero speakers (\$199 a pair) and its SW1v passive subwoofer (\$499). The Zeros can be mounted on a wall or ceiling using NHT's optional brackets; the SW1v is magnetically shielded, so placement near a television set isn't a problem.

port on the Acoustimass 5 Series II in this issue), but other manufacturers making subwoofer/satellite systems are taking different tacks, making speakers that are meant to be seen as well as heard. The point is to squeeze as much performance out of a system as possible while making it a reasonable addition to one's living space. The basic subwoofer/satellite concept can accommodate a variety of approaches and variations. For instance, not all such systems have three pieces: The Cambridge SoundWorks Ensemble has two satellites and two subwoofers. And the same company's Model 11 is a portable powered system in which the subwoofer also serves as a carrying case.

Although in many systems the subwoofer can be easily tucked into a corner or under furniture, the satellites, while small, don't cry out for camouflage. Sleekly designed, they ask for display, the better to wow acquaintances who can't believe that the big sound is coming from just those small speakers—which it isn't, of course.

For those who prefer that their speakers not take up any floor or shelf space at all, there are now systems like Triad's Inwall 7, a dual-woofer in-wall system. In-wall speaker pioneer Sonance also offers subwoofers to complement its full-range speakers, as do Polk and Boston Acoustics.

While most manufacturers sell subwoofers and satellites together, some don't. Miller and Kreisel offers its powered subwoofers separately from its satellite speakers, recommending them as bass-boosting options for any home system. Its satellites provide a wide array of mix-and-match options. NHT takes a similar approach and is now offering multispeaker arrays for home-theater installations. And other companies, such as a/d/s/, offer both sub/sat systems and separates.

If you decide to mix and match, pay close attention to the specifications for power-handling capability, nominal impedance, and crossover frequencies. A subwoofer needs to be well matched acoustically and electrically with its satellite speakers and with the amplifier.

Prices do vary, as you might expect, but in general subwoofer/satellite systems offer good value. This is particularly true when you consider that a well-chosen system can accomplish several things at once: save space, look good in your room, and provide terrific stereo sound with all of the bass that makes it move you.

The Boston Acoustics SubSat Six system (\$500) features a dwalchamber PowerVent bass module. A seafed chamber loads the two woofers while a vented chamber enhances their deep-bass output.

The bass module in Jensen's new J1255 three-piece system (\$350) has a 12-inch woofer. The system can handle up to 150 watts per channel and has a usable frequency response of 43 to 21,000 Hz.





Despite its name, Infinity's Infinitesimal Four System is a threepiecer. The subwoofer is impressively small, measuring a little over 13 Inches In each dimension. Price: satellites, \$420 a pair; subwoofer, \$630. The Design Acoustics PS-3 Micro-Monitor system (\$600) has a slot-loaded bass module that's finished on all sides for maximum placement flexibility. The Triad System 6 (S800) boasts two-way satellites with separate tweeter enclosures. The rotating, damped mounting system isolates the tweeters from the box vibrations of the midrange drivers and enables a user to adjust the treble balance by pointing the tweeters in different directions.



JBL's Pro III Plus (S659) has a ported bass module with an 8-inch woofer that can deliver lows down to 35 Hz. All three pieces are magnetically shielded, eliminating any concern about closely placed speakers degrading a television picture. The system can handle up to

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The Cambridge SoundWorks Model 11 (\$749) is a portable system that includes its own three-channel amplifier with volume, balance, and tone controls. The BassCase subwoofer does double duty as a carrying case.

Acoustic Research's distinctively designed AR SubSat System (S600) has a dramatic dark-gray sueded finish. Recommended power for the system is 10 to 75 watts into 4-ohm loads.



Memorex's TS-3 (S400) is one of the company's two subwoofer/satellite systems. The slightly more expensive TS-5 (S650, not shown) is probably the only sub/sat system with a tower subwoofer.



Phase Tech's PC-60 bookshelf speakers (\$480 a pair) are well matched with its PC-50 subwoofer (\$350), a down-firing acousticsuspension model with a 10-inch solid-piston woofer.



The a/d/s/ SubSat 5 system (\$1,500) was styled by Frogdesign, a widely acclaimed industrial-design firm. The stands shown are optional, at \$300 a pair. The company also offers a number of small speakers and subwoofers as separates.

I don't play anything out of a sense of duty. At the moment of doing any particular piece. I must feel its my favorite music.

DAHA RENBOIN

PP HAVE four musical homes," said Daniel Barenboim, "Chicago, Berlin, Bayreuth, and the piano. I don't know which to call my permanent residence."

Starting this September, however, it undoubtedly will be his newest domicile, Chicago, that is going to draw the most interest and attention. For at the age of forty-eight, Barenboim, arguably the most prodigious pianist-conductor in the business, is taking over formally from Georg Solti as music director of the Chicago Symphony Orchestral which this year is marking its hundredth anniversary.

The heartland of America may seem an unlikely roosting place for a musician of Barenboim's cosmopolitan background. Born in Argentina, raised and educated in Israel, a frequent visitor to New York, a former resident of London, a regular conductor in Berlin and Bayreuth, he has spent much of the last fifteen years in Paris, where he was the center of a controversy regarding his almost-but-not-quite directorship of the new Bastille Opera.

But he says he's perfectly at home, musically and otherwise, in Chicago, Illinois. "I started coming to Chicago as a guest conductor twenty years ago," he explained during a preseason stop in New York. "I've developed a closer relationship with it than with any other American orchestra I've conducted, including the Philadelphia and the Cleveland.

"You know, one of the differences between playing the piano and conducting is that the apprentice years are more difficult for a conductor. You can't practice alone; you have to train yourself before an audience. It takes ten or fifteen years to do that, and in all those years I've had the Chicago Symphony before my eyes as my idea of what an orchestra should be. So when the position was offered to me, I was not only honored, I was overjoyed and eager. I feel musically at one with this orchestra.

"Besides, I really don't think there is any such thing any more as a 'European' or an 'American' conductor. The idea of musical nationalism has broken down since World War II, when nationalism itself took on such an ugly connotation. Think of conductors like Mehta, Ozawa Just because you were born in Salzburg doesn't necessarily mean you're a good Mozart conductor.

"The same is true of orchestras. I think Chicago has shown how it is possible for an orchestra to change faces with the different styles it plays. I'm not a great partisan of a certain 'sound.' I feel a great orchestra should be able to play Debussy like a French orchestra and Bruckner like a German orchestra. It's certainly that way in Chicago."

Barenboim's Chicago repertory—a great deal of which will wind up in recorded form—certainly represents a diversified portfolio, to borrow a financial term. His inaugural subscription concerts on September 12, 13, and 14 consist of Beethoven's *Missa Solemnis.* "We have such an outstanding chorus." he said, "that I want to begin right off with it. As a matter of fact, I'm going to start each season that way. Next year we're doing Brahms's German Requiem and in 1993 the Verdi Requiem."

Contemporary music will occupy a larger portion of the orchestra's programs than was true in the Solti years. "I don't believe in lip service to new music," Barenbeim said. "It shouldn't be put in a ghetto of 'contemporary music concerts.' You can only tell the value of a contemporary piece when you hear it in juxtaposition with a repertory piece. And you can't just give if a première and drop it. It should be played a second and a third time; it needs the familiarity of repetition. I find that the performance quality of a contemporary work improves each time it's played."

Barenboim expresses a particular admiration for Pierre Boulez and his music. This season he has invited the French composer-conductor to come to Chicago for a four-week residency of concerts and recordings, and he plans to have him back in future years as well. "It's not because he's French," Barenboim said. "It's because of what he represents internationally speaking, musically speaking. Boulez's works since his days as music director of the New York Philharmonic have included important additions to the repertory. Last April we played his Notations 1-4 for the third time in the last decade."

This season Barenboim will conduct the world premières of Boulez's *Notations 5-8* and two other new works, Luciano Berio's *Continuo* and Ralph Shapey's *Concerto Fantastique*. He'll also participate as a pianist, with

PHOTO COURT

Boulez conducting, in two U.S. premières, the German composer York Höller's Piano Concerto and Berio's *Concerto II*.

Barenboim thinks an ideal symphonic season should be so diversified and eclectic that audiences would be happy to attend every single program rather than subscribing only to a portion of them. "Variety and balance are important not only to the audience. but to the players, too," he added.

Although Barenboim made his first impact on the musical scene as a pianist, he says he developed ambitions to conduct while he was still in his childhood. Both of his parents were accomplished pianists, so he naturally began his musical studies with them, and at age seven he gave his first public concert in Buenos Aires. (He was called on to play seven encores and had to decline an eighth only because he didn't know any more pieces.) His first studies abroad were with Igor Markevitch at the Mozarteum in Salzburg; later he worked with Nadia Boulanger in France.

"My father taught me to see the piano as a miniature orchestra," he recalled. "There are great possibilities of creating the illusion of an orchestra on the keyboard. Of course, there are some composers, like Bruckner, that you can't do it with. The entire repertory interested me, so when I was eleven I began taking conducting lessons with Markevitch."

The Barenboim family moved from Argentina to Israel in 1951, and Daniel remains a citizen of both countries. He made his U.S. debut as a pianist in 1957, at the age of fifteen, under the aegis of Sol Hurok, thus launching his international career. In 1967 he married the young English cellist Jacqueline Du Pré, with whom he forged a musical as well as a personal partnership based in London. Since her tragic death from multiple sclerosis in 1987 he has remarried and is the father of two boys.

ARENBOIM started conducting professionally in 1962 in Australia during tours with the Melbourne and Sydney symphony orchestras. In 1964 he began a relationship with the English Chamber Orchestra, appearing with it as both a conductor and pianist for some ten years. Barenboim, Zubin Mehta, Vladimir Ashkenazy, and Itzhak Perlman formed a kind of London generational conclave, sharing their musical zest and enthusiasm, and their friendship lasts to this day. To both his pianism and his conducting Barenboim brought a personal imprint. He became known for his magisterial performances of Beethoven's complete cycle of thirty-two piano sonatas, Bach's "Goldberg" Variations, and other great piano works. As a conductor he developed a flexible, intense style that some critics found akin to that of the great Wilhelm Fürtwängler.

Although he has guest-conducted extensively in Britain, Germany, and the United States, Barenboim's most recent permanent base has been with the Orchestre de Paris, where he wound up a fifteen-year tenure in 1989. He originally intended to take over as director of the Bastille Opera, the new French operatic showcase, but a last-minute blowup with the administration aborted that plan. Even now, he doesn't like to talk about it.

"I spent fifteen years in Paris and the Bastille affair lasted eighteen months," he said. "It's a page I turned some time ago. I'd rather dwell on my happy memories of my years with the orchestra."

Far from turning his back on opera in Chicago, Barenboim will celebrate the Mozart Bicentennial next February by putting on with the orchestra three performances each of The Marriage of Figaro, Don Giovanni, and Così Fan Tutte during a two-week period. The orchestra will be stationed on the left side of the stage, and the singers (costumed by none other than Oscar de la Renta) on the right. "It's a concept I devised in Israel with Jean-Pierre Ponnelle," Barenboim explained. "It works very well. We're using a kind of indeterminate period setting."

Barenboim expects to go on doing one opera a season in Symphony Hall. "You don't get an orchestra of the caliber of the Chicago playing opera very often," he said. "I believe we have to rethink the whole question of how to produce opera. Television has made it difficult to see opera as it should be. On the small screen, singing actors do not have the larger-thanlife quality that they attain on the stage and that you really need in opera."

Barenboim and the orchestra recently signed an exclusive five-year recording contract with Erato/Elektra International Classics, committing them to twenty compact disc releases. (The orchestra will be able to continue recording with other conductors, such as Solti, on other labels.) The first two Erato CD's are already out: an all-Richard Strauss record containing *Till* *Eulenspiegels Lustige Streiche* and *Ein Heldenleben* and John Corigliano's Symphony No. 1, a searing, 43-minute-long work inspired by the AIDS crisis, which Barenboim and the orchestra premièred last spring.

N October Erato will release another Strauss CD with Don Juan and Don Quixote, and 1992 will see Mahler's Das Lied von der Erde and the Missa Solemnis, which is being recorded live at the opening concerts. Farther down the line are Strauss's Alpine Symphony and "Dance of the Seven Veils" from Salome and an all-Ravel record including Boléro and Daphnis et Chloé. Barenboim's Mozart opera recordings are also being released on Erato, though these are with the Berlin Philharmonic rather than the Chicago Symphony.

Strangely, Barenboim himself is not a great record enthusiast. He says he plays them only infrequently, "and least of all my own."

'The faithfulness of CD reproduction is astounding," he said. "Nevertheless it remains a reproduction. Probably as a result of recordings and broadcasts we have a much larger public for concerts today. But I think audiences may actually be less involved in music than formerly. People used to learn their music from playing it themselves at home, but now that's out of fashion. Today there's more 'music appreciation' than musicmaking. The public may have been smaller in Beethoven's day or in Bruckner's, but it had more tools for understanding. Now we have passive rather than active music appreciation."

Barenboim acknowledges that there may be a few gaps in his own musical sympathies. He says he's content to leave the music of Shostakovich to his guest conductors, and that while he has a deep love for Mahler's vocal music he shies away from the thought of conducting a complete cycle of his symphonies. "I don't play anything out of a sense of duty," he said. "At the moment of doing any particular piece I must feel it's my favorite music."

Fortunately, Daniel Barenboim has that feeling about a great variety of music, as he simultaneously opens a new phase of his own brilliant career and leads the Chicago Symphony into its second century.

Herbert Kupferberg, a senior editor of Parade magazine, is the author of The Book of Classical Music Lists (Penguin) and other books.









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New products from the Consumer Electronics Show

EACH June thousands of retailers, journalists, manufacturers, and distributors gather in Chicago at McCormick Place and in nearby hotels for what amounts to a peek into the world's electronics workshop. This year, 55,629 attendees at the Consumer Electronics Show marveled at the audio and video equipment, games, and gadgets that are due to be in stores in the next few months. They were also tipped off about new technologies that will be incorporated into future products to wow us in years to come.

The No. 1 conversation starter was Sony's new Mini Disc (MD) digital recording format, slated for introduction in the latter half of 1992, which compresses as much as 74 minutes of near-CD-quality music onto a 2½-inch magnetooptical disc. Designed mainly for portable applications, MD will compete with the Philips DCC (Digital Compact Cassette) tape system due out in June 1992. Meanwhile, new DAT portables and home decks from Sharp, Casio, Denon, Onkyo, and Technics will be in stores soon.

A welcome theme at this show was simplifying the operation of audio/video systems. A number of companies were showing off "one-touch" control systems in which their components interact intelligently (more or less) to reduce the burden on human brains and fingers. And Bang & Olufsen and Vidikron showed a jointly developed surroundsound system that's easy to operate with B&O's Beolink remote control. At the high end, Niles Audio showed its new custom-programmed MediaMinder, which can control audio, video, drapes, and lighting via a simple on-screen graphics menu and a glass-panel remote control. A new

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company, Frox, Inc., made a splash with an off-site demo of a whiz-bang audio/video/information-services system that's operated by a wand with only a couple of buttons.

Home theater continues to be a hot topic. Lexicon, Audio Design Associates, Snell Acoustics, Miller & Kreisel, Altec Lansing, Triad Speakers, Harman/Fosgate, and Technics all showed audio products built to THX specifications so that people can hear movies at home the way their directors intended them to be heard in theaters. Budget home-theater solutions were provided by Dynaco, with its tiny \$70 matrix surround-sound decoder, and by Hughes Aircraft, with outboard versions of its Sound Retrieval System, which expands the apparent sound stage with only two speakers. Boston Acoustics, Polk Audio, Kenwood, Energy, and others showed new wide-enclosure center-channel speakers designed to sit on or under a TV set.

Whether you're shopping next week or next year, the future is bright. On the following pages are some of the most promising new products that we saw and heard in Chicago.



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A mockup of Sony's new 2½-inch, shellencased recordable Mini Disc next to a conventional 4¾-Inch CD



8× Hi-Fi Stereo

> video Hi8 Handycam

The Lexicon CP-3 (\$2,895) uses advanced digital signal processing (DSP) to deliver Home THX reproduction of Dolby Surround movie soundtracks and to simulate a wide variety of acoustical settings for music playback.

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Sony's CCD-TR81 (price to be announced) is the company's first compact Hi8 camcorder. It boasts stereo AFM audio and high-resolution video.

SONY

Zenith's ZB3551T 35-inch direct-view TV (\$3,095) features a built-in Bose sound system with external rear speakers for Studio Surround. An Invar picture tube is used for purer and more brilliant colors.





Thiel uses a sloping, rounded baffle in its CS2.2 Coherent Source floor-standing speaker (\$2,050 a pair) to improve phase and amplitude response.



Panasonic

Measuring 12½ x 10 x 7 inches, the Signet SL250B/U speaker (\$300 a pair) uses a 5½-inch paper-cone woofer and a ¾-inch ferrofluidcooled tweeter. The three 50-watt amplifiers inside Atlantic Technology's \$800 Model 300 sub/sat system can be configured to drive all three speakers or just the subwoofer.



A combination five-disc carousel CD changer and laserdisc player, the Pioneer CLD-M90 (\$700) is also the first combiplayer to offer highspeed picture scan with audible soundtrack. Panasonic's CX-DP60 six-disc MASH 1-bit car CD changer (\$475) measures a scant 11 x 2% x 6½ inches.

MASH US





Two woofers placed at different heights on the front and rear baffles smooth the room response of the Snell Acoustics Type B loudspeaker (\$4,200 a pair). It measures 48 x 25 x 19 inches.

CESS. W STOPPERS



Part of a \$350 driver/ crossover speaker system for the car, the SAS Revolver tweeter spin-mounts onto a threaded base housing its connections. Definitive Technology's 38 x 8½ x 11-inch DR7 transmission-line speaker (S375 each) incorporates elements from the company's flagship BP20, including a fully braced monocoque cabinet and a Linkwitz-Riley crossover network.





The world's first CD-Interactive player, Magnavox's CDI910 (\$1,400) combines CD audio with video, text, graphics, and animation.



Designed for sport, marine, and utility vehicles, Jensen's JS9400 cassette receiver (S320) is protected by a marine-rated front panel and weather-resistant cassette-well cover.

Audile uses a digital signal processing module in its ACT I system to linearize and match the phase and frequency responses of the two speakers. Price: \$6,000 a pair, including stands.



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To your right, the model 500's. Their avant-garde design predicts their avant-garde technology. The

Helmholtz resonator band pass subwoofer design requires minimal cone excursion which results in deeper, more accurate bass with less distortion. Topping off the speaker is the Advent Isolated Satellite Imaging Module (ISIM)[™] containing a dome tweeter and graphite midrange for the ultimate imaging definition. Together, Helmholtz and ISIM's musicality is incomparable as is its genuine teak finish.

Nothing, however, replaces hearing these for yourself. Check your dealer for the speakers that will not only please the demanding ear of our engineers, but yours. For your nearest

dealer and free literature, call 1-800-477-3257.



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Stereo Review's critics choose the



outstanding current releases

Richard X. Heyman: Pop Savant for the Nineties

ICHARD X. HEYMAN paints songs in bright, vivid, Crayola hues. 'Hey Man!," his new Sire album, is as uplifting as a spring morning, full of pure-pop songs that shower colors and good feeling in all directions. You'll be reminded of the pop Sixties-students of the semi-obscure will be blowing dust off well-worn copies of "Nazz Nazz" and the like-but whereas that was a time of combos, Heyman is a virtual oneman show who plays it all with panache. He's a fine drummer, so the beat never lags, and quite a capable guitarist and keyboardist as well. And the harmonies he overlays are worthy of Byrdland and Hollieville.

It's clear that Heyman has thoroughly and lovingly internalized modern pop from the Beatles onward. The result is an album of songs that sparkle with a vitality that belies the age of their inspirational antecedents. The sprightly twelve-string riff and fullbodied vocals of Falling Along are reminiscent of "Rumours"-era Fleetwood Mac (here and elsewhere, Heyman sounds like the pop natural Lindsey Buckingham would like to be). The piano-rolling beat blues in Sidetracked rekindles thoughts of "Little Stevie" Winwood pounding the ivories with the Spencer Davis Group, and the detailed phrasing of the prayerful, folk-rockish In the Scheme of Things evokes aspects of the Byrds and Dylan. Then there's the delicate arrangement of To Whiskey Flats, with its shimmering strings, arpeggiating piano, and reverential vocal.

Chief among Heyman's most obvious influences is Todd Rundgren, who crafted the first truly original American response to Beatlemania, first with the Nazz and then on his own. "Hey Man!" is a thrilling showcase that will tickle the fancy of anyone who recognized Rundgren's "Something/Anything?" for the pop watershed it was. Between the lines, Heyman defiantly declares his allegiance to melodic pop, with not a single synth, syndrum, or digital reverb in earshot, a loyalty even Rundgren let



lapse in his embrace of more convoluted forms.

Knowing that he's swimming against the tide of fashion, Heyman does what he does because he's hooked. As he sings in *Private Army*, "Some people think it's coy and charming/But it's all I can do/I refuse to join the fools I see." Hey, anyone who can write a song titled *Civil War Buff*, one that mentions by name the author of a favorite historical account, and make it sound as vital as *Paperback Writer* is a pop savant of the very first rank. You'd be well advised to fall in line and join Heyman's "private army." Parke Puterbaugh

RICHARD X. HEYMAN: Hey Man! Richard X. Heyman (vocals, guitars, bass, keyboards, drums, harmonica); other musicians. Falling Away; Back to You; To Whiskey Flats; Private Army; Loud; Sidetracked; In the Scheme of Things: Thought I'd Seen Everything; Home Again; Caught in a Lie; The Waking Hour; Civil War Buff; Monica; Bad Business in Town. SIRE/WARNER BROS. @ 26506-2 (43 min), © 26506-4.

Glowing Mendelssohn Violin Concertos

ENDELSSOHN'S beloved Violin Concerto in E Minor is, quite understandably, one of the most frequently recorded works in the repertory. There are perhaps a dozen current versions of real distinction and dozens more that are solidly attractive. While it may be impossible to name any single recording as the outright "best," it can surely be said that none is likely to prove *more* enticing to the broadest range of listening tastes than the new Philips recording in which Viktoria Mullova is the soloist with the Academy of St. Martin in the Fields

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adore the concerto, neither as a "vehicle" nor as an icon but as a source of limitless stimulation and refreshment. Every phrase sings, not only in the solo part but in the orchestra as well. Marriner, himself a former violinist, seems to share the enchantment, providing as sympathetic and enlivening an accompaniment (accompaniment in the sense of "going with," of companionship) as he did in Mullova's earlier recording of concertos by Paganini and Vieuxtemps. The second work on the disc is not

under Neville Marriner. In their

hands the work fairly glows with

sunlight. Mullova must absolutely

HE

the usual Bruch or Tchaikovsky concerto but the Vivaldiesque Concerto in D Minor for violin and string orchestra composed by Mendelssohn himself at the age of thirteen and revived less

than forty years ago by Yehudi Menuhin. We never hear it in our concert halls, but what a charmer it can be! Its finale has always been the most striking portion, and so it is here-infectious enough to call for instant replay, in fact-but in this performance the earlier movements may surprise you with their largely unsuspected substance. Philips, for its part, has provided a sonic frame of exceptional transparency and excellent balance. At a little under 50 minutes, the disc is not generously filled, but in musical terms it certainly constitutes full value. **Richard Freed**

MENDELSSOHN: Violin Concerto in E Minor, Op. 64; Violin Concerto in D Minor. Viktoria Mullova (violin); Academy of St. Martin in the Fields, Neville Marriner cond. PHILIPS @ 432 077-2 (50 min).

Del Shannon: Rock On

HE late Del Shannon (he committed suicide last year) is often characterized as one of the premier rockers to have emerged in the period between Elvis and the Beatles. That's true enough, especially considering how enduring his early hits (Runaway, Hats Off to Larry) have turned out to be, but he was more than that. He was one of rock's genuine naturals-a terrific songwriter, an ace bandleader, a savvy producer, and, above all, the possessor of a tensile rock-and-roll tenor that's as American a voice as you are ever likely to hear.

All of which makes the excellence of his posthumous "Rock On!," produced by Jeff Lynne and Mike Campbell (with a little help from Tom Petty), especially frustrating, because 10 seconds into it you realize that Shannon's powers were utterly undimmed before the awful moment something induced him to blow his brains out. Sure, the album is retro (nary a sample or hiphop beat to be heard). Sure, the production makes it sound like volume two of Tom Petty's "Full Moon Fever" (with a more interesting lead singer). But it is undeniably the work of a musician at the very top of his a form, overflowing with concisely constructed, melodically memorable population in the structure of the structu structed, melodically memorable pop/ passionate conviction. And vet-get this-despite its formalist accessibility and pro forma boy-loses-girl lyrics, it has enough dark, disturbing undercurrents that it is also genuinely adult.

The crucial track is the closing Let's Dance, a fabulously catchy Cajun ditty in which Shannon extols the virtues of kicking out the jams with an intensity that is almost frightening. No onerepeat, no one-has ever made (or even suspected the possibility of making) this kind of Zydeco romp sound desperate before. But there are so many things to admire in "Rock On!"

that it's almost pointless to enumerate them. One minute you'll be thinking that the falsetto hook in Are You Lovin' Me Too is just too perfect for words; the next you'll be swooning over the giddy goofiness of the cover version of What Kind of Fool Do You Think I Am? (a hit for the Tams back in 1963). Later you'll get sucked into the lush textures Lynne and Campbell have provided for Walk Away (ELO meets Phil Spector), thinking that it's the most gorgeously melancholic thing you've ever heard, but only until you hear what all concerned have done with the remake



of Shannon's classic I Go to Pieces.

Ultimately, though, you'll keep coming back to Shannon's singing, which is perhaps the secret subtext of the album. His voice is pleasing, to be sure, and completely unchanged from the *Runaway* days. But unlike most voices on the radio, then and now, it hasn't a whiff of show-biz glitz to it; it isn't trying to ingratiate itself. What Shannon sounds like, frankly, is a guy wresting a kind of poetry out of his demons, and it's pretty astonishing that he was able to do it so consistently in "Rock On!" within the limits of the 3- or 4-minute pop ditty. By all accounts he was something of a lost soul, and we can only hope that making the finest album of his career provided him some small solace before his sad end. Steve Simels

DEL SHANNON: Rock On! Del Shannon (vocals, guitar); Mike Campbell (guitar); Jeff Lynne (bass, vocals); Tom Petty (guitar, vocals); Phil Jones (drums); other musicians. Walk Away; Who Left Who; Are You Lovin' Me Too; Callin' Out My Name; I Go to Pieces; Lost in a Memory; I Got You (The Birds' Song); What Kind of Fool Do You Think I Am?; When I Had You; Let's Dance. GONE GATOR/MCA (D) MCAD-10296 (46 min), (D) MCAC-10296.



AVING recorded twentieth-century music with the ease and authority of a young Pierre Boulez, Esa-Pekka Salonen shows that he has considerable range in repertory, too, with his first recording of Classical works, a slightly offbeat selection of Haydn symphonies. The performances are not at all a contemporary conductor's response to the antique, but a startlingly personal distillation of the lessons of the authentic-instruments movement within the context of a chamber orchestra of modern instruments.

With respect to period style, Salonen uses minimal vibrato and terraced dynamics, resulting in clean, lithe textures. And it's not just because it's the right thing to do: While these techniques ebb and flow in favor among hard-core early-music performers, Salonen uses them with extraordinary conviction, even passion. But what I like most about his performances is the sense of rhythm. It's always precise, but never so that the music sounds inflexible; there's a dancelike spring that gives almost every phrase a revelatory effect.

Salonen's one blind spot is humor. Haydn's music is full of it, and though Salonen is not entirely oblivious to the humor implicit in "The Philosopher" and "The Bear," he obviously prefers to emphasize their musical substance over their programmatic content.

That's a relatively minor shortcoming, particularly considering the overall interpretive quality of these performances and the quality of the playing



by the Stockholm Chamber Orchestra. It achieves a transparency and lightness of texture that one associates with original-instruments ensembles, while also giving a rhetorical weightiness to the music that is possible only with conventional modern instruments. In effect, Salonen gives us the best of both worlds, showing that Haydn need not be lost to the authentic-instrument camp so long as the gains of the authenticity movement can be incorporated into the mainstream. David Patrick Stearns

HAYDN: Symphonies No. 22, in E-Flat Major ("The Philosopher"), No. 78, in C Minor, and No. 82, in C Major ("The Bear"). Stockholm Chamber Orchestra, Esa-Pekka Salonen cond. SONY CLASSI-CAL © SK 45972 (58 min).



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• JONI MITCHELL: Dog Eat Dog. GEFFEN GEFD-24074. Her 1985 collaboration with synth-pop master Thomas Dolby, including a guest recitation by Rod Steiger (!).

• TOM PETTY AND THE HEART-BREAKERS. MCAD-10135. You're Gonna Gei It! MCAD-10134. Newly remastered versions of Petty and company's long unavailable first two albums, from 1976 and 1978.

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• BEETHOVEN: Overtures. Masur. PHILIPS 426 630-2. Solid performances from the East German conductor and his Leipzig Gewandhaus Orchestra.

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• MAHLER: Symphony No. 4. Mathis; Karajan. DEUTSCHE GRAMMOPHON 415 323-2. Midprice reissue of one of the great performances of this work, with "every element . . . under total control" (May 1980).

• RACHMANINOFF: Piano Concertos Nos. 2 and 3. Wild; Horenstein. CHANDOS CHAN 6507. "One of the most effective Rachmaninoff performances I have ever heard" (February 1978).

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Popular Music

Recent discs and cassettes reviewed by Chris Albertson, Phyl Garland, Ron Givens, Roy Hemming, Alanna Nash, Parke Puterbaugh, and Steve Simels

PAT BENATAR: True Love. Pat Benatar (vocals); Neil Giraldo (guitar); Charlie Giordano (keyboards); Chuck Domanico (bass); Myron Grombacher (drums); Roomful of Blues (horns, drums); other musicians. Bloodshot Eyes; Payin' the Cost to Be the Boss; So Long; I've Got Papers on You; I Feel Lucky; and six others. CHRYSALIS © F2 21805 (39 min), © F4 21805.

Performance: Blues that jump Recording: Full

After seven albums' worth of radiofriendly, album-oriented rock and a lengthy hiatus, Pat Benatar returns here with a straight-up blues album cut in the company of the purist Roomful of Blues. "True Love" is an unpretentious romp through a set of jump blues, and Benatar has enough of an aptitude for the form to know not to overdo it. She's always sung sassily, but the way she wraps her voice around a song like *Bloodshot Eyes* assisted by a solid shot of reverb—is a minor revelation.

Benatar and guitarist/producer/husband Neil Giraldo swing hard in the company of the five Roomful of Blues horns; her phrasing is spot-on throughout, and Giraldo does justice to his mentors. They rip through numbers by two Kings-B.B. (Payin' the Cost to Be the Boss and I've Got Papers on You) and Albert (I Get Evil). In the middle, they sprint through three originals, including a fast one led by a stride piano (I Feel Lucky) and the slow-burning title track, which comes within a few degrees of Peggy Lee's Fever. "True Love" is a pleasurable comeback album from Pat Benatar, who may have hit us with her best shot when we least expected it. P.P.

MICHAEL BOLTON: Time, Love and Tenderness. Michael Bolton (vocals); vocal and instrumental accompaniment. Love Is a Wonderful Thing; Time, Love and Tenderness; Missing You Now; For-

Explanation of Symbols

- © = Tape cassette
- $\mathbf{O} = \mathbf{LP} \mathbf{record}$
- Example 2 Compact disc (timings are to the nearest minute)

ever Isn't Long Enough; Now That I Found You; and five others. COLUMBIA © CK 46771 (45 min), © CT 46771.

Performance: Soul manqué Recording: Good

There's a difference between soul and a blustery approximation of it, and Michael Bolton-his undeniable natural talent notwithstanding-tends to err on the side of overkill. His big, bearish voice falls somewhere between a grizzly-size growl and a bruised, plaintive mewl. Bolton is most effective when the material is worthy and he doesn't have to strain to show off his soul-man chops; the title song here, for instance, is a real keeper. Elsewhere, though, he reddens his throat trying to pump life into slick, formulaic material with a catalog of received vocal mannerisms that echo the likes of Marvin Gaye and Otis Redding. And when Kenny G wanders by to blow goopy soprano sax in a Californicatin' love ballad entitled Missing You Now, you've suddenly got New Age soul dripping out of the speakers-a truly misbegotten hybrid. A curious footnote to all this is that Bolton's songwriting collaborator for Steel Bars, the last song in the album, is none other than Bob Dylan, though his fingerprints are only faintly evident on what amounts to another ordinary track. PP

DAVID BYRNE: The Forest. David Byrne (vocals); orchestra. Ur; Kish; Dura Europus; Samara; Nineveh; Ava; Machu Picchu; and three others. LUAKA BOP/WARNER BROS. (D) 26584-2 (62 min), (E) 26584-4.

Performance: Ambitious, but Recording: Very good

This ain't no party, this ain't no disco, this ain't no foolin' around. No, this is David Byrne, composer, enlisting a thirty-piece orchestra to perform a ten-part symphonic suite about some big themes that have been running through his mind lately: man's relationship to God and nature, mythologies that bulwarked the Industrial Revolution, romantic notions that have made a savior of machines and technology in the Western world. Little things like that.

It's a long way from CBGB's to the concert hall, and while Byrne's intellectual reach deserves commendation, the project is so much of a detour it's hard to know what to think of it—hard to decide how good it is, or even exactly what it is. "The Forest" begs to be admired, but it's difficult to enjoy as a piece of music. Even to my classically untrained ears some of the themes seem to lumber along in search of resolution or balance. (Listen to the way Ava lists uncomfortably in all directions.) The ambition is noble, but the project seems onanistic—ponderously hip orchestral mucky-muck for SoHo art-gallery openings. (Look out, Philip Glass, you've got competition.) Ultimately, this isn't so much a step forward as sideways for the increasingly academic-trending Byrne. Finally, it seems fair to wonder, on behalf of consumers, if he weren't a Talking Head, would "The Forest" have seen the light of day? *P.P.*

EMF: Schubert Dip. EMF (vocals and instrumentals). Children; Long Summer Days; When You're Mine; Traveling Not Running; I Believe; Unbelievable; and four others. EMI © CDP-96238-2 (41 min), © E21S-96238.

Performance: Very poppy Recording: Good

EMF is a dance band. EMF is a rock band. EMF is two, two, two bands in



Benatar: true blues

one. And what's more, the combination sounds minty fresh to me. The rhythms in "Schubert Dip" shift smoothly from disco loping to sharp-as-a-tack rock stutter-snaps, the sound is dominated alternately by peppery keyboards and snarling guitars, and the mix is spiced even further by sampled audio bits (such as police sirens) that are then distorted and manipulated into something musical. All this would make EMF come off like a twenty-first-century schizoid band if it weren't for the relentlessly poppy nature of their music. When You're Mine, for example, has one riff going on the bass, another on guitar, another on piano, and another in the vocals-and that doesn't include the "scratching" interlude, in which the rap device of manipulating

turntables to create rhythmic squeaks takes on the quality of an instrumental solo. This stuff is so relentlessly inventive that I'm willing to believe that somewhere in "Schubert Dip" EMF has actually sampled a kitchen sink and found a way to make it sound irresistible. *R.G.*

FIREHOSE: Flyin' the Flannel. fIRE-HOSE (vocals and instrumentals). Down with the Bass; Up Finnegan's Ladder; Can't Believe; Walking the Cow; Flyin' the Flannel; Epoxy, for Example; O'er the Town of Pedro; Too Long; The First Cuss; and seven others. COLUMBIA [®] CK 47839 (43 min), [©] CT 47839.

Performance: Awkward Recording: Okay

These guys dare to be different; in fact, they wallow in their idiosyncracies. From the reverse-capitalization of their name to the wildly inconsistent nature of their music, this trio (slashing guitar, throbbing bass, pounding drums) tries too hard to escape categorization.

The title cut, for example, locks into a barrelhouse rock groove but then slows down to an agonizing crawl, then kicks back into high gear, and then downshifts to low again. The tempo changes only serve to frustrate the listener while making the band seem needlessly willful. Some of the songs have a nice, roughand-tumble wit, but others are sophomoric and oblique. Some have powerful rhythms but dorky, strum-by-the-numbers lead guitar. Maybe these guys don't want to sound professional because they consider that boring, but too often they just sound erratic and confused. R.G.

FISHBONE: The Reality of My Surroundings. Fishbone (vocals and instrumentals). Fight the Youth; So Many Millions; Asswhippin'; Housework; Deathmarch; Behavior Control Technician; Pressure; Junkies Prayer; Pray to the Junkiemaker; Everyday Sunshine; Naz-tee May'en; Babyhead; and six others. COLUMBIA (D) CK 46142 (60 min), (CT 46142.

Performance: Full-frontal assault Recording: Good

Be careful how you handle the new Fishbone album. Even sitting inside its plastic jewel box and encased in shrink wrap, "The Reality of My Surroundings" is dangerously explosive. This Los Angeles funk-rock septet has always made hyperkinetic music, but this album is another kind of volatile substance altogether.

Fishbone builds its musical bomb out of a whole bunch of pop-music styles black and white, soul and metal, and so on and so forth. You can hear echoes of James Brown, Sly Stone, Jimi Hendrix, Rush, even Van Halen. The fusion of funk and rock has become a major pop trend thanks to white groups like Red Hot Chili Peppers and Faith No More and black groups like Living Colour. But no one else has been as musically omnivorous as Fishbone, nor as artistically



Johnnie Johnson: unsung hero

daring. Fishbone's arrangements are jam-packed with guitars, bass and drums, horns, singing voices, speaking voices, howling and crooning choirs. So Many Millions, for example, pounds out a rocking beat decorated by earthshakingly funky bass, nasty whirling guitars, punchy horns, and cacophonous background vocals. Housework sounds like speeded-up reggae with a little Dixieland jazz on the side. Those Days Are Gone glides back and forth between smooth soul and jangly psychedelia. If it feels right, these guys play it.

And they say it just as strong. The songs in this album tackle youthful prejudice, the futility of the underclass, the dead-end nature of the broken family, the destructive crush of drugs, the depression caused by society's problems. Even if Fishbone verges on stridency and sometimes sacrifices musical interest for political rectitude, this album maintains its body-shaking energy while keeping its rugged integrity. "The Reality of My Surroundings" will move you in more ways than one. *R.G.*

RICHARD X. HEYMAN: Hey Man! (see Best of the Month, page 65)

JOHNNIE JOHNSON: Johnnie B. Bad. Johnnie Johnson (vocals, piano); Keith Richards (guitar, vocals); Eric Clapton (guitar); NRBQ (vocals and instrumentals). Tanqueray; Fault Line Tremor; Stepped in What?; Key to the Highway; and eight others. ELEKTRA/NONESUCH © EA 61149 (44 min), © EA4 61149.

Performance: A joy Recording: Excellent

This is the first-ever solo album by Chuck Berry's long-time piano player, a guy who's influenced countless musicians over the years and yet remained a mostly unsung hero of rock-and-roll. Interestingly enough, it's been released under Elektra's new American Explorer imprint, a well-intentioned venture predicated on the odd notion that what we usually refer to as American roots music—that is, pop styles more or less out of fashion (like rockabilly)—is endangered exotica, like Bulgarian folk chorales or something. In any case, Johnson's album is a genuine joy, a collection of barrelhouse blues and rock rendered with a late-night, smoky-dive ambience that's so thick you can cut it. If you've ever heard the Rolling Stones' Chess bootlegs, you'll have a vague idea what "Johnnie B. Bad" sounds like (not surprising since Keith Richards is much in evidence throughout the album).

Johnson himself may be the only rock pianist alive who still knows how to swing. He also turns out to have a charming untutored voice and a thoroughly droll delivery (listen to Stepped in What?) that makes you wish he'd sing more than he does here. Meanwhile, all the backings by NRBQ have that Fifties Chicago groove down absolutely cold, and you can tell that to a man the participants are having an infectiously good time. In short, this is a small knockout of an album-as are, come to think of it, the companion releases in the American Explorer series, especially the rockabilly set by Charlie Feathers and the neohonky-tonk effort by Jimmie Dale Gilmore. 2.2.

THE KLF: The White Room. Bill Drummond, Jimi Cauty (vocals and instrumentals); other musicians. What Time Is Love; Make It Rain; 3 A.M. Eternal; Church of the KLF; Last Train to Trancentral; Build a Fire; and three others. ARISTA [®] ARCD-8657 (40 min), [®] AC-8657.

Performance: Unique Recording: Excellent

This is a dance-music album for people who don't like dance music. The brain trust of the KLF is Bill Drummond and Jimi Cauty, two Britishers with musical and managerial backgrounds who orchestrate some of the most creative recording, video, and performance-art endeavors on either side of the Atlantic. Imagine the cunning of Malcolm McLaren, the eclectic reach of Neil Young, and the dance-floor energy of C&C Music Factory all tossed into a big melting pot and liberally seasoned with rap, reggae, and rhythms from the far corners of the globe. And don't leave out mystique, in this case deriving from KLF's adaptation of ideas and symbols from the Illuminatus trilogy of cult science-fiction novels from the Seventies. So instead of the usual calls to get your butt out on the dance floor, the KLF poses bottomless questions like "What time is love?" and makes statements like "Time is eternal," all the while hyping themselves as "the Justified Ancients of Mu-Mu" (a.k.a. the Jams, another recording alias).

After years of testing the copyright laws by sampling up to and beyond the legal limit in a string of hilarious 12-inch singles, Drummond and Cauty have found in the KLF a somewhat more



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earnest and commercial project. They integrate samples and chants into grooves both hard-core and dreamlike, all the while flogging their "justified and ancient" cosmology, tongues only partly in cheek. In Last Train to Trancentral, half a dozen different singer/rappers each pitch a line-for example, "Come on boy, d'ya wanna ride?" or "All aboard, all aboard" or "Back to the heavyweight jam"-into an inferno of sound that's like a hip-hop version of Neil Young's "Trans" album. Sometimes, as in 3 A.M. Eternal, they move from the raucous to the hypnotic in the same song. There's a surprise around every curve on the KLF's winding track. P.P.

PAUL MCCARTNEY: Unplugged—The Official Bootleg. Paul McCartney (vocals, guitar); Hamish Stuart (bass): Robbie Macintosh (guitar); other musicians. Be-Bop-a-Lula; 1 Lost My Little Girl; Here There and Everywhere; Blue Moon of Kentucky; We Can Work It Out; San



Aaron Neville: alone at last

Francisco Bay Blues; and nine others. CAPITOL © CDP-96413-2 (59 min).

Performance: Low-key Recording: Very good

This live concert set by the once-andfuture Cute Beatle, staged earlier this year on MTV's acoustic-purist show Unplugged, lacks a certain (shall we say) rock-and-roll excitement. On the other hand, it also has its moments and thus, given the generally disappointing nature of McCartney's recent output, rates as a pleasant, if minor, surprise.

The biggest revelation here is Bill Withers's Seventies hit Ain't No Sunshine, rendered with a kind of existential soulfulness one would have thought beyond McCartney's reach. (Unfortunately, it is; bassist Hamish Stuart sings it.) There are also a couple of obscure numbers resurrected from McCartney's earliest solo record—*Every Night* and the inaptly titled *Junk*—that hold up far better than I remember; they are, in fact, quite lovely. On the down side, there are some Elvis and Gene Vincent rockabilly numbers rendered a bit like campfire singalongs and some Beatles classics that sound suspiciously like outtakes from *Beatlemania*! Come to think of it, all this stuff somehow seemed more interesting on TV. On CD, estimable as it is, it mostly makes me kind of sleepy. *S.S.*

BILL MONROE AND THE BLUE GRASS BOYS: Cryin' Holy unto the Lord. Bill Monroe (vocals, mandolin); Ralph Stanley (vocals); Ricky Skaggs (acoustic guitar, vocals); the Blue Grass Boys (vocals and instrumentals); other musicians. Cryin' Holy unto the Lord; Harbor of Love; Shine Hallelujah Shine; Just over in the Glory Land; Just a Little Talk with Jesus; and five others. MCA @ MCAD-10017 (29 min), © MCAC-10017.

Performance: Stirring Recording: Good

When Bill Monroe was a child, growing up in the small western Kentucky town of Rosine, he paid rapt attention to four distinct styles of music-the wail of Southern blues, the Scotch bagpipe and Celtic music at the heart of Kentucky's heritage, the sentimentality of old-time country songs, and the gospel singing of regional Methodist, Baptist, and Holiness congregations. Now nearly eighty, Monroe still clings to his early musical repertory and education in church singing, even though his best-known work embraces largely secular themes. For his latest collection of bluegrass gospel, he's stacked the deck with a stellar lineup of guest musicians, all of whom share his passion for the gospel spirit.

Taking the lead vocal only in the truelife Baptize Me in the Cumberland River. which he wrote in the Eighties, Monroe steps aside in most of the album to allow his guests to shine. His great contemporary Ralph Stanley handles the honors in brother Carter Stanley's Harbor of Love, deftly delivering a mournful vocal to the hot instrumental picking of Ricky Skaggs on guitar. Skaggs likewise turns in a true bluegrassy vocal in You're Drifting Away, a Monroe song originally recorded in 1951. Another Monroe classic. This World Is Not My Home, first recorded in 1936, gets a fresh, dusted-off presentation from Mac Wiseman. The Osborne Brothers come aboard for Just over in the Glory Land, a thirty-year-old Monroe tune. And Jim and Jesse McReynolds step up to the mike in Are You Lost in Sin?, Monroe and Jesse trading mandolin licks and the kind of harmony picking that scores great audience response at live festivals.

What comes through in each of these cuts—aside from great gospel songwriting and exemplary singing and picking is how vital the genre can still be in such creative hands. A half-century after Monroe first crafted his personal brand of music, he remains the quintessential rural musician-hero, a pioneer and patriarch extraordinaire. A.N.

BOB NEUWIRTH: 99 Monkeys. Bob Neuwirth (vocals, guitar, harmonica); Katy Moffatt, Billy Swan (guitar, vocals); Steve Young (guitar); other musicians. Great Spirit; Biggest Bordertown; The First Time; Good Intentions; and five others. GOLD CASTLE (D) D2 71347 (43 min), (C) D4 71347.

Performance: Homemade Recording: Variable

Bob Neuwirth has been a shadowy figure on the pop and rock scene for decades (he was Bob Dylan's road manager during the English tour filmed for the documentary Don't Look Back), but he's been better known for his famous friends (Dylan, Janis Joplin, Kris Kristofferson) than for his own work. "99 Monkeys" goes some distance to give him his dueafter all, he wrote all the songs and sings them in a kind of hoarse whisper that suggests he thinks of himself as a poet rather than a performer. But it also proves why Neuwirth has been a member of several celebrated packs and never a leader. Although the songs are filled with shimmering lines and passages, they rarely jell as wholes, usually being undermined by a not-so-tuneful melody or too opaque a concept.

Among all the ballads of war and peace and ladies he has loved, Neuwirth sneaks in a resonant blues (*Biding Her Time*) and a kind of beat-poet fantasy of survival in New York City (*Biggest Bordertown*) that alludes to Hank Williams, Dylan Thomas, Thomas Wolfe, and Jackson Pollock. In these tracks, he almost redeems himself from being only a famous hanger-on. A.N.

AARON NEVILLE: Warm Your Heart. Aaron Neville (vocals); other musicians. Louisiana 1927; Everybody Plays the Fool; It Feels Like Rain; Somewhere, Somebody; Don't Go Please Stay; With You in Mind; and seven others. A&M [®] 75021 5354-2 (50 min), [®] 75021 5354-4.

Performance: Sumptuous Recording: Very good

For somebody so well known, Aaron Neville has done very little work on his own. Despite a hit single in 1966 (*Tell 1t Like lt 1s*), a hit duet with Linda Ronstadt (*Don't Know Much*), and a string of critically exalted albums with his family band, the Neville Brothers, he hasn't put out anything under his own name since a mid-Eighties EP. So his new solo album, "Warm Your Heart," is already a special release, and the clean, restrained production (by Linda Ronstadt and George Massenburg) makes it even more of a treat.

of a treat. The range covered by the thirteen songs here is broad—from Randy Newman's somber *Louisiana 1927* to the Main Ingredient's silky-smooth *Every-*

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body Plays the Fool to a gumbo-funk version of Neville's own prison song Angola Bound to the gauzy-soft religious tune Ave Maria. All of the arrangements, instrumental and vocal, push Neville's candied tenor into the spotlight, where his swooping and whirling curlicues truly shine. Even if the album's precision and understatement sometimes make it seem sterile compared with the roiling r-&-b of the Neville Brothers, it's a gorgeous piece of mainstream music and a testament to the sheer beauty of one of pop's great voices. R.G.

NEW YORK CITY GAY MEN'S CHO-RUS: Love Lives On. New York City Gay Men's Chorus (vocals); instrumental accompaniment. Love Lives On; Wind Beneath My Wings; Not a Day Goes By; No One Is Alone; Boogie Woogie Bugle Boy; Isn't It Romantic; Old Friend; I'll Be Seeing You; and ten others. VIRGIN © 2-91647 (73 min), © 4-91647.

Performance: Thrilling Recording: Excellent

I must admit I hadn't heard a large-size, all-male chorus in essentially pop repertory since my college days—and so I had pretty much forgotten how exciting and warmly appealing such massed sounds can be when done well. And they're done exceptionally well, indeed, by the 150-voice, solidly musical New York City Gay Men's Chorus.

There isn't a weak track among this new disc's generous eighteen selections, and there's wonderful variety in tempo, mood, style, and instrumental backing. It's inevitable, of course, given the makeup of the chorus, that some of the songs take on vividly affecting new meanings in the age of AIDS. But the overall tone of the disc is one of sincerely joyous musicmaking, not maudlin sentimentality. In quite a few numbers, you probably won't be able to resist raising your own voice for a bar or two, or at least tapping out the accompanying rhythms, especially in That Old Piano Roll and the closing Duke Ellington medley. Since Virgin is donating a portion of the album's proceeds to a foundation for AIDS research, there's an additional reason beside sheer listening pleasure for checking this one out. R.H.

DEL SHANNON: Rock On! (see Best of the Month, page 67)

GEORGE STRAIT: Chill of an Early Fall. George Strait (vocals); the Ace in the Hole Band (instrumentals); other musicians. The Chill of an Early Fall; I've Convinced Everybody but Me; If I Know Me; You Know Me Better Than That; Anything You Can Spare; and five others. MCA ⁽ⁱ⁾ MCAD-10204 (31 min), ⁽ⁱ⁾ MCAC-10204.

Performance: His best Recording: Excellent

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Essentially an interpretive singer, Strait here recalls several country legends, including Bob Wills and Tommy Duncan. I've Convinced Everybody but Me, the confession of a wounded lover, is a perfect Texas shuffle of the sort Ray Price used to handle with ease. And it's difficult to listen to Anything You Can Spare, an old-style, elegant honky-tonk ballad, without thinking of Lefty Frizzell. Instead of copying these artists, however, Strait has learned how to carry on in their traditions, enhancing their styles with a kind of innocence, like a young man smarting over his first genuine romantic hurt.

That innocence is beautifully showcased here in You Know Me Better Than That, which Strait delivers with the perfect dollops of humor and anguish. Pleading with his former lover to take him back, he relates the stress of trying to play the sophisticate to a new, more cultured girl friend.

All of this would go a long way toward making up a strong and delightful album, but Strait really hits his stride with two surprising remakes, Hank Williams's eternal Lovesick Blues and a very gutsy version of Kokomo Arnold's Milk Cow Blues. It is high praise, indeed, to say that Strait invests the Williams classic with more straightforward charm than Hank himself, making it seem like an exciting discovery. But the real wonder is Milk Cow Blues, which he slows down and treats with a palpable sensuality. Elvis Presley would barely recognize his "boogie" here as Strait turns it into a playground for his touring band, with fiddler Gene Elders and guitarist Benny McArthur performing a kind of musical foreplay unusual for country or swing bands. It is an invigorating piece of musicianship, and it boosts the singer's credibility by a thousand percent.

Even if Strait never makes another album like this one, which he co-produced with Jimmy Bowen, it will seal him in the history books as one of the few country superstars who have lived up to their hype. It is, simply, the album of his career. A.N.

TANYA TUCKER: What Do I Do with Me. Tanya Tucker (vocals); other musicians. If Your Heart Ain't Busy Tonight; Some Kind of Trouble; (Without You) What Do I Do with Me; Down to My Last Teardrop; Everything That You Want; Trail of Tears; and four others. CAPITOL. © C21S-95562 (34 min), © C41H-95562.

Performance: Masterly Recording: Very good

Rightly or wrongly, Tanya Tucker's profile in Nashville for the past few years has been as something of the town pump. In fact, before she publicly identified the father of her daughter, Presley Tanita,

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Pere Ubu

REVIEWS

HEN you're really and truly eccentric, sometimes the weirdest thing you can do is try to appear normal. Think back to Captain Beefheart's self-conceived bid for mass popularity, "Unconditionally Guaranteed," an album of relatively simple melodies and words on whose cover he was shown clutching a fistful of money; in hindsight, it may be his most bizarre recording.

Since regrouping in 1987, the veteran Midwestern eccentrics in Pere Ubu have been flirting with accessibility-using the word in a very relative sense, of course-while still filtering reality through a most unconventional prism. Their latest gesture toward normality and the marketplace, "Worlds in Collision," has a decidedly poppish sheen to it: the songs bounce along, playfully out of kilter but rarely jarring or dissonant. You might even find yourself tapping your feet or snapping your fingers, only to catch a snatch of lyrics that would never have occurred to New Kids on the Block, such as, "Long live the carnival rain king/the king bee/the king of Mars/ they're all like me" (from Goodnight Irene, not to be confused with the Leadbelly classic). Dig deeper, and the songs seem to be about lonely, disoriented creatures stalking a barren landscapeghosts, aliens, and even estranged, heartsick human beings.

The music is kinetic, well-organized, and creatively unbound pop, touching on recognizable referents while reaching out for parts unknown. Except for some wacky warbling in *Life of Riley* (imagine David Byrne on laughing gas), Pere Ubu's lead singer, David Thomas, vocalizes within the dotted lines and won't clear the room of all but aficionados of the avant-garde. Because Pere Ubu is not usually the sort of combo to dwell on such plebeian matters as lost love, when it does address the subject the words seem strikingly pertinent; there's something revealing and uncontrived about lines like "I don't know much about a broken heart/When a heart falls apart will we still be who we are?" (from *Playback*).

The Ubus imbue their colorful, evocative music with a light dose of surrealism. It is the sort of alignment of recognizable form with original vision that enlightened listeners wait for with the avidness of astronomers anticipating eclipses. For example, Turpentine! careens around the room with loopy energy amid a clangor of broken rhymes, chorded bass, "found" sounds used in a percussive way, marimba, and choppy rhythm guitar. On the other hand, songs like Oh Catherine, Cry Cry Cry, and Don't Look Back are free-flowing and unfettered, sounding like nothing so much as the Traveling Wilburys on a joyride around the cosmos. And so it goes in "Worlds in Collision," an album where Pere Ubu is weird enough to play it straight ... or something like that. Parke Puterbaugh

PERE UBU: Worlds in Collision. David Thomas (vocals); Jim Jones (guitars, backing vocals); Eric Drew Feldman (keyboards); Tony Maimone (bass); Scott Krauss (drums). Oh Catherine; I Hear They Smoke the Barbecue; Turpentine!; Goodnight Irene; Mirror Man; Cry Cry Cry; Worlds in Collision; Life of Riley; Over the Moon; Don't Look Back; Playback; Nobody Knows; Winter in the Firelands. FONTANA © 848 564-2 (43 min), © 848 564-4.



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tongues wagged that the reason Tanya had Presley's photo taken with so many top male country stars was so she could try to figure out who the daddy was. Along this gossipy path, it somehow got lost that Tucker is also one of Music City's best vocal interpreters, a singer who could teach a thing or two to the legions of young artists who blow into town on an image and a sexy pose. That's particularly apparent in this new album, an intelligent collection of rockabilly, ballads, and energetic rhythm numbers that allows Tucker to tap into a wide range of emotion.

A marvelous vocal actress, Tucker easily persuades her listeners that she knows a little something about the situations at hand. She's particularly seductive here in Right About Now, a horny tune about a sexual encounter of the imagined kind; in the blues of Everything You Want; in the gutsy, loping rock of Down to My Last Teardrop, where she makes a sexy drop to her lower register and plies her trademark hiccup; and in the infectious neo-rockabilly of If Your Heart Ain't Busy Tonight, which includes the friendly logic, "If your lips ain't got something pressing to do/lf your arms aren't held up, well, they're invited, too.'

Of course, while almost all of this is exemplary commercial fare, it will never be confused with great literature. But then, *The Scarlet Letter* isn't half so much fun. Tanya, like our ol' pal Hester Prynne, has definitely had her societal problems. It seems to have made a better singer of her, though. You can spot that voice of experience every time. A.N.

VIOLENT FEMMES: Why Do Birds Sing? Violent Femmes (vocals and instrumentals); other musicians. American Music; Out the Window; Look Like That; Hey Nonny Nonny; Used to Be; Girl Trouble; and seven others. SLASH/RE-PRISE © 26476-2 (43 min), © 26476-4.

Performance: Unabashedly odd Recording: Good

I don't know what Gordon Gano is like at parties, but if this singer-songwriter-guitarist for the Violent Femmes resembles his music, then I'd want to keep a safe distance. In "Why Do Birds Sing?" Gano does pretty much the same as he's done in the four previous Violent Femmes albums, which is to follow his own quirky, often disturbed muse. I don't know how faux his naif act really is, but when I listened to him sing "I always felt that I was different," in *More Money Tonight*, I couldn't help but nod my head vigorously.

Out the Window, to provide a specific example, is about committing suicide by jumping out windows: "Life was short and life was sweet/I was thinking as I hit the street." That seems pretty funny to me in context, and so does the earthy way he describes his romantic problems in *Girl Trouble*. But sometimes Gano's extremely literal, simple way of looking

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at things just seems simplistic, as in dumb. Or maybe it's just that you can't listen to more than four or five of these songs without having his dweebish quirks get repetitive. R.G.

WORLD PARTY: Thank You World. World Party (vocals and instrumentals). Thank You World (album version); Is It Too Late? (remix); You're Invited to a Party; Watching and Waiting; Happiness Is a Warm Gun; and four others. CHRYS-ALIS © F2 21848 (40 min), © F4 21848.

Performance: Cute Recording: Fine

No, this is not (alas) the new World Party album. Instead, it's a sort of mini-album meant to whet our interest while WP honcho Karl Wallinger holes up in the studio crafting the follow-up to last year's rapturously received (by me) "Goodbye Jumbo." As such, it's not exactly what you'd call a major workone or two new songs, a couple of remixes-but as unpretentious time wasters go, it's not bad either. Actually, the real reason to get it is the version of John Lennon's Happiness Is a Warm Gun. remade here with knowingly ironic fidelity. It doesn't add anything to our appreciation of the song, but it's nice that Wallinger has finally made his Beatles fetishism explicit. Otherwise, this is mostly for committed fans. S.S.

Jazz

EDDIE HARRIS: A Tale of Two Cities. Eddie Harris (tenor saxophone, piano, trumpet, vocals); other musicians. Chicago Serenade; Cherokee; Lover Man; Sonnymoon (for Two); I Can't Get Started; and two others. NIGHT/VIRGIN © 2-91589 (62 min), © 4-91589.

Performance: Revelatory Recording: Amateur

In many respects, Eddie Harris was a pioneer in the movement toward electronic enhancement that has come to dominate much of today's best-selling jazz. Back in the Sixties, he hooked up his tenor saxophone to gadgets that altered his sound so much that he seemed to sing and play simultaneously. The commercial success he enjoyed tainted his image for purists, but before those experiments he was a solid post-bop performer who not only interpreted the modern jazz repertory with authority but also composed pieces in that tradition.

While Harris is best remembered for catchy hits like *Listen Here*, this set of previously unreleased live performances recorded in Chicago and San Francisco conveys a much broader sense of his artistic range. The swift thinking that informs his fluid solos in *Cherokee* commands respect, and he is no less impressive in the standards, including *Lover Man*, *I Can't Get Started*, and *Sonny*-

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moon (for Two). But he is best showcased here in his own compositions, such as Don't Let Me Go, where he electronically simulates the voice of Billie Holiday, and the hauntingly beautiful Illusionary Dreams. Though Harris is often overlooked, this album shows us just how good he has always been. P.G.

ART HODES/JIM GALLOWAY: Live from Toronto's Café des Copains. Jim Galloway (soprano and baritone saxophones); Art Hodes (piano). I Would Do Most Anything; Exactly Like You; Some of These Days; The Preacher; Doing the New Lowdown; and seven others. MUSIC & ARTS (D) CD-610 (69 min).

Performance: Superb collaboration Recording: Excellent remote

Pianist Art Hodes has contributed immeasurably to jazz, not only through his recordings—which he has been making with some regularity since the late Twenties—but also through his written observations. Born in Russia and raised in Chicago, Hodes was on the scene when New Orleans-based jazz thrived in the Windy City's speakeasies, and he was there when bands grew bigger and swing swept the country. At the end of the swing era, Hodes sought to preserve tradition in a dignified, practical manner. He continued to play the music he knew best, and he published *Jazz Record*, a singularly informative magazine that has become a treasured source of information for historians. Hodes didn't discourage the new forms of jazz; he just did not want us to forget the old.

This new album finds Hodes teamed with saxophonist Jim Galloway, a Scot who made his mark on the Glasgow trad scene before moving to Canada in 1964. A live 1988 set from Toronto's Café des Copains, it's a marvelous romp that features the dexterous octogenarian in superb form. To hear the two players share their love of this timeless music is a joy. It's no cliché-ridden dip into Dixieland, for Hodes and Galloway are an original pair who capture the spirit of old but very much go their own way. The duets are outstanding, including an intricate, fast-paced weave of Doing the New Lowdown and I Would Do Most Anything and slow explorations of such songs as If I Had You and The Tennessee Waltz. Hodes also gets in a couple of solos-Horace Silver's The Preacher and a stunning 5-minute slice of history called Tomorrow's Blues. It all adds up to 69 minutes of brilliant music. CA

JON LUCIEN: Listen Love. Jon Lucien (vocals, bass, synthesizers); other musi-

cians. Take Me Away; Mysteries; You Take My Breath Away; Love Me; Listen Love; and five others. MERCURY ⁽¹⁾ 848 532-2 (48 min), ⁽²⁾ 848 532-4.

Performance: Caribbean seduction Recording: Very good

It is hard to believe that Jon Lucien, the Caribbean-born master of romantic jazz balladry, first appeared on records more than twenty years ago (his remarkable 1970 debut, "I Am Now"). Those of us who heard him back then knew he was a singular talent, a melodically gifted composer with a rich, warm baritone as inviting as the seas surrounding his native St. Thomas.

Lucien held an audience during the Seventies and early Eighties, but he disappeared from the recording scene nearly a decade ago. Now he has come out of self-imposed exile in the Puerto Rican rain forest to take up where he left off. Here again are his trademark sensual ballads, along with occasional changeups that quicken the pulse, such as the rhythmically accented You Take My Breath Away and the hypnotically enticing Love Me. Lucien still has a way of making you feel he is singing to you and you alone; those who succumbed to his seductive serenades in the past will be delighted to have him back. P.G.

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The compact discs that are included in STEREO REVIEW's series of special CD offers are all approved by the editors of the magazine. Legacy is a new label, and within its first year it has won a Gold Record Award from the RIAA and a Grammy Award from the National Academy of Recording Arts and Sciences for its Robert Johnson boxed set. We are impressed by the range and quality of the selections on Legacy's "Music for the Next Generation," and we do not hesitate to recommend this sampler to our readers. To get your copy of this CD, fill out the coupon below, clip it from the magazine, and send it to Legacy, P.O. Box 179, West New York, NJ 07093 with your check or money order for \$4. New Jersey residents add 7 percent sales tax (28¢). Outside the United States send a postal money order for US\$7.

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Recent discs and cassettes reviewed by Robert Ackart, Richard Freed, David Hall, Eric Salzman, and David Patrick Stearns

BARBER: Symphony No. 1, Op. 9; Piano Concerto, Op. 38. John Browning (piano); Saint Louis Symphony Orchestra, Leonard Slatkin cond. Souvenirs, Op. 28. John Browning, Leonard Slatkin (piano). RCA VICTOR (0) 60732-2-RC (70 min), (6) 60732-4-RC.

Performance: Very good Recording: Superb

Samuel Barber's First Symphony, written in 1935-1936, is still among the finest American essays in the genre, and the musical language represents Barber at his most powerfully Romantic. While Leonard Slatkin's well-knit new reading is better than the two other recordings currently available (both analog), it lacks the tension and sinewy quality brought to the score by Artur Rodzinski with the NBC Symphony in 1938 or by Howard Hanson in his 1954 Mercury recording.

The 1962 Piano Concerto is a proverbial knucklebuster with considerably more harmonic astringency than the symphony. The ferocious ostinato finale has much in common with the idiom of the "Dance of Vengeance" from the Medea music. John Browning played the première of the concerto, with Erich Leinsdorf and the Boston Symphony, and he subsequently recorded it with George Szell and the Cleveland Orchestra on Columbia. As in that 1964 recording, Browning plays the work here with blazing virtuosity in the outer movements and all the tenderness one could want in the central canzona.

Slatkin and the orchestra provide splendid collaboration in the concerto, though in terms of tempo and phrasing the performance is more expansive than Szell's tautly woven canvas. The recorded sound is far more ingratiating than in the Columbia recording, however, with ample depth imaging and a rich bass line. The piano is expertly balanced and superbly reproduced. The one strong competitor in the catalog is Tedd Joselson's recording with the London Symphony

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Classical Music

under Andrew Schenck on ASV (Barber modified some of the fingerwork to accommodate Joselson's small hands).

A surprise bonus is *Souvenirs*, best known in its orchestral dress for Todd Bolender's ballet of the same name. Here we have the four-hand piano version in which the music was first recorded (by Arthur Gold and Robert Fizdale for Columbia in 1952). The six movements add up to a charmingly affectionate study in nostalgia. Browning and Slatkin make a wonderful keyboard team, and their joy in musicmaking shines through every measure. The sound is top of the line. *D.H.*

BARTÓK (arr. Serly): Cello Concerto (see DVOŘÁK)

BRAHMS (arr. Thomas): Wir Wandelten (see BRITTEN)

BRITTEN: Simple Symphony; Variations on a Theme of Frank Bridge. BRAHMS (arr. Thomas): Wir Wandelten. ZORAN: Cartoon. Kreisler String Orchestra. FAC-TORY CLASSICAL © Facd226 (51 min).

Performance: Tight, man Recording: Even tighter

Call it the Nigel Kennedy syndrome, if you will, but don't be put off from this artistically valid, rather desirable record of string-orchestra music by its fragmented, MTV-style cover art and uninformative notes full of pop jargon. The Kreisler String Orchestra is apparently a British counterpart to New York's Orpheus Chamber Orchestra in that its players are mostly young and there is no conductor. Though it hasn't the refinement of the Orpheus ensemble, it certainly exhibits virtuosity, intelligence, taste, and passion in this collection of highly colorful, too-rarely recorded pieces by Britten and Brahms, plus Eric Zoran's Cartoon, a mad little 8-minute waltz that speeds through so many coloristic and textural changes, it's a miniature odyssey.

The album's programming seems to be thematic, somewhat in the fashion of a Kronos Quartet recording, though not with as clear a theme. In any case, the two Britten performances are welcome, especially for the orchestra's strong sense of ensemble. Sometimes it sounds like a single instrument, a remarkable feat considering that the recording is unforgivingly engineered with what sounds like one microphone to an instrument. The approach gives each string line a vibrance and immediacy but leaves no room for ambience. I wasn't bothered by the sound quality, but some people might be. D.P.S.

CORIGLIANO: Symphony No. 1. Stephen Hough (piano); John Sharp (cello); Chicago Symphony Orchestra, Daniel Barenboim cond. ERATO © 2292 45601-2 (41 min).

Performance: Scintillating Recording: Live and excellent

John Corigliano's Symphony No. 1, of which this is the première recording, is easily among the best pieces to come out of the current renaissance of American orchestral music. Inspired by the rage and grief the composer feels in the midst of the AIDS epidemic, the symphony is searing music full of some of the most evocative effects this side of Berlioz. A dreamy, off-stage piano in the first movement portrays a concert pianist who died of the disease, and the mad



Corigliano: searing First Symphony

tarantella of the second movement portrays a friend of Corigliano's who suffered from AIDS dementia. The third movement is a bit more abstract, its melodies all inspired by eulogies, interwoven in a chaconne.

As fascinating as it is to examine how the work's programmatic underpinnings translate into music, its visceral appeal intensifies on repeated listenings, after you quit following the program so closely. Purely as music, the symphony is richer than some Richard Strauss tone poems. Corigliano has consolidated many twentieth-century innovations with confidence and clarity of vision; while the intensity of the work's emotionalism suggests Mahler and Shostakovich, the sense of organization occasionally suggests serialism. Leonard Bernstein's symphonies, with their literary programs and distinctive chord structures, also seem to have been an influence, but most of all the symphony recalls the music of Alfred Schnittke, the great Soviet composer whose nightmarish sound collages are truly a language for the final quarter of this century. Corigliano has absorbed Schnittke's techniques into his personal style, and he shows a spectacular command of the orchestra's coloristic resources and a tighter sense of organization.

Daniel Barenboim hasn't conducted such an important recording in years. There's no Furtwänglerian lingering over the music's tortured terrains; he

Dutoit's recording is almost everything that the gorgeous but dramatically inert Karajan set on EMI/Angel promised to be. While Karajan's string-dominated textures were so relentlessly beautiful that the opera talked in a mellifluous monotone. Dutoit's version has an often startling coloristic range that effectively reveals the enigmatic characters. There are times when Dutoit's interpretation needs a little seasoning, and some scenes are not given their full dramatic weight because he is more concerned with creating a clear dramatic arc, but his treatment of Mélisande's death in Act V is a highly moving payoff:

The cast is not up to Karajan's, however. Colette Alliot-Lugaz's Mélisande



Dutoit: well-rounded Pelléas et Mélisande

lets the piece take off like a train speeding out of control. It constantly threatens to derail but somehow always stays on course. A triumph. D.P.S.

DEBUSSY: Pelléas et Mélisande. Colette Alliot-Lugaz (soprano), Mélisande; Didier Henry (baritone), Pelléas; Gilles Cachemaille (bass), Golaud; Pierre Thau (bass), Arkel; Claudine Carlson (mezzosoprano), Geneviève; Françoise Golfier (soprano), Yniold. Montreal Symphony Orchestra and Chorus, Charles Dutoit cond. LONDON () 430 502-2 two CD's (151 min).

Performance: Splendid Recording: Luscious

For many fanatical admirers of Pelléas et Mélisande, this recording will be an answer to their prayers. It combines the greatest French opera with this generation's greatest interpreters of French symphonic music, Charles Dutoit and the Montreal Symphony Orchestra. Even with the considerable competition in the catalog (no available Pelléas is less than noteworthy), this recording stands with the very best, alongside the classic 1941 EMI set led by Roger Desormière.

is more outgoing and sunny than Karajan's Frederica von Stade, who gives her character an exceptional vulnerability combined with an inner toughness. Didier Henry's Pelléas occasionally disappoints; his baritone hasn't enough lyrical upper range to let the love music soar. The other vocal performances, though below star quality, are thoughtful and serious. Overall, while Dutoit's set doesn't reach all the high points of the opera, it's a better-rounded realization than most others. D.P.S.

DVORAK: Cello Concerto in B Minor. Op. 104. BARTÓK (arr. Serly): Cello Concerto. Janos Starker (cello); Saint Louis Symphony Orchestra, Leonard Slatkin cond. RCA VICTOR (1) 60717-2-RC (61 min), © 60717-4-RC.

Performance: Excellent Recording: Fine

Janos Starker's third recording of the Dvořák Cello Concerto finds him in top form all the way and in a considerably more soulful vein-in the last pages of the slow movement especially-than in his 1962 Mercury reading with Antal Dorati and the London Symphony. In

approaching the orchestral part, Leonard Slatkin lines up with those conductors who stress the music's meltingly lyrical aspects wherever possible (as in the lengthy opening tutti) rather than with the likes of George Szell, Václav Neumann, or Charles Mackerras, all of whom take a sterner view of the work. It's a matter of taste which approach you prefer. RCA's sound is lively and rich.

The unusual coupler is a concerto by Béla Bartók, commissioned for the violist William Primrose, that was completed after Bartók's death by his friend and colleague Tibor Serly. Serly recast the work for cello, apparently following a hint by Bartók, before the première of the viola version in 1949, but the alternative version was unplayed until Starker. revived it for the Banff Festival in Canada in 1981. Except for some adjustments to accommodate the cello's lower range, the music is identical in both versions. Although the first movement seems a bit scrappy by Bartók's standards, the concerto is pleasant listening and sometimes-as in the central Adagio religioso and the transition to the dance finaleeven poignantly moving.

The superb 1951 recording by Primrose, with Serly conducting, is still available on LP on the Bartók label. Starker and Slatkin take a more lyrically expansive view of the opening pages but otherwise stick pretty close to the Primrose-Serly pacing (I have not heard the other available recordings). The performance has ample vitality and richness, with sonics to match. D.H.

DVOŘÁK: Te Deum (see JANÁČEK)

FAURÉ: Piano Quartets No. 1, in C Minor, Op. 15, and No. 2, in G Minor, Op. 45. Ames Piano Quartet. DORIAN (D) DOR-90144 (66 min).

Performance: Appealing Recording: Vivid

The Ames Quartet was formed fifteen years ago at Iowa State University and is now in residence there. Not long ago these players made their debut recording for Dorian in the two piano quartets of Dvořák, who was among the most celebrated of foreign visitors to their state. Fauré never made it to Iowa, but he seems to have gotten to the Ames Ouartet. These are very appealing performances, with no concession to stereotyped views of the composer. The approach is straightforward and fullblooded, with a fine appreciation of the wit in the two scherzos, the genuine tenderness in the slow movements, and the music's natural pulse throughout.

The Ames may not be quite as subtle and idiomatic as the French musicians who recorded these works for Erato more than twenty years ago (available all too briefly on CD), but this Dorian issue goes to the top of the very short list of currently available versions. The recording itself might have been a little softer in focus-it is close up and shows



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Send coupon with check of money order to: AudioVideo Magazine, Dept C, 400 Madison Ave., NY, NY 10017. No cash, **ca**rd or phone orders, please! a flash of fierceness now and then—but overall it is vivid, well defined, and well suited to the character of the performances. *R.F.*

HAYDN: Quartets in G Major and F Major, Op. 77, Nos. 1 and 2; Quartet in D Minor, Op. 103 (unfinished). Takács Quartet. LONDON © 430 199-2 (61 min).

Performance: Smooth Recording: Excellent

Since Haydn's last two, and greatest, fully proportioned string quartets add up to only 50 minutes' playing time, the idea of packaging with them the andante and menuet that were to have been the middle movements of a subsequent one makes excellent sense. We have in fact had at least three such packages in the last year or two, all with "period instrument" ensembles. The Takács Quartet gives a great deal of pleasure, as one would expect from this excellent group's recordings of Haydn's Op. 76 quartets, though it is a somewhat different kind of pleasure than the other groups offer. The difference has less to do with the sound of the respective instruments than with the style of the performances. The Takács players are very stylish indeed, but theirs seems a rather streamlined style when juxtaposed with any of the periodinstrument versions. They are more open to the use of vibrato, less characterful in their inflection of individual phrases.

One might say, however, that the performance of such works ought not to be circumscribed by any of the limitations faced by Haydn himself. The Takács approach gives us more of "the big picture," with a greater emphasis on overall structure, and does so in a way that is both elegant and enlivening. In the minuets of the two Op. 77 quartets in particular, and in both movements of the unfinished Op. 103, they seem to be making the point that Haydn himself was not bound by any real or imagined restrictions but was taking giant strides into a future for which all his own work had clearly paved the way. On its own terms, such playing is hard to resist, and the recording itself is exemplary. *R*.*F*.

HAYDN: Symphonies Nos. 22, 78, and 82 (see Best of the Month, page 68)

JANÁČEK: Glagolitic Mass. DVOŘÁK: Te Deum, Op. 103. Christine Brewer (soprano); Marietta Simpson (mezzo-soprano); Karl Dent (tenor); Roger Roloff (bass): Atlanta Symphony Chorus and Orchestra, Robert Shaw cond. TELARC © CD-80287 (59 min).

Performance: Impressive Recording: Likewise

The elemental power of Leoš Janáček's totally individual treatment of the Mass in Old Slavonic never fails to move, even disturb, the listener. The celebratory opening and closing instrumental movements, the stunning organ toccata at the

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conclusion of the Mass proper, the incantatory *Gloria*, and the almost operatic *Credo* are among the sections that especially haunt the memory. Both the choral and instrumental parts are highly demanding, and some of the solo demands, notably for the tenor, verge on cruel and unusual punishment.

The conductor Robert Shaw, a finely matched team of soloists, the superbly trained Atlanta Symphony Chorus and Orchestra, and the organist Norman Mackenzie all acquit themselves most impressively in this new CD. A major advantage is the wonderfully rich and warm recorded sound.

The Dvořák Te Deum was written down just before the Czech master's journey to America and was intended as part of the celebration in 1892 of the fourhundredth anniversary of Christopher Columbus's landing in America. The festive opening is akin in spirit to the Carnival Overture, the "Tu Rex gloriae" is appropriately solemn with a lovely bass solo, "Aeterna fac" is in a Slavonic dance vein, and the final movement opens with a supplicatory solo for soprano and concludes with resplendent alleluias. Again we have a first-rate, immensely vital performance, beautifully recorded. D.H.

MAHLER: Symphony No. 6, in A Minor; Songs of a Wayfarer. Jessye Norman (soprano, in songs); Berlin Philharmonic Orchestra, Bernard Haitink cond. PHIL-IPS © 426 257-2 two CD's (103 min).

Performance: Tough-fibered Recording: Outstanding

One normally thinks of Bernard Haitink as a conductor whose readings of Mahler and Bruckner are carefully thought out and beautiful to hear but not necessarily overwhelming. This Berlin recording of the Mahler Sixth is definitely an exception to that rule. What is most extraordinary throughout the performance is the remarkably detailed recorded sound. There is weight and momentum aplenty, but also exquisitely limned details, such as the sounds of cowbells, celesta, harp, and the like in the pastoral episodes.

The opening march music is replete with hobnailed boots à la Bernstein, but the effect is relentless rather than frenetic. In the grotesque scherzo, the recording is particularly effective in letting us savor the skeletal flavor of the xylophone (the only place it figures in Mahler's symphonic scoring). The poignant *Kindertotenlieder* redolence of the slow movement is fully realized in the delicate intensity that finally pours forth in an anguished outburst toward the end.

The crown of the performance is the colossal finale, the impact of which stems not from the famous climactic hammer blows (there are two, as per Mahler's final thoughts on the matter, not three) but from the contrast between the relentless momentum and the interludes that recall the "Alma" motive from the opening pages of the move-





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A Brecht/Weill Hit

NLY six years separate the first and last collaborations of Kurt Weill and Bertolt Brecht. The original *Mahagonny* texts were written in the mid-1920's and set in 1927 as a kind of ironic chamber cantata, the *Mahagonny Songspiel*, for a modern-music festival. The operatic version (*The Rise and Fall of the City of Mahagonny*) came a little later and, in fact, provoked the breakup of this famous team. Only in



Ute Lemper: sweet and tough

ARTHUR UMBOH/DECCA

1933, already in exile in Paris, did Weill and Brecht come together one last time, for *The Seven Deadly Sins*, a *ballet chanté* for George Balanchine.

The Mahagonny Songspiel and The Seven Deadly Sins have much in common—both are bitter critiques of bourgeois capitalism set in an imaginary America and take the form of a religious cantata (one or two sopranos, male quartet) that turns conventional morality upside down—and it is astonishing to hear how different they are. The difference is in Kurt Weill.

When he wrote the Mahagonny Songspiel, Weill was the brilliant young iconoclast who, under the spell of Brecht's powerful personality, had produced an amazing mélange of modern music, pop, religiosity, and cutting satire. Six years later, by then a successful and experienced theater composer and fresh from a collaboration with Georg Kaiser (a much more spiritual and humanistic writer than Brecht), Weill's style had matured. Although never as successful or influential as some of his other European works, The Seven Deadly Sins is a most moving and masterly synthesis of everything he had done to that date. Weill himself regarded it as "the finest score I've written up to now." It combines his through-composed, operatic style with closed, pop-influenced musical numbers and puts the German religious/chorale tradition together with modern vocal and dramatic writing. A masterpiece.

I have not been an unqualified fan of the work of either Ute Lemper or John Mauceri, but their new recording of The Seven Deadly Sins does nothing less than put it at the top of the Weill hit list. This is not the "original" but rather a version for low voice made by one Wilhelm Brückner-Rüggeberg for Lotte Lenya after Weill's death (it puts the original soprano part in pure chest-voice pop range). But it suits Lemper as the two Annas from Louisiana (one a singer, one mainly a dancer). The upside-down morality tells us what it takes to make it in a dog-eat-dog world—and from a wom-an's point of view. The male quartet which plays the two Annas' family-is exquisitely and simultaneously fatuous and menacing as they egg Anna I and Anna II on and on again with pious and hypocritical moralizing. The tone, sweet and nasty, is perfect

Mauceri and the RIAS Berlin Sinfonietta project the symphonic dimensions of this work with remarkable energy and forward drive. Perhaps the outstanding quality of the performance is the intense, exquisite phrasing, which runs from the powerful, insinuating solos of Lemper (low-voice edition or no, she really sings the part) to the barber-shop ironies of the quartet to the truly rousing orchestral passages. This is a sophisticated piece about the journey and corruption of innocents (and innocence), and this performance and recording carries us forward-sweetly and toughly-at every moment. It is, we can hear, one of the great musical journeys of the century.

I have neglected the Songspiel partly because it is more of a known quantity, partly because the otherwise excellent performance here lacks a bit of the extra energy and distance that the piece needs. The levels of involvement and dynamic *espressivo* that makes *The Seven Deadly* Sins work perfectly blunts the razorsharp edges of the early Mahagonny. Still, even slightly softened, this is a deeply thought and finely realized companion performance, and it is fascinating to see and hear, side by side, the similarities and differences between the two. *Eric Salzman*

WEILL: The Seven Deadly Sins; Mahagonny Songspiel. Ute Lemper (vocals); Helmut Wildhaber, Peter Haage (tenor); Thomas Mohr (baritone); Manfred Jungwirth (bass); Susanne Tremper (soprano); Jeffrey Cohen (piano); RIAS Berlin Sinfonietta, John Mauceri cond. LON-DON © 430 168-2 (66 min). ment. Unlike Riccardo Chailly in his Concertgebouw reading for London, Haitink does not let the "Alma" motive emerge from a wash of sound but places it very distinctly within a firmly stated harmonic context. The Berlin Philharmonic's performance is a dare-all affair for strings and brasses alike. Even by Karajan's standards Haitink has these musicians playing well above their heads. The epilogue is the most blackly despairing I have yet encountered, and the final A-minor chord is soul-shattering. Clearly, this recorded performance ranks with the ones by Karajan, Tennstedt, Bernstein, and Horenstein.

In the Songs of a Wayfarer, which fill out the second disc, Jessye Norman's vocal delivery seems a bit ripe for the first two songs, but she is in her element with the near-operatic passions of the third. She takes the final song, one of heartbreak and resignation, at a daringly slow tempo, and even if you don't agree with the somewhat mannered interpretation, you'll be bowled over by the pure vocal magic. D.H.

MENDELSSOHN: Violin Concertos in E Minor and D Minor (see Best of the Month, page 65)

MUSSORGSKY (arr. Ravel): Pictures at an Exhibition. MUSSORGSKY (arr. Rimsky-Korsakov): Night on Bald Mountain. RAVEL: Valses Nobles et Sentimentales. New York Philharmonic, Giuseppe Sinopoli cond. DEUTSCHE GRAM-MOPHON © 429 785-2 (67 min).

Performance: Resplendent Recording: Handsome

Giuseppe Sinopoli has the New York Philharmonic playing at the very top of its form here—and not in Avery Fisher Hall but in the wide-open spaces of Manhattan Center (the production team seems to have tamed its hitherto obtrusive reverberation).

In its emphasis on sharp delineation, Sinopoli's Pictures is an orchestral counterpart to Mikhail Pletnev's fascinating Virgin Classics recording of the original solo-piano score (also reviewed in this issue). The opening "Promenade" is on the deliberate and thoughtful side but graced by splendid golden sonority from the Philharmonic brass. The central episode of "Gnomus" is more than usually spooky, and the saxophone solo in "II Vecchio Castello" is elegantly melliflu-ous and dreamlike. The "Bydlo" oxcart episode, with some wonderful tuba work, is massive almost to the point of menace. The "Unhatched Chicks," in contrast, are utterly endearing. "Limoges" is an exercise in blazing virtuosity. In the "Catacombs" the low brass are at their very best in the passage leading up to the plangent trumpet solo and in the mysterious episode of the glowing skulls. The highlight of the "Hut on Fowls' Legs" is the bridge-bowing effect toward the close-the best I've heard it done since Rafael Kubelik's



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landmark 1951 Mercury recording. Solemn awe is the hallmark of "The Great Gate of Kiev" under Sinopoli's batonquite different from the usual extroverted, festive treatment but in its own way mighty impressive.

The Rimsky-Korsakov version of Night on Bald Mountain comes off with ample force throughout its main section, but what makes this performance special is the superb realization of the long atmospheric epilogue, wherein the solo clarinet and flute truly do themselves proud. Ravel's feline sequence of waltzes makes for delectable listening, and again the Philharmonic players outdo themselves in coyness and delicacy, but compared with readings by the likes of Charles Dutoit or Ernest Ansermet, some may find Sinopoli's on the mannered side. DH

MUSSORGSKY: Pictures at an Exhibition, TCHAIKOVSKY (arr. Pletnev): Sleeping Beauty, Op. 66 (excerpts). Mikhail Pletnev (piano). VIRGIN () 91169-2 (64 min).

Performance: Colorful Recording: Good

Mikhail Pletnev's treatment of Mussorgsky's famous piano suite, like Horowitz's two memorable (but out-of-print) versions on RCA, is not for the literalminded. His characterization of each piece is sharp and colorful, thanks to a remarkable command of both touch and pedal. "Gnomus" is marvelously articulated at the start and moves to a superbly sinister middle section. "Il vecchio castello" gets quite the most poetic realization I have heard, remarkable in the subtle nuance achieved. The "Bydlo" oxcart movement is rather on the fearsome side, and Pletnev lets the pedal resonance carry over into the brooding "Promenade" episode that follows. The "Unhatched Chicks" and "Polish Jews" segments are done with great humor.

Pletney evidently views the "Catacombs" episode, with its mysterious and lamenting epilogue, as the very heart of the work. In "The Hut on Fowl's Legs' and "The Heroes' Gate at Kiev," all-out virtuosity is the approach. The whole piece comes off as a spectacular listening experience.

The eleven excerpts Pletnev has arranged from Tchaikovsky's Sleeping Beauty ballet don't exactly replace the resplendent orchestral sounds of the original, but in terms of the piano, everything works quite effectively-even brilliantly in the case of the elaborate "Introduction." I also like the characterization of the wolf in the "Red Riding Hood" movement. The microphoning of the piano is on the close side, probably all to the best given that a church was used for the recording. The resulting sound is rich and full-bodied. D.H.

RAVEL: Valses Nobles et sentimentales (see MUSSORGSKY)

TCHAIKOVSKY: Sleeping Beauty, excerpts (see MUSSORGSKY)

VERDI: Aïda. Aprile Millo (soprano), Aïda: Placido Domingo (tenor), Radamès; Dolora Zajick (mezzo-soprano), Amneris; James Morris (baritone). Amonasro; Samuel Ramey (bass), Ramfis; Terry Cook (bass), King of Egypt; Hei-Kyung Hong (soprano), High Priestess; Charles Anthony (tenor), Messenger, Metropolitan Opera Orchestra and Chorus, James Levine cond. SONY CLASSICAL @ S3K 45973 three CD's (145 min).

Performance: Respectable Recording: Good

This recording, the first of several by the Metropolitan Opera under James Levine projected for the Sony Classical label, has nothing "wrong" with it; it merely fails to add any interpretive freshness to Verdi's familiar work. The clarity of the sound is to be commended, and there is a careful balance of soloists, chorus, and orchestra.

Much of Aprile Milo's singing here is of a high order, and "O patria mia" and the Tomb Scene illustrate the soprano at her best. She is, however, also capable of explosive attacks on high notes and, on occasion, of poor articulation. Her real insufficiency, however, is in her sense of character; most of what she sings is correct and tasteful, but the sum does not yield a memorable Aïda

The same must be said of Placido Domingo's Radamès, a role he has recorded many times. He sings with his customary taste and musicality, but frequently his voice sounds less than fresh, and in some passages his characterization lacks the necessary intensity; the Act III duet with Aïda, however, shows him at his best. James Morris fares better as Amonasro. Indeed, his is the best vocal performance in the recordingunforced, well phrased, dramatically involved. He dominates each scene in which he appears.

Dolora Zajick is to be complimented for her strength of characterization in the dramatic, jealousy-ridden episodes, but she projects little of the sensuality that Amneris is all about. And I miss throughout the vocal velvet that is so important in, for example, the thrice-repeated strain, "Ah! vieni, amor mio" (Act II), which is the quality essential to Amneris's delineation in all but the final encounter with Radamès. As Ramfis, Samuel Ramey pours out stentorian, furry tone and occasionally disappears from hearing in his lower tessitura. Terry Cook provides an effective King of Egypt, and the other soloists acquit themselves very well.

The Metropolitan Chorus sings admirably, and the orchestral playing is splendid, but more trenchant performances of the opera will be found in a number of earlier recordings. R.A.

ZORAN: Cartoon (see BRITTEN)

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R · E · C · O · R · D

by Maryann Saltser & Robert Ripps

HEN word got out that legendary rhythm-andbluesman Taj Mahal was back in the recording studio, it seemed like everybody want-ed a piece of the action. "Like Never Before," his Private Music debut, features a diverse group of guest artists, including Hall and Oates, the Pointer Sisters, rapper D.J. Jazzy Jeff, and the pianist Dr. John. With the support of these peers, Mahal was encouraged to go in some new musical directions, resulting in what he feels is "some of the jamminest, slamminest music I've ever made."

Taj Mahal got his start back



Taj Mahal: the jamminest

in the Sixties, teaming up with Ry Cooder to form the cult blues band the Rising Sons. Later, he wrote the memorable soundtrack for the film Sounder, and he was instrumental in bringing the Langston Hughes/Zora Neale Hurston play Mule Bone to Broadway. Along with Miles Davis and John Lee Hooker, he was nominated for a Grammy this year for his work on the soundtrack of Dennis Hopper's film *The Hot Spot*, and currently he's on the big screen in *Bill & Ted's Bogus Journey*, the sequel to *Bill & Ted's Excellent Adventure*.

ECORDINGS on the Soviet R Melodiya label, one of the world's largest, are now being released on CD, thanks to completion of the first CD pressing plant in the U.S.S.R., and they will be distributed in the U.S. exclusively by Koch International. Melodiya already has a classical catalog of 145 titles on CD, with a vast library of older recordings to draw from, and a wide selection of jazz and ethnic-music CD's will be released soon. Koch International is planning to release twenty-five Melodiya CD's a month until the entire catalog is available. The first release, earlier this summer, featured Mozart violin sonatas with Oleg Kagan and Sviatoslav Richter, Chopin piano works with Evgeni Kissin, Mozart and Brahms from the Borodin Quartet, and Russian works by the pianist Mikhail Pletnev, the conductor Evgeni Svetlanov, and others.

HE Nitty Gritty Dirt Band turns twenty-five this year. To mark the occasion, Capitol Records in Nashville has released "Live to Five," the band's twenty-fourth recording and its first live album in fifteen years. Recorded last March in the historic Red Deer Theatre in Alberta, Canada, the sixteen-song set features highlights from three days of sold-out performances, including such longtime favorites as Mr. Bojangles, Make a Little Magic, Dance Little Jean, and Baby's Got a Hold on Me. The album's producer, T-Bone Burnett, also got into the act, joining the band onstage for its trademark encore, Will the Circle Be Unbroken, which it first recorded for the 1972 album of the same name. Last year's follow-up to that land-



sociated with Yes album jack-

and the American-born pianist

and composer Keith Jarrett

transcend categories and boundaries, both geographi-

cally and musically. Petri's

repertory ranges from the ear-

ly Baroque to the avant-garde,

and Jarrett, who got his jazz

education from Art Blakey,

among others, has broken new

ground in contemporary mu-

sic with his extended improvi-

sations and his formal compo-

sitions. Their first recorded

collaboration finds them clos-

er to Petri's home turf with a

disc of Handel's Sonatas for

Recorder and Harpsichord on

RCA Victor Red Seal, for

which Petri now records ex-

bèque left their native France

this summer for appearances

at music festivals across the

U.S., from Mostly Mozart at

Lincoln Center in New York

HE piano duo of sisters

Katia and Marielle La-

clusively.

HE Danish-born recorder

virtuoso Michala Petri

ets, is doing the cover.

The Dirt Band: still unbroken

mark recording, "Will the Circle Be Unbroken, Vol. 11," earned three Grammy awards.

EUDING days at last behind them, members of the rock group Yes reunited this year for a new album, "Union," and a world tour. "This 'union'," said lead singer Jon Anderson, "is something that I've felt very strongly about for some time."

The timing is impeccable. too, as Atlantic has just re-leased "Yesyears," a four-CD boxed set spanning the band's entire career. In addition to such classic tunes as Roundabout and Owner of a Lonely Heart, the set contains previously unreleased demos, outtakes, rare stereo mixes, and even one never-beforeheard song, Money. Because of the use of original master recordings (as in Atlantic's Led Zeppelin retrospective), the overall sound quality of "Yesyears" promises to be noticeably superior to that of prior Yes CD's. And the artist Roger Dean, whose surrealistic images have long been as-

Yes: now they are eight



/ DILTZ/GARY GURLE

to the Hollywood Bowl, with stops in Cincinnati and Ann Arbor along the way. Best known to American record buyers for their spirited interpretations of Gershwin and Bernstein, the Labèques are now delving further into American jazz. In their latest recording, "Love of Colours" on Sony, they perform works by Thelonious Monk, Chick Corea, and Miles Davis, all arranged by the record's producer, the guitarist John McLaughlin.

ELOS Records' "Great American Composer" series got off to an impressive start two years ago with a recording of two Howard Hanson symphonies. That disc,



Petri, Jarrett: partners

which received three Grammy nominations and a STEREO RE-VIEW "Record of the Year" Award, stayed on the Billboard Classical chart for forty-one weeks. A second volume of Hanson followed in 1990, and this summer is bringing the release of a third volume, featuring the Symphony No. 4. As with the earlier releases, the driving force behind the project is the conductor Gerard Schwarz. Considering the indefatigable Schwarz's music directorship of both the New York Chamber Symphony and the Seattle Symphony (his summer jobs include directing the Mostly Mozart and Waterloo Festivals), it is especially appropriate that both ensembles have been employed in this groundbreaking cycle. Schwarz and Delos have also recorded

DELOS



Labèques jazz it up

works by the American composers David Diamond, Walter Piston, Charles Griffes, and Deems Taylor as well as a Barber/Gershwin/Bernstein disc.

oxette, the Swedish rock duo whose recent single, Joyride, is a No. 1 hit worldwide, has been given the ultimate seal of approval: a postage stamp bearing their features. On October 5, the Royal Swedish Mail will release the new stamp, which has a value of 25 pence, the cost to mail a standard letter in Scandinavia. Subjects of the other current Swedish stamps are Alfred Nobel (inventor of dynamite and founder of the Nobel Prizes) and the King of Sweden, When Roxette was asked for a reaction to the philatelic recognition, the duo's guitarist, Per Gessle, said simply, "It feels good to have all of Sweden licking our behinds." Gessle and Marie Fredriksson, the duo's vocal-

Schwarz: all-American

ist, started a world tour in the U.S. this summer.

RATO RECORDS is introducing two new midprice series in September. The Hommage series will spotlight renowned artists. First up will be the cellist Paul Tortelier with three discs, one each of works by Vivaldi, Bach, and Debussy and Ravel. The Libretto line is devoted to reissues of operas and kicks off with seven titles ranging from Purcell's Dido and Aeneas to Dukas's Ariane et Barbe-Bleue. As a sneak preview in early August Libretto offered no less than Prokofiev's epic War and Peace conducted by the composer's close friend and compatriot Mstislav Rostropovich. The conductor's wife, Galina Vishnevskaya, sings Natasha, a role she originated at the world première of the final, complete version of the opera at the Bolshoi in 1959, before she and her husband left Russia.

GRACENOTES. Rykodisc, the largest of the few remaining successful American independent labels, has acquired Hannibal Records, whose catalog includes nearly every album by Richard Thompson as well as a substantial amount of English folk music and world music.... RCA Victor continues to reissue treasures from its vault of historic **Toscanini** recordings, and next March "The Complete Toscanini Collection," on eighty-two CD's, will be issued in a limited edition in honor of the 125th anniversary



Roxette: Take a letter!

of the maestro's birth. In the E meantime, a budget-price Toscanini "sampler" CD, featuring such works as Ride of the Valkyries, the "Leonore" Overture No. 3, and excerpts from La Bohème, will be available for a limited time.... The Naird Award for the best independent heavy-metal album of 1990 was given to "Blackface in Bondage" by the Slappin' Mammys on the Performance/Bizarro World label. It's a collection of tunes associated with Al Jolson performed in the style of Judas Priest and Metallica. ... Two thousand autograph seekers turned up at a São Paulo, Brazil, record store recently for a signing party starring the Ramones, who happen to be major Latin American stars. "We're up there with Madonna and people like that," noted lead singer Joey Ramone.



Nip 'n' Tuck

ALK to people over age thirty, and chances are they will express outrage over the current pop-music scene. The dance-pop idiom, to hear them tell it, is pure musical fraud. At best, smash recording artists like Paula Abdul, Milli Vanilli, and Vanilla Ice are clearly much better dancers than musicians. To watch them vault to the top of the music charts is a tragedy indeed. Even worse, some of these singers are not even doing their own singing. The Milli Vanilli duo, after winning the Grammy for best new group one year, was exposed for lip-syncing the next. What's going on here?

What's going on is business as usual. Pop music has long been a largely manufactured product, mixing equal parts ability and production. There are certainly some colossally talented pop musicians, and some not so talented. To help close the gap, a number of tricks have become part of the trade. For example, for many albums, a competent, anonymous singer is hired to record "guide tracks." This usually takes about an hour. Then the star appears and spends days mimicking the guide track, copying the musical expression of the anonymous singer.

The vocals are usually recorded on a number of tracks, and the final vocal line is assembled by picking and choosing good phrases as needed to complete the composite. Meanwhile, a number of standard signal-processing techniques are employed to cover vocal deficiencies. In addition to

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SIGNALS

by Ken C. Pohlmann

equalization and reverberation, vocals are often doubled—that is, run through a digital delay line to introduce a slight time shift, or recorded twice and mixed together. The result is a fuller-sounding voice. In short, pop studio recordings are about as natural as Cheez Whiz. The ingredients of liveperformance recordings, like those of wieners, are something you don't even want to think about.

Well, you say, I guess pop music has pretty much been corrupted by technology, but what's the difference? The music is just commercial fodder anyway. Thank goodness that real music, like classical music, is free of such duplicity.

Well, think again. That symphony you're listening to has as many pieces as an Eiffel Tower made of Legos. A typical classical music recording has well over a hundred edits. I've seen master tape recordings of albums with so much splicing tape I could hardly see the magnetic tape underneath.

In fact, classical music, too, has long relied on tricks. The stories are legendary. There was a certain famous soprano recording Tristan und Isolde who couldn't hit the high C's in Act Two. Another soprano was stationed right behind her in the studio, and when the problem passage came along, the second singer stepped forward and hit the high notes. In another example, try as he might, an aging virtuoso pianist couldn't quite play a difficult passage in a Schumann piece. The producer found the passage in an unfinished recording of the same piece, recorded years before, in a different hall, with a different piano. By adding equalization and reverberation, he was able to splice the old passage into the new recording, and everyone was happy.

Well, okay, you say. So classical musicians take advantage of technological opportunities. Nothing wrong with that. And maybe you're right. But you should also know that recording techniques are changing the way an artist records. For example, in preparing for a recent recording session, a famous brass group divided each musical selection into four- and five-bar chunks, then went into the studio and played all the pieces one chunk at a time. In this way they stayed fresh, and when the chunks were spliced together, the result was a superhuman-sounding brass performance. In another example, a famous flutist similarly recorded in small chunks, then edited out the breaths to create what he called "superbreaths"—long phrases of incredible virtuosity. Anything's fair game, especially since albums don't specify the number of edits they contain.

Thanks to digital audio editing systems, music can be spliced and diced just like the words coming out of my word processor. The system can cut, paste, copy, replace, reverse, trim, invert, fade in, fade out, smooth, loop, mix, merge, change gain and pitch, crossfade, equalize, and compress and expand time. A bit flat on that note? Just click on it and nudge it up a little. Wrong note? Find the same note somewhere else and copy it over. Late entrance on the cadenza? Just trim the pause a little. Held a note too long? Cut out a few milliseconds.

If things like that sound dishonest to you, then virtually every contempo-

Digital audio editing systems can cut, paste, copy, replace, reverse, trim, invert, fade in, fade out, smooth, loop, mix, merge, change gain and pitch, crossfade, equalize . . .

rary recording you own is guilty. Even a so-called live recording is probably a composite of several live performances edited together. Much has been said about the growing virtuosity of today's classical recording artists, but some of the praise must go to their producers and engineers and to their clever techniques. Thanks to the talent of artists and technology, you rarely hear a wrong note any more.

I guess that's good. But next time you laugh at Milli Vanilli's lip-syncing problems, remember that your own classical music collection is filled with edits. Just like this column. Koss Pro/4XL Stereo-

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