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Best Products of 1993, and the only audio product chosen.

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Cover

The six floor-standing speakers in this month's showdown: from left, the Klipsch KG-3.5, DCM TF-400 Series Two, KEF Q30, Paradigm 7se MkIII, Infinity RS 525, and Advent Laureate. How do they compare? See "Stand Up and Be Counted," beginning on page 54.

Photograph by Roberto Brosan

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Stereo Review.

EQUIPMENT

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Stand Up and Be Counted

Comparison tests of half a dozen floor-standing speakers that won't deplete your wallet or your living space • by Tom Nousaine

Quiet!!! How to keep the music in and the noise out of your listening room • by Michael Klasco

MUSIC

Where Have All the Tenors Gone? ...

Pavarotti and Domingo are approaching the end of their singing careers. Now what? • by Jamie James

Best Recordings of the Month

Neo-punk from Elvis Costello and the Attractions, Sam Phillips's "Martinis" with a Lennon twist, superb performances by the Vogler Quartet, and James Levine's world-class MET Orchestra



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V Page 82



BULLETIN BY WILLIAM LIVINGSTONE AND BOB ANKOSKO

A/V ACTION

Mitsubishi has unveiled the industry's first 50-inch tabletop projection TV. It's slated to hit stores in August with a \$3,100 price tag.... A number of new Magnavox and Philips TV's include a nifty Remote Locator feature: When you lose the remote control (and you know you will), you simply press the set's power button and the remote chirps for 30 seconds.

.... PBS TV stations across the country are broadcasting a date/time signal that automatically sets the clocks on specially equipped VCR's. Sony, with the introduction of the \$599 SLV-770HF and the \$649 SLV-920HF, is the first company to kiss the notorious flashing 12:00 goodbye.... Fisher has added its popular Studio 24 twenty-four-disc CD changer to four new rack systems priced from \$600 to \$1,000.... Philips says that CD-I-format movies released after May conform to the "White Book" standard, which means they will now be playable on Video CD players, the first of which are due out this fall.

VATICAN CONCERT

On April 7 at the Vatican a landmark Papal concert was held to honor the memory of the six million Jews who were victims of the Nazi Holocaust during World War II. It was the Vatican's first commemoration of the Holocaust and the first time the Chief Rabbi of Rome had been an official quest there. A recording will be issued this month, on CD by Justice Records, of Houston, Texas, and on home video by Rhino Entertainment. The concert, widely considered a significant step in lessening strife between Catholics and Jews, was organized by Gilbert Levine, a Jewish American conductor, who led the Royal Philharmonic Orchestra at the event. The cellist Lynn Harrell was a soloist, and the actor Richard Dreyfuss read

CLASSICAL PUSH

Marketing chiefs at record companies are working overtime to find ways to expand the audience for classical music. Deutsche Grammophon's "Mad About" series with wacky cartoon covers ("Mad About Mozart," "Mad About Piano," etc.) has sold nearly a million cassettes and CD's, and RCA Victor is releasing rock performed by classical artists, as in "Symphonic Music of the Rolling Stones." The Children's Group, of Toronto, combines drama with music to make the classics appealing to the young in "Mr. Bach Comes to Call" and "Beethoven Lives Upstairs." Laserlight has just issued "Power Classics! Classical Music for Your Active Lifestyle," a boxed set of five CD's or cassettes for people who exercise. The covers show youthful athletes doing strenuous things. Instead of music for sensuous moves (Ravel's Boléro, for example), the selections emphasize heroic excerpts such as the "Magic Fire Music," marches, and fast dance steps—the trepak, farandole, and czardas. Inspirational liner notes sav these works "make us feel we can face any task, conquer any challenge with the right music ringing in our ears."

the Kaddish, the Jewish prayer for the dead, to music by Leonard Bernstein. Other works were by Bruch, Beethoven, and Schubert.

LONG LIVE THE KING

Cinema experts predict that the thirty-second full-length animated feature from Walt Disney Pictures, The Lion King, will be an even bigger success than Aladdin, Beauty and the Beast, or The Little Mermaid. The soundtrack for The Lion King was issued on CD and cassette shortly before the film's release on June 15. Included are five songs by Elton John with lyrics by Tim Rice. Among the performers (in addition to John) are Jeremy Irons, Cheech Marin, Robert Guillaume, and Whoopi Goldberg. Hit pickers have singled out Can You Feel the Love Tonight as the best song.

NEW NATIONWIDE REPAIR NETWORK

Looking for a shop to fix your ailing electronics gear? By the end of the year, Radio Shack says, all of its 6,600 outlets will provide out-ofwarranty repair service for a variety of major-brand home electronics equipment, including stereo systems and components, VCR's, and personal computers. All repairs will be backed by a ninety-day guarantee, and "most repairs should be completed in fifteen days or less," according to the company. For more information, call 1-800-482-6399.

ROAD WATCH

Velodyne is developing a line of servo-controlled car subwoofers that it hopes to market under the Velomotive moniker in the "near future." The first will be a 12-inch driver said to deliver "very high output with ultra-low distortion."

MUSIC NOTE

Engines that pull trains through the recently opened underwater Channel Tunnel that links England and France are being named after famous opera singers. The first carries the name of the tenor Luciano Pavarotti. Can the Placido Domingo and the José Carreras be far behind?

PRICE FIX

JVC has dropped the price of its X'Eye CD-based multimedia system from \$499 to \$399.... Philips has lowered the prices of two DCC components, the DCC900 home recorder, which drops to \$599 from \$799, and the DCC130 portable player, dropping to \$399 from \$549.



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The Premier Opt al Digital Reference System is the result of that pursuit. It is simply the finest system of advanced, integrated audio components ever crafted for the automobile. But more importantly, threpresents what is possible when a company dedicates itself to a quest for the absolute best.

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t's not surprising that Pjoneer would go to such lengths to realize a dream Because Pionper wants the same thing from a čar entertainment system that you do. Sound that stirs the emotions. And now that Pioneer has realized its dream of making the Optical Digital Reference System, it's time for you to realize your dream of experiencing the ultimate car audio system for yourself.

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LETTERS

Digital Chaos

David Ranada's well-written "Digital Chaos" in May was the final blow to what should have been digital heaven for amateur recordists. First there was the unnecessary near death of DAT. Then there was the birth of MiniDisc, which has been miniaturized beyond common sense and is not quite as good as digital should be. And at the same time there was the revival, from a forthcoming well-deserved retirement, of an obsolete tape format by a clever piece of technology (DCC) that leaves us with all the problems of tape as a recording medium. Now we learn that the perceptual coding built into both MD and DCC makes these formats useless for dubbing, for editing or mixing down from a master tape, and even for recording off the radio (which itself will be digital before long).

What we need is very simple: a recordable compact disc. No new formats. No old formats prolonged beyond their time. And no perceptual coding. Just *one* format for both prerecorded and homemade recordings. I'd rather wait a few years for the legal and copyright issues to be worked out than use half-baked compromise formats. We're talking about the standard we'll have to live with for the next decade or more. It had better be right. ANTHONY C. LUNN Princeton, NJ

Hams and RFI

n "A Ham Next Door" in May's "Audio Q&A," Ian Masters placed most of the responsibility for radio-frequency interference (RFI) from amateur radio broadcasts on the ham operator. The FCC has ruled, however, that an amateur radio operator is within his or her rights to operate provided the station is properly assembled, is running within legal power limits, and has had a low-pass filter installed if needed. The responsibility is thus shifted to the audio/ video industry and consumers who buy its products, which are often poorly shielded JOSEPH H. WEBSTER against RFI. Jacksonville, FL

Assuming that the radio amateur is operating within the frequency ranges and power levels allowed by his or her license (which is a very reasonable assumption if a commercially manufactured transmitter is being used), a neighbor's RFI problem is certainly not the radio amateur's responsibility. Rather, the fault is in the neighbor's audio equipment. In my twenty years as an electronics technician, I've learned that much, if not most, consumer audio equipment is woefully inadequate in rejecting even moderately strong RF signals. Mark Elson's article "It's Unpacked. Now What?" in May gives some excellent advice for tackling the kind of RF interference problem Ian Masters discussed in his "Q&A" column in the same issue. Mr. Elson says that "the trick is to identify the source and then isolate the point of entry into your system," but he doesn't elaborate on how one might go about that. A technique that often works well is to disconnect *everything* from the amplifier or receiver except the speakers, then listen for interference while the radio amateur is transmitting. If interference is audible, disconnect the speakers and listen through headphones.

No interference? Then the speaker leads are the culprit (or one of the culprits). A 0.01-microfarad capacitor connected between each speaker terminal and the metal chassis of the amplifier or receiver will often entirely cure the problem.

Interference? If you're lucky, it's getting in through the power line, and you may be able to head it off with a plug-in RFI filter. If you're not, then the amplifier or receiver is so poorly shielded that the most sensible thing might be to replace it.

Now begin reconnecting the other components in your system one by one. First connect the cable, then set the input selector to that input and listen for interference. Interference? Try reorienting the cable, neatly rolling up the slack, and twisting the plugs around in the jacks at both ends. As a last resort, try a more upscale cable. No interference? Turn on the power to the source component. Interference? Try a plug-in RFI filter on the component's power cord. No interference? Plug in the next component and continue the process.

Obviously, having the cooperation of the radio amateur will make this procedure a lot easier. And you'll be a lot more likely to get that cooperation if you approach the operator from the standpoint that you have a problem with your equipment, not a problem with his or her radio transmissions.

AL LOTZE Brookdale, CA

Laserdisc Update

In his article on Home THX (April), Tomlinson Holman said that new laserdisc players would be needed to take advantage of Dolby's new digital format. When will they be available? Should I buy a laserdisc player now, or wait for the real goods?

In the same issue, David Ranada mentioned Reference Recordings' "A Video Standard" laserdisc. How can I get a copy of that and the THX "Wow!" demo/setup disc I hear so much about? ANDY HERZIG Toledo, OH Our best guess right now is that laserdisc players with Dolby Surround Digital capability will be available sometime next year. "A Video Standard" is available from many laserdisc dealers, and you can also order it directly from Reference Recordings (P.O. Box 77225-x, San Francisco, CA 94107; telephone, 1-800-336-8866 [toll-free] or 415-355-1892). The only way you can get "Wow!" is to huy Home THX equipment; it is not available separately.

Who's a Wuss?

Regarding Steve Schwartz's assessment, in "How to Make Good Tapes" (March), of people who tape entire LP's, a number of us tape symphonic works and operas to get rid of annoying side breaks. Unless done for purposes of passage-by-passage comparison, only a "wuss" of some kind would tape $3\frac{1}{2}$ minutes of one performance, 5 minutes of another, and so on.

> LEROY W. SOUTHERS, JR. Meredith, NH

Learning the Lingo

Where can I get a good book on audio terminology? I already have more than one reference book on electronics, but I can't find many of the terms used in STEREO REVIEW in any of them. RICK SMITHSON Burbank, CA

Understanding Audio & Video, available from Pioneer for the asking (while supplies last), includes explanations of all the terms used routinely in STEREO REVIEW; call 1-800-746-6337. Our annual Stereo Buyer's Guide, which comes out in the fall, also includes a glossary of audio terminology. And the latest edition of the Consumer Electronics Product Terminology Dictionary is available for \$4.50 from the Electronic Industries Association, Consumer Electronics Group, 2002 Pennsylvania Ave. NW, Washington, DC 20001-1813; telephone, 202-457-4986.

Correction

n June "Letters" we erroneously stated that all DAT portables had been discontinued. Sony actually introduced some new ones recently.

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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NEW PRODUCTS

B&K COMPONENTS

Designed for surround-sound and multiroom systems that require power for multiple channels, B&K's AV6000 amplifier is rated to deliver 105 watts each to six channels. It has three pairs of RCA-type audio inputs and a level control for each output; balanced inputs are optional. The AV6000 is said to be capable of driving "typical" speakers of 90-dB efficiency to sound levels in excess of 110 dB. Distortion is given as 0.09 percent at 1 kHz. Price: \$1,298. B&K Components, Dept. SR, 2100 Old Union Rd., Buffalo, NY 14227-2725. • Circle 120 on reader service card



CANON A

Looking more like a prop from a Star Wars movie set than the bookshelf speaker that it is, Canon's 10½-inch-tall S-35 embodies an unusual widedispersion design. Two S-35's are said to produce a soundstage far wider than can be produced by a pair of conventional speakers. The dome-mounted woofer and tweeter fire down onto a curved "acoustic mirror" that disperses the sound. The low-frequency limit is given as 70 Hz. Price: \$400 a pair. Canon U.S.A., Dept. SR, One Canon Plaza, Lake Success, NY 11042. • Circle 121 on reader service card

V SAUDER WOODWORKING

Sauder's Model 960 entertainment center, which has a pedestal base, is said to hold most 27-inch TV's. The 57%-inchwide, 45%-inch-high cabinet has two adjustable component shelves behind a glass door, a pop-out rack that holds forty CD's, and a side storage compartment for VHS tapes. Finish is oak vinyl. Price: \$320. Sauder Woodworking, Dept. SR, 502 Middle St., Archbold, OH 43502. • Circle 122 on reader service card





Canon

AUDIOSOURCE

AudioSource's SW Four subwoofer combines a downward-firing 12inch driver, an adjustable active crossover, and a 150-watt amplifier in a ported cabinet measuring 19% x 12% x 15¾ inches. Rated down to 20 Hz, it accepts both speaker- and linelevel inputs and has two 150-Hz high-pass speaker returns. Price: \$500. AudioSource, Dept. SR, 1327 N. Carolan Ave., Burlingame, CA 94010. • Clrcle 123 on reader service card

NEW PRODUCTS



ABKE DESIGN

CD jewel boxes are cantilevered at a 10-degree angle in the 11/sinch-thick Bakrak storage unit from Abke Design. The wood rack, finished in walnut, natural, or black, comes in two versions, for 125 discs (left, \$69) and 50 discs

(two shown at right, \$49 each). Available factory-direct (plus shipping) from Abke Design, Dept. SR, 1573A N. Milwaukee Ave., Suite 427, Chicago, IL 60622; 312-278-7827. • Circle 124 on reader service card

KLH 🕨

KLH's Model 610/66 speaker system includes two 7¼-inch-tall, two-way satellites and a 9½ x 11½ x 19-inch ported subwoofer with two 6½-inch drivers. The satellite cabinets have integral mounting brackets and are made of black aluminum; the bass module is finished in black vinyl. System bandwidth is given as 45 Hz to 20 kHz. Price: \$350. KLH, Dept. SR, 11131 Dora St., Sun Valley, CA 91352.



PROTON

Proton's AP-2000 preamp features six stereo inputs, a subwoofer output with a switchable 75/150-Hz crossover, a Bass EQ button for use with compact speakers, separate record and listen

selectors, and a high-gain phono section. All connectors are gold-plated. Price: \$300. Proton, Dept. SR, 16826 Edwards Rd., Cerritos, CA 90701. • Circle 126 on reader service card



COUSTIC

Coustic has two new factoryreplacement 6 x 9-inch car speakers: the two-way HS-92v (left, \$95 a pair), featuring a coaxially mounted 2¼-inch cone tweeter, and the three-way HS-93v (right, \$110 a pair), which adds a ½-inch dome tweeter

to the coaxial configuration. Both models require 2¾ inches of rear clearance for installation and are rated to handle up to 90 watts of power. Coustic,Dept. SR, 4260 Charter St., Vernon, CA 90058-2596.

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VIDEO

Go Video's GV-3090WS is a unique dual-well VCR with two four-head VHS Hi-Fi recording decks, a Dolby Pro Logic decoder, and a 900-MHz wireless transmitter that sends the surround signal to a pair of

powered two-way speakers (included). The transmitter's range is given as 150 feet. Price: \$1,599. Go Video, Dept. SR, 14455 N. Hayden Rd., Suite 219, Scottsdale, AZ 85260-6949. • Circle 128 on reader service card



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NEW PRODUCTS

POLK AUDIO

Polk's AB705 in-wall speaker combines a 6½-inch woofer and a 1-inch tweeter in a 7½ x 11-inch frame. Installation requires a 6¼ x 9¾-inch cutout and a rear clearance of 3¼ inches. The lowfrequency limit is given as 32 Hz and maximum power handling as 100 watts. Price: \$400 a pair. Polk Audio, Dept. SR, 5601 Metro Dr., Baltimore, MD 21215.



LIFT DISCPLAY

Lift's Combo Cabinet holds 160 CD's in eight slide-out trays and 52 cassettes in four trays. The cabinet, made of steel, has rolling casters. No assembly is required. Available by mail order for \$250 plus shipping from Lift Discplay, Dept. SR, 115 River Rd., Suite 105, Edgewater, NJ 07020; 1-800-543-8269.

• Circle 129 on reader service card



ESOTERIC AUDIO USA

The Aliante Model One is cable maker Esoteric Audio USA's first speaker. The Italian-designed system combines a 6½-inch woofer and a metal-dome tweeter in a 15¾-inch-tall cabinet featuring a rear-facing port and 1½-inch-thick red walnut side panels. Bandwidth is given as 45 Hz to 32 kHz ±3 dB, sensitivity as 87.5 dB, and power handling as 100 watts. Price: \$3,000 a pair. Esoteric Audio USA, Dept. SR, 44 Pearl Pentecost Rd., Winder, GA 30680.

• Circle 130 on reader service card





JVC

JVC's RX-815VTN A/V receiver features a digital Dolby Pro Logic decoder, an ambience processor with four settings, a programmable seven-band equalizer, a subwoofer output, and a remote control with "self-illuminating" keys—only the keys that operate the selected source component light up. Power output is 70 watts each to the three front speakers and 20 watts each to the surrounds. Price: \$630. JVC, Dept. SR, 41 Slater Dr., Elmwood Park,NJ 07407. • Circle 132 on reader service card



A MARANTZ

The Slim Series from Marantz includes (from top to bottom): the SR-1020 receiver (\$499), which delivers 45 watts per channel and includes a unified remote control, the CD-1020 CD player (\$399), and the SD-1020 cassette deck (\$399). The 3-inch-tall components connect with a single-wire bus and are controlled by one remote. Marantz America, Dept. SR, 440 Medinah Rd., Roselle, IL 60172.



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NEW PRODUCTS

V ONKYO

The TX-SV414PRO, Onkyo's lowest-price Dolby Pro Logic receiver to date, is rated to deliver 50 watts each to the three front speakers and 15 watts each to two surrounds, or 60 watts per channel in two-channel mode. It features audio/video switching, an AM/FM tuner with forty presets and a six-category memory for classifying stations by format, a sleep timer, and a linelevel subwoofer output. Remote control included. Price: \$400. Onkyo, Dept. SR, 200 Williams Dr., Ramsey NJ 07446.



RING-A-LITE >

For fans of loud music, Ring-a-Lite's namesake product provides a visual cue when the phone rings. The device connects to any phone and lamp. Available by mail order for \$39.95 (plus \$5 shipping) from the Telus Group, Dept. SR, P.O. Box 9362, Kansas City, MD 64133; 816-229-5688. • Circle 133 on reader service card





ASC 🔺

Wall Panels from ASC (Acoustic Sciences Corp.) are said to help create a more natural-sounding listening environment by using an alternating pattern of absorbers and reflectors to control room reflections instead of merely soaking them up. The fabriccovered panels are made of rigid fiberglass and have a notched frame for wall hanging with picture-frame hangers. Each panel weighs 3 pounds and measures 15 x 37 x 1 inches. Available in light and dark gray, black, and quartz. Price: \$399 for eight panels. Acoustic Sciences Corp. (ASC), Dept. SR, P.O. Box 1189, Eugene, OR 97440. • Circle 134 on reader service card



HIMARK

The Sight & Sound CD 100 Plus storage rack from Himark Enterprises is made of highimpact black plastic and holds up to 104 CD's on four fold-down shelves. Each shelf holds one double CD. The rack, which measures 16³/₄ inches wide and 25 inches tall, comes fully assembled with legs that are removable for wall mounting. Price: \$25. Himark Enterprises, Dept. SR, 155 Commerce Or., Hauppauge, NY 11787.



WRIGHT AUDIO

Conceived as an extension speaker, Wright Audio's wallmount Surround-Ambience 10 has a plastic-lined 4-inch recess on top that can hold a plant. Its 11¼inch-square, solid-redwood cabinet contains a 6-inch fullrange driver. Frequency response is given as 60 Hz to 14 kHz ±3 dB. Mounting hardware is included. Available factory-direct for \$165 a pair (plus shipping) from Wright Audio, Dept. SR, 3088 W. 15th Ave., Unit 17, Eugene, OR 97402; 503-343-1413.

How Do You "...The Best Value

Cambridge SoundWorks Introduces New Ensemble, New Ensemble II

Audio Magazine once said that our Ensemble speaker system may be "the best value in the world." Dozens of critics and thousands of customers have applauded our Ensemble and Ensemble II speaker systems. Designed by Audio Hall of Fame member Henry Kloss, (founder of AR, KLH and Advent), these systems have become best sellers by offering very high quality construction and accurate, wide-range music reproduction with precise stereo imaging – all at factory-direct prices, with no expensive middlemen.

We are now pleased to introduce new versions of our Ensemble and Ensemble II systems, as well as our new, ultra-compact Ensemble III system.



The New Ensemble

New Ensemble is an improved version of our original, dual-subwoofer/satellite speaker system. New Ensemble maintains the dual subwoofer design of Ensemble, which allows for maximum room placement flexibility. Placement of bass and highfrequency speakers in a room-and how those speakers interact with the acoustics of the room-has more influence on the overall sound quality of a stereo system than just about anything. New Ensemble's two ultraslim subwoofers give you more placement flexibility than any speaker system we know of, and is most likely to provide the performance you want in the real world ... in your room. Having two, compact subwoofers lets you move them around, experiment, and find that placement that gives you exactly



the sound you want. This is one of the reasons *Esquire* described Ensemble by saying "you get 30 days to return the speakers or keep them, but you'll keep them."

So What's New?

New Ensemble maintains the tonal balance, frequency range and quality of construction of the original. There are two basic differences.

 New "long throw" subwoofer speakers with built-in heat sinks.
 New Ensemble uses the 8" long throw woofer designed for our Powered Subwoofer II. The woofer's extremely long "throw" (almost 1") provides for more linear cone excursion for more accurate bass. A unique integral heat

2. New frequency balance controls. New Ensemble's satellite speakers use the same high quality 1 3/4" tweeter, 4" midrange driver and crossover as the original Ensemble, but with newly designed midrange and high-frequency balance control switches.

sink provides improved power handling.

A two-position midrange switch on each satellite lets you choose the same output in the key 800-1600 Hz octave as in the original – or you can flip the switch to emphasize that octave by 2 dB. The original Ensemble's response was tailored to avoid the "boxy" characteristic typical of many speakers. This results in an "open" sound on large-scale musical works. For some music, switching to the higher output position provides a "warmer" sound that some listeners may prefer.

A second, high-frequency switch has three positions:

A) The same balance as original Ensemble.

B) A 2 dB high-frequency increase.
C) A 2 dB high-frequency decrease.
Rather than affecting tonal balance as does the midrange control, the high-frequency switch can subtly increase the system's "airiness" (Increase) or it can reduce any tendency towards "edginess" (Decrease).

Real Life Performance, Real Value.

In terms of "real life" performance (your music, your listening room), we believe our New Ensemble system competes head-on with speakers selling for hundreds of dollars more. Available factory-direct with black vinyl-clad subwoofers for \$549, or with black-laminate subwoofers for \$629.

The New Ensemble II.

New Ensemble II is an improved version of our best-selling speaker system, Ensemble II. It's more affordable than New Ensemble because it uses one cabinet to house both subwoofer speakers. Its satellite speakers are identical in every way to those used in the New Ensemble, including the new highfrequency and midrange balance controls.



So What's New?

New Ensemble II maintains the overall tonal balance, frequency range, power handling and quality of construction that have made the original Ensemble II one of the country's most popular speaker systems. There are two basic differences. The first is

Improve On In The World"?

– and a new member of the family, Ensemble III.

that its satellite speakers use the same highfrequency and midrange balance controls as our New Ensemble system (see previous description). The satellites also use the same gold-plated 5-way connecting posts as New Ensemble. The second difference involves a redesigned subwoofer cabinet.

New flared subwoofer port. New Ensemble II's subwoofer cabinet encloses twin 6 1/2" long throw woofers mounted in a sealed "acoustic suspension" chamber. They project into a second chamber fitted with a single. flared port. The new port provides smoother air flow, virtually eliminating the generation of any extraneous noise on strong, low bass notes.



"...Beyond Its Price And Size Class

Stereo Review said that the original Ensemble II "performs so far beyond its price and size class that it can be compared only with much larger speakers at substantially higher prices." We believe New

Ensemble II carries on this tradition, clearly outperforming other speakers in its category, including wellknown models that sell for about twice the price. Available factory-direct for \$439.

The Ensemble III

Now you can bring the clear, balanced wide-range sound of Ensemble speakers to a small room. Our new Ensemble III speaker system is ultracompact: a pair of twoway satellite speakers measuring 4 1/2" x 6 1/2" x 3" and one subwoofer

\$40-\$50 Discount Certificate With New Ensemble.

Purchase New Ensemble with vinyl-clad subwoofers before August 31,1994 and get a \$40 Discount Certificate towards a purchase of any item in our catalog. Purchase New Ensemble with black-laminate subwoofers and get a \$50 Certificate.*

\$30 Discount Certificate With New Ensemble II.

Purchase New Ensemble II before August 31,1994 and get a \$30 Discount Certificate towards a purchase of any item in our catalog.*

\$20 Discount Certificate With Ensemble III.

Purchase Ensemble III before August 31,1994 and get a \$20 Discount Certificate towards a purchase of any item in our catalog.*

 * You may not apply the discount to the Ensemble speakers you are buying.

cabinet measuring just 8" x 8" x 15".

Surprising Accuracy and Musical Range at a Low Price.

Compared to our New Ensemble II system, Ensemble III gives up a little in the way of power handling, low bass range, and efficiency. Unlike the "cube" satellite

speakers you'd expect to find in similarly priced systems, Ensemble III's satellites are true two-way speakers with a 3 1/2" midrange driver, a 3/4" tweeter and a crossover. Ensemble III's 6 1/2" woofer uses two separate voice coils (one for each channel) in a cabinet using a special flared port for

smooth air flow. With most record-

ings Ensemble III will sound virtually identical to New Ensemble II. It simply won't play quite as loudly. Its construction quality matches that of our other Ensemble speakers. With a factory-direct price of only **\$329**, Ensemble III is perhaps the best speaker value of all time.

Risk Free, Satisfaction Guaranteed.

All Cambridge SoundWorks speakers are backed by a 30-Day Total Satisfaction Guarantee. So you can audition your speaker

the *right* way – in your home, with no salesman hovering nearby. If within 30 days you're not happy, return your system for a full refund. We even reimburse original UPS ground shipping charges in continental U.S.



The satellite speakers used in the New Ensemble and New Ensemble II include midrange and high-frequency tonal balance

and high-frequency tonal balance controls, and gold-plated 5-way binding posts...



All three Ensemble speaker systems come with 100 feet of speaker wire, a wire cutter/stripper: accessories, and our Guide To Surround Sound.

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In The Mid '70s We Now We've Created

The people who work at Cambridge SoundWorks - including our cofounder Henry Kloss (who also founded AR. KLH and Advent) - have been involved with the concept of home theater from the beginning. In 1969 (years before VCRs and cable TV), Henry Kloss founded Advent, the company that introduced the first home theater audio/ video systems - complete with bigscreen TVs and digital surround sound. We have had an ongoing relationship with the people at Dolby Laboratories, creators of Dolby Surround Sound, since Henry Kloss introduced the first consumer products with Dolby noise reduction over 20 years ago. And now at Cambridge

systems factory-direct,

with no expensive middlemen, you can save hundreds of dollars. We believe the products on these pages represent the

country's best values in high performance home theater components. Audio critics, and thousands of satisfied customers, agree. *Stereo Review* said "Cambridge SoundWorks manufactures loudspeakers that provide exceptional sound quality at affordable prices." *Audio* suggested that we "may have the best value in the world."



Our Center Channel Speakers

we have set a new price-to-performance standard for home theater components. Because we sell carefully matched and tested home theater speaker

Center Channel Speakers

Cambridge SoundWorks manufactures three speakers for use as center channel speakers in Dolby Pro Logic home theater systems. All three are magnetically shielded so they can be placed near a TV or computer monitor. Model Ten-A is a small, affordable twoway speaker. \$75. Center Channel is identical to a





Our Surround Speakers

Cambridge SoundWorks Ensemble satellite (but with magnetic shielding). \$149. Center Channel Plus uses an ultra-low, ultra-wide design that is ideal for placement above (or, with optional support stand, below) a TV monitor. \$219.

Surround Speakers

Cambridge SoundWorks makes two "dipole radiator" surround sound speakers. Dolby Laboratories recommends dipole radiator speakers for use as surround speakers. The Surround has a very high power handling capacity and is often selected for "high end" surround sound systems. Audio, describing a system that included The Surround said "In many ways the surround sensation was every bit as good as far more expensive installations." \$399 pr. The smaller The Surround II is arguably the country's best value in a dipole radiator speaker. \$249 pr.

Our EXO-1 Electronic Crossover



Our Popcorn

SoundWorks

we believe

Created Home Theater. A New Way To Buy It.

Powered Subwoofers

The original Powered Subwoofer by Cambridge SoundWorks consists of a heavy-duty 12" woofer housed in an acoustic suspension cabinet with a 140watt amplifier and a built-in electronic crossover. *Stereo Review* said it provides "deep powerful bass...31.5 Hz bass output was obtainable at a roomshaking level... they open the way to having a 'killer' system for an affordable price." **\$599.** Our Slave Subwoofer





Our Powered Subwoofers

uses the same woofer driver and cabinet, but does not include the amplifier or crossover. It can only be used in conjunction with the Powered Subwoofer. **\$299.** The new Powered Subwoofer II uses a 120-watt amplifier with an 8" woofer. **\$399.**

Our EXO-1 electronic crossover can be used with either of our powered subwoofer systems, or with powered subwoofers made by other companies. Its high pass filters keep strong, low bass signals out of the main stereo speakers, and directs them to the powered subwoofer. **\$299.**

Home Theater Speaker Systems

We have assembled a number of home theater speaker systems that consist of center channel, surround and main



stereo speakers. The combination we show here is our best seller. It includes our New Ensemble subwoofer satellite speaker system (with dual subwoofers), our *Center Channel Plus* and a pair of our best surround speakers, *The Surround*. You could spend hundreds more than its **\$1,167** price without improving performance.

For information on other home theater speaker systems – or on any of the products we make and sell – call 1-800-FOR-HIFI for your free color catalog. Thanks.





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Our 64-page catalog is loaded with components and music systems from Cambridge SoundWorks, Pioneer, Philips, Denon, Sony and others. Because you buy factory-direct, with no expensive middle-men, you can save hundreds of dollars. For example, a Dolby Surround system with Ensemble II speakers, rear speakers, Philips Dolby Surround receiver, CD player and system remote is less than \$1,000. Call today and find out why Audio magazine said we "may have the best value in the world."

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- 30 Day Total Satisfaction Guarantee on all Cambridge SoundWorks products.

The critically acclaimed Ensemble II speaker system by Henry

Kloss. \$430



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The Lowdown on Surround

I have read several times recently that surround speakers should be placed at the sides of the listening area. This comes as quite a surprise. as every surround decoder or A/V receiver I have ever seen has outputs for "rear" speakers. I have my surround speakers in the back of the viewing listening area and have been pleased with the results. Is that not correct?

> JOHN PAUL BLACKWOOD Knoxville, TN

It's true that the surround outputs on most decoders are labeled "rear" even though Dolby Laboratories, developer of the Dolby Surround system, recommends that surround speakers be placed at the sides of the listening area, especially in the case of Home THX setups that use dipole surround speakers. "Rear," in this case, should be taken as meaning "not in the front." Ideally, the surround field should be diffuse enough that listeners cannot localize the speakers. Whatever speaker placement can achieve that goal in your system is the one to use. I have configured my system both ways (side and rear) at various times, and the differences have been pretty small.

Multiroom Amplifier

I have wired my house extensively for sound, as I enjoy music in every room. Speakers playing everywhere at medium volume fill the house with the mood-even my guest bathroom has a pair. In looking for a new amplifier to power my house system. I was drawn to the multichannel capability of an A/V amp, although I'm not interested in a home theater setup. I soon learned, however, that the typical A/V amplifier can't support the sort of setup I have-sound quality goes from adequate to awful. Do I have to buy separate amplifiers, or is there such a thing as an amp with eight channels that is not meant for A/V applications?

DOUGLAS C. BEARDMORE Melbourne Beach, FL

Driving many channels from a single power supply can be a problem if they are all running at high levels, but in surround-sound applications that's less of a concern because some of the channels-the surrounds -tend to be at a much lower level most of the time. Also, you don't say how the speakers were connected to the A/V amplifiers you tried. I would expect most to be fine with one speaker per channel, but if you're trying to run more than one from each, that might be more than many amplifiers can take gracefully. There are some

multichannel amplifiers with adequate power supplies, and they may suit your needs (the eight-channel McIntosh MC7108, for instance, might work well). But except for a possible saving in shelf space, there isn't much advantage in having all your power on a single chassis.

Disappearing Bass

When I play my surround-sound system in the normal two-channel stereo mode, the subwoofer provides more than enough bass. But when I switch to any of the surround modes, the bass nearly disappears. What have I done wrong? **REX MCGEE** Cleburne, TX

My guess is that it's a simple matter of switching your Pro Logic decoder's center-channel mode from "wide" to "normal." In most setups, the center speaker is smaller than the others and thus somewhat deficient in the bass. While Dolby Pro Logic extracts signals that are in phase and at equal levels from the left and right channels and reroutes them to the center speaker, in normal mode it performs this extraction and rerouting only above about 100 Hz. Thus, even when the low bass is virtually mono (as it often will be), it stays in the left and right channels. For systems that use a fullrange speaker in the center, however, Pro Logic's wide (for wideband) mode treats the lowest frequencies like the others and steers them to the center channel when appropriate. If your system is like most, your subwoofer is fed from the right and left channels, not the center, so when you switch to surround mode, the bass is removed from the left and right-and the subwoofer-and fed to the center speaker, which in many cases can't handle it.

Magnets and Music

I've heard that using a wand-type head demagnetizer within 6 feet of recorded tapes could cause dropouts, as could storing them near a television set. Yet I have noticed that the tape-storage areas in many entertainment centers are fairly close to the equipment shelves. Is that safe, or are the NADA PENDIC warnings correct? Niles, IL

Magnetism doesn't usually cause what we normally call dropouts-short gaps Π in the signal caused by missing bits of oxide. Its effect is more subtle, showing up as a reduced overall level, restricted highfrequency response, or increased noise, all of which can affect a whole tape or only

parts of it. It's a form of partial erasure, so you should keep your precious recordings well away from anything with magnets (although 6 feet might be a bit excessive).

In an A/V system, the television and the transformers in power amplifiers generate the most electromagnetism, so storage facilities should, ideally, be at least a short distance from those components. A head demagnetizer is only a problem when it is actually working, but if you use one regularly, it's probably a good idea to store your cassettes away from the tape deck.

Even worse than electromagnetic fields are the fields produced by permanent magnets, so you should make sure your tapes are as far away from your speakers as possible, unless they are shielded (as many A/V speakers today are). And steer clear of any sort of cabinet with magnetic door latches that might come close to your tapes.

Multiple Phones

I have a pair of cordless headphones that receive their signal by infrared radiation. I would like to add one or more pairs of similar phones. Can I use multiple phones with just a single infrared transmitter, or would that degrade the stereo signal or the overall sound quality?

> GONZALO MANRIQUEZ Parral, Chile

Fear not. Virtually any number of headphones can be fed from one infrared transmitter without trouble, just as any number of eyes can watch a television without degrading its picture.

Long-Range FM

I live on a barrier island where the land is level and there are no tall buildings around. I would like to get an indoor FM antenna to pick up stations about 80 miles away. I can't have one on the roof or in the attic. What would work for me?

MARY L. HEALEY Ponte Vedra Beach, FL

A t 80 miles, FM reception can be a problem, particularly if, as in your case, mounting a very high antenna is not an option. Still, I assume that the distance is all over water, so there's nothing to block the signal except the curvature of the earth. If the broadcasting tower is high enough that your ground-level antenna can "see" a bit of the signal, a high-gain antenna might capture enough of it to make it listenable. An amplified antenna may help as well. Either way, you may find that the signal has a tendency to waver sometimes, but that's probably better than no signal at all.

Next of Speaker Kin

I am putting together a home theater system and am ready to buy speakers for it. I already own a pair of speakers, but an audio salesman told me I should use models all made by the same manufacturer in order to maintain the "same sound quality." How important is this? And what happens if you do mix speaker brands? SHANE ROBERSON

East Lansing, MI

As sounds move around on the soundstage, they shouldn't change in tonal character. It's particularly important that the center speaker match the other two front speakers, at least in the midrange and highs; otherwise, dialogue and other things will sound unnatural when the action moves from, say, the center to the side. And when you're listening to a soundtrack in Dolby Pro Logic mode, it's often the center speaker you hear most. The surround speakers are not quite as critical, but if their tonal character differs radically from the others. frontto-back movement of effects will sound very peculiar.

While you can find speakers from different makers that sound similar, it's often easier to choose speakers from one source.

If you have a question about audio, send it to Q&A, Stereo Review, 1633 Broadway, New Yark, NY 10019. Sarry, only questions chasen for publication can be answered.



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SIGNALS by ken c. pohlmann

Rocket Science

any years ago, radio and television broadcasting was strictly a terrestrial affair. Towers built near populated areas sent sound and pictures into people's homes. By transmitting from tower to tower, it was possible to convey programming across the country; networks were formed. The business of broadcasting was well defined. Each local broadcaster knew exactly what his market was and competed only against other local broadcasters. The arrival of satellites, at least initially, did not greatly complicate things. Even though TV and radio programs could be beamed across the world via satellite, competition was still strictly local.

The advent of cable TV changed all that. Cable operators set up satellite receiving stations around the country and passed on a diverse selection of programming to their wired customer bases. Access to thirty or more cable TV channels instead of a handful of local stations spawned a new generation of remote-control-wielding couch potatoes. Cable-TV superstations were formed to deliver programming into millions of homes. And premium channels were created to provide nonstop, commercial-free entertainment in exchange for a monthly fee. As more households became wired for cable TV, fewer people tuned into locally originated broadcasts. But, although satellite distribution made it possible for radio stations to expand their programming base, the commercial backbone of radio remained local.

Then along came the cable-based music services. Digital Cable Radio (DCR) and Digital Music Express (DMX). For a monthly fee, subscribers received a decoding box that gave them access to thirty channels of near-CD-quality music. 24 hours a day. Classical, jazz. blues, hiphop, rock, country, contemporary, and more—all delivered in the frequency space that would be occupied by just *one* cable-TV channel. For the first time, local radio stations had to compete with national, cable-delivered programming.

Now radio and TV broadcasters, as well as the cable companies, will have to contend with the nation's first direct broadcast satellite (DBS) delivery system, a billion-dollar venture that's being spearheaded by DirecTV, a subsidiary of GM Hughes Electronics. As of this writing, the all-digital system was slated for rollout in late May in Arkansas, Louisiana, Mississippi, Oklahoma, and New Mexico (not necessarily in that order). A national rollout is planned for the fall, following the launch of a second satellite, which will bring the system's total channel capacity up to 150.

In addition to lots of channels, including many popular cable networks like the Disney Channel and pay-per-view movies and special events, DirecTV promises near-laserdisc picture quality and CDquality audio. To tune in, viewers have to buy a \$699 Digital Satellite System (DSS) hardware package from RCA which includes an 18-inch satellite dish, a TV-top receiver, and a remote control and pay a monthly subscription fee to DirecTV or United States Satellite Broadcasting (USSB), which also offers programming packages.

Three cable-TV-like programming options will be offered to DirecTV subscribers later this year, but only the \$21.95-a-month Personal Choice I packavailable through DirecTV only in areas where it is not available via broadcast.

A wide array of movies, sports, and special-event broadcasts will be available through DirecTV's Direct Ticket service, which is expected to deliver about forty channels of pay-per-view movies into subscribers' homes; hit films will be available every 30 minutes. DirecTV says that movies, priced from \$1.95 to \$3.95 each, will show up on Direct Ticket before they appear on premium cable-TV services.

Programming originates from a broadcast facility in Castle Rock, Colorado, and is transmitted in compressed digital form (in accordance with the MPEG standard) to the satellite, which in turn beams high-power signals back down to the miniature satellite dishes on earth. The digital signal goes from the satellite dish to the TV-top receiver, which converts it to conventional analog audio and video signals.

DirecTV will present a direct challenge to local over-the-air radio broadcasters when DCR's thirty music channels become available later this year. Suddenly, conventional AM and FM radio, with

n addition to lots of channels, including many cable networks like the Disney Channel, DirecTV promises near-laserdisc picture quality and CD-quality audio.

age is available during the rollout phase. In addition to a number of popular cablenetwork programs like ESPN, the Discovery Channel, CNN, and E! Entertainment, subscribers receive the Disney Channel, a movie preview channel, and one \$3.95 pay-per-view movie credit a month.

When the second satellite becomes operational later this year, the Personal Choice I package will be upgraded automatically to Personal Choice II, which will include thirty Music Choice audio channels from DCR as well as allowing subscribers to choose additional programming services. The Total Choice premium package, which among other things includes two movie credits, will also become available at that time for \$29.95 a month. Network TV programming will be their commercials, reception problems, and other limitations, will seem mighty antiquated next to the sleek, new Music Choice system. About 125,000 households currently subscribe to DCR, but when it is piggy-backed onto DirecTV, that number could very well shoot to a half-million or more in the first year. In addition, with cable and satellite delivery secured, DCR is looking at home delivery over existing telephone lines.

Clearly, the way we receive radio and television signals in our homes is changing dramatically as broadcasters, cable operators, and now direct satellite broadcasters compete for market share. The only constant in all of this is the car. It's still locked into terrestrial-broadcast radio. But the rocket scientists are working hard to change that, too.





linearity (right chann 2dB/vertical div.).

"Nothing less than a steal."

-Robert Harley, Stereophile

There's something in this review of our GDA-600 digital-to-analog converter that the competition doesn't want you to see. Maybe it's the fact that the GDA-600 makes digital formats sound richer and more musical. Or that it has advanced 20 bit conversion architecture and a Class "A" analog output stage. But what they really don't want you to see is that the GDA-600 costs much less than you might expect. For the full review see *Stereophile*, Volume 17, No. 3, (March '94). Or, if your copy has been stolen, give us a call.



CIRCLE NO. 2 ON READER SERVICE CARD



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but well in hand.



The 10th Annual Rodrigues Cartoon Caption Contest

Il hail Ron Haynes, of Nashville, Tennessee! Mr. Haynes is the winner of the tenth Rodrigues Cartoon Caption Contest, and his winning entry is printed under the drawing.

As we did in previous years, in our issue of January 1994 we published a drawing by our regular cartoonist, Charles Rodrigues, and invited readers to submit captions for it. The prize for the one the judges considered to be the funniest is \$100 and the original drawing.

The editors of STEREO REVIEW thank Mr. Haynes and the thousands of others who entered the contest. Entries came from as far away as Stuttgart, Germany; Ramat-Gan, Israel; São Paulo, Brazil; and Quezon City in the Philip-

pines. Across North America they ranged from Siena College Friary in Loudonville, New York, to Mr. Anderson's sixth-grade class at Marshall Elementary School in San Bernardino, California.

We are grateful to our previous winners, who served as judges: Thomas Briggle (Wadsworth, Ohio), Michael Binyon (Weaverville, California), Bruce Barstow (Philadelphia, Pennsylvania), Matthew Mirapaul (Evanston, Illinois). Marc Welenteychik (Richmond, Virginia), Douglas Daughhetee (Birmingham, Alabama), Kelly Mills (Raleigh, North Carolina), Diane Sullivan (New Brunswick, Canada), and Brian Hoffman (New York City).

This year Rossini's *William Tell Overture* edged out Tchaikovsky's 1812, which has been the composition mentioned most frequently in past contests. In addition to the usual big names in audio—Julian Hirsch, Amar Bose, Matthew Polk—the persons mentioned most often this year were President and Mrs. Clinton and Al and Tipper Gore. Madonna disappeared, superseded by Howard Stern, Rush Limbaugh, Nirvana, Pearl Jam, Beavis and Butt-head, and with or without the Raiders—Paul Revere.

Many entries voiced concern about possible luxury taxes on audio equipment, and others expressed worries about new foreign competition ("The Mexicans are coming!"). Some were apprehensive about new technology ("Fiber optics are coming!"), the return of the old ("Quadraphonics are coming back!"), or low-fi formats such as rack systems and boomboxes.

This year's winner, Mr. Haynes, works in the securityelectronics business. A long-time fan of multichannel stereo, he still has quadraphonic equipment from the 1970's, and he



"Remember??? You checked the catalog order-form box for special delivery guaranteed overnight."

wants to install a home theater system. He listens mostly to current popular music and jazz.

If your entry is not among the runners up below, well, better luck next time. We will announce next year's contest in the issue of January 1995. —*William Livingstone*

RUNNERS UP

"You think this looks odd? My wife's on Trigger, and she's got the widescreen." —Ken Alakel, Carefree, AZ

"They're throwing Japanese stereos overboard in Boston Harbor." —Bill Cronquist, Palo Alto, CA

"Honey, that's the ninth time he's gone by.... Maybe you should get involved. —Geoff Knight, Eugene, OR

"Get out while you can! These new homes have no acoustical treatment whatsoever!" —Jason Boesch, St. Louis, MO

"Flee! Grah your tweeters and flee! Ampzilla has returned, and he's out of phase!" —Jim Rolando, Missoula, MT

"My son's moved back home!" —Peter Delasanta, Cranston, RI

"Five minutes until the ten-day trial period ends!" —Jason Williams, Oxford, PA

"Run for your lives! Ross Perot has a new country CD, and he's sending you a free copy." —David Sorenson, Redwood City, CA

"Bring out your dead and your analog."

-Pat Milewski, Blaine, MA



Hurry, all calls and entries must be received by 7/31/94. Good luck!

GRAND PRIZE (1)

A trip for 2 to the 1994 JVC Jazz Festival in Newport, Rhode Island. The 4-day, 3-night trip includes deluxe accommodations, backstage VIP passes, and more. Prize also includes a IVC Home Theater and a Fender[™] Stratocaster. Total approx. retail value: \$12,000.



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3rd PRIZE (1,000)

1994 JVC Jazz Festival t-shirt, and either a pair of Suncloud Sunglasses or a JAZ fashion watch. Total approx. retail value: \$80.



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TECH TALK

Hi-Fi Bargains

o, I am not referring to cut-rate or closeout sales of audio components, which can indeed be (but are not always!) bargains. If you are aware (and who isn't?) of the trends in the global economy, and specifically the ongoing inflation of prices in most of the developed industrial countries, you have probably noticed how the prices of most basic audio productsamplifiers and receivers. CD players, tape decks, speakers, and so forth-have been maintained for a number of years. In terms of constant dollars, in fact, most audio components sold in the United States now cost considerably less than their equivalents of a decade ago. Furthermore, their performance generally far surpasses that of their predecessors, including, in many cases, products that were actually at the state of the art in their day.

Quite apart from global economics (a subject about as familiar to me as the technicalities of high-fidelity audio components would be to the average economist), this situation appears to have its roots in technological advances. That fact was strongly impressed on me during a recent tour of the Matsushita Electric Industrial Company manufacturing facilities in Fukushima, Japan. and a day-long technical seminar for audio-equipment reviewers at the company's Osaka headquarters. (Matsushita products are sold under the Technics, Panasonic, and Quasar brands.)

The thrust of the visit was twofold: to show us the advances in automated (robotic) production techniques that are at the heart of this achievement and to introduce the new Technics audio and video products that are its final result. I believe that my colleagues, as well as myself, came away from this experience with a sense of amazement, bordering on awe in some respects.

The technical features of, for example, the newest Technics audio/video receivers are not the subject of this column (that will come when we review production units). Instead, I will concentrate on one basic engineering problem, how it was solved, and the benefits, both acoustic and financial, to the consumer.

Modern A/V receivers usually include five or more power amplifiers, often with

rather high power ratings; it is not uncommon for such a receiver to provide 400 watts or more of power from its combined amplifier channels. These amplifiers, with their massive heat sinks and power supplies, account for much of the receiver's cost and weight. In addition to creating an undesirably warm cabinet exterior, the receiver's high internal temperature may also shorten its life by causing premature failure of circuit components. And in some installations, it may be difficult to achieve adequate ventilation. Assuming that high power is a must,

Assuming that high power is a must, there are only a few ways to keep heat buildup reasonably low. Extensions of existing methods, such as larger heat sinks and chassis size, are costly and inconvenient and do not answer the objection of excessive cabinet temperature. The ideal answer is higher amplifier efficiency, concentrating its output into audio watts to drive loudspeakers instead of joules of wasted energy to heat up the listening room.

Technics engineers have taken just that approach, developing a high-efficiency amplifier design (a substantially improved version of Class H that they call machines (PanaRobots) are also used for nearly every step of final product assembly. It is amazing to see the amplifier modules being mounted to heat sinks and screwed into place with no human assistance. Technics can now assemble almost any of its home audio products with just a handful of people.

But that seems almost routine (which it definitely is not!) compared with the clean-room power-module assembly. In that area (entered by humans through an "air bath" compartment while wearing special outer clothing and shoes), a row of robots operates tirelessly. Each is larger than a man, with an "arm" whose "fingers" can move in almost any direction and manipulate nearly invisible parts with uncanny precision and control. As a row of small baseplates for the power modules moves along on a belt, the robotic "hands" move down and mount components on them, often faster than the eye (mine, at least) can follow. Some steps cannot be observed clearly without the aid of a magnifying lens or microscope.

The assembly takes place through a succession of robotic operations (people are present only for maintenance purpos-

nnovative design and advanced robotic manufacturing are creating higher-performance audio components at lower prices.

Class H+) that substantially reduces heatdissipation requirements. Furthermore, each pair of outputs, rated as high as 125 watts each, comes from a single compact hybrid module, less than $3\frac{1}{2}$ x $1\frac{3}{4}$ inches and only $\frac{5}{16}$ inches thick, which includes four output transistors, two control transistors, protection and driver IC's (integrated circuits), and several dozen more tiny surface-mount components. This compact amplifier module replaces a large number of discrete components and produces more power at low distortion with less heat dissipation than conventional amplifiers.

Impressive as that is, however, it is overshadowed by the way the amplifier modules are manufactured. They are assembled at the Fukushima plant by robots on a completely automated line. Similar es) until the finished modules emerge at the end of the line. At that point, a test robot makes a complete electrical measurement of the module's performance, listing the various measured characteristics on a CRT display, followed by "PASSED" or "OK" in large letters. During the time I was in this fabrication area, I did not see any failures, nor do I imagine that they occur very often.

The bottom line to this level of automation is the creation (presumably with a satisfactory profit for the manufacturer) of better and more reliable products at lower prices. How low? Would you believe a full-featured 100-watt-per-channel stereo receiver for \$199? And that is in 1994 dollars! Wouldn't it be wonderful if automobiles and houses could match the economic miracles of electronics?
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Linn Majik-I Integrated Amplifier

n its early years, Linn Products was best known for its high-quality turntables, tonearms, and phono cartridges. As the company has grown, however, so has its product line, which now also includes amplifiers, CD players, digital-to-analog (D/A) converters, tuners, loudspeakers, and even a sophisticated multiroom control system.

Linn's products are made at factories in and around Glasgow, Scotland, where the company is headquartered. Although small by the standards of the giants that dominate the audio electronics market, Linn employs some of the world's most advanced manufacturing technology. The circuits for recent electronic products, such as the Majik-I amplifier reviewed here, make extensive use of surface-mount components, for example, and parts are delivered directly to assembly workstations by a fully automated robotic inventory system.

PHOTO:

There are no assembly lines, however. Assembly, testing, and packing of each unit that goes out the door is the responsibility of a single person. Thus, a worker in a Linn factory will normally build a number of complete units each day rather than merely having a hand in the assembly of a much larger number. Linn's outspoken and entertaining founder, Ivor Tiefenbrun, feels very strongly that this "singlestation build" system yields both high-

> DIMENSIONS 12% inches wide, 3% inches high, 12% inches deep

PRICE \$995; \$1,095 WITH PHONO STAGE

MANUFACTURER LINN PRODUCTS, DISTRIBUTED BY AUDIOPHILE SYSTEMS, LTD., DEPT, SR, 8709 CASTLE PARK DR., INDIANAPOLIS, IN 46256 er-quality products and greater worker satisfaction.

An interesting idiosyncrasy of Linn products is that (with one minor exception) each has an unusual name containing the letter k. The new Linn Majik-I is a compact, modestly powered stereo integrated amplifier (Linn calls it a control amplifier) whose numerous novel or unconventional features greatly enhance its overall functionality and ease of operation.

The Majik-I's preamplifier section normally has six line-level inputs. In the phono-option version that we tested, however, one of the auxiliary inputs becomes a phono input, switchable via a jumper on the circuit board for either moving-magnet or movingcoil cartridges. The power amplifiers are rated at 33 watts per channel into 8 ohms and 66 watts into 4 ohms. There are no published distortion or frequency-response specifications for the Majik-I (or most other Linn products, for that matter), reflecting the company's view, not as heretical as it might seem, that many of the usual audio performance specifications have little correlation with the final sound of a music system.

The Maiik-I is smaller than most preamplifiers, to say nothing of integrated amplifiers. It has no knobs, the front panel containing only a power button, a headphone jack, a small display panel, and six control keys. The keys are for muting, volume (up/ down), source selection (stepping sequentially in either direction), and recording source selection, which channels any selected input to the tape-out terminals on the rear apron, independent of the source being listened to. For some operations two keys are used simultaneously. For example, pressing the two volume keys simultaneously displays BAL in the window, after which pressing either one shifts the balance in one direction or the other, displaying numbers from -9 to +9 in the window (0 indicates equal levels from both channels). Similarly, you can switch the speakers off for headphone listening by pressing the two center keys simultaneously. Although such procedures can seem confusing when you just read about them, they are amazingly simple and logical in actual use. The Majik-I is a very easyto-use component.

While any adjustment or selection is being made, appropriate numbers or letters appear in the display window. The instruction manual (one of the best we have seen) is clear and explicit—and even has a section, "Getting Unstuck," that guides the user out of any unexpected situation he might encounter. It is a model of what manuals should be but rarely are (at least in my experience).

The Majik-I's rear apron is well populated with inputs and outputs, all of which are standard RCA-type phono jacks. In addition to inputs for CD, tuner, and phono (or a second auxiliary source), there are two pairs of tape input and output jacks and a pair of pre-out/main-in jacks, normally joined by removable jumpers, that enable the insertion of an external active crossover (such as the Linn Kaber Aktiv) in the signal path or the use of an external power amplifier or signal processor (a surround-sound decoder, for example).

The Majik-I has two pairs of speaker outputs, suitable for driving two sets of speakers or for biwiring a sin-



MEASUREMENTS

Output at clipping (1 kHz, 0.1% THD+N)
8 ohms
4 ohms
Clipping headroom (re rated output)
8 ohms0.3 dB
4 ohms
Dynamic power
8 ohms
4 ohms
2 ohms
Dynamic headroom (re rated output)
8 ohnis0.2 dB
4 ohms
Distortion at rated power
(THD+N)
Sensitivity (for a 1-watt output into 8 ohms)
CD
phono
A-weighted noise (re 1-watt output)
CD96.5 dB
phono81.5 dB
Phono-input overload (1-kHz-equivalent
levels, moving-magnet setting)
20 Hz
1 kHz
20 kHz
Phono-input impedance (moving-magnet)
RIAA phono-equalization error
(20 Hz to 20 kHz)+0, -2.5 dB
Frequency response
20 Hz to 20 kHz +00.55 dB

gle pair if they have the necessary terminals. The output jacks accept standard single banana plugs, but their spacing does not permit use of dual banana plugs (a requirement for electrical products sold in Great Britain, where AC-line plugs have the same connector shape and spacing as our dual banana plugs).

The Majik-I is actually more than an integrated amplifier, for it contains an expansion slot that will accept what Linn calls a Sneaky module. For example, a Linn Kudos FM tuner board could be installed, converting the Majik-I into a receiver. Or you could substitute a Knekt board to make the amplifier the heart of a highly versatile multiroom Linn audio system. And, of course, you can always add larger power amplifiers to your system without making any part of your investment obsolete.

But we are concerned at this point with the "bare bones" Majik-I. Compared with most similarly priced amplifiers sold in the United States, it is relatively low-powered, delivering in our tests just over 30 watts at the clipping point into 8-ohm loads. On the other hand, power into 4-ohm loads was nearly double the 8-ohm reading (though slightly shy of the rated 66 watts), indicating that the amplifier was very close to being a true voltage source. That is a desirable quality for an amplifier that might be faced with the task of driving speakers with impedances falling well below 4 ohms at some frequencies-a not uncommon situation.

Linn says that even 2-ohm loads will not damage the amplifier and that its sophisticated protection system enables it to be pushed well beyond its design limits without damage or excessive distortion. Although we did not venture continuous-output measurements with less-than-4-ohm loads, our dynamic-power measurements showed that the Majik-I does indeed pack a healthy punch into 2 ohms under realistic listening conditions. Moreover, at no time during our testing or use of the amplifier did any part of its exterior become more than faintly warm.

Another notable test result was the amplifier's exceptionally low noise

level through both the high-level and phono inputs. The phono-overload measurements were not as good as we would have expected for a movingmagnet input, indicating that any cartridge used with this amplifier should have a relatively low output. In fact, at first we suspected that the phono stage had been set for moving-coil cartridges, but the sensitivity and inputimpedance measurements clearly indicated that it was set for moving-magnet pickups.

Nonetheless, our use of the Linn Majik-I (which did not include input from a phono source) was an unalloyed pleasure. The smoothness and silence with which its controls operated were striking (every change of control function occurred smoothly and silently over a period of a second or two). The Majik-I comes with a small system remote control compatible with other Linn products. It worked with all the amplifier's front-panel functions, controlling volume, balance source selection, and so forth.

We could not resist opening up the Majik-I. Its interior can only be described as gem-like: All the amplifier circuitry was on a single circuit board, gant appearance. It was also interesting to find the name of the person who built the amplifier inscribed on its bottom plate.

At a time when a growing number of audio amplifiers can deliver 100 to 200 watts per channel and when oper-

The Linn Magik-I amplifier is surprisingly easy to use, with just half a dozen buttons and amazingly simple and logical control procedures.

and the only visible wires were those to the power supply and its switch and to the front-panel display. A large toroidal power transformer occupied a good part of the amplifier's interior. Most of the circuit elements were surface-mount devices, adding to the eleating controls are becoming increasingly difficult to understand and use, it is refreshing to see that a really good amplifier of modest power can easily hold its own (and then some) with any of them for listening enjoyment. The Linn Majik-I is most aptly named!



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Optimus PRO-7 Loudspeaker System

JULIAN HIRSCH 🖲 HIRSCH-HOUCK LABORATORIES

he Optimus PRO-7, sold through Radio Shack stores, is a true minispeaker, small and light enough to be held in the palm of one's hand. It is also a true twoway system, with a 4-inch "woofer" in a vented enclosure and a 1-inch soft-dome tweeter. The manufacturer's specifications for the system cover only the basics: a frequency range of 100 Hz to 20 kHz (no tolerance given), a nominal impedance of 8 ohms, and a suggested maximum amplifier power rating of 50 watts.

The PRO-7 is housed in a metal case, available in black or white. A perforated metal grille protects the drivers. The enclosure vent, which is ¹¹/₁₆ inches in diameter, is on the back of the case with the input connectors, which are effectively flush with the rear panel. The connectors are spring-loaded and accept only stripped wire ends. Also on the back panel is a fitting for wall-mounting the speaker.

We placed the Optimus PRO-7 speakers on stands, several feet from the walls, for both measurement and listening. The close-miked woofer response varied only ± 3 dB from 100 Hz to 2 kHz, falling off rapidly above and below those frequencies. Although the crossover frequency was not specified, it appeared to be about 2 to 2.5 kHz.

The averaged room response of the two speakers, using a sweeping warble tone, fell off below 200 Hz at about 12 dB per octave. It was quite uniform from 300 Hz to 3 kHz, varying only ± 1.5 dB over that range, with an increase of 2 or 3 dB at 4 kHz and a downward slope at higher frequencies.

A separate close-miked measurement of the woofer response (which excluded room effects) indicated a ± 2.5 -dB variation from 120 Hz to 2

DIMENSIONS 4½ INCHES WIDE, 7 INCHES HIGH, 4½ INCHES DEEP PRICE \$59.99 EACH

BLACK OR WHITE

MANUFACTURER RADIO SHACK, DEPT. SR. 1500 ONE TANDY CENTER, FORT WORTH, TX 76102 kHz. The output dropped sharply at lower frequencies. Although the lower octaves were present in the port output, their level was far below that of the woofer cone and did not contribute significantly to the overall response.

The PRO-7's composite frequency response, formed by splicing the closemiked woofer curve to the averaged room curve, closely matched what we actually heard from the speakers. It was flat within ±2 dB from 130 Hz to 3 kHz, with a broad 3-dB rise at 4 kHz before returning to the average midrange level. The output above 7 kHz remained quite flat to about 13 kHz, dropping slightly at higher frequencies to -5 dB at 20 kHz. Clearly, this pintsize speaker can do a reasonably good job of radiating the middle and high frequencies, but, barring magic or miracles, it cannot be expected to match that performance at lower frequencies.

Our quasi-anechoic MLS frequency-response curves revealed that the PRO-7's on-axis output was very flat from 300 Hz (the lower limit of this measurement) to almost 15 kHz, with one exception that may not be audibly serious. There was a pronounced response "hole" between 3.5 and 7 kHz, ranging in depth from 10 to 15 dB depending on the distance between the speaker and the microphone (1 to 2 meters). The same effect appeared in every MLS measurement and appears to be a cancellation between the outputs of the two drivers, possibly related to the crossover between them. Strangely, however, the dip was completely absent from normal room measurements, which actually showed a slight peak in output at 4 kHz. In listening tests, too, we could not detect any anomaly in that range.

Impedance dipped to 5.1 ohms at 80 and 300 Hz, with maximum readings of 32 ohms at 30 Hz, 44 ohms at 120 Hz, and 18 ohms at 1.7 kHz. The actual minimum impedance was 5 ohms from 5 to 7 kHz. Despite the PRO-7's 8-ohm rating, these low impedance readings are of little importance since the speaker is relatively efficient over most of the audio range. With a 2.83volt input of pink noise, the soundpressure level (SPL) was a rather high 92 dB at 1 meter.

With a constant input of 2.26 volts a

(equivalent to a 90-dB SPL in our sensitivity measurements), the PRO-7's woofer distortion was less than 1 percent over most of its effective range, from 130 Hz to 2 kHz. Even at lower frequencies the distortion remained under 10 percent, although that is irrelevant since the output in that range was largely inaudible.

As would be expected from the small drivers in the PRO-7, its horizontal dispersion was good, though it did not match the range of some larger systems with smaller and more sophisticated tweeters.

Despite its small drivers, the PRO-7 was able to absorb considerable power during short (single-cycle) tone bursts without damage. At 100 Hz, the 4inch driver began to sound raspy with about 50 watts input (its rated maximum), but that is of little practical importance since no one in his right mind would attempt to drive a 4-inch speaker to such levels. The raspiness increased gradually as we raised the power, and we stopped at 160 watts (into the speaker's 15-ohm impedance at that frequency) since destruction was not our goal. The speaker suffered no permanent harm from this outrageous treatment that we could detect. At higher frequencies the amplifier clipped (at 530 and 1,200 watts at 1 and 10 kHz, respectively) before the speaker was damaged.

Obviously, no one buying this

speaker would expect it to deliver room-shaking acoustic levels or to match the sound quality of speakers several times its size and price. But if you understand its limitations, the Optimus PRO-7 can do a creditable job of playing music. In the usual hi-fi sense, it has virtually no bass output. On the other hand, higher frequencies are reproduced, for the most part, without serious distortion.

It should be obvious that comparing the PRO-7 with a top-ranking speaker system selling for ten or twenty times its price is like judging a Model-A Ford against a modern luxury automobile. Nonetheless, we made that comparison, placing the Optimus PRO-7's on top of the "reference" speakers. With most program material, the minispeaker's lack of bass was only too obvious when switching between systems, though after a period of listening the PRO-7 began to sound more "normal." With music having little or no content below 100 Hz, the difference was greatly diminished, and the PRO-7 acquitted itself quite well. Often the difference was virtually unnoticeable -so long as the music didn't go into the bottom octaves.

If the Optimus PRO-7 is used in relatively uncritical applications such as in a den or child's room, it should do a fine job. Another possible application might be as a surround speaker in a low-cost home theater installation.



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Audio Control C-101 Series III Equalizer/Analyzer

JULIAN HIRSCH **HIRSCH-HOUCK LABORATORIES**

udio Control, true to its name, is a specialist manufacturer of products for controlling or modifying the frequency response of audio systems. For home and car audio, it produces a number of graphic equalizers, signal processors, and real-time spectrum analyzers. The C-101 Series III is the latest incarnation of a home product initially introduced in 1979.

The C-101 Series III combines a ten-band octave equalizer with a realtime spectrum analyzer whose frequency bands correspond to those of the equalizer. The gain in each band is adjusted by a vertical slider control, of which there are twenty for the two channels. The display window shows the instantaneous program level in each of the ten bands, which are centered at frequencies of 32, 60, 120. 250, and 500 Hz and 1, 2, 4, 8, and 16 kHz. The levels are indicated by vertical rows of red LED's; the level intervals can be set at 2 or 4 dB by a frontpanel control.

The C-101 Series III is normally installed in the signal path to the power amplifier, typically through a tapemonitor loop of a preamplifier or receiver (the C-101 III provides a replacement tape loop). Several alternative configurations are also shown in the instruction manual. If you use the equalizer in a home theater system, it should be placed in the signal path after the surround-sound decoder.

Except for the small Display Level

DIMENSIONS 17 INCHES WIDE, 31/2 inches high, 11 inches deep PRICE \$459

MANUFACTURER AUDIO CONTROL, DEPT. SR, 22410 70TH AVE. W. MOUNTLAKE TERRACE, WA 98043

knob and the vertical sliders, all the front-panel controls of the C-101 Series III are pushbuttons. Operating with a light touch and a short "throw," the buttons trigger electronic switches located close to the controlled circuits, minimizing crosstalk and noise pickup.

There are buttons for selecting a slow or fast LED time constant (display decay rate) and for activating an internal pink-noise generator for use in speaker/room equalization. (Pink noise, a random signal having equal power in each frequency octave, ideally shows as flat on the analyzer display.) Other buttons switch on the equalizing function, equalize the taperecorder outputs, activate the tapemonitor loop, and insert a "subsonic filter" (more accurately, an infrasonic filter) into the signal path. There is even a button to disable the display if it is too distracting.

In addition to its program-equalization functions, the C-101 Series III can be used for room and loudspeaker equalization and for optimizing speaker placement in the room. For this purpose, it is furnished with a small microphone (apparently an electret type) that plugs into a jack on the equalizer/analyzer's front panel. The microphone's frequency response, though not specified, is said to be "very flat,"

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SCUNDFEEDER MOBILE AUDIO CONNECTOR Completely Portable • Reduces Theft • No Cassette Deck Required

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The Sound Feeder's combination of stereo sound, easy installation, portability and power supply feature, plus its ability to reduce the risk of theft and save the expense of a costly indash system, make it the ideal acces-



TEST REPORTS

and image rejection, on the other hand, as well as selectivity, were appreciably better than rated and quite impressive. The AM frequency response was somewhat wider than average, with slightly better high-frequency response than most AM tuners and an unusual rising output at the lowest audio frequencies.

The preamplifier's frequency response with tone controls centered was very flat over the audio range and down only 3 dB at 150 kHz. Tonecontrol characteristics were good, with the treble variation limited to frequencies above 2 kHz and the bass to frequencies under 250 Hz. The loudness compensation affected only frequencies below 500 Hz, with a maximum boost of 10 dB at low and moderate volume settings.

The RIAA phono EQ was also exceptionally accurate, and the phonooverload margin was excellent over most of the audio range, with a reduced limit at the highest frequencies that was still quite satisfactory. Phonoinput impedance was nearly ideal.

We used the PT2300 in a system with a high-quality stereo power amplifier, and the results were just as good as its bench performance would lead one to expect. The tuner/preamp format, which for some reason has never enjoyed the acceptance it deserves, is ideal for anyone who would like the convenience of a receiver combined with true high-power capability. Although there are some receivers with 100-watt-per-channel amplifiers (or even bigger ones), they tend to be rather large and heavy, as well as posing heat-dissipation problems in a limited-space installation. Separating the power amplifier from the rest of the "receiver" provides the best of both worlds, especially if the amplifier (like the one we used when listening to the PT2300) turns on automatically when a signal is applied. Unfortunately, the PT2300's pair of switched outlets are rated for a total of only 180 watts, a bit skimpy for a powerful amplifier.

Overall, the PT2300 acquitted itself admirably in all phases of our testing. The design concept is a good one, and Harman Kardon has executed it very effectively.

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AEASUREMENTS

TUNER SECTION

All figures for FM only except frequer	псу
response	
50-dB quieting sensitivity	
mono/stereo	.5 dBf
Signal-to-noise ratio (at 65 dBf)	
mono/stereo	/74 dB
Distortion (THD+N at 65 dBf)	
mono/stereo	0.09%
Capture ratio (at 65 dBf)	2.2 dB
AM rejection	70 dB
Selectivity	
altemate-channel	.80 dB
adjacent-channel	8.5 dB
Pil <mark>ot-carrier leakage</mark>	
19-/38-kHz80/-	-65 dB
Hum (120 Hz)	-74 dB
Channel separation	
100 Hz/l kHz/10 kHz	/40 dB
Frequency response	
FM 20 Hz to 15 kHz +0.35, -	0.4 dB
AM	±3 dB

PREAMPLIFIER SECTION

Output at clipping (1 kHz)	6.8 volts
Distortion (at 0.5-volt output).	0.005%
Sensitivity (for a 0.5-volt output	it)
CD/phono	.86/1.33 mV
A-weighted noise (re 0.5-volt	output)
CD/phono	-92/-82.4 dB
Phono-input overload	
(1-kHz-equivalent levels)	
20 Hz	
1 kHz	
20 kHz	
Phono-input impedance	
	with 100 pF
Tone-control range	
100 Hz	±8 dB
10 kHz	±10 dB
RIAA phono-equalization err	or
(20 Hz to 20 kHz)	±0.2 dB
Frequency response (with ton	e controls
centered)	20 kHz ±0.1

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Sony STR-G1ES Audio/Video Receiver

JULIAN HIRSCH . HIRSCH-HOUCK LABORATORIES

R ecently we have seen a trend toward integration of audio components and computers, especially in complex products such as audio/video (A/V) receivers and signal-processing accessories whose circuits are heavily digital. In the new Sony STR-G1ES, a remarkable and unusual A/V receiver, the union of home audio component and computer may have been carried to its practical limits.

The STR-G1ES is large and heavy (the manual gives its "mass" as 30 pounds, 14 ounces). Its front panel, mostly covered by a thick, clear plastic faceplate, gives no hint of its true function. The panel's visible features are limited to a horizontal row of ten buttons, a large volume-control knob, a power button, and a protrusion labeled VisionTouch, about which more later.

So far, the STR-GIES would appear to be merely a large and handsomely styled power amplifier. But a door along the bottom of its front panel hinges down to reveal several pushbutton switches and jacks that indicate some nonamplifier capabilities. The buttons are marked Speakers On/Off, Preset Tuning (+/-), and Soundfield (On/Off). The jacks include one for a ¹/4-inch headphone plug and a group identified as Video 4 (video and audio inputs, including an S-video socket). A glance at the STR-G1ES's rear apron (well populated with connectors) finally confirms that it must be an A/V receiver. But where are the numerous front-panel controls usually required to operate such a product?

This would be the time to read the instruction manual. Without that often-neglected step, you may not be able to operate the STR-G1ES at all. In the manual you'd find that the key to operating the STR-G1ES is a

> DIMENSIONS 17 INCHES WIDE, 5% INCHES HIGH, 15% INCHES DEEP

> > PRICE \$1,700

MANUFACTURER Sony Consumer Products Group, Dept. SR. Sony Dr., Park Ridge, NJ 07656 strange black plastic object, resembling a sliced-off egg, with a single pushbutton. This is the receiver's Remote Commander, a unique radio-frequency controller powered by two AA cells loaded into the flat end of the egg. A small dipole antenna, which connects via a cable to the rear of the STR-GIES, carries the Commander's signals to the control circuits in the receiver. This antenna must be hooked up and properly located (away from metal surfaces, for example) for the receiver to work. Also, to see what you are doing, a TV receiver or monitor with a video input jack must be connected to a monitor output on the rear of the STR-GIES (both composite and S-video outputs are provided).

The Remote Commander is actually the *only* control used during normal operation of the STR-G1ES. When the controller, which stands on its flattened end when not in use, is picked up, pressing its button will turn on the receiver and any devices connected to its three switched AC outlets. You don't have to aim the egg at the receiver, or even at the antenna if you are close enough to it.

You probably won't be able to turn on your monitor from one of the AC outlets. They are rated for only 120 watts each. Besides, all the outlets are two-prong jacks, while many components now come with three-prong

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Q-SERIES



This question may confuse those who believe that the measure of a loudspeaker is the number of its drivers. It will also elude those who have never bothered to question conventional driver placement, which always separates the woofer from the tweeter.

In fact, the most acoustically correct location for the tweeter is precisely at the *center* of the woofer. This strategic placement creates a single sound source, allowing high and low frequencies to reach your ears at the proper time, regardless of where the speakers are placed or where you are sitting. (No wonder KEF's patented Uni-Q[®] is the technology of choice for advanced Home Theater applications.)

Perhaps the greatest benefit of the KEF Q Series speakers is that they sound as good in your home as they do in the showroom.



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plugs. But if your monitor or other component has an infrared remote control, Sony has provided a way for you to command it. In this case the receiver, not its remote, "learns" the necessary infrared codes.

To program it, you aim the auxiliary component's remote control at the receiver's front-panel VisionTouch protuberance and press the appropriate buttons. When activated subsequently by a proper sequence of Remote Commander operations, the receiver sprays the memorized infrared command into the room to be picked up by nearby components. In case they do not pick up the emissions, the receiver also comes with an infrared repeater that plugs into a rear-panel socket and can be located up to 123/4 feet away (the length of its cord, which I imagine can be easily augmented by a headphone extension cord).

The STR-GIES is preprogrammed with the infrared commands for Sony components, and it can also be programmed to emit up to eighty infrared commands for non-Sony equipment. Up to ten commands can be strung together in a "macro" sequence activated by a single push of the Commander button, and two different macros can be stored.

In any case, when you first pick up the Remote Commander and press its button, the monitor screen will display the main menu, from which you can select a series of other menus. Along with the menu, the screen displays a movable cursor, or pointer. Simply moving the Commander with your wrist positions the cursor on any desired portion of the displayed menu. You can activate the function pointed to by pressing the button.

Among the functions provided are input-source selection, volume control, FM or AM tuning (including memorizing as many as thirty presets), digital parametric equalization for the midrange frequencies, and digital bass and treble tone controls. Since this is an A/V receiver, you can also control the Dolby Pro Logic decoder and adjust ten different synthesized sound environments, including such parameters as hall size and wall "hardness," listener position, reverberation time, reverb level, and so forth. All of these

MEASUREMENTS

TUNER SECTION

All figures for FM only except frequency
response
50-dB quieting sensitivity
mono/stereo
Signal-to-noise ratio (at 65 dBf)
mono/stereo
Distortion (THD+N at 65 dBf)
mono/stereo
Capture ratio (at 65 dBf)1.65 dB
AM rejection
Selectivity
alternate-/adjacent-channel
Pilot-carrier leakage
19-/38-kHz
Hum80 dB
Channel separation
100 Hz/1 kHz/10 kHz
Frequency response
FM
AM

AMPLIFIER SECTION All figures for main front channels only Output at clipping (1 kHz)

8 and 4 ohms......110 watts

Clipping headroom (re rated output) Dynamic power Dynamic headroom Sensitivity (for a 1-watt output into 8 ohms) A-weighted noise (re a 1-watt output) CD/phono......-83/-75 dB Phono-input overload (1-kHz-equivalent levels) Phono-input impedance .50,000 ohms in parallel with 110 pF **RIAA phono-equalization error** (20 Hz to 20 kHz)+1, -4 dB Frequency response (20 Hz to 20 kHz; see text) through preamp+8, -0 dB power amp only+0, -0.16 dB

parameters are displayed graphically and numerically on the TV screen during the adjustment process.

The receiver's inputs include, in addition to the built-in AM and FM tuners, phono, CD, DAT/MD, laserdisc, and four other video sources (two of them playback only, such as the frontpanel camcorder input). On the rear panel, all the speaker outputs (two front, one or two center, and two surround) are insulated binding posts that accept wire ends or single or dual banana plugs. If you use two center speakers, be advised that those outputs are connected in series (as in other A/V receivers we've seen with this feature), which can cause frequencyresponse changes due to speaker-tospeaker impedance interactions. It's usually best to use a single center speaker.

For driving external power amplifiers, the front-channel preamplifier outputs can be separated from the main amplifier inputs by removing a pair of jumpers, and there is a line-level mono output for driving a powered subwoofer or a subwoofer amplifier. A switch on the rear apron inserts a lowcut filter in the signal path to the front speakers to remove the low bass from them when a subwoofer is used (ideally, you should also have a subwoofer crossover to remove the high frequencies from the subwoofer output).

The key amplifier ratings include a power output of 85 watts each into 8 ohms for the three front channels, or 80 watts into 4 ohms. The two surround outputs are rated at 20 watts each. In two-channel mode, the front amplifiers are rated (by the EIA standard) to deliver 80 watts each into 8 ohms from 20 Hz to 20 kHz with no more than 0.04 percent total harmonic distortion (THD). A switch on the rear apron changes the amplifier voltage for safe operation into 4-ohm loads.

For our use and listening tests of the Sony STR-G1ES we teamed it up with a small TV monitor/receiver and a pair of good speakers. We made laboratory measurements of its two-channel oper-

The magazine on your ear bat bracks you on your ear CARSTERED REVIEW 0 100: evaluations. Reviews of the hottest, state-of-the-art equipevaluations. Fevrews of the nortest, state-or-the-art equip-ment. A doit-yourself course on installation. And there's a boous: the most complete up to date braver's outdate of the provide and the provide the provi ment. A do-reventsen course on installation. And there's a bonus: the most complete, up-to-date buyer's guide available anumbers in the world Where in the World. So, if you're ready to treat your ears to great sound at a so, if you're ready to treat your ears to great sound at a 50, IT you're ready to treat your ears to great sound at a price that's right for you, check out CAR STEREO REVIEW. To get home delivery of CAR STEREO REVIEW, simply detach t used to be simple. You had a car. It came with a radio. anywhere in the world. mail the altacheu caro. You'll get a one-year subscription (6 issues in all-includ-You'll get a one-year subscription (6 issues in all-includ-tation and altacheu caro. Libe annual buver's quidel for just se or that's a two costs I ISTEITEU, PERIOU ... NOW YOU'VE got options. So many options, it's easy NOW YOU'VE got options. So many options, it's easy not bleve over inet to increase of the components that Icu II gera one-year subscription to issues in all-includ-ing the annual buyer's guide) for just \$8.97. That's a full 60% of just \$ to get blown away just trying to find components that to get blown away just trying to find components that togetber and fit your budget too Ing the annual buyers guide, for just \$6.97. Inals a full buyer of the annual newssland cost! And if GAR STEREO REVIEW depend to be annual newspan of the arrow of the annual newspan of the arrow of the annual newspan of the arrow of the ar off the annual newsstand cost. And it CARTETERED rieview doesn't knock you on your ear every time, we'll send you a full refund for all unmailed issues That's a promise! and mail the attached card. You listened. Period. ogener-and in your oudget too. So what do you do when it's time to upgrade your Und for all unmailed ISSUES. Inal's a promise! So don't delay. Make tracks for the best possible audio sys-mat the best possible price by entrained your cube eriories the at the best possible price by entrained your cube eriories. fit together and fit your budget too. WEST MOCKYOU UNYOUR Ear EVERY UNIE, WE IT SET vefund for all unmailed issues. That's a promise codecuted on the tradecuted to the tradecuted of tradecuted of the tradecuted of trad So don't delay. Make tracks for the best possible audio system at the best possible price by entering your subscription to CAR STEREO REVIEW. Do it today Whether you like your sounds big and boomy or tight and whether you own a certain or a Humadai Whether you fike your sounds big and boomy or tight and well controlled . . . whether you own a Ferrari or a Hyundai, CAR STEREO REVIEW lets you drive away with a system that's custom built for the way you like to listen t's custom built for the way you like to lister. You'll get head-to-head comparisons of CDs, players and You'll get head-to-head stuners, amnifiers, crossovers car stereo? CART STERED REVIEW IELS YOU UNVE away will a that's custom built for the way you like to listen. Way that's custom built for the bead comparisone of com You'll get neau-to-neau comparisons of cus, players an changers, cassette decks, tuners, amplifiers, crossovers, changers, cassette decks, tuners, amplifiers, construction construction existence contributions contributions and the second contribution of the second changers, casselle decks, uners, amplitiers, crossovers, and speakers, equalizers, security systems, cellular phones, and ne, in every price range. Plus, every issue brings you complete test reports. User's If the attached card is missing, please write more, in every price range. Car Stereo Review, P.O. Box 57316, Boulder, CO 80322-7316 nadian orders add \$7.00 per year (includes 7% GST); er year, payment in US funds must accompany order. w 30 to 60 days for delivery of first is

ation following our normal procedures.

Our first frequency-response measurements of the front-channel amplifiers (including the preamplifier section) showed an 8-dB peak centered at 80 Hz but were otherwise flat to 20 kHz. The peak was the result of the receiver's Dynamic Bass Feedback (DBFB) circuit, which is intended to provide "more powerful bass." DBFB can be switched off from a menu, but the out-of-box default for it seems to be on. With DBFB off, or through the power amplifiers alone, the response was very flat.

The receiver's power capabilities exceeded its ratings, with 110 watts available at 1 kHz into both 8- and 4ohm loads. Additional short-term power reserves were minimal, however. The RIAA equalization error was rather high compared to what we've been measuring lately, but that matters

Sony's STR-G1ES provides a stunningly innovative approach to the not inconsiderable problem of managing the multiple components of a home theater system. With the VisionTouch system and its radio-frequency Remote Commander, this receiver truly becomes the central controller of a system, going so far as to emit from its front panel the infrared commands for the other components in a system.

On the whole, I found the combination of Remote Commander and onscreen menus worked exceptionally well. The Remote Commander fits comfortably in the hand, and with only one button how can you miss, even in the dark? On the other hand, there are some ergonomic difficulties with what the on-screen menu system allows you to do, ranging from minor to considerable annoyances.

Beyond a doubt, the most bothersome aspect of the menu system is that volume adjustment is one level away from the main menu and even further away from other menus. It can take several seconds of confused button pushing, possibly while you're being deafened, to get to the volume menu, where the 20-dB-mute control also resides. It would have been easy for only if you are going to play LP's. The FM section's performance was satisfactory, although (as with virtually all receivers) it fell short of the quality of many separate component tuners.

A period of use in a music-only system left us with a mixed verdict on this remarkable receiver (and "remarkable" is the mildest adjective we can apply to it). Basically, it worked well, and it is certainly impressive in the way it enables you to set a myriad of controls with a single button. On the other hand, some operations that with a conventional receiver normally require only the turn of a knob or a single touch of a button become multistep procedures with the Sony STR-GIES, requiring you to re-aim the Commander and press its button repeatedly.

In a fully equipped audio/video system, such a process might be justifi-

Sony STR-G1ES A/V Receiver

Sony to provide on-screen volume control with *every* menu. Then, while experimenting with surround-sound modes, you wouldn't have to keep flipping back and forth between the surround-mode and volume-control menus to compensate for the variations in overall volume level that most of the surround modes produce (those variations themselves are a substantial ergonomic annoyance).

While I'm discussing surround modes: A 1-second mute occurs both when switching between modes and when switching a mode on or off. That makes it difficult to compare the modes with one another. It is also not possible to remove the artificial reflections and reverb effects from the front speakers or to hear the processed sound alone, again hampering comparisons and adjustments. Few A/V receiver designers from any company seem to realize how useful such capabilities are.

A more serious problem involving the surround system is that there is no way to turn the artificial reverberation completely off. Such reverb (a dense series of decaying artificial echoes) isn't necessary—and, in fact, it's detrimental—to the playback of music recorded with natural ambience, such as able, and even advantageous compared with using a confusing manybuttoned programmable remote handset. For audio only, however, it was a source of frustration and annoyance. Having to hook up and turn on a TV monitor for the simplest audio operation—such as changing volume with the remote control—is hard to justify.

How much the STR-G1ES appeals to you, therefore, will probably depend on your specific audio or audio/ video orientation as well as your level of patience with menu-driven computer interactions. For audio/video systems, the STR-G1ES's control system is intriguing, and the receiver is not unreasonably priced for what it contains and does. But if you would use it primarily for audio, I could not recommend it, unless you insist on being the first on the block with the latest technology.

most classical music and much jazz and folk. Such music (and much pop besides) needs only the synthesis of discrete early echoes (ambience) to be substantially enhanced spatially. While the reverb is most annoying in the Church surround mode, where it has an unnatural throbbing quality, the same pulsations can be detected in many of the other modes if you stop your CD player in the middle of the music and listen to the decay of the reverb. Hint: Resist the temptation to use a mode only with music that seems to match that mode's name. Try them all!

Despite the reverb, the STR-G1ES's music-enhancement surround modes are considerably better than most of those in other A/V receivers I've used. Their spaciousness-enhancing effects at their default settings are unusually subtle and most definitely not excessive. Even the Church and Stadium settings are note-worthy for *not* adding excess spaciousness to pop vocals, a very common fault.

Unfortunately, the STR-G1ES has not escaped the baffling Japanese predilection for applying seemingly arbitrary default equalization settings to specific types of surround-sound processing. The default equalization for the Dance mode, for example, gives you a 10-dB boost at

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82 Hz, a 5-dB boost at 2.3 kHz, and a 2dB cut at 18 kHz. Even the Opera mode receives a default 1-dB boost at 435 Hz—curiously, the same as the Jazz mode. There is also no equalizer in/out control enabling you to instantly compare equalized with nonequalized settings.

So as soon as you hook up this receiver, you should go through all the surround modes and reset their equalization settings to flat, then change them only when the recorded sound quality demands it. And while you're practicing with the Remote Commander you can also correct another operational fault: Setting the speaker balance in the Dolby Pro Logic mode does not also set the balances for the other surround modes. I recommend that you first set balances using Pro Logic and its built-in test tone, then immediately go through the rest of the modes and adjust their "rear" (surround) speaker level and (where appropriate) the center-speaker level to match those you obtained for Dolby Pro Logic.

Three other features I'd have liked: 1) an RF video output that would enable the menu screens to be seen on a cheap B&W TV (even though the "gray" screen setting still has some lettering in possibly illegible color); 2) a left-right balance control (I couldn't find one in any of the menus); and 3) a stereo/mono control for the FM tuner to help tune in weak stations.

The manual ain't Shakespeare. It barely mentions such sound-affecting features as the default bass boost (DBFB). It is also misleading in critical descriptions of how to use the remote. It says, "When using the Remote Commander, keep the button parallel to the floor." But using the remote requires you to tilt its "nose," and thus its button, up and down to move the on-screen pointer vertically. What Sony means is that the handset's button should be on top when you hold it. The remote will also work when the button is on the bottom or side, though it takes more hand-eye coordination in those positions because the cursor movements will be counterintuitive. The Quick Start Guide fails to point out the critical importance of hooking up the Remote Commander antenna. And when the manual or the screen tells you to set the remote down ("Please place the commander on someplace flat"), set it on its flat side, noseup, not button-up.

The artsy tilt of the Remote Commander when set on "someplace flat" makes its removable battery door internally asymmetrical, so its reinstallation is a bit awkward. But if the batteries should suddenly die, you won't have to reprogram the remote-control codes for non-Sony components since they are stored in the receiver, not the handset. And you will still be able to activate a set of core functions from the receiver's front panel: power, input selection, volume, and surround-processing on/off (no surround-mode selection, though).

The VisionTouch infrared-code memorization procedure that is essential for turning the STR-G1ES into a system-wide control center is easy if you follow the manual's directions precisely. The requirement for a monitor has one decided benefit: The on-screen display is always visible, even in a completely dark room. But to my taste, the menus

DOLBY PRO LOGIC PERFORMANCE

Frequency response

left, right20 Hz to 20 kHz +0.4, -1.4 dB
center
surround22 Hz to 7.9 kHz. +0.18, -3 dB
A-weighted noise
left, right72 dB
center70 dB
surround74 dB
Distortion (1 kHz, THD+N)
left, right0.07%
center
surround0.08%
Surround decoder input-overload
levels (at 1 kHz)
left, right (re 200 mV)+21.5 dB
center (re 141.4 mV)+24.4 dB
surround (re 141.4 mV)+24.4 dB
Surround-channel noise-reduction
calibration error
re Dolby spec (247.5 mV)+0.4 dB
re Home THX spec (141.4 mV)+5.26 dB
Channel separation (100 Hz to 7 kHz)
left output, right driven>36 dB
left output, center driven>47 dB
left output, surround driven>38 dB

center output, left driven>52 dB

center output, surround driven>48 dB

surround output, left driven>43 dB

surround output, center driven>47 dB

remained on screen too long, obscuring all or part of the picture, shutting off only after the handset had been put down for almost 5 seconds. A menu-off control would have been nice.

The receiver's front-panel infrared emitter did work for a couple of nearby components, but I had to hook up the infrared repeater to control the TV monitor (which was in a separate cabinet). If your components are behind tinted glass doors, you might want to check on whether the receiver's infrared emitter can penetrate two layers of glass (to get out of the receiver's cabinet and into that of the other components) without using the repeater. The repeater's trailing black cord might detract from your room's decor if it can't be hidden.

Electronically, the surround system performed well. Dolby Pro Logic decoding was accurate in steering and low in background noise level. The surround-channel noise-reduction calibration accuracy was unusually good (when judged by Dolby's spec). Surround-channel frequency response in Pro Logic operation also matched Dolby's standard curves very well up to 1 kHz and deviated from them substantially only at higher frequencies, where they rolled off somewhat in comparison (by approximately 2 dB at 4 kHz), a common characteristic. There was ample amplifier power to cleanly drive a set of Home THX speakers (with an external subwoofer amplifier) to very loud levels.

Although my recitation of the STR-GIES's ergonomic deficiencies might be intimidating, only one of them is truly significant-the "remoteness" of the volume menu. The receiver's overall ease of use-a result of its logical and consistent menu system-is a remarkable achievement in a first-generation product of such obvious complexity. Its other shortcomings could be considered high-tech teething pains that I would expect Sony to clear up in future VisionTouch products. Home theater is so important in today's audio market that other manufacturers of A/V receivers must be struggling with the system-control problem. The egg-shaped Remote Commander of the VisionTouch system in Sony's STR-G1ES points the way to a solution. And that's no yolk! -David Ranada

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COMPARISON TESTS

We compare half a dozen medium-price floorstanding loudspeakers.

loor-standing, or tower, loudspeakers have a certain intrinsic appeal to most audio enthusiasts. We all appreciate small, easy-to-place, unobtrusive speakers, but one that boldly atruts has always carr ed with it a presumption of higher performance. We dare a "bookshelf" speaker to prove its worth, and though we're happy when it can, deep down inside we yearn for big, tough loudspeakers that make no compror ises.

Today, high-definition drivers together with sophisticated, computerassisted measurement and modeling techniques are helping loudspeakers perform better than ever before in every part of the audio spectrum. Excellent-sounding speakers are available in every size and shape—even those pantywaist minimonitors that are hidden on shelves in living rooms and media rooms seem to de everything except strong, deep bass.

In fact, a common and very effective strategy is to place minimonitors or bookshelf speakers on stands well out in the room, away from walls, to enhance imaging and reduce blurring early reflections. Usually a subwoofer is employed in such systems to provide full bandwidth, because even the best small speakers have increasing difficulty in producing adequate loudness as they are pushed down below 80 Hz or so.

But if you're putting small speakers on stands, you're giving up floor space to them anyway, so why not just use it for floor-standing speakers

BY TOM NOUSAINE





in the first place? A good question, especially since the same techniques used to reduce the size of bookshelf speakers have also reduced the overall bulk of typical floor-standing speakers. Which brings us to this six-pack of compact floor-standing speakers priced from \$500 to \$600 a pair and requiring only half to slightly less than a full square foot each of floor space to deliver clean bass down to around 50 Hz (or even below).

The Speakers

Advent Lourecte (\$550 a pair). The original Large Advent bookshelf speaker was one of the great loudspeakers of all time. It sounded good, cost little, and sold like crazy. The Laureate seeks to follow in that tradition. Its classy traditional styling includes a solid oiled-pecan top and front, black textured-vinyl sides, and a brown cloth grille on a snap-on plastic frame. Spring-clip amplifier connectors are on the rear.

Size-wise, the Laureate is about average for this group, standing $32^{3/4}$ inches tall, weighing 46 pounds, and taking three-quarters of a square foot of floor space for its 9 x 12-inch foot-print. It uses dual $6^{1/2}$ -inch woofers in

a sealed enclosure, crossing over at 3 kHz to a 1inch parabolic soft-dome tweeter with magnetic-fluid cooling.

DCM TF-400 Series Two (\$598 a pair). The TF-400 is in the middle of DCM's Time Frame line of speakers, which share certain styling and design characteristics. In particular, they all employ staggered transmission-line woofer loading (terminated in a port in the rear panel), mirror-image driver mounting, magnetically shielded drivers (enabling use close to a television set), rear-firing Ambient Field tweeters, and autoreset circuit-breaker protection. In addition to the rear tweeter, the TF-400 uses a 3/4-inch soft-dome tweeter up front, mounted coaxially with a $6\frac{1}{2}$ -inch midbass driver, and a 61/2inch woofer.

DCM's Time Frame speakers are distinguished by their relatively wide.

thin cabinets. The TF-400's is $14^{3}/4$ inches wide by 38 inches high and leans backward slightly, tapering in from $7^{3}/4$ inches deep at the bottom to a 3-inch-deep dark-oak or black-oak

top plate. The entire 38pound cabinet is wrapped in attractive nonremovable black grille material, and there is a small swingout foot at the rear of the base to insure stability. Amplifier connections use a pair of color-coded fiveway binding posts on ³/₄inch centers, compatible with standard dual banana plugs.

Infinity RS 525 (\$598 a pair). The Infinity RS 525 stands 32 inches tall and is approximately $9\frac{1}{2}$ inches wide and $12\frac{1}{4}$ inches deep, occupying just shy of a square foot of floor space. It is available finished in oak or black ash. The speaker's black cloth grille is attached via a flush-mount, snap-on plastic frame. Amplifier connections are made to dual five-way binding posts on handy ³/₄-inch centers. The RS 525 employs a 6¹/₂-inch IMG (injection-molded graphite) woofer augmented by two 6¹/₂-inch IMG passive radiators. A 1-inch Polycell tweeter with magnetic-fluid cooling takes over at frequencies above 2.8 kHz.

KEF Q30 (\$500 a pair). The Q30 is based on KEF's Uni-Q driver technology, which puts a tweeter in the space normally occupied by the bass driver's dust cap (the small dome at the center of most woofer cones)—in this case, a 1-inch dome tweeter in a reflex-loaded 6¹/₂-inch woofer. KEF says that this innovative coaxial arrangement matches the directivity of the woofer and tweeter at the crossover point, improving both imaging and coverage of the listening area.

Whatever its sonic benefits, the Uni-Q driver is one slick-looking transducer, even if it is normally hidden behind the gently curved snap-on grille that covers the top half of this smallish (20¹/2-pound) loudspeaker. Available in gray, oak, or black ash, the O30 is 26 inches tall, 71/2 inches wide, and 10³/₄ inches deep, and it requires only half a square foot of floor space. It comes with a small base (plinth) and spiked feet, which add 21/4 inches to the speaker's height if used. Signals are routed to the speaker via a pair of five-way binding posts that are too widely spaced to accept standard dual banana plugs.





Klipsch KG-3.5 (\$599 a pair). Essentially an update of and replacement for the KG-3.2, the KG-3.5 uses an 8-inch woofer married to a hornloaded tweeter in a 34½-inch-tall, bass-reflex cabinet. Measuring 10½ inches wide and 11 inches deep, the enclosure consumes a mere threequarters of a square foot of real estate and weighs in at 32 pounds. It is available in medium oak, light oak, walnut, or black satin finish. Signals reach the speaker through ultra-handy dual fiveway binding posts on standard ¾-inch centers.

Paradigm 7se MkIII (\$599 a pair). Interesting in more ways than just its complicated model number, the Paradigm 7se MkIII is a two-way, three-driver system using two 6¹/₂-inch polypropylene-cone woofers with diecast chassis. They are reflex-loaded via a quasi-third-order resistive port and mated through a second-order (12-dB-per-octave) crossover at 1.8 kHz to a 1-inch cloth-dome tweeter with magnetic-fluid cooling.

Saddle the 7se MkIII with the biggest shoes on campus and it still claims less than a square foot of media-room carpet with its 8¹/₄-inchwide, 15-inch-deep footprint. With its adjustable spiked feet, the 7se MkIII reaches just over 34¹/₂ inches tall. The 43-pound speaker is available in an attractive oak or black-ash finish. It has separate pairs of goldplated five-way binding posts (both on ³/₄-inch centers) for its woofer and tweeter sections, enabling biamping or biwiring when the gold-plated straps that normally link the posts are removed.

Evaluation Process

We evaluated the performance of these six speakers in three phases, one measurement and two listening. The lab-test phase started with measurements of each speaker's frequency response at a distance of 0.5 meter (about 1.5 feet) both directly on the axis of its tweeter and 30 degrees off-axis. We made these measurements in my 221/4-foot-long, 12-footwide listening room with the speaker being tested

located 3 feet from the nearest side wall and 5 feet from the wall behind it. Although the MLSSA instrumentation we used for these tests is capable of essentially anechoic measurement

with time-windowing and close-microphone techniques, we wanted to emulate performance in a real working environment. Consequently, the measurements include the effects of my listening room, especially the floor, on each loudspeaker's output. We also measured each speaker's impedance and voltage sensitivity (output from a 2.83-volt pink-noise input, equivalent to 1 watt into an 8ohm resistive load).

The first listening phase of the evaluation was a round-robin blind bake-off (or R2B2, as I like to call it). Five listeners, either individually or in pairs, subjectively rank-ordered sets of three stereo pairs in eight listening sessions, followed up with two face-offs in which the topranked speakers from the initial comparisons were compared head-to-head. All listening was performed blind with an acoustically transparent cloth draped over the speakers, which were lined up three abreast on each side, each 6 feet from its partner, 9 feet from the center listening position, and well away from any wall. Speaker placement for the first session was set by a random lottery drawing, and their locations were statistically staggered in subsequent sessions so that all the speakers being compared were evaluated at least once in each of the three possible lineup locations.

We matched the speakers' output levels using pink noise and an Audio Control AC3050a real-time analyzer with an A-weighting filter. Each speaker had a dedicated stereo amplifier channel, and listeners used a wired five-position remote switchbox to switch freely among the three speaker pairs under test and a fourth pair as a reference, or "anchor." The speakers under test were assigned randomly to Positions 1, 3, and 5. Positions 2 and 4 always selected the anchor speakershigh-quality two-way bookshelf systems with 8-inch woofers and 34-inch soft-dome tweeters, level-matched to the other speakers. They were placed directly atop one pair of the contestants and available in every listening session. The common anchor enabled



listeners to compare speakers evaluated in previous sessions more easily.

We asked the listeners to rank and rate each speaker on a ten-point scale in terms of spectral uniformity (naturalness of frequency response), spatial rendition (placement of sounds in space), and dynamics (how clear and distortion-free the speaker sounded when played very softly and very loudly). The music for these sessions consisted of four tracks, including a heavily processed studio recording of a female vocalist backed by common electric instruments, the same singer with acoustic instruments, and two dynamic big-band cuts with loud acoustic instruments. Organs, cannons, and explosions were omitted from the basic bake-off sessions, as none of these speakers pretends to subwooferclass bass. Listeners were free to adjust volume and change tracks whenever they liked and to use additional program material if they wanted (none did). There were no time limits, and each set of bake-offs took between $1\frac{1}{2}$ and 2 hours.

Following the bake-offs, I compared each set of speakers, one pair at a time, with the anchor speakers using the same programs plus a selection with



Results

Basic measured performance can be found in the table on the facing page, which shows the speakers' minimum impedance, sensitivity, and in-room frequency response at ¹/₂ meter; the graphs show their room response onaxis (green curves) and 30 degrees off-axis (yellow curves). All these speakers are rated at 6 to 8

ohms nominal impedance, but their minimum impedances were all near 4 ohms. Consequently, care should be used when driving any of them in parallel with another set of speakers.

> All six speakers performed to 20 kHz with ease on-axis and had excellent response up to at least 30 degrees off-axis. All were capable of an honest 60 Hz at the low end, the best still pumping down to 40 Hz, and even the least sensitive could nail 91 dB SPL (soundpressure level) when driven with pink noise in a real room. In short, all the speakers had very good to excellent measured performance. There were, nonetheless, significant differences among them.

> Advent Laureate. The Laureate had the widest response variance, mainly because of a large suckout at 2 kHz, near the crossover region. Tweeter output was elevated about 3 dB above 5 kHz relative to the woofer output. Offaxis response was a mirror image of the direct radiation, except that the tweeter's response dropped rapidly above 12 kHz. At



the other end of the spectrum, the Laureate's twin woofers led the pack, delivering bass to about 40 Hz, although there was a slight elevation around 500 Hz. Sonically, the Laureate had a warm, pleasant sound with good detail at moderate levels. Played more softly, the speaker had some coloration in the lower registers and a bit less detail. The Laureate sounded most balanced when played fairly loud. Imaging was very good, with a smaller, tighter soundstage than presented by the better contenders. Dynamics were average for this group, and the speaker tended to blare when driven excessively, but it made no rude noises when severely overdriven.

The Advent Laureate placed middle-of-the-road in the listening comparisons, finishing near the top in some first-round competition, with listeners reporting "natural" sound and "good soundstage" performance.

DCM TF-400 Series Two. Overall, the TF-400 had the flattest, tightest frequency response of any speakers measured, with only minor roughness anywhere in the audible range. Bass extension was average, and there was a small response notch at 125 Hz, probably caused by the spacing between the floor and the woofer. Off-axis response was nearly identical to on-axis response, with even smoother performance above 2 kHz.

Sonically, I felt that the TF-400 had better low-bass performance than the



two top-performing speakers in the bake-off. Its overall tonal balance was very natural with a female voice, but there was a slight muting of low-level detail. The TF-400 excelled in delivering a big, open ambience (an apparent advantage of its rear tweeter), although placement was somewhat less precise than provided by some of the other speakers. The system played with less "blat" and "holler" than the average competitor when driven into moderate overload, but there was significant doubling and distortion when it was driven into extreme overload.

Listeners generally seemed impressed by the DCM TF-400, as it scored a first and two seconds in the first-round bake-off, but ultimately it couldn't get by the top-ranked KEF and Klipsch speakers.

Infinity RS 525. The RS 525's measured frequency response was nearly as good as that of the top-performing DCM speaker, with excellent midband performance but elevations above 10 kHz and below about 100 Hz. Off-axis response was virtually identical, except that the high-frequency rise was lopped off as tweeter output fell above 12 kHz. Woofer output was solid to just below 50 Hz, about average for this group. Sensitivity was outstanding.

Sonically, the RS 525 gave an impression of solid deep bass and relatively natural overall character, with some muting of breath tones and low-level detail. It produced a tightly focused but relatively narrow sound-stage. The speaker became shouty and hollow as it moved into overload.

Although I found the Infinity RS 525 pleasing, it never finished first in the bake-off sessions. Listeners said it sounded "warm" or "muddy" with "tons of bass."

KEF Q30. On-axis the Q30 had one of the flattest measured responses from 60 Hz to 10 kHz, but with a peculiar sharp peak at 13 kHz (perhaps a byproduct of the coincidenttweeter design). Its off-axis measurements looked even better, with the high-frequency peak ameliorated as the tweeter level began sloping off at 16 kHz. Overall, the response had a gently rising characteristic with good bass extension to 55 Hz. Sensitivity, although the lowest of the group, was still quite respectable.

The Q30 had the cleanest, clearest, and most natural sound of any speaker in the comparison, marred only by a

	M	E	A	S	U	R	E	M	E	N	T	S		
			DA	M			5	ENS	ITIN	/ITY			FREQUENC RESPONS	
Advent Laureate	3.	8 c	hm	s at	15	9 Hz		93	dB		41	Hz to	20 kHz ±8.0 d	B
DCM TF-400 Two	3.	2 0	hm	s at	44	Hz		92	dB		55	Hz to	20 kHz ±3.0 d	B
Infinity RS 525	4.	. 0 o	hm	s at	20	7 Hz		94	dB		53	Hz to	20 kHz ±4.7 d	в
KEF Q30	4.	.4 o	hm	s at	179	9 Hz		91	dB		55	Hz to	20 kHz ±4.2 d	в
Klipsch KG-3.5	4.	1 o	hm	s at	15	9 Hz		94	dB		59	Hz to	20 kHz ±5.0 di	B
Paradigm 7se MkIII	3.	8 o	hm	s at	15	2 Hz	:	92	dB		44	Hz to	20 kHz ±4.8 di	в



LISTENING COMPARISONS

	N U M B E R FIRST	OF TIMES SECOND	R A N K E D THIRD	AVERAGE RANK
KEF Q30	6	2	0	1.25
Klipsch KG-3.5	6	2	0	1.25
DCM TF-400 Series Two	1	5	2	2.13
Advent Laureate	2	2	4	2.25
Paradigm 7se MkIII	1 1	3	4	2.38
Infinity RS 525	0	4	4	2.50

very mild voice coloration at low levels. Spatially, it just "opened up," creating a wide, deep, stable stage that managed to feel immediate and intimate at the same time. Dynamically, the Q30 was slightly below average for this group, with saxophones squeaking and percussion splattering at very high levels. Overall, though, a very good sound show!

The listening panelists agreed, putting the KEF Q30 first or second in every blind comparison. In face-offs with the Klipsch, they tended to prefer it about half the time, noting a wide, deep soundstage with natural sound and excellent ambience.

Klipsch KG-3.5. The KG-3.5 had respectable but not spectacular measured response. Overall, the curve was fairly smooth, about average, but it tilted upward at about 1.5 dB per octave on-axis. Thirty degrees off-axis, it followed pretty much the same pattern, with a small notch in the crossover region and a somewhat reduced tweeter level. Its sensitivity was spectacular.

A gradually rising frequency response often makes a loudspeaker sound thin, but that was not the case here. The KG-3.5 sounded nicely balanced, especially at high output levels, sharing the clear, open character of the KEF Q30. The high-frequency emphasis added just a touch of extra sizzle to the sound, which usually masqueraded as increased detail and personality but sometimes added a trace of spit to breath tones and sibilance to vocals. At very high volume the KG-3.5 tended to go shiny, with some percussive tearing. On the other hand, there was no doubling or woofer rattle on serious overload.

The listening panel just loved the Klipsch KG-3.5, picking it over the KEF Q30 about half the time in face-

offs; it easily overmatched everything else in the comparisons. Listeners cited the KG-3.5 as "easiest to listen to across all volume levels" and "great sounding, but the great highs are a little unnatural."

Paradigm 7se MkIII. The 7se MkIII had the smoothest, best-looking frequency response, although it was worse statistically than that of the DCM TF-400 because of a mild crossover notch and a peak at 12 kHz. Off-axis response was almost dead flat between 100 Hz and 10 kHz, with little midband raggedness. Bass response extended down to 44 Hz, second only to the Advent, although there was mild peaking between 60 and 80 Hz. Sensitivity was quite good and, like everything else, dead on-spec, indicating tight engineering and quality control.

onically, the Paradigm 7se MkIII represents a definite choice in style, being much heavier in character than the KEF or Klipsch and thus sometimes preferable on electric bass. Soundstage presentation was thicker, but very deep, and voice reproduction was actually the most natural among all the models tested at moderate volume. At louder levels, however, the powerful bass thundered and droned, making the 7se MkIII bend to the muddy. Bass distortion remained low even at extreme levels, but horns became overly brash and biting.

Although it placed first or second in several first-round bake-offs, the Paradigm 7se MkIII, like the DCM, just couldn't best the KEF or the Klipsch in head-to-head competition. Listeners noted that it sounded "most natural at lower levels" but sometimes "muted and muddy." On the other hand, one listener called it "a very close second to Speaker 5" (which was the Klipsch KG-3.5 in this instance).

Appearance

Styling is even more a matter of taste than sound quality. As it turned out, none of our participants favored the same speaker for both sound and appearance, which was a disappointment to some of them. One listener thought the DCM TF-400 was one of the best-looking loudspeakers he had ever seen and labeled all the others "uninteresting." On the other hand, everyone else saw the DCM's tall, wide front panel as a "larger" speaker, even though it took up only an average amount of floor space.

The one woman in the group and two of the men favored the tall. slender cabinets and traditional naturalwood finishes of the Advent and Infinity, but they split between the Advent's stand-off grille and Infinity's flush grille. Two listeners appreciated the trim, sleek, modern KEF Q30, but neither liked its looks the best: One (the woman) didn't want to trade woodgrain for a smaller footprint, whereas the other (male) saw the Q30 as "too small for my system."

Me? I liked the Paradigm's monolithic slab styling and dark finish. The double pair of gold five-way binding posts grabbed my attention too. I like the idea of biamplifying loudspeakers (biwiring, I think, would be more accurately labeled "buy-wiring").

Final Thoughts

All these speakers represent excellent value and sound for the dollar. The KEF Q30 and the Klipsch KG-3.5 were clearly preferred in our blind listening comparisons, but styling preferences just as clearly failed to follow suit. Overall, the Klipsch may be the better choice for many applications, as its 3-dB sensitivity advantage is equivalent to a doubling of amplifier power (and in a comparison with unmatched levels will almost always give it the edge).

But I don't think it's possible to make a big mistake with any of these speakers. Each is well-engineered, carefully assembled, and a good example of how to make a high-performance speaker within the limitations imposed by their size and price class. They all deliver superb, extended highs and decent bass, but don't expect any of them to double as a subwoofer. Actually, that would be an excellent first upgrade.



PRACTICALLY SINCE their introduction, compact discs have been superheroes of the audio industry, known for their amazing sonic powers—and an astonishing ability to generate record-industry profits. Recently a new breed of challengers has arisen: the super CD's. Because of the special signal processing used to make them, these discs are said to be endowed with even greater sonic capabilities than their comparatively mild-mannered predecessors. The processing, which can be different from label to label and even from disc to disc, goes under several trademarks—Super Bit Mapping (Sony), 4D (Deutsche Grammophon), and Telarc 20-Bit, among others. Do any of these pretenders to auditory super status live up to what has been promised for them? The answer is in the numbers.

One of the first CD's made with Sony's Super Bit Mapping (SBM) process was a MasterSound STEREO REVIEW sampler disc (no longer available) containing selections from Sony Music's MasterSound pop and jazz remasterings/repackagings of material that originally appeared on Columbia and related labels. The discs represented in the sampler, and others in the MasterSound series, have gone on to receive widespread critical acclaim, much of it focusing on the revamped sound.

On the basis of the MasterSound releases, some critics have attributed powers to the SBM process that it does not—and cannot—have. The use of Super Bit Mapping alone can't account for the relatively large improvements in sound quality that have been noted in many MasterSound reissues. As Sony has explained in technical presentations and in its U.S. patent on SBM (No. 5,204,677), the process is designed to produce a very specific effect. That effect is subtle enough that, by itself, it would probably be inaudible with MasterSound series discs, which originate from relatively noisy analog master tapes.



Then what does account for the differences? It's the other steps employed in MasterSound disc production, primarily the use of a different master tape from the one used for earlier issues of the same material. That alone can lead to diminished tape hiss, flatter frequency response, lower distortion, and less audible wow and flutter. Furthermore, the new CD master doesn't have to undergo equalization and other processing for now-irrelevant LP reproduction, as previous master tapes did. With some MasterSound CD's, there is also a slight level shift: The new discs are higher in overall volume, a characteristic that will nearly always throw a comparison in their favor.

Two of these effects-the level shift and the change in frequency balance from the use of a different master tape or re-equalization-are easily measured. Figure 1 shows the difference in frequency content between the old and the MasterSound versions of the first few minutes of Until the Night from Billy Joel's 52nd Street (CBS/Sony CK 35609, MasterSound CK 52858). The graph, produced by spectrum averaging over identical sections of the music, shows the approximate equalizer frequency response necessary to transform the sound of the old release into the MasterSound version. In addition to the broad peaks at 80 Hz, 600 Hz, and 6 kHz, note the overall rise in level of about 3 dB. Try approximating this curve with your equalizer, and you'll be surprised how close the old and new discs can be made to sound. Other MasterSound comparisons show different frequency-balance and level shifts. Since SBM as presently implemented is a fixed, nonadjustable process, it cannot be responsible for such varving alterations.

Yet you'd be quite wrong to conclude from this discussion that there is nothing to SBM but advertising hype. Sony's description of the process as "revolutionary" is justified. To find where the 20-bit revolution is taking place, though, we have to explore other aspects of the audio signal and use different music; let's look at the bottom of the dynamic range with the classics.

Figure 2 shows various theoretical limits to the background noise and distortion levels of digital audio recordings. (For simplicity, I will sometimes refer just to "noise" even though "noise and distortion" is always meant. And although the graphs in this article are consistent, the actual level calibra-

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tions vary depending on how the calculations and measurements are done.) The vellow line is the theoretical minimum noise level of a 16-bit recording made with perfect 16-bit analog-todigital converters (ADC's) and the proper amount of distortion-eliminating "gaussian dither." In practice, the noise content of a typical 16-bit-mastered CD will be higher than the yellow trace, which represents the best performance possible from a CD made by traditional means (not counting the noise-reduction effects of using the CD system's optional pre-emphasis). With CD's made from older analog master tapes, like many MasterSound discs, the noise levels can be high enough to float off the top of the graph. Even 16 bits would be overkill.

The green line near the bottom of Figure 2 is the calculated minimum noise for a perfect 20-bit recording. It is some 24 dB lower than the 16-bit minimum, a huge difference that could be clearly audible with the right music under the right listening conditions. Even a perfect 16-bit recording does not have a low enough noise level to record the full perceptible dynamic range of live sounds-not counting explosions and gunshots. Recordings made with a full 20 bits of resolution do meet this stringent requirement. That's one good reason for record companies to start making 20-bit master tapes, and labels such as Sony Classical, Deutsche Grammophon, Telarc, and Dorian are doing so.

> he tricky part is turning such a master tape into a 16-bit

CD. You can't simply drop the four "least significant" bits, because you'd end up with a recording with worse noise and distortion than a correctly made 16-bit master tape. One simple 20-bit to 16-bit conversion process is virtually the same as the procedure vou'd follow if you had to convert dollars and cents into just dollars. With \$1,995.95, for instance, you'd first round off the cents to the nearest dollar (\$1,996.00), then *truncate* that number by lopping off the cent digits (\$1,996). In performing this round/truncate operation with 20-bit audio data, you'd have to add a few niceties such as "triangular PDF dither," and you'd end up with noise and distortion no lower than the red line in Figures 2-5, an important theoretical limit. This line represents the minimum noise level of a 16-bit recording directly generated in

the digital domain, as from a 16-bit digital sound synthesizer or from simple dither/round/truncate operations on audio data recorded at greater than 16bit resolution. The red-line limit is only 1.1 dB lower than the yellow line. You don't gain much of an improvement in background noise by making a greater-than-16-bit recording if you use such simple processing to convert your master tape to 16-bit CD data.

But the red-line noise level shown in Figures 2-5 is special. While the amount of noise is irreducible, digital signal processing can move it to where it is less audible. "Squish" down the red curve at the frequencies where the ear is most sensitive to low-level sounds (around 4 kHz, placed here at the middle of the graphs in Figures 2-5), and "squeeze" the resulting noise "bulge" up to where the ear is quite insensitive at low levels (above 15 kHz), and you haven't changed the total amount of noise, but you have redistributed it so that it is far less perceptible. This squish-squeeze process. which is performed by a digital filter, is called *noise shaping*, and if it is properly incorporated into the dither/ round/truncate sequence, from a good 20-bit master you can create a 16-bit CD with a noise "floor" that is tailored to the sensitivity of the ear. At the frequencies where noise would be most audible, it disappears! The dashed blue curve of Figure 2 represents the residual noise that a high-quality 20- to 16bit processor produces. At 4 kHz it's a great improvement over the red-line limit.

That is what's revolutionary about the principle behind Super Bit Mapping. With noise-shaped 16-bit CD's, for the first time a signal-reproduction technology available to the consumer could, theoretically, come very close to equaling the human perception of dynamic range. In comparison, film and video don't even get halfway to reproducing the full range of perceivable light levels.

As the different types of super CD's indicate, there are different noiseshaping processes available to recording studios. Although it was the first of the breed, Sony's SBM is now considered by some recording professionals to be less effective at noise shaping than other processing, such as the Gambit device graphed in the dashed line of Figure 2. Meridian has also made some outstanding contributions in this area and produces its own 20to 16-bit mastering processor. Has any of this theory produced improvements in practice, where the signals come not from calculations but from real-world microphones?

Figure 3 shows the residual noise spectrum, measured digitally directly from the audio data stream, of the *only* super CD I've yet found, out of around forty from different labels, to show a noise floor unmistakably below the 16-bit red-line limit. It's a Sony Classical SBM disc of a solo piano (Emanuel Ax playing Liszt, SK 48484) recorded with just two mikes, a preamp, and the digital recorder—a minimalist setup if there ever was one. The rise in noise down toward 1 kHz is part of the low-frequency "room tone," the sound ing the outputs of main and spotlight mikes can improve musical clarity while maintaining stereo image depth.

The principal reason that the noise levels of all these recordings are much higher than the dashed noise-shaped residual in Figure 2 derives from early in the signal chain. In particular, microphone noise can sometimes be higher than even the 16-bit limit, and it grows with the number of mikes that are used (yet another argument in the case for minimalist recordings).

Being able to process microphone signals digitally gains you nothing in dynamic range if the mikes are already too noisy to provide a 20-bit output. That processing might even lead you

Noise-shaping lets a

6-bit CD have a near-20-bit

ynamic

that gets recorded when nobody is playing but the mikes are still on. While the curve doesn't come near a 20-bit dynamic range, the 4- to 5-dB dip in noise between 2 and 16 kHz and the telltale bulge above 16 kHz show that noise-shift processing did occur. It *is* a damn "clean" disc. The Telarc 20-Bit CD's I've measured as well as 20bit-mastered discs from Dorian also show primarily the high-frequency noise-shift bulge, not the more important 4-kHz dip.

None of the dozen Deutsche Grammophon 4D recordings I've tested show noise levels below the 16-bit red-line limit, despite DG's use of its Authentic Bit Imaging (ABI) process to convert the master tapes to CD. The 4D noise levels are, at best, like those of Figure 4 (Grieg's Lyric Pieces, 437 522): about the same as a perfect 16bit recording. They can be worse, as shown in Figure 5 (Rimsky-Korsakov's Scheherazade, 437 818), which, ignoring the hall noise below 2 kHz, shows no evidence of noise shaping but does include a leaked-in television horizontal-scan frequency (the peak near 16 kHz).

There are other innovations contained within the 4D process that may produce more obvious sonic benefits than ABI, the most important being the ability to digitally mix and timealign multiple 21-bit microphone signals. As Denon's pioneers in the technique discovered, digitally time-alignto digitally clip the signal inadvertently, producing a "compressed" sound on the loudest peaks, something that happens with unusual regularity in certain 4D recordings. Figure 6 shows an oscilloscope "freeze frame" of waveform-flattening clipping of the digital data during Stravinsky's Firebird (Deutsche Grammophon 437 850). So the bottom line with super CD's is what it has always been for recordings: Buy for the music, not the technology. When remastering from analog tapes is involved, as it is in the MasterSound series, any improvements you hear are likely to arise from the use of different master tapes.

Even if "20-bit" CD's did have better than 16-bit noise levels-and with new low-noise mikes, mike preamps, and ADC's many of them eventually will-you cannot get the full benefit of any noise shifting unless the digitalto-analog converters (DAC's) in your CD player are of near 20-bit accuracy, even if they are only 16-bit devices. The various output-voltage steps from a 16-bit converter have to be as close to perfect as a 20-bit converter's are, which suggests several new test criteria for digital products. So although it may take some time for super CD's to live up to their potential (even Superman had to grow up), as a result of noise-shifting technology and new test criteria we may eventually see betterperforming CD players. That should please any superhero.

QUITIN

hen music is recorded in a studio, great care is taken to isolate the microphones from

extraneous noise. The last thing a recording engineer wants to put on tape is the clanging of a nearby rail line, the rumble of an aging air conditioner, or, God forbid, the clickity-clack of heels on the wooden floor upstairs. That's why professional recording studios are soundproofed to the hilt. Of course, soundproofing also reduces the level of noise traveling beyond studio walls and into adjacent rooms or buildings.

Soundproofing can also be a worthwhile pursuit at home if you dream of kicking back in a noise-free listening room—one in which the Eagles don't have to compete with the rumble of a passing garbage truck. Soundproofing is not the same as the use of sound-absorbing wall panels and other interior treatments designed to tame reverb and otherwise enhance room acoustics. Rather, the idea is to create a barrier that inhibits the flow of

unwanted sound (noise) through the walls, floor, windows, and ceiling of your listening room. Of course, eliminating noise also means putting a muzzle on those annoying buzzes and rattles that occur when you crank up the volume. Contrary to conventional wisdom, there's a lot more to soundproofing than simply slapping some cork or fuzzy material on your walls.

What Noise?

The first step on the path toward a quiet listening room is to determine exactly what it is you're trying to accomplish. Do you want to isolate your listening environment from an external noise source—perhaps the roar of jets at a nearby airport or the din of a city street? Or are you simply trying to be a good neighbor and keep your penchant for loud music to yourself? (No matter how good the jamming is on the inside, it's noise to those on the outside.) Or maybe it's a whooshing ventilation system or an elusive rattle that's putting a damper

Soundproofing techniques to keep the music in and the noise out of your listening room on your music enjoyment. Whatever the offending noise source may be, you have to zero in on it before you can devise an appropriate strategy for dealing with it.

A Sound Survey

Before you even think about tearing down walls or messing with the structure of your listening room, conduct a thorough survey of the space. Walk around and really listen. Are there any "leaks" that can be plugged up without too much trouble? It's quite common for sound and vibration to travel between rooms via what acousticians refer to as "flanking paths"—back-to-back electrical outlets, electrical conduits and pipes, ventilation ducting, and other wall cavities (see Figure 1, page 67).

Pay particular attention to electrical outlets that are aligned with outlets in adjoining rooms—you'd be surprised how much noise can leak through such a small opening. You can achieve a noticeable reduction in noise by simply

placing a piece of sheetrock between the outlets, although offsetting them by 18 inches or so will provide even better isolation. (These may be jobs for an electrician.) If there are any exposed electrical conduits or pipes, make sure the entry and exit points in the floor or wall surrounding them are sealed; you can use fiberglass or foam to fill in open spaces. Wrapping foam insulation around exposed pipes will also help cut down on extraneous noise.

Disturbing Ducts

Air-conditioning and heating ducts are another common source of noise. The movement of air through ducts that are too small, or have sharp bends, produces a "chuffing" sound that can be quite intrusive. And the closer your music haven is to the A/C equipment or furnace in your house or apartment, the louder the noise and vibration.

A quick fix for a noisy ventilation system is to install a $\frac{\delta_0}{\delta_0}$ homemade duct silencer, whose job is to quiet the flow of air

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in much the same way that a muffler mutes a car's exhaust. Remove the register (grille cover) and line the last 18 inches of the duct with foam that's an inch or two thick. Fiberglass will also quiet a noisy duct, but I don't recommend using it because it's a pain to handle (it makes most people itch) and can shed particles into the air.

If the noise level is still too high, try wrapping a damping material like Illbruck's ProSPEC Barrier around the outside of the duct—if you can get to it. That will stop noise and vibration from passing through the duct's thin walls. ProSPEC Barrier is a 54-inchwide, high-density vinyl sheet that ranges in price from \$180 for a 20-foot roll of nonreinforced material to \$695 for a 60-foot reinforced roll.

Shake, Rattle, and Buzz

Many of us are so busy tweaking system components and worrying about things like flat frequency response that we fail to notice noise that's caused by "spurious resonators" *within* the listening room. Chattering furniture, rattling glassware, and buzzing wastepaper baskets are a few common offenders.

Eliminating such sonic annoyances is relatively easy. Pop in a test CD, like Pierre Verany's "Digital Test," and play the sinewave-sweep or frequency-response track. As the test tone moves across the frequency spectrum, listen for sympathetic resonances. Repeat the sweep at increasingly higher volumes if necessary (not too loud, or you may damage your speakers or your ears). Zero in on each noise source, and then "destroy" it by placing felt or some other damping material between the vibrating surfaces. Allsop makes a rubbery material called Navcom that's good for this purpose. It's widely available in the form of 2-inch-round Audio Isolators: a package of four costs about \$30.

Through the Wall

If after having tried smaller fixes you're still unhappy with the level of noise that's invading your listening room, you may have to resort to more

HOW TO MEASURE SOUND TRANSMISSION

To measure the sound-transmission characteristic of a wall, you'll need a robust speaker, a power amplifier, a pink-noise generator, or a test CD, and a sound-level meter like Radio Shack's Model 33-2055 (shown, \$60). Place the speaker a few feet from any reflecting surface and play pink noise through it (it'll sound like you're standing next to Niagara Falls). Turn up the volume until the gushing is louder than the ambient noise (neighbors, traffic, wind, etc.), and aim the level meter away from the front of the speaker (out of its near field). A sound-pressure level of at least

105 dBA is recommended (the A refers to a weighting system that simulates the sensitivity characteristics of the human ear), so make sure to use a fairly highoutput speaker—a wimpy model might blow.

Next, have a friend switch the pink noise on and off every minute while adjoining room, measuring with the noise source on and off. Compare the level from the "transmitting" room (at least 105 dBA) with the level in the "receiving" room when the noise source is on. The difference between them represents the degree of attenuation provided by the wall separating the rooms, a figure roughly equivalent to the STC (Sound Transmission Class) rating used by contractors and acousticians.

vou make noise-level readings in the

For rooms that are in different apartments, 50 dBA of attenuation is considered acceptable, while the walls



separating rooms within the same house or apartment often yield less isolation—perhaps only 40 dBA. The rationale (among builders at least) seems to be that yelling at your kid to turn down his stereo is less of a problem than yelling at your neighbor. drastic soundproofing measures, some of which could require the services of a contractor.

First off, you can pretty much forget about the old handyman remedy of loosely stuffing fiberglass in your walls. The slight reduction in midrange noise you'll gain will hardly be worth the effort—although it may be worthwhile if used in conjunction with other structural treatments.

The standard textbook solution for reducing the transmission of sound and vibration is to add another layer of material to the existing walls. The trick is to use a *different* material (add wood paneling to sheetrock, for example), or, if you must use the same material, at least use a different thickness ($\frac{5}{1}$ -inch sheetrock if the existing wall is $\frac{3}{1}$ inch, for example). Why? Varying the density of the layers creates an "impedance mismatch" that makes it harder for sound to pass through.

To pick up a few more decibels of isolation, you can put a layer of damping material between the existing layer of sheetrock and the one you're adding. Retro-Rock from Greenwood Forest Products, an adhesive-backed visco-elastic material, is designed specifically for this application. In addition to reducing noise transmission, it also controls annoying wall resonances. Retro-Rock is generally sold in large quantities to contractors.

Bulking up your walls will produce an audible improvement, but it won't solve severe noise problems-especially those involving substantial lowfrequency energy (like 757's roaring overhead or a neighbor who owns a huge subwoofer and loves rap music). To combat problems of that magnitude, I recommend constructing a wide-frame wall with staggered studs and a flexible noise barrier (like Illbruck's ProSPEC Barrier) running through the middle (see Figure 2). Because there's a gap of several inches between the studs on either side of the wall's inner surface (and the flexible barrier), sound that's picked up by one side does not pass *directly* through to the other side. (In a conventional wall, the sheetrock on both sides is attached directly to all of the studs, which makes it easier for sound to travel from one side to the other.) As a result, a staggered-stud wall provides about 10 dB more isolation than a conventionally studded wall (see Figure 3).

For the ultimate in wall isolation, you can always build *two* separate staggered-stud wall frames and sepa-



10 dB. A secondary ceiling secured by special resilient brackets can provide 10 dB of isolation. Sound travels more

readily through a

conventional wall (top) than one built

with a wide frame

and staggered

studs (below).

You can expect to

gain about 10 dB of

staggered-stud wall

instead of a standard

wall, or by using

damped plywood

regular plywood

for subflooring.

instead of

isolation by building a

Sound passes easily

from room to room via "flanking paths" like

electrical outlets and ducts, increasing noise in an adjacent room by









An effective way to reduce the flow of noise through windows is to install a sliding sound barrier behind drapery.

FIGURE 4



here's a lot more to soundproofing than slapping some cork or fuzzy material on your

rate them by a few inches. The results will be superb, but it will cost a bundle and you'll have to give up lots of precious listening space. While we're on the subject of construction, one quick word of advice: Consult your local building code *before* you begin any structural work.

walls.

A Leaky Ceiling

If there's a noise source directly above your listening room-rambunctious kids in the upstairs bedroom, partying neighbors in an apartment, and so on-the ceiling will figure prominently into your soundproofing plans. The easiest way to mitigate the flow of noise through the ceiling is to install carpeting with thick underpadding in the room above. You can expect more than a 6-dB reduction in noise from this step alone. Unfortunately, it is not a practical solution for most apartment dwellers.

The other option is to hire a professional to install a secondary sheetrock ceiling that attaches to the primary ceiling by means of special resilient brackets. The U-shaped brackets create a 1-inch gap between the two ceilings, effectively isolating them from one another. Also, a space is left around the perimeter of the secondary ceiling to prevent wall vibrations from

Proudfoot's Quilted Sound Screens, sold under the Noisemaster brand name, create an effective sound barrier when used behind drapery.



Illbruck's ProSPEC noise barriers can help with many kinds of noise problems. Shown here, top to bottom, are ProSPEC Composite, ProSPEC Barrier, and ProSPEC Acoustical Foam.



COMMON SOUND LEVELS (DECIBELS)

THRESHOLD OF FEELING	130+	
	120	jet takeoff (60 meters)
DEAFENING	110	construction site
	100	shout (1.5 meters)
VERY NDISY	90	heavy truck (15 meters)
	80	city street
NOISY	70	car interior (55 mph)
	60	normal conversation (1 meter)
MODERATE	50	office, classroom
	40	living room
QUIET	30	bedroom at night
	20	broadcast studio
BARELY AUDIBLE	10	rustling leaves
THRESHOLD OF AUDIBILITY	D	

Source : Thomas D. Rossing, Science of Sound (Addison-Wesley, 1982)

passing back into the ceiling. The perimeter gap is caulked with a nonhardening elastomer like silicone (just make sure it's the paintable kind).

Through the Floor

As I've noted, carpeting with thick underpadding will do a pretty good job of keeping the music in and the noise out of your listening room. But if you're grappling with an extraordinary noise problem and have money to burn, you could hire a professional to install a "floating floor." It's the ultimate noise-barrier structure, which is why you'll find it in big-time recording studios like New York's legendary Electric Lady Sound Studios, which for some bizarre reason is located above a subway station. Typically, concrete is poured into a floating steel frame with spring supports. Other commercial techniques involve the use of floor supports made of a vinyl-coated metal mesh or compressed fiberglass.

If you're planning a construction project, here are a few tips to keep in mind: 1) Subflooring boards should be nailed and glued to prevent creaking. 2) Consider using damped wood panels for the subflooring instead of regular plywood (see Figure 3). Greenwood Forest's dB-Ply is engineered to reduce noise transmission without compromising structural integrity; a 4 x 8-foot ³/₄-inch-thick sheet costs about \$90. 3) If you want to put a noise barrier beneath marble, ceramic tile, or parquet flooring, seek professional advice on what type of material to use or you'll wind up with cracks in the floor. Soundcoat's DYAD 601 with pressure-sensitive adhesive, for example, is a commercial subflooring material specifically designed to reduce impact noise on marble floors.

Out the Window

No matter how thick or well-isolated your walls are, sound can still pass into (and out of) your listening room through the windows. I remember visiting a "work in progress" home studio where the owner proudly showed off his ambitious wall-construction efforts, yet the window panes were only *l*%-inch thick. That's like building a submarine with a double hull, but forgetting to close the hatches!

You can expect a noticeable improvement in sound isolation by increasing glass thickness from $\frac{1}{8}$ inch (very thin) or $\frac{1}{4}$ inch (typical) to $\frac{3}{8}$ inch. For best results, the glass should



Many of us are so busy tweaking our systems that we fail to notice resonant noises within the listening room.

float in a Neoprene rubber gasket, which will further reduce the sound and vibration picked up by the pane and reduce its transfer to the window frame as well. There are a few outfits, including Overly Manufacturing, that specialize in precision-made "acoustic" windows, and many more supply the double-glazed "thermal" windows (which have two closely spaced panes of glass in the same frame).

Acoustic windows are very effective at reducing noise transmission, some by more than 50 dB, but they're also very expensive (about twice as much as comparable premium-quality standard windows). Double-glazed windows cost less, but they're also less effective because they're really designed to reduce your heating bill. If you're looking to get the most bang for your buck (that is, the *least* "bang"), you can simply install a lowly storm window—it will outperform a doubleglazed window and be *much* cheaper than any acoustic window.

While storm windows can provide adequate relief in many settings, they won't provide enough isolation if you live at the end of an airport runway or have some other colossal noise problem. In such cases, I recommend installing a sliding sound barrier in front of the window or, even better, across the entire length of the offending wall. Such a scheme can be extremely effective at keeping noise outside. There are two ways to go: Put the barrier behind the drapery (see Figure 4), or have it covered in fabric so it can double as drapery. Either way, leave about 6 inches of space between the barrier and the window/wall to achieve the best possible isolation.

A variety of acoustical barriers from lead- and fiberglass-lined "quilts" to foam panels—are available from Proudfoot, United, and Illbruck. Proudfoot, for example, sells Quilted Sound Screens under the Noisemaster brand name. The 4-foot-wide fiberglass-filled screens are available with a vinyl or lead core and have eyelets for hanging. Prices range from \$3.50 to \$6 per square foot, depending on size and thickness.

To reduce noise leakage from windows in less severe environments, you can create a foam barrier behind the drapes using a product like Illbruck's ProSPEC Acoustical Foam. It should be positioned a few inches from the wall and mounted to a sliding frame unless you don't mind looking at a foam wall.

Reducing the noise leakage from doors can become rather involved. Specialized "acoustic" doors, similar to the acoustic windows discussed above, are available from Overly and other companies. A less extreme and expensive measure, though also less effective, is to install a gasket of flexible material around the entire inner frame of the door to seal it off when closed.

Finally, it's always a good idea to consult local fire officials before installing a sound barrier of any kind.

Now it's time to put on your acoustician's hat and pour a glass of wine. If you're planning to build a new home or add on a room, you now have an arsenal of soundproofing tips to ponder. If new construction isn't in the cards, perhaps the simple solutions offered in the first part of this article will provide all the sonic isolation you need. On the other hand, a few subtle improvements may whet your appetite for an even quieter listening room. Next thing you know you'll be consulting a loan officer and calling in the construction crews to turn your dreams of sonic solitude into reality. Or maybe you'll decide to take a completely different route and move to the desert

RESOURCES

The following companies offer a wide variety of soundproofing materials and devices.

ALLSOP, INC.

P.O. Box 23, Bellingham, WA 98227; telephone, 1-800-426-4303 (toll-free) or 206-734-9090.

GREENWOOD FOREST PRODUCTS INC.

16704 W. 75th Place, Golden, CO 80403; telephone, 303-431-0862.

LLBRUCK, INC., SONEX OIVISION

3800 Washington Ave. N., Minneapolis, MN 55412; telephone, 1-800-662-0032 or 612-520-3620.

OVERLY MANUFACTURING CO.

574 W. Otterman St., Greensburg, PA 15601; telephone, 412-834-7300.

THE PROUDFOOT CO., INC.

P.O. Box 276, Monroe, CT 06468; telephone, 1-800-445-0034 ar 203-459-0031.

SOUNDCOAT CO., INC.

1 Burt Or., Deer Park, NY 11729; telephone, 516-242-2200

UNITED PROCESS INC., SOUND SEAL DIVISION P.O. Box 545, Agawam, MA 01001; telephone, 413-789-1770

YSTEMS

Audio Before Video

ome theater is all well and good, but music-pure and unadulterated-is really what it's all about as far as Soren Laursen is concerned. A loval reader of STEREO REVIEW since the beginning (when it was called HiFi & Music Review), the fifty-eight-year-old insurance executive would just as soon slip a Wagner or Dvorak opera into his changer as fire up his hi-fi VCR, even though his modest system is endowed with plenty of surround-sound accoutrements.

"We're not TV people," says Laursen, whose longstanding love affair with audio began back in the Fifties when he built his first Heathkit amp and preamp. "Ninety-five percent of the time, my wife Ellie and I simply play music. The theater part of the system is for when we rent a video or record an opera. which amounts to a couple of hours a week."

Enter the den of the Laursen residence in Mahwah, New Jersey, and your eyes are immediately drawn to the magnificent floor-toceiling A/V cabinet and room divider built by Laursen, who modestly refers to his carpentry skills as "a hobby." The divider features builtin lighting, eleven adjustable shelves, a TV compartment, bookshelves on each side, and



shelving for CD's as well as audio and video tapes. There are even a couple of nooks for subwoofers, one hidden and one exposed. Full-length louvered doors in the rear provide easy access to the components' back panels.

The electronics side of Laursen's A/V rig is Sony all the way. The CDP-C335 five-CD carousel changer is the only one of his three audio source components that gets a regular workout. "I like being able to change four discs while one is playing," he says, noting that his PS-LX520 turntable is in mothballs along with his collection of classical LP's (which he's thinking of selling). "I'm gradually replacing everything with CD's because they're so convenient to use and the sound is just so much better. Once in

a while I want to hear something on LP that I can't find on CD, so I hook up the turntable and record it onto videotape."

The third audio source is a TC-RX470 cassette deck, used mainly to make tapes for playback on the eleven-speaker, 120-watt Infinity Spatial Imaging System in his Chrysler Concorde.

The hub of Laursen's home system is a Sony STR-AV970X A/V receiver, featuring a Dolby Pro Logic decoder. Power output in the surround mode is 100 watts each to the front left and right speakers and 15 watts to each surround speaker, or 100 watts per channel in two-channel mode. The receiver's centerchannel line-level output feeds the TV speaker. "That's a decision I regret," Laursen admits, "but I wanted to make use of what I already had." To handle the occasional videocassette or Metropolitan Opera broadcast, a Sony SLV-696HF VHS Hi-Fi VCR feeds the 25-inch Sony KV-25XBR TV.

Sound is conveyed by a four-piece Cambridge SoundWorks Ensemble speaker system, comprising a pair of compact satellites and two subwoofers, each with an 8-inch driver. "I was really impressed by the thirtyday guarantee offered by Cambridge Sound-Works," Laursen says. "To be able to test a speaker in your home is just so logical."

The satellites are bracket-mounted on the ceiling and aimed toward the listening area. When Laursen engages the receiver's surround mode, a pair of Cambridge Sound-Works Surround II dipole speakers kick in. They're mounted on the side walls about a foot below the ceiling and a couple of feet from the back wall. As with the ceiling speakers, all wiring is meticulously concealed.

For casual listening at poolside, or wherever else he wants music, Laursen bought two pairs of Recoton W100 wireless speakers. "The signal is carried via the household electrical wiring from a transmitter in the main cabinet," Laursen explains. "You plug one of the speakers into the wall outlet and run a wire from it to the other speaker. They sound pretty good."

While Laursen is quite happy with the performance of his system, which cost only about \$2,500, like most enthusiasts he's always eying new acquisitions. His wish list includes a dedicated center speaker and a large, powered subwoofer. "I've heard some low organ-pedal notes in my car that I don't hear at home, so I think it's time to see if I can get better bass at -Bob Ankosko 🖇 home."


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WHERE HAVE ALL THE R Y Τ

ast summer Luciano Pavarotti gave a free concert in Central Park that drew an audience of close to half a million people-the sort of massive turnout ordinarily associated with pop stars such as Diana Ross and Paul Simon. The concert came on the heels of the spectacular success of London Records' "Three Tenors." a recording of a 1990 concert at the World Cup soccer competion in Rome by Pavarotti, Placido Domingo, and José Carreras. To date, it has sold more than 11 million CD's, cassettes, and videos worldwide-a figure that Michael Jackson or Barbra Streisand might envy. On the sixteenth of this month, again at the World Cup competition, the three singers will be reunited for a second "Three Tenors" concert, at Dodger Stadium in Los Angeles, with a top ticket price in excess of a thousand dollars.

All that has prompted record executives and other music-industry professionals to dream of a new golden age of classical music, reviving

memories of Enrico Caruso, the legendary tenor who was the first great star of the phonograph. The only flaw in this rosy vision is that when you reach from the superstar level down to the second tier, in terms of popularity and commercial success you are going from the Rocky Mountains to Death Valley.

There are many talented and accomplished young (and not-so-young) lyric tenors on the scene now, but they do not carry even a fraction of the impact of Domingo and Pavarotti. Jerry Hadley, Richard Leech, and Neil Shicoff, to name just three, are fine artists with very successful careers, but they are known primarily to classical-music aficionados, and their recording careers are not in the ballpark with the two megatenors. (While Carreras continues to perform on the opera stage from time to time, his career has shifted strongly into crossover.)

Yet Domingo and Pavarotti, who are fiftythree and fifty-eight years old, respectively, are nearing the ends of their singing careers: Ten





years from now, who will there be to attract half a million people to Central Park to listen to classical music? Does anyone believe that a Hadley-Leech-Shicoff concert will ever sell even a tiny part of what "Three Tenors" has done?

Domingo and Pavarotti are most closely associated with Italian opera, but the situation is even grimmer in the German repertory. Many works that were formerly staples of the opera stage and record catalog are centered hugely popular, and their names on the album covers insured strong sales. Yet in two recent recordings of Aïda, the stars were the tenors: In London's 1990 recording, Pavarotti is paired with the relative unknown Maria Chiara in the title role, and in Sony's 1991 set, Domingo partners Aprile Millo, a soprano who has a following at the Met but is not that well known outside New York.

The Sony Aïda was Domingo's fourth, and there is now talk of him

ARRERAS DOMINGO PAVAROTTI EHTA

around parts for heldentenor (German for "heroic tenor"), a voice of outstanding power, brilliance, and endurance. Some of those works simply cannot be performed now, for there is no one to sing the tenor roles. The Metropolitan Opera has not programmed Wagner's Tristan und Isolde in ten years and, for lack of a Tristan, has no immediate plans to do so. "We can't do Tristan," Ray Minshull, the Decca artist-and-repertory director who produced many of Pavarotti's most successful recordings, told me ruefully before he retired earlier this vear. "I don't see a heldentenor anywhere. We'd love to find somebody, but there isn't anyone."

Thirty years ago, record producers and opera-company directors had many star tenors (if still only a few heldentenors) to choose from, including Carlo Bergonzi, Franco Corelli, Nicolai Gedda, Mario Del Monaco, Giuseppe di Stefano, Richard Tucker, and Jon Vickers. Today, thanks to digital recording technology, orchestras have never sounded better, but the record labels face serious problems in

coming up with casts of singers who will sell.

In the past it was usually the soprano who provided the star quality-and the commercial appeal. A recording of Aïda, say, sold because of the singer in the title role: Maria Callas, Leontyne Price, and Renata Tebaldi were

doing it for a fifth time. When I spoke with him, the tenor was almost apologetic: "Personally, I think they should give someone else a chance. But if they ask me, what am I supposed to do-say no?" He says that he would much rather record something new than a fourth or fifth version of one of the repertory warhorses.

"I ask them, why don't you do La Battaglia di Legnano, or I Masnadieri, or I Due Foscari [three early Verdi operas]. But if I think I can do another Aïda well, that I can bring something interesting, something different to my performance, then I will do it."

Much of the blame for the situation must go to the recording companies, which often seem to be excessively timid about programming and casting. Domingo is always a safe choice for a new recording of Aida-but why not give someone new a chance? Why not opt for a lesser-known Verdi opera instead of one of the old favorites already well represented in the catalog?

The answer, of course, is to be found on the bottom line. Left to their own devices, the marketing numberscrunchers will always insist on recording a popular piece with a big name in the cast. Nonetheless, there are hopeful exceptions. An artist of Domingo's stature can convince the major labels to record lesser-known repertory, such as DG's recent première of El Gato Montés, an early-twentieth-century opera by the Spanish composer Manuel Penella, which featured Domingo and the young Chilean soprano Verónica Villarroel.

Sony Classics has also shown a penchant for innovation by issuing live opera recordings, which are far cheaper to produce, with fresh young singers in big parts. Sony's new La Traviata, for example, a live recording from La Scala conducted by Riccardo Muti, has as its Alfredo the young French tenor Roberto Alagna, who at moments sounds remarkably like Pavarotti. Teldec has done much the same thing with a new set of Wagner's Ring cycle, recorded live at the Bayreuth Festival with conductor Daniel Barenboim and a cast of seasoned but not very well-known singers.

Yet the recording companies are dealing in a luxury commodity that is expensive to produce, and they simply cannot afford to take big risks. A consumer on a budget isn't likely to look twice at a recording of an unfamiliar opera with a cast of singers he has never heard of. As Domingo pointed out, "Today recording is so expensive. The record companies aren't philanthropies; they have to make a profit." For the moment, it seems that they can only do so by using big names like his.

Exactly how do names like Domingo's and Pavarotti's get made? Certainly talent is essential, but it takes two additional ingredients: star magnetism and towering ambition. As Decca's Ray Minshull noted, other tenors had voices as compelling, but not superstar careers: "Jussi Bjoerling and Giuseppe di Stefano had everything that Pavarotti has [vocally], but they lacked Pavarotti's magnetism."

rdis Krainik, general director of the Lyric Opera of Chicago, believes that the impetus to extend a singing career beyond the opera stage to a larger public is something distinct from musical talent. "Some people are ambitious to be a great singer," she told me, "and some are ambitious to be more than that, to become a public phenomenon. Those two boys [Pavarotti and Domingo] are [like] that. Jon Vickers never was, and he was one of the great singers of all time. It's not just singing; it's also marketing."

As an example, Krainik recounted a telling anecdote from the early days of Domingo's career: "When Placido first sang with us, he was just a young beginner. Nobody thought he was going to be what he is now. One day he told me that he had to leave Chicago in the middle of a series of performances. I told him we wouldn't be happy about that, but he said, 'It's very important to me. 1'm going to be on the Johnny Carson show.'" Pavarotti had been on the *Tonight Show* with Carson, Krainik noted, and Domingo knew that television exposure was important for broadening his audience.

Some observers believe that the megatenor phenomenon itself is something of an anomaly. "When Luciano and I first came around," Domingo pointed out, "certainly there were a tremendous number of exciting tenors singing, but even so, it was the age of

the diva. Everyone was talking about Callas, Tebaldi, Price, Sutherland, Nilsson, Caballé. Then all of a sudden it changed, and the interest was in the tenors. It has been that way for quite a long time.

I don't know if it's going to remain that way until we retire, or if there will be a turn for sopranos again, or mezzos or baritones."

Alison Ames, vice president for artists and repertory at Deutsche Grammophon, is already beginning to see a trend away from tenors: "If we had a golden era of divas in the Forties and Fifties, in the Eighties and [early] Nineties it was a golden era for tenors. Now we seem to be entering the age of the mezzos and baritones-which, after all, are the more natural voice levels." In support of that view, Ames cites the enormous success of the mezzo-soprano Cecilia Bartoli and the emerging careers of such baritones as Dmitri Hvorostovsky and Thomas Hampson.

The outlook for tenors isn't altogether dim; picking the next crop is one of the favorite sports of music-industry insiders. Alison Ames sees great careers down the line for Jerry Hadley, Richard Leech, and Frank Lopardo; Ray Minshull adds Roberto Alagna to the list. Ardis Krainik believes that the Canadian Ben Heppner will be the next great heldentenor; the Met currently favors Michael Sylvester for the lyrictenor roles of the Italian repertory.

Yet Krainik captures the consensus when she says, "Is there another Domingo, another Pavarotti coming? I don't know. There isn't anybody on the horizon right now that you can point to and say, 'Boy, this is it.'"

Jamie James is an arts correspondent for the Times of London and author of The Music of the Spheres (Grove).



AFTFR Band

Can rising stars Jerry Hadley (top), Neil Shicoff (center), and Richard Leech (bottom) become tomorrow's "three tenors"?

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STEREO REVIEW'S CRITICS CHOOSE THE OUTSTANDING CURRENT RELEASES

Elvis Costello, 1994's Model

KFX OF WONTH



In fact, "Brutal Youth," which was coproduced by Costello and Mitchell Froom, winds up sounding like the Great Lost Elvis Costello and the Attractions Album, a worldly neo-punk broadside that could easily be filed between "This Year's Model" and "Armed Forces." Like those classics, it's a big chunk of a record to digest; its fifteen songs are as dense and unrelenting as anything Costello's ever recorded, more like novellas than the average songwriter's short stories. But only one clocks in at over 5 minutes (the moody, keyboard-drenched Sulky Girl). and the band runs as clean and hot as a well-tuned engine on such numbers as 20% Amnesia, a blast of rebel rock that features Costello in full-throttle scream throughout.

The album's musical standout is *Clown* Strike, a breezy soul strut that could easily merit a spot on a beach-music jukebox. Lyrically. Costello taps into a motherlode in *London's Brilliant Parade*, a detailed catalog of urban obsessions defining his love/hate relationship with the city whose spirit he interprets with as sure a hand as Lou Reed dissects New York. It's a theme explored in depth on "Brutal Youth." as Costello, returning to the scene of the crime, sifts through the evidence of a profligate age and draws up a canny indictment in which even he does not stand unaccused.

From start to finish, "Brutal Youth" reveals an artist fully in control. Amazingly, time hasn't mellowed Costello and the Attractions—it's made them that much more muscular and knowing. Costello even looks more like himself on the cover than he has in years—clean-shaven, hornrimmed, back in fighting trim, face fixed in a delightfully jaundiced smirk. This Elvis, I'm pleased to note, has not left the building. *Parke Puterbaugh*

ELVIS COSTELLO Brutal Youth

Pony St.: Kinder Murder: 13 Steps Lead Down: This Is Hell: Clown Strike: You Tripped at Every Step: Still Too Soon to Know; 20% Aninesia: Sulky Girl: London's Brilliant Parade; My Science Fiction Twin: Rocking Horse Road; Just About Glad: All the Rage: Favorite Hour WARNER BROS. 45535 (57 min)

Ivis Costello has been laying the groundwork for his latest record, "Brutal Youth," for a long time. From the dense, often labored songcraft of albums like the late-Eighties "Spike" and (especially) 1991's "Mighty Like a Rose" through noble failures like last year's "The Juliet Letters," Costello was guilty only of trying too hard to maintain his status as the pre-eminent songwriter of his time. Now, with "Brutal Youth," he refines and clarifies his art by focusing sharply on what he does best—boring through the thicket of human interactions with lacerating wit and a musical attack to match. Fittingly, the effort reunites him with the musicians who participated in his greatest successes: his old band, the Attractions (Steve Nieve, Pete Thomas, Bruce Thomas), and his erstwhile producer, Nick Lowe, who here shares bass duties.

BEST OF MONTH



The Vogler **Quartet Delivers**

he youthful Vogler Quartet impressed me the first time I reviewed one of its recordings, a pairing of Verdi's String Quartet in E Minor and Berg's Lyric Suite some three years ago. The Vogler's new RCA Victor CD offers equally provocative programming-quartets by Debussy, Janacek, and Shostakovich-and superb performances, superbly recorded.

From the very first bars, Debussy's lone quartet gets a reading that is elegantly poised yet has plenty of muscle where called for. The prickly scherzo is a real ear-grabber, the slow movement is both sensuous and translucent, and the main body of the finale has marvelous impulse and drive.

The realization of Leos Janacek's First Ouartet, a miniature music drama inspired by Tolstoy's tale of jealousy and murder, The Kreutzer Sonata, extracts every ounce of passion and color that this remarkable work has to offer. Listen in particular to the tense dialogue in the second movement and the savage interjections that punctuate the third.

Shostakovich's Quartet No. 11, written in 1966 as a memorial for the second violinist of the famed Beethoven Quartet of Moscow, is atypical of the genre in that it has seven movements, all but the last two less than 3 minutes in length. The musical structure is held together by interlinked motifs that thread their way through the diverse movements. The first movement seems to ask, "why?" and the succeeding ones are imbued with elements of both Russian Orthodox and Hebraic liturgical chant. The third, a savage recitative, and the fourth, a sizzling etude, haunt the memory, and the final two movements are even more unforgettable, particularly the last, which suggests a cradle song for infinity. The performance by the Vogler Quartet is simply stunning in its impact, enhanced by sonics of extraordinary dynamic range and presence. Don't pass up this CD! David Hall

DEBUSSY: **String Quartet** JANACEK: String Quartet No. 1 SHOSTAKOVICH: String Quartet No. 11 Vogler Quartet RCA VICTOR 61816 (60 min)

Sam Phillips's Dear John Letter

as John Lennon been dead long enough for somebody to inherit his caustic spirit? If not, don't tell Sam Phillips. On her new album, "Martinis and Bikinis," Phillips pays homage to Lennon through dead-on Beatlesque melodies, guitar riffs, song structures, production techniques, and vocals, all of which she weds to her own cryptic lyrics about the Search for Truth.

But Phillips, who scored critical raves with two previous albums, "The Indescribable Wow" and "Cruel Inventions" (this is her fifth record, produced like the last three by her husband, T-Bone Burnett), doesn't so much copy Lennon; it's as if she had his hologram stamped on her soul and then picked up where he left off. Her imagery is at once brittle and dreamy, her passion strong yet dry. And her anger is consistently palpable ("Our madness envy and desire / Ring you with an unforgiving fire," from Circle of Fire) even if her vulnerability is only sometimes visible ("Control is letting go / And I'm the last to know," from When I Fall).

Flirting at times with ersatz psychedelia (Same Rain, in which the wash of background vocals thrillingly approximates new Beatles harmonies), Phillips's music isn't nearly as immediately hummable or tuneful as the early Beatles classics (she zeros in mainly on the "Straw-

Sam Phillips (bikini not shown)



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berry Fields"/"Sgt. Pepper" era). But she gets closest to that kind of melodic appeal with *I Need Love*, a direct plea for a real emotional response in which she sounds spookily like Lennon, and on the George Harrisonesque *Baby I Can't Please You*, an exercise in Indian influence (tabla and something that sounds very akin to a sitar) in which she calls a romantic poseur on the carpet.

Fittingly, Phillips closes with Lennon's own *Gimme Some Truth*, which reiterates what she's said elsewhere in the album. Her vocal here is bold, bleating, and desperate. And anybody who can pull this song off (dated lyrics and all) with such power deserves to be considered the Fifth Beatle, even if she declares (unconvincingly) in her press material that she "wasn't that familiar with John Lennon's albums." The bottom line, of course, is that "Martinis" is a very cool record.

Alanna Nash

SAM PHILLIPS Martinis and Bikinis

Love and Kisses; Signposts: Same Rain: Baby I Can't Please You; Circle of Fire; Strawberry Road: When I Fall; Same Changes; Black Sky: Fighting with Fire; I Need Love; Wheel of the Broken Voice: Gimme Some Truth VIRGIN 39438 (46 min)

James Levine's World-Class MET Orchestra

ames Levine and the MET Orchestra are really an anachronism: a world-class conductor and orchestra that live, work, and breathe together. While other star conductors jet all over the place, Levine mostly stays in New York City, where he runs the Metropolitan Opera and conducts its performances several times a week. He has conducted its orchestra thousands of times, not only in the operatic repertory but increasingly in Classical, Romantic, and twentieth-century symphonic music as well.

Here is a kind of long-term relationship that has deep rewards. The big payoff, as you hear in DG's new recording of Mussorgsky's *Pictures at an Exhibition* and Stravinsky's *The Rite of Spring*, is that an opera orchestra has turned into one of the great *symphonic* ensembles, not only of this country but anywhere. Who would have thought that the Met's pit band would emerge as one of the leading recording orchestras of the CD era?

Take the items at hand. These performances go well beyond what happens when good orchestral players follow a gifted conductor. There is a kind of maurity, a solidity and depth, that is powerful and moving. The performances are more than brilliant; they cohere. They are colorful in the best way, clear and transparent without any loss of energy or forward movement. The music never feels arbitrary or forced; even the greatest moments of power, of edge, of intimacy, of forward drive are easy and right. This is ensemble performing in the best sense.

What makes it all the more remarkable is that the orchestra rarely gets to deal with challenges like the Stravinsky in the opera house. You would never guess that these musicians have not been playing *The Rite of Spring* all their lives.

Levine, like Leonard Bernstein, has a feel for the Russian repertory, but, unlike Bernstein, his approach is architectural. Where Bernstein depended on feeling and rhythmic color—qualities not exactly in-appropriate in music that is neither symphonic nor developmental in the Central European tradition—Levine's cooler and more spacious style gives these pieces an almost Classical aura against which the exotic Russian colors only seem to stand out the more clearly. And it is the rapport between orchestra and conductor that makes everything work. The first-rate recorded sound helps, too. Eric Salzman

MUSSORGSKY: Pictures at an Exhibition (orch. Ravel) STRAVINSKY:

The Rite of Spring (1947) MET Orchestra, Levine DEUTSCHE GRAMMOPHON 437 531 (67 min)



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PUPULAR MUSIC



DAVE ALVIN King of California HIGHTONE 8054 (55 min) Performance: Hypnotic **Recording:** Good

On his fourth solo outing, Dave Alvin strips down the instrumentation to craft a basic folk-and-blues album, mostly out of reworked songs he previously recorded solo (Fourth of July) or with his first band, the Blasters (Bus Station, Barn Burning). Along the way, he throws in a few covers (Tom Russell's Blue Wing, Alex Moore's East Texas Blues) that fit his theme of life's beautiful losers caught in freeze-frame demise. Alvin's hoarse baritone and his hit-and-miss pitch may put off some listeners, but like Tom Waits, his rough-hewn performance style perfectly fits his poetry of the down-and-out. Here he's joined by two more singers who can't really sing (Syd Straw and Rosie Flores) but who make you sit up and take notice anyway. Most affecting songs: Every Night About This Time, a gorgeous, sad portrait of loneliness and loss, and the title tune, about California as a cruel metaphor for starryeyed dreamers at the end of the road. A.N.

> BECK Mellow Gold DGC 24634 (48 min) Performance: Like, wow Recording: Home brew

nertia, decay, decomposition, collapse. It's the end of the world as we know it, and no one feels particularly fine. Then along comes Beck, holding a funhouse mirror up to life in the ruins and managing to coax a collective giggle at the tragicomic absurdity of it all. "I'm a loser, baby, so why don't you kill me," he sings in Loser, creating a self-referential archetype that isn't so much slacker as willing-to-work hustler who's losing ground on the economic and esteem fronts.

A nuthouse symphony of groggy voices. slide guitar, junkyard rhythms, preposterous imagery, and foul-mouthed cunning, "Mellow Gold" flips the bird at a world that's too busy rolling down the gutter to notice. "Tonight the city's full of morgues / And all the toilets are overflowing / The shopping mall's coming out of the walls / As we walk out among the manure," he sings like a street-smart Pete Seeger who's waist deep in another kind of Big Muddy. His portraits of life among the losers are simultaneously hilarious and harrowing. With wicked Zappa-esque wordplay, he skewers characters like the Truckdrivin' Neighbors Downstairs ("Whisky-stained buck-toothed backwoods creep") and a Nitemare Hippie Girl ("She's cooking salad for breakfast / She's got tofu the size of Texas"). All the while the music rolls on in a collision of styles that sounds like the aftermath of a power outage at a sherbet factory on a hot summer nightmessy, slurpy, and weird, but beautiful in its own peculiar way. PP

DR. JOHN Television GRP/MCA 4024 (48 min) Performance: Grotesque Recording: Bottom-heavy

Dr. John indulges in a bit of quackery by attempting to pawn himself off as a lowdown funkateer on "Television." which-like most of what's on the boob

Beck: giggling at the apocalypse



NEW RECORDINGS REVIEWED BY CHRIS ALBERTSON. FRANCIS DAVIS, PHYL GARLAND, RON GIVENS, ROY HEMMING, ALANNA NASH. PARKE PUTERBAUGH, AND STEVE SIMELS

tube-all but begs to be switched off. Trading his trademark Louisiana blues-jazz voodoo for an ill-advised foray into urban funk, the good doctor makes a messy gumbo of his musical persona, which had seemed so on-course with albums like 1992's "Goin' Back to New Orleans." "Television" is, by contrast, a hopeless muddle of contrived, jive-talkin'junk (P-Funk wannabe slop like Shut D Fonk Up and the all but unlistenable grunt-fest Limbo) and funk/R&B chestnuts with which he mistakenly presumes some kind of kinship (Sly and the Family Stone's 1970 crossover hit Thank You [Falletin Me Be Mice Elf Again] and Money [That's What I Want]). Only Witchy Red, a swampy, haunting throwback to his Night Tripper days, passes any sort of muster. Prescription: Physician, heal thyself! PP



GREEN DAY Dookie REPRISE 45529 (40 min) Performance: Lively **Recording: Punchy**

oud-fast alternative rock needn't be just a hyperventilating slamfest for mosh-pit denizens. Stick a little melody in there and you've got a formula for fun that has energized garage-punk groups from Steppenwolf to the Sex Pistols. Green Day is a cartoonish lot of surprisingly adroit players who come off like the Beastie Boys with pop smarts, good guitars, and a great intuitive grasp of rock dynamics. "Dookie" is a virtual invitation to shut the door and pull out the air guitar. So far, 1994 has yielded few pleasures so keen as this album's onetwo-three of Longview (killer chorus!), Welcome to Paradise (Born to Be Wild chords, Hüsker Dü heart), and Pulling Teeth (wherein Green Day sounds like an Everly Brothers for the Nineties). All in all, "Dookie" is more fun than a barrel of slam-P.P. 8 dancing Monkees.

WISH LIST:

Reissues We'd Like to See

There are still lots of cool LP's that haven't been reissued on compact disc. Here are some our critics would actually pay money for.

BUFFALO SPRINGFIELD

ATCO (1966)

The *mono* version. Stephen Stills and Neil Young did the mix and spent a lot of time on it, whereas the (currently available) stereo version was done in a hurry by their slipshod producers. *P.P.*



EXPRESSO BONGO

Original-Cast Recording PYE (British import, 1958) This cynical look at the sleazy underbelly of show biz documented the manufacture of an Elvis-like rock star. Paul Scofield and company had a good time with the tuneful songs and witty lyrics, and I loved the album. *William Livingstone*

DOLLY PARTON My Tennessee Mountain Home

RCA (1973) From when Dolly was still a folk artist who wrote real stuff, rather than the plastic creation she became. A.N.

WAS (NOT WAS)

Born to Laugh at Tornados GEFFEN/ZE (1984)

A brilliant melding of rock, soul, and unclassifiable whatsis, with special guests ranging from Ozzy Osbourne to Mel Tormé. S.S.

AN EVENING WITH WILDMAN FISCHER

BIZARRE/WARNER BROS. (1970) This guy was probably crazy, which could explain why he recorded for Frank Zappa's label. I have a feeling it will *never* be on CD. *R.G.*

TED HAWKINS The Next Hundred Years DGC 24627 (38 min) Performance: Real as rain Recording: Basic

For the uninitiated, Ted Hawkins is a for-mer L.A. street singer who started out life in wrenching poverty, spending part of his younger years in Mississippi's legendary Parchman, a hellhole of a prison known for routine beatings and chain gangs. Since then, Hawkins has refined a personal mix of blues, soul, folk, and country, and performs as if he was channeling the shades of Otis Redding, Sam Cooke, and Jackie Wilson. In 1982 he cut a remarkable album, "Watch Your Step," and this new one is nothing to sneeze at either. When Hawkins sings the old Webb Pierce song, There Stands the Glass, you can hear the thirst in his voice, a kind of sweetness gone to rasp. When he performs John Fogerty's Long as I Can See the Light, he makes it a hymn all his own. And when he tells of his Strange Conversation, in which his baby says his next lover will be the blues, the words underscored by a bleeding Memphis soul guitar, his voice cracks from emotion, not bad technique. How many of your slick pretenders to the throne do that these days? Tremendous. A.N.

HUEY LEWIS & THE NEWS Four Chords and Several Years Ago ELEKTRA 61500 (50 min) Performance: By the numbers Recording: Properly vintage

f you ever had the feeling Huey Lewis & the News was your basic bar band that got lucky and hit the big time, this collection of reworked golden oldies (Shake, Rattle, and Roll, Blue Monday, Mother in Law, and fourteen others) will confirm the impression. Dave Marsh once said there was "no pop in their power." Well, there's no power in their pop, either-and even worse, there's no passion. This album isn't just nostalgia, it's a colossal ego trip, and a misplaced one at that. Smack in the middle of summer, it probably constitutes a decent party album-just don't confuse it with real A.Nmusic.

KATHY MATTEA Walking Away a Winner MERCURY 314 518 852 (38 min) Performance: Solid Recording: Very good

When it comes to commercial country music, you can't craft an album any better than the latest from Kathy Mattea, "Walking Away a Winner." Mattea shows once again, as she has on her previous strong outings, that she can tug at the heartstrings of Nashville without making much of a fuss; she doesn't need to howl or wail to make you understand deep emotions. Even on the album's title tune, in which a woman is leaving the scene of a romantic crime, Mattea comes off as the sort of person you'd really want around during a time of crisis. The subject matter and the sentiments here may be a little pedestrian housewives deserve a break, we'll miss our



Kathy Mattea: no muss, no fuss

parents when they're gone—but the production is state-of-the-art, with just enough rock-like guitar to make the arrangements seem fresh. And Mattea seems incapable of singing a false note. Among the women of country music, she's as dependable as they come. *R.G.*

PAT MCLAUGHLIN

Unglued DOS 7005 (44 min) Performance: Finding his way home Recording: Good

R&B singer/songwriter Pat McLaughlin has turned out songs for country stars Trisha Yearwood, Tanya Tucker, Steve Wariner, Joy White, and Maura O'Connell. But aside from co-writing John Prine's Daddy's Little Pumpkin, he's best known for two things-his 1988 debut album, a critics' favorite, and his second record, "Get Out and Stav Out," which was heralded by some as the best album never released (his label dropped him in a change of regimes). This return to recording finds him, like before, a kind of cross between J.J. Cale and John Hiatt, though not as biting and off the wall as the latter. Lyrically obscure ("Only flower underneath my rug can find / Such a piece of cake"), and ranging stylistically from gut-bucket hollering blues (Night Thing) to romantic folk (Try the Love) to Seventies blues-rock (It's Hard) and not-very-convincing honky-tonk country (Knockin' Around Nashville). McLaughlin favors groove over content. Don't listen too closely-just take it in by osmosis. McLaughlin has one of those lived-in voices, and, like many roots performers, when he gets on a roll he's more into getting emotion out than in communicating with you. No matter. Enjoy. A.N.

POPULAR MUSIC

MEAT PUPPETS Too High to Die LONDON 828 484 (52 min) Performance: Trippy Recording: Good

reah, this is your brain on drugs, but in a good way. Tripping the light fantastic through a baker's dozen mind excursions. Meat Puppets have returned to the languid, flowing slipstream of altered consciousness they navigated so swimmingly on such albums as 1985's "Up on the Sun." Figuratively speaking, guitarist Curt Kirkwood is one of Jerry's kids-Garcia, that is-and he's back in tune with his cosmic runes rather than the prickly, ZZ Top-style bluesrock mannerisms that bogged him down circa "Huevos" (1987). By contrast, "Too High to Die" is one sprightly turn of the kaleidoscope after another, from the crystal dewdrop notes flung by Kirkwood's fleetfingered guitar on Never to Be Found to a whimsical flight through the mental ionosphere entitled We Don't Exist. Neither time nor hallucinogenic intake has dulled the Meat Puppets' ability to create colorful, smartly arranged soundscapes. Most of "Too High to Die" is played uptempo with the kind of vigor and imagination prevalent in the ballrooms of Haight-Ashbury before burnout set in. Ten years on, the Meat Puppets are flying higher than ever. PP

> THE NEVILLE BROTHERS Live on Planet Earth A&M 0225 (71 min) **Performance: Spirited Recording: Very good remote**

Youngest brother Cyril Neville describes this high-energy concert album as something "like a spiritual revival and a Mardi Gras parade at the same time." He's precisely right. When the Nevilles aren't stirring their gumbo of R&B, jazz, New Orleans funk, and pop, they're bowing down to give thanks-to God, to Rosa Parks, to a woman with African eyes. Recorded over a year's time at various concerts around the globe, this album is nearly nonstop drive and fire, from the hypnotic New Orleans jazz-in-the-pocket of Congo Square to Aaron Neville's angelic rendering of Amazing Grace. On a couple of the more predictable tunes, especially the cover medleys of One Love/People Get Ready/Sermon and Love the One You're With/You Can't Always Get What You Want, the Nevilles get a tad lazy vocally, and dumb down for the crowd instrumentally. But on the whole, the hottest rhythm section alive more than lives up to its rep here. A.N.

BUSTER POINDEXTER Buster's Happy Hour FORWARD/RHINO 7054 (53 min) Performance: Novelty wearing thin **Recording:** Good

et's face it, David Johansen's Buster Poindexter character was a limited shtick to begin with, and by now the limit's about up. This time, Johansen drops his Jolson pose for covers of Louis Jordan and Wynonie Harris jump tunes (most interesting track: Drunk, a duet with Bill Morrissey). But how many unconvincing bluesman inflections and whiskey-and-women tirades does it take before a smart-alek New York white boy turns completely jive? On the evidence here, not many. A.N.

COLLIN RAYE Extremes

EPIC 53952 (35 min) Performance: Not "extreme," but not tame Recording: Very good

then balladeer Rave burst on the scene with Love. Me in 1991, he looked like a one-hit wonder. Since then, he's taken pains to present himself as an across-theboard mainstream country performer, as at



The Neville Brothers: world-class party band



ith the twenty-first century almost here, no reissue could be more timely than the recorded work of the 2000 Year Old Man, a guy who's seen it all, from historical figures ("Did I know Joan of Arc? I went with her!") to the greatest scientific achievements of Western Civilization ("Liquid Prell!"). Now "Carl Reiner and Mel Brooks: The Complete 2000 Year Old Man" (Rhino 71017, four CD's) collects all of the duo's classic albums (out of print for over fifteen years), and pound for pound they're still the funnlest comedy records ever made. Forget Brooks's tired Eightles movies. This stuff-recorded between 1961 and 1973-not only hasn't dated, it can still make you laugh till you're giddy. An essential purchase. S.S.

home with full-tilt, Fifties-style rockers as with ballads. Now, on his third album, he shows he's not afraid to experiment with songs that push the envelope a tad as well. Little Rock, for example, is a grittier and bleaker kind of "I can't live without you" song in which a pathetic VCR salesman at a Wal-Mart muses about his life and loss. And in the Gothic Man of My Word, a widower wishes he'd lied when he told his dying wife he'd remain faithful. Raye also weighs in with a decent family-values song, A Bible and a Bus Ticket Home, which imparts homespun wisdom without getting sickeningly sweet. Still, Raye-whose real first name is Floyd-shines brightest on the uptempo honkers, such as Lee Roy Parnell's That's My Story, and on his own To the Border and Beyond. Which goes to show that if you're born a Floyd, you're probably still a country boy underneath, even if you cover it up with a Collin. A.N.

> **DENNIS ROBBINS Born Ready**

GIANT 24543 (34 min) Performance: Yeah, buddy **Recording: Good**

• n his second solo outing Dennis Rob-bins continues to demonstrate the sly wit, backwoods drawl, and off-center, blue-collar songs that make him one of Nash-

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ville's favorite smart-guy white boys. Robbins excels at situations in which smalltown lads lose their heads after a short walk on the wild side, be it the grease monkey who follows the leather-clad babe on the Harley in Ride, Ride, Ride, or the libidinal romantic who never encountered anybody quite like Mona Lisa on Cruise Control. For that reason, Robbins makes what might also be called Andy Griffith music. Just after he presents himself as the World's Biggest Hick, he comes up with a serving of Mayberry wisdom, declaring on Traveling Music, in which he engages in a bit of a domestic squabble, that "Everybody knows I ain't afraid to fight / But I got my good clothes on tonight." Robbins wrote Garth Brooks's white-trash anthem, Two of a Kind, Working on a Full House, and he hasn't packed this album with songs nearly as rambunctious. Nevertheless, this is one heck of a fun record, and a fine introduction to a much underrated talent. A.N.

VICTORIA SHAW In Full View REPRISE 45592 (35 min) Performance: Going places **Recording: Good**

Victoria Shaw has (so far) written three No. I country hits-Garth Brooks's The River, Doug Stone's Too Busy Being in Love, and John Michael Montgomery's I Love the Way You Love Me-and now she's out to prove there's a voice behind the pen. Indeed there is-a sturdy, full-range soprano with impressive technical proficiency and an ability to convey complex emotion. As a performer Shaw is as commercial as they come-she's perfect for radio-and all her successful friends (Brooks. Billy Dean, Lari White, Bill Lloyd, Mary Ann Kennedy) show up to give her a help-

STENING



the Cheap Trick guitarist and Huntz Hall lookalike been grooving on lately?

What CD's has

"Patto's 'Hold Your Fire'

(Repertoire 4360, import available from Metro Music, 301-622-2473), which is from the early Seventies-it reminds me of how good these guys were. (I also like their 'Roll 'Em Smoke 'Em,' a nice anti-drug album.) Then there's 'Barcelona,' by Freddy Mercury and Monserrat Caballé (Hollywood 61366). I like about half that record-the whole idea of the opera and 'Doing the Freddy.' And, of course, Cheap Trick's 'Woke Up with a Monster' (Warner Bros. 45425)—a cool album by one of my all-time favorite bands."

ing hand on this debut. Whether co-writing (with the likes of White, Jon Vezner, and Desmond Child) or going solo, Shaw turns out highly melodic, hook-laden songs (You Don't Know Love, Love's Not Gonna Pass Me By, Small Talk) that often impart a bit of philosophical advice. She knows how to have fun, too, but a campy Elvis cover aside, it's obvious she's intent on songs that make a strong emotional connection. Shaw will probably settle back down into songwriter status one of these days, but in the meantime, enjoy her sound as well as her songs. A.N.

TRAFFIC Far from Home VIRGIN 39490 (62 min) Performance: Traffic at a standstill **Recording: Good**

lo have Stevie Winwood performing under the banner of Traffic is probably preferable to the drowsy, quasi-commercial solo stuff that intermittently occupied him during the Eighties. Unfortunately, this current reincarnation has more to do with the somnambulant later Traffic albums ("Shoot Out at the Fantasy Factory," "When the Eagle Flies") than the creatively audacious ensemble that blew onto the scene like a breath of fresh air in the late Sixties. On "Far from Home," Traffic's reunited alumni Winwood and Jim Capaldi coast along on autopilot, providing comfortable background music that packs little of the emotional shiver of which the duo is capable. Still, despite endless lyric banalities (such as Some Kinda Woman) and a general air of jazzy malaise, the unmistakable geometry of Winwood's keyboards and Capaldi's Latin-inflected rhythmic sizzle offer glimpses of a trademark alchemy here and there. One listener's snoozy is another man's lovely, of course, and there are those who will no doubt embrace this album as a creative rebirth. When all's said and done, however, "Far from Home" offers too much of the kind of stagnation that's plagued Winwood's career since the days when he wrote an all-too-revealing song entitled Sometimes I Feel So Uninspired. P.P.

RANDY TRAVIS This Is Me WARNER BROS. 45501 (34 min)

Performance: Pleasant **Recording: Very good**

trange as it may seem, Randy Travis is Strange as it may seem, turning making a comeback at the tender age of thirty-five. After huge success in the Eighties, the singer seemed to get trampled in the stampede of hat acts in country music. Now, with "This Is Me," Travis has reconstructed, ever so slightly, the approach that made him so successful. You can hear the difference most clearly in the use of guitars-pedal-steel is used more delicately, electric a bit more aggressively. Otherwise, the album could have come from Travis's heyday. The songs offer the usual, somewhat predictable variety of situations, from All-Consuming Heartache to Zealous Familial Sentimentality, but what makes them all work in a most congenial way is that soft, warm Travis baritone. Whether he's



Traffic: running on empty?

prescribing a honky-tonk cure for the blues \vec{z} or proclaiming the intensity of his passion, DOUGLAS BROTHERS/VIRGIN Randy Travis makes his singing seem as effortless as falling off a log. R.G.

IAN TYSON **Eighteen Inches of Rain** VANGUARD 79475 (42 min) Performance: Sleepy Recording: Good

Once part of the folk duo Ian & Sylvia, singer/songwriter Ian Tyson has devoted the last decade to producing some of the most lyrical western-style music ever recorded. Of course, being a real rancher helps, and so does being Canadian-he can separate himself from the American cowboy mythology and write about tried-andtrue themes (high soaring hawks, stray cattle, the cowpoke's isolation, etc.) in a modern way. There's a kind of sweetness, a romance, to Tyson's work, as in the idea of "chasin' the moon by the tail." But he's usually far more realistic about trail lifebitter coffee, gut-wrenching lonelinesseven if in his world men still measure their lives by the outfits they've ridden in and the good horses and bad women they've loved (M.C. Horses, Heartaches Are Stealin').

Tyson is a bit sharper when he co-writes with folks, like Tom Russell, who supply a little edge, something this easygoing-tothe-point-of-drowsy collection needs. Still, "Eighteen Inches of Rain" is a fine record to play when you kick off your boots and sit by the fire. Just don't look for it to supply the fire by itself. A.N.

PAUL WELLER Wild Wood LONDON 823 513 (61 min) Performance: Extraordinary **Recording: Good**

Daul Weller is a restless changeling whose varied guises have included leadership of the Jam (punk's answer to the Who) and Style Council (a more musically ambitious ensemble that employed jazzy mannerisms to convey Weller's anti-establishment polemics). On this, his second solo album, he combines the hard-soul energy of the former with the deceptively breezy

POPULAR MUSIC

melodies of the latter, adding an absolute willingness to drop all guards and testify in a confessional exposition of pain, yearning, and wonder.

Weller has always possessed the uncanny ability to interlace the personal with the political, crafting lyrics that can be read on both levels. But it is as a musical force that Weller looms most impressively on "Wild Wood." He's written and arranged a batch of songs with staying power, building a smoldering, soulful fire upon a sturdy bed of embers. Just check out the wicked fuzz bass and syncopated chant that propels Can You Heal Us (Holy Man) into the realm of groove-stoked protest, or the stinging guitar lines that pump cool fuel into the choogling likes of 5th Season and Sunflower. Weller hits unshakably sturdy bedrock in numbers like Shadow of the Sun (poised somewhere between such Brit-soul pillars as Traffic and Free) and Fly on the Wall (a thrilling number awash in acoustic guitars).

But the best song on "Wild Wood" is really among the most moving songs I've ever heard and one that deserves to be enshrined as a classic. *Foot of the Mountain*, performed by Weller in both solo acoustic and full-band versions, uses elemental imagery of love as a daunting conquest comparable to scaling mountains and sailing oceans. Weller lets it bleed in a beseeching voice as full of emotional nuance as any you're likely to hear. Drawing upon classic forms that eschew trendiness for something more enduring, Paul Weller has surely cut an album for the ages in "Wild Wood." *P.P.*

Collections



THE BEST OF MOUNTAIN STAGE, VOLUME SIX BLUE PLATE 006 (41 min) Performance: Hit and miss Recording: Good

The live anthology albums from the "Mountain Stage" radio show are always diverse offerings—alternative rock groups shaking hands with folk, country, and gospel acts. But Volume Six must be the most eccentric of all, with performances by Iris DeMent, Bruce Hornsby, and R.E.M. That said, it's also one of the weakest. Hornsby does an affecting job with Dylan's *Girl from the North Country*, Paul Brady's acoustic R&B *Blue World* is stirring and involving, and Dement's performance of *After You're Gone*, a hymn for a dying father, is too sad and beautiful for words. But Nanci Griffith tosses off *Outbound Plane* with a growt that says, "I've done this too many times, and I'm jaded anyway." and both Jeffrey Gaines's *Headmasters of Mine* and Barenaked Ladies' *What a Good Boy* get too mired in opaque lyrics. Still, there are some smilers—Cracker's white-trash anthem *Mister Wrong* and Col. Bruce Hampton and the Aquarium Rescue Unit's jazzrock rendition of the gospel chestnut *Working on a Building*—and "Mountain Stage" is a real treasure. *A.N.*

THE COWBOY POETRY GATHERING RHINO 71573 (67 min) Performance: Just needs Walter Brennan Recording: Good

Every year, buckaroos, these here cowboy poets gather in Elko, Nevada, and sit around the proverbial campfire and tell stories and tales. Now there's lots of poetry gatherings that pretend to be like this one, but this here is the Granddaddy shebang. Sometimes the fellers even pack a harmonica or a guit-box, and they weave a spell that would tame even the meanest bronc. Recorded at the 1993 fest (the ninth of its kind), a lot of these here "pomes" are real easy to cotton to-like Mike Lee's humorous ode to his dog. Man's Best Friend. But it helps a might to have a passin' knowledge of the cowboy life to get the full meanin' sometimes. like with Paul Zarzyski's Benny Reynolds' Bareback Riggin', a high-buckin' trip through the rodeo world. It don't take nothin' extra to enjoy 'em. though. And it does a feller good to know that lots of these buckskin bards live the life they tell about-the land, the tradition. the saddle sores. Cowboy wisdom has it that recitin' poetry is like a haircut-if it's good, you feel like a million bucks, if it's bad, you hide your head under a hat. But there's no need to wear your Stetson for this here disc. Unless, of course, it makes you ride a little taller in the saddle. A.N

PASTURES OF PLENTY: AN AUSTIN CELEBRATION OF WOODY GUTHRIE DEJADISC 3207 (69 min)

Performance: Varies Recording: Varies

The idea of recording the songs of Depression-era balladeer Woody Guthrie may seem quaint in a time when gangsta rap serves as America's premier protest music. But down in Texas, they know that many of Guthrie's songs are as relevant today as they were when he wrote them-that I Ain't Got No Home might be sung over huddled bundles on the contemporary streets of New York City or Washington, D.C.-and speak as much about the failure of U.S. society as they do about the simple greatness of Guthrie's songwriting. Three years ago, Austin's singer-songwriters started getting together annually to re-explore Guthrie's legacy. This live recording, from a 1993 concert, has a few lackluster moments, particularly when the performers recast Guthrie's songs into inappropriate and unworkable arrangements. à la Lisa Med-



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CONTINUUM 19315 (50 min)

Contempo dance tracks based on a variety of (legal) samples from Jimi Hendrix albums and outtakes, and against the odds it works. Spacey, funky, and genuinely creative stuff—Summer of Love purists may cringe, but Jimi himself would doubtless have dug it. S.S.



GOOD ROCKING TONIGHT: THE BEST OF ROY BROWN

RHINO 71545 (50 min)

Late-Forties and early-Fifties tracks by one of the premier vocal stylists of the era, and proof positive that there was indeed (in Nick Tosches's phrase) rock-and-roll in the dark, wild days before Elvis. *S.S.*

HUUN-HUUR-TU 60 Horses in My Herd

SHANACHIE 64050 (48 min)

Like Tibetan monks, these musicians from Tuva in highest Central Asia have mastered the art of singing two or three notes at one time. In evolved listeners their tuneful program of old Tuvan songs will stir primitive parts of the brain where race memory dwells. The album notes are excellent and helpful. *William Livingstone*

IN YO' FACE: THE ROOTS OF FUNK VOL. 1/2

RHINO 71615 (48 min)

A document of that historical moment the late Sixties—when soul and R&B began to favor groove over traditional song structure, including such fondly remembered transitional hits as the Fantastic Johnny C's *Boogaloo Down Broadway* and Archie Bell's *Tighten Up*. Great down-and-dirty stuff, and lots of fun. *S.S.*



MINT JULEPS Round Our Way HIGHTONE 8052 (41 min) An all-girl British neo-doo-wop *a cappella* group that, as they say, sings like birds in fact, a little too much like birds (big exception: a soulful, technically virtuosic version of Jackie Wilson's *Higher and Higher*). Pleasant enough overall, but the Persuasions they're not. S.S.

THE SPONGETONES Beat & Torn

BLACK VINYL 12993 (52 min) North Carolina's Spongetones have labored to keep the jaunty sound of Merseybeat alive via albums of original tunes that almost best their sources of inspiration. "Beat & Torn" collects their early-Eighties recordings (a complete album, a mini-album, and bonus tracks) into a package that's lovable, listenable, and—take my word here—indispensable. *P.P.*

SANDY STEWART & FAMILY CABARET 5010 (55 min)

Talk about talent running in families! First there's Sandy Stewart, still as sultryvoiced and bewitching as ever. Then there are her two sons (by the late Broadway composer Moose Charlap): Bill Charlap (Gerry Mulligan's pianist) and bassist Tom Charlap. Add her present husband, former Benny Goodman trumpeter George Triffon, and what terrific music they make together, mostly in a soft-lights (but never colorless) mood. *R.H.*

TODO TANGO

MILAN 35667 (76 min)

Leading performers from Argentina (Astor Piazzolla, Horacio Salgan, Roberto Goyeneche, and others) make this a beautiful and super-authentic overview of the tango today. Its twenty-two tracks are mostly New Tango, with a few old favorites in slick, modern arrangements. A perfect treat for novices and tango connoisseurs alike. *W. L.*

BEN VAUGHN Mono U.S.A.

BAR/NONE 039 (56 min)

Ben Vaughn has put together a collection of reverb-happy oldies in the privacy of his home studio—and no stereo sound allowed. Nearly all this stuff, from twangy instrumentals (the Ventures' *Exploration in Fear*) to maudlin sociology (Henson Cargill's *Skip a Rope*) is neo-classic, meaning that Vaughn is more interested in paying homage to the past than reinventing pop music, but that just makes "Mono U.S.A." even cooler. *R.G.*

VELOCITY GIRL Simpatico

SUBPOP 247 (35 min)

Somebody called this stuff bubblegrunge, which is just about right, because underneath the layers of fuzzed-out guitars lurks a sweet pop quintet as familiar (how I can't figure) with the Association as with, say, My Bloody Valentine. Withal, an absolutely delightful racket, and the lead track, *Sorry Again*, gets my premature vote for single of the year. *S.S.*

nick's reggae version of *Hard Travelin'*. On the whole, though, the album is an emotional reminder of Guthrie's enormous social conscience (and America's lack of one), and of the beauty of his timeless Okie melodies. Standout performances include Butch Hancock's resonant *Belle Starr*, Jimmy LaFave's bluesy *Oklahoma Hills*, and Sarah Elizabeth Campbell's beautifully sad *Ramblin' 'Round*. Recommended especially to new converts to country, blues, and folk who can't quite tell where one leaves off and the other begins. *A.N.*



HERB ELLIS Texas Swings JUSTICE 1002 (52 min) Performance: Distinctly Herbal Recording: Very good

e was born and raised in Texas, so it's not a complete surprise to find that guitarist Herb Ellis's new album, "Texas Swings," combines the jazz style for which he is known with elements of country music. The progenitor of this idiomatic blend-which is sometimes called western swing-was probably Bob Wills, whose twenty-five-piece Texas Playboys became regular Midwest radio fare in the Thirties and even perked up the ears of the young Charlie Parker, Indeed, there are Wills alumni in Ellis's group, which-in terms of size-is more modest than the Playboys. but doesn't skimp on talent. Three guitars, two violins, piano, bass, and drums is an unusual instrumentation that sometimes approaches the sound of the Ouintet of the Hot Club of France. The country accent comes mainly from Herb Remington's steel guitar and the two violins (played by Johnny Gimble and Bobby Bruce). But the group's most prominent "sideman" is country superstar Willie Nelson, whose guitar is not out of place in a jazz environment.

Charlie Parker's *Billie's Bounce* (mislabeled *Scrapple from the Apple*), which starts things off, is decidedly urban, being a well-fused bop/swing concoction. In fact, the jazz flavor dominates this release, and even *The Old Rugged Cross*, which starts out as pure Nashville, eventually takes a turn that should please the mainstream jazz fan. All in all, a thoroughly captivating western-swing romp. *C.A.*

GEORGE LEWIS Changing with the Times NEW WORLD 80434 (65 min) Performance: Poetry in motion Recording: Excellent

The music on this disc is as enchanting as it is difficult to classify—and by "music" I also mean the poems and narratives around which trombonist Lewis has centered his six compositions for small ensembles of shifting instrumentation. Because so much of the literal music heard here sounds through-composed (even including a bit of barrelhouse piano from Jeanne Cheatham), the hard-liners at Lincoln Center might be

POPULAR MUSIC

reluctant to call it jazz. But so what? I suppose it's best to call it New Music and let it go at that. Whatever it is, though, it's a beautiful piece of work, the most emotionally satisfying effort from Lewis since his 1979 "Homage to Charles Parker," and one of the most absorbing hours of music anyone has given us so far this year. The centerpiece is the lengthy title composition, in which Bernard Mixon reads-or performs, to do him justice-Lewis's father's informal autobiography, and which blurs the line between fact and tall tale in disarming fashion. The rollicking and affectionate music that envelops it is just as mythic, earthy, F.D. and fine.

RIVERSIDE REUNION BAND Mostly Monk MILESTONE 9216 (62 min) Performance: Starry get-together Recording: Very good

Riverside Records existed for roughly a decade, which is several years longer than any financial analyst would have predicted. The man who kept it going was Bill Grauer, a good-humored jazz fan with broad taste in music. Although his partner, Orrin Keepnews, never had a real ear, it was Keepnews who, on a hit-and-miss basis, produced most of the label's sessions, from which good music often emerged.

Now Keepnews has assembled the Riverside Reunion Band, a sextet of luminaries whose musical authority is not easily interfered with. With Nat Adderley and Jimmy Heath as the front line, the group also boasts Buddy Montgomery on vibes (his brother, Wes, was a Riverside artist before moving on to commercial success), and a rhythm section comprising Barry Harris, Ron Carter, and Albert Heath. All-star gatherings don't necessarily result in good music, but this one does. Nothing innovative, just solid jazz of a timeless variety. *C.A.*

SILVER LEAF JAZZ BAND Streets and Scenes of New Orleans GOOD TIME JAZZ (71 min) Performance: In the tradition Recording: Very good

When I produced a series of New Or-leans sessions for the Riverside label in 1961, I thought I was capturing the last gasp of traditional sounds from the cradle of jazz. I was wrong, of course. In fact, some of the musicians I recorded back then continued to play for another two or three decades, and there are still active keepers of the flame today. One such group is the Silver Leaf Jazz Band, a New Orleans ensemble whose members were transplanted from such places as New York, Pittsburgh, and France. There is no innovation here; the band, which plays regularly in the tourist environment of Bourbon Street, is strictly a mirror of the past. The arrangements and many of the solos are derived from classic recordings, which will make any collector feel right at home. Perdido Street Blues, for example, is taken right from the 1926 performance by Lil Armstrong's New Orleans Wanderers, complete with the wonderful George Mitchell/Johnny Dodds lead-in. Imitative? Yes, but the Silver Leaf gang has the right spirit and sound to please the true traditionalist. C.A.

JOE WILLIAMS Here's to Life TELARC JAZZ 83357 (59 min) Performance: Lifeless Recording: Good

JOE WILLIAMS Every Day

VERVE 813 (two CD's, 123 min) Performance: Pure cream Recording: Decent transfers

thought Joe Williams, at seventy-five, might still be capable of giving a memorable performance, but I'm afraid "Here's to Life" says otherwise. Mainly, it's the wrong mix of singer and material, and Williams's usually assertive voice is weak and faltering.

"Every Day" is quite another matter. Subtitled "The Best of the Verve Years," it features performances recorded between 1955 and 1990. With one exception, these are worthy of the album's title; Williams sounds uncomfortable on a dumb song called *Too Good to Be True*, a 1988 duet with Shirley Horn, but he's in top form everywhere else. The accompaniments range from the glorious bash that was Count Basie's Orchestra to various small groups. I listened to this set twice, and I'm still not through. C.A.

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CLASSICAL MUSIC

NEW RECORDINGS REVIEWED BY ROBERT ACKART, RICHARD FREED, DAVID MALL, GEORGE JELLINEK, ERIC SALZMAN, AND DAVID PATRICK STEARNS

BEETHOVEN: Piano Variations Olli Mustonen LONDON 436 834 (77 min) Performance: Crisp, elegant Recording: Bright, clear

Out of the twenty sets of variations Beethoven wrote, the young Finnish virtuoso Olli Mustonen here offers us an imaginatively arranged program of eight. There are two entertaining sets from 1795 on themes from the then-popular Paisiello opera La Molinara and from the following year a dozen variations on a so-called Russian dance. Also in the entertainment mode, but of a more rugged cast, are the 1803 set based on Rule Britannia and a companion piece on God Save the King—interesting to compare this one with Charles Ives's Variations on America (which, of course, uses the same tune).

The really substantial pieces, from the

same "Eroica" Symphony period as the British sets, include the Six Variations in F Major, Op. 34, and the lordly and elaborate Fifteen Variations and Fugue in E-flat Major, Op. 35, which uses the same theme as the variations-finale of the "Eroica." And from 1806, the period of the Fifth Symphony, comes the Thirty-two Variations in C Minor on an original theme, in a chaconne pattern also used by Brahms.

Mustonen's decidedly crisp and cool approach to these pieces is enhanced by impeccably accurate playing, with scintillating passage work. For me it works beautifully in the lighter sets, in the Op. 34 set, and in the virtuosic aspects of Op. 35, but the performance of the wonderful C Minor set emphasizes intellect at the expense of drama. The bright and slightly hard sonics of London's Henry Wood Hall tend to reinforce that impression. D.H.

SOMETHING TO CROW ABOUT



Chanticleer, a distinguished San Francisco-based a cappella ensemble that performs more than a hundred concerts of wide-ranging repertory each year in North America, Europe, and the Far East, has been signed to an exclusive contract by Teldec. The twelve-man group's first Teldec CD, titled "Mexican Baroque," was released in June. It's also their first recording with instrumental accompaniment, here provided by the Chanticleer Sinfonia, a nineteen-mem-

ber period-instrument orchestra. Chanticleer's music director, Joseph Jennings, conducts.

Teldec already has plans in the works for three more new Chanticleer discs, ranging from the Renaissance to Broadway, and it will also relssue recordings the group produced for its own label since its founding in 1978. The first reissue, also a June release, is "Where the Sun Will Never Go Down," which features gospel music.



BERLIOZ: Roman Carnival Overture; Symphonie Fantastique Orchestre de Paris, Bychkov PHILIPS 438 939 (61 min) Performance: Very good Recording: Good

emyon Bychkov gets this Berlioz pro-Semyon Bycnkov gets this better gram off to a flying start with a sharply etched treatment of that familiar showpiece, Le Carnaval Romain. The opening sigh of "Reveries-Passions" then sets the stage for a convincing depiction of the emotional ebb and flow. and occasional hysteria, of the Symphonie Fantastique's opening movement. The ensuing ballroom movement could use a little more lilt, as well as a bit more savagery when the protagonist catches sight of his beloved. The troubled "Scene in the Fields" idyll gains added impact from Bychkov's handling of the big recitative episode and its climactic outburst; the menacing thunder in its last pages is less distant than usual but immensely dramatic in effect. There are no repeats in the "March to the Scaffold," and the brass is less snarly than usual. I have heard scarier performances of the "Witches' Sabbath," but the ending is as fierce and wild as one could wish. The sonics are clean but hardly spectacular.

I would rank this reading of the *Sympho*nie Fantastique by Bychkov and his Paris Orchestra, for all their stylish woodwind playing, just below those of the top classic interpreters (Colin Davis, Monteux, Munch). In a class by themselves, of course, are the historic-style performances of Roger Norrington and John Eliot Gardiner. D.H.

CHOPIN: Piano Concertos Nos. 1 and 2

Rigutto: Budapest Philharmonic, Bergel

DENON 75637 (72 min)

Performance: Expansive Recording: Cloudy at times

Bruno Rigutto (French by birth and training despite the Italian name) goes all out in an old-fashioned but generally attractive way in the Chopin concertos. His performances are expansive, unhurried, anything but supercharged, with just enough subtle tension to sustain momentum; sometimes he stretches the shape of a phrase, but he's always very much involved and frequently reaches a poetic level. I felt that he must be responding genuinely to the music, rather than merely seeking an approach that would strike listeners as different from today's norm. But it is different, and absorbing-at least the first time round. The Romanian conductor Erich Bergel is a remarkably sympathetic partner in an interchange whose intimacy is close to the realm of chamber music.

This recording may not be for everyone, and some who do respond to it at first may find a second or third hearing somewhat less persuasive; but for many it could be an appealing evocation of an earlier era—or, at least, what we may imagine an earlier era to have been. The sound, emphasizing warmth rather than brilliance, suits the intimacy of the performances just fine. *R.F.*

> DEBUSSY: Etudes BERG: Piano Sonata Maurizio Pollini DEUTSCHE GRAMMOPHON 423 678 (52 min) Performance: Superb Berg Recording: All right

Most of us, I suspect, will not have heard Maurizio Pollini play Debussy before (his only previous recording of French music seems to have been the Boulez sonata). Nothing this pianist does is without interest, and there is a good deal of stunning playing here; there is also, however, a good deal to suggest he is less comfortable with Debussy than with Chopin, Beethoven, Schoenberg, and so on, in whose music he projects such intimacy and conviction.

The most successful of the twelve etudes here are No. 1, which is downright dazzling, and No. 8, which comes across with a wonderful sense of fantasy. Elsewhere in the sequence 1 felt Pollini was a little tentative here and there, as if he had not fully digested the music beyond its technical demands, and there is even a shaky moment or two in that respect.

Berg's Op. 1 sonata, a curious filler for the Debussy, finds the pianist on what we would consider his home ground, and he does not disappoint us in any way. I can imagine more than a few listeners ungrudgingly buying this disc for the Berg alone, and the sound quality is quite good, without being exceptional. For the Debussy, though, the CD's by Garrick Ohlsson (Arabesque) and Paul Jacobs (Nonesuch) both strike me as safer recommendations. *R.F.*

DVORAK: Piano Trios Nos. I-4

Lanier Trio GASPARO GSCD-291/2 (two CD's. 140 min) Performance: Fine musicianship Recording: Good

D his youthful and mature creative periods. The First, in B-flat Major, is contemporaneous with the lovely E Major String Serenade from 1875 and shares many of its endearing qualities. The Second, in G Minor, from the following year, sounds a tragic note in its opening movement, reflecting the composer's grief over the death of his eldest daughter, and there's a touch of Czech national flavor in the finale's polka rhythms.

The Trio No. 3, in F Minor. was composed in 1883, squarely in Dvorak's peak creative period. Like the D Minor Symphony (No. 7) of two years later, its powerful first movement shows a strong Brahmsian influence. The national element still comes through in the charming second movement and the dance-based fourth: the slow movement is deeply expressive, with violin and cello taking the lead. Trio No. 4, the "Dumky" from 1891. shucks off Classical forms and displays in its six movements the variegated broody and gay aspects of the Slavonic lament, or dumka, If the F Minor is arguably the most cogent of Dvorak's trios, the "Dumky" is by far the most popular.

The Lanier Trio includes Cary and Dorothy Lewis as pianist and cellist and, since 1986, William Preucil of the Cleveland Quartet as violinist. There is ample warmth in their treatment of Dvorak's wealth of melody and countermelody, and a fine rhythmic sense throughout, with excellent balance among the three instruments. I was particularly struck by Preucil's outstanding playing in the "Dumky" Trio and his subtle use of portamento in its third movement. The recording is agreeably intimate. D.H.

ELGAR: Violin Concerto; Introduction and Allegro

Takezawa: Bavarian Radio Symphony, C. Davis RCA VICTOR 61612 (65 min)

> Performance: Extraordinary Recording: Very good

Elgar's massive Violin Concerto in B Minor has never attained great popularity despite a distinguished list of committed advocates, beginning with the teenage Yehudi Menuhin's recording with the composer conducting and extending to the young Nigel Kennedy's. Now it's Kyoko Takezawa's turn, and her stunning new recording for RCA Victor may well help establish the concerto more solidly within the boundaries of the so-called standard repertory.

Takezawa's remarkable combination of youthful drive and mature vision has been evident in all her recorded performances, as has the flexibility with which she adapts her assertive individuality to the work at hand. These are the qualities the Elgar particularly





Browning, Studer, and Hampson

BARBER SONGS

The two-time Grammy-winning pianist John Browning joined soprano Cheryl Studer and baritone Thomas Hampson for the first complete recording of Samuel Barber's songs, released by Deutsche Grammophon in April. The two-CD set, titled "Secrets of the Old" after a Yeats setting, features first recordings of ten unpublished songs. Barber's most famous song, *Dover Beach*, is performed by Hampson with the Grammy-winning Emerson String Quartet; Browning partners the singers in all the others.

Browning, who celebrated his sixtleth birthday this past season, has long been assoclated with Barber's music. His first Grammy, in 1992, was for an RCA Victor recording of the composer's Piano Concerto, which Barber wrote for him. His second, awarded this year, was for a Music-Masters recording of Barber's complete works for solo piano.

PHOTO, JÖRG REICHARDT/DC

demands, and no violinist who has recorded the work before has seemed more truly "inside" it. No other recorded performance has been more fired up with its unique blend of passion and breadth, more consistently aglow with voluptuous tone and unforced warmth of heart, more reliable in respect to both nomentum and tastefulness.

Colin Davis, conducting the Bavarian Radio Orchestra, provides a tidy accompaniment. The filler piece, Elgar's Introduction and Allegro for string orchestra, does not involve Takezawa and doesn't really get off the ground, but her performance of the concerto is simply not to be missed. R.F.

JANACEK: Glagolitic Mass; Sinfonietta

Soloists; Montreal Symphony Chorus and Orchestra, Dutoit LONDON 436 211 (66 min) Performance: Handsome Recording: Resplendent

Janacek's setting of the Mass in Old Church Slavonic has little in common with the solemnities of the Masses by Bach, Haydn, or Beethoven: rather, it stems from



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the musical language of his operas with their sharp contrasts of ferocity, exaltation, and reflectiveness.

Charles Dutoit has a generally fine team of soloists in soprano Natalia Troitskaya, mezzo Eva Randová, tenor Kaludi Kaludov. and bass Sergei Leiferkus-the soprano is a bit strident in the Kyrie, but the tenor is superb in the cruelly demanding portions alloted to him, especially in the closing pages of the Credo. The choral work is first-rate throughout, and the orchestral execution is all that one could ask, particularly in terms of the solo work and the vivid coloration. More urgency would have been welcome in the instrumental introduction. The organ part is more prominent than usual in this Mass, and Thomas Trotter plays the king of instruments to magnificent effect. Indeed, it is the glorious acoustic surround afforded by Montreal's Church of St. Eustache that lifts this realization out of the ordinary.

The brazen Sinfonietta, with its panoply of twelve trumpets, is a perfect companion piece for the Glagolitic Mass, and again the church acoustic makes for a marvelous soundstage. Dutoit opts for a fast pace in the opening movement, which for me dilutes the work's ceremonial quality, but he does honorably by the three middle movements, and his very broad pacing at the end of the finale is striking.

While Dutoit and his Montrealers may miss something of the fiery quality that these late masterpieces by Janacek demand, their recording earns a special place for its sonic grandeur. D.H.



NIELSEN: Symphonies Nos. 1-6 Gothenburg Symphony, Järvi DEUTSCHE GRAMMOPHON 437 507 (three CD's, 202 min) Performance: Good to excellent Recording: Good

eeme Järvi's Carl Nielsen cycle for Neeme Jarvi's Can Hierory Deutsche Grammophon with the Gothenburg Symphony-which includes recordings of the Fourth and Sixth previously issued on Bis to complete Myung-Whung Chung's unfinished set-is not my first choice among the complete cycles currently available on CD, but it's a near miss. Järvi particularly excels at expressing the lyrical side of Nielsen's musical personality, as in the slow movement of the neo-Brahmsian First Symphony, the "phlegmatic" and "melancholic" middle movements of the delightful Second (titled "The Four Temperaments"), and the pantheistic andante pastorale of the Third (the "Sinfonia Es-

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pansiva"), with its offstage vocalise for soprano (Soile Isokoski) and baritone (Jorma Hynninen). Järvi also magically conveys the enigmatic quality of the *allegretto* of the Third, its penultimate movement, but he fails to find the right tempo and pulse for the finale's problematic ceremonial march (the same can be said of most other conductors who have recorded it).

The charming poco allegretto second movement of the Fourth Symphony ("The Inextinguishable") is delightfully done, and there is a fine intensity to the violin line that ushers in its slow movement, but the outer movements lack the requisite fire. The epic Fifth Symphony gets an honorable treatment, and the all-important snare-drum part in the first of the two movements is beautifully handled: insistent and satanic. but not overbearing until the climax, where Nielsen calls for the drummer to attempt, by improvising, to bring the rest of the orchestra to a standstill. The Sixth Symphony ("Sinfonia Semplice"), by turns sardonic and darkly depressed, fares best here in the brief slow movement. As with virtually all the recordings that have come out of Gothenburg, the sound is uniformly satisfying throughout the set in terms of warmth, body, and sense of space.

For all the excellences of these performances, however, Herbert Blomstedt's cycle with the San Francisco Symphony on London is the most consistently gripping in terms of interpretion. Individual discs from other cycles are also outstanding, especially Chung's version of the "*Espansiva*" on Bis (he gets the problematic finale just right, and the performance is thrillingly recorded, too) and Leonard Bernstein's 1942 New York Philharmonic recording of the Fifth as reissued on Sony (despite the rather glaring sonics, the most intensely dramatic reading of them all). *D.H.*

PURCELL: Dido and Aeneas; Ode for St. Cecilia's Day

Soloists; Monteverdi Choir: English Baroque Soloists, Gardiner

PHILIPS 432 114 (67 min) Performance: Excellent Recordina: Fine

Purcell's beautiful *Ode* is one of the most eloquent paeans to the art of music, and his opera *Dido and Aeneas* sounds as fresh and moving here as 1 imagine it was when first presented in 1689. The soloists are especially strong: Carolyn Watkinson is a most affecting Dido, and George Mosley as Aeneas admirably conveys the hero's obedience to his fate. Ruth Holton is remarkably agile in Belinda's aria, and Teresa Shaw makes the Sorceress fearful without caricature. In both works, the singers' English diction is exemplary.

While the real "star" of the recording is Purcell himself—rarely has a composer written so economically or cogently—John Eliot Gardiner conducts these early masterpieces on period instruments with arresting conviction. These are not typical "historical" readings, but rather full-blown interpretations in which the sound of another era is made meaningful to modern listeners. The result is a revelation. *R.A.*

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BACK IN THE U.S.A.



RACHMANINOFF: Preludes (complete) Moura Lympany (piano) ERATO 91714 (two CD's, 81 min) Performance: To the manner born Recording: Excellent

Moura Lympany is an old hand when it comes to Rachmaninoff. She was one of the first to record the complete piano preludes, back in 1951, and this new set demonstrates that she has lost none of her technical or interpretive prowess.

While the twenty-four preludes do encompass all the major and minor keys, they were not conceived as an integral series like he conductor Andrew Litton, who made his reputation overseas, returned to his native land last month when he took over the Dallas Symphony from Eduardo Mata—making him the first American-born conductor to be appointed music director of a major American orchestra in ten years. Maybe it's a trend: After Litton's appointment was announced, Michael Tilson Thomas was chosen to lead the San Francisco Symphony, and Leonard Slatkin decided to move from St. Louis to the National Symphony in Washington, D.C.

the Chopin preludes or Bach's *Well-Tempered Clavier*. The famous Prelude in C-sharp Minor comes from Rachmaninoff's Op. 3, and another ten were set down in 1904. Six years later he wrote the best of the lot. a baker's dozen published as Op. 32.

To start with the two most popular preludes, the C-sharp Minor is played here in a broody *rubato* fashion that is very effective and refreshing, and the G Minor gets a more relaxed pacing than usual. Lympany is very good in the lyrical numbers, such as the next to last from the Op. 23 set. It is in Op. 32, however, that she really comes into her own with a burst of virtuosity in the fierce F Minor and in the tragic lament in the B Minor (No. 10). The series climaxes in the last three preludes—the tender B Major, the G-sharp Minor with its sustained melody, and the grandiose D-flat Major, where things come to a resounding conclusion. If you prefer your Rachmaninoff with a stress on the lyrical element, Lympany's recording will satisfy you. But Vladimir Ashkenazy's 1985 London set of the preludes, which includes the Second Piano Sonata, is a tempting alternative. D.H.

SCHUBERT: Symphany Na. 2; Rosamunde (excerpts) Vienna Philharmonic, Muti EMI 54873 (61 min) Performance: Refreshing Recording: Excellent

Riccardo Muti's approach to Schubert's Second Symphony is an assertively energetic one, and his reading is aglow with the most genuine affection and a convincing feeling for the exuberance and drive of the young composer, then rounding out his eighteenth year. The Vienna Philharmonic players, who have been known to defy conductors who have their own ideas about such proprietary repertory, are with him all the way. There's nothing hotted-up or larger than life here, but every phrase is fully alive, giving the performance a freshness and vitality that should compel a re-evalua-



CLASSICAL MUSIC

tion on the part of listeners who think of the work as one of those trifles you acquire to complete a set. Repeats are taken in both outer movements, and it's grand to hear such delicious material come round again. The variations that make up the slow movement are tellingly characterized, with all the radiant Schubert charm in full bloom yet enough momentum to avoid falling into caricature. The *Rosamunde* pieces—the *Zauberharfe* Overture and Ballet Music I and II—are every bit as rewarding. The playing as such is all one could ask, and so is the beautifully balanced recording. *R.F.*

SUK: Ripening; Praga Royal Liverpool Philharmonic, Pesek VIRGIN 59318 (67 min) Performance: Persuasive Recording: Excellent

Libor Pesek is today's most active and effective champion of the music of Josef Suk (1874-1935), grandfather of the contemporary violinist of the same name and both pupil and son-in-law of Dvorak. In recordings with the Czech Philharmonic for Supraphon and in his guest appearances with American orchestras, Pesek has introduced us to several works by Suk, and when he toured here with the Liverpool Philharmonic two years ago their big work was the Second Symphony ("Asrael"), which they've also recorded. This new disc by Pesek and his orchestra offers two tone poems.

Ripening, a sort of autobiographical disquisition in music on the process of maturing through experience, runs more than 40 minutes in Pesek's reading. It might be described as Richard Strauss without the bluster—also without the memorable tunes he was able to devise. But Suk's themes are strong enough to sustain the musical development, and there is imaginative exploitation of orchestral color (augmented by a wordless chorus in the final section).

The performance itself, and the recording of it, are all a composer could wish, and the same may be said of *Praga*, an enthusiastic tribute to the proud Czech capital in which fanfares based on the famous Hussite hymn lead to a battle scene and an apotheosis with organ. Pesek's still current Supraphon recording (with a different coupling) is splendidly idiomatic, but the somewhat more expansive Liverpool remake is even more persuasive. It has an added breadth that is not at all devitalizing, and the organ makes a grander effect here thanks to Virgin's exceptionally rich, wide-open sonics. *R.F.*

TIPPETT: Fantasia Concertante on a Theme of Corelli HOLST: A Fugal Concerto; St. Paul's Suite Works by Corelli and Bach Saint Paul Chamber Orchestra, Hogwood LONDON 440 376 (57 min) Performance: Good Recording: Good

The British love of old Italian music is amply demonstrated by this recording, which elegantly reaches back across the centuries, starting with a Corelli trio sonata in B Minor. Bach wrote a fugue based on a theme from that sonata, and here it's reCorelli-ized by Christopher Hogwood in a transcription for strings and continuo. Commissioned to write something for the 1953 tercentenary of Corelli's birth, Michael Tippett used themes from the Bach-Corelli fugue. Corelli's F Major Concerto Grosso, and his popular "Christmas" Concerto to create an enigmatic hybrid.

Gustav Holst's links with the Baroque pieces are less direct, and both the Fugal Concerto and the St. Paul's Suite are less original than the Tippett, but also more accessible in their evocation of a sort of folk-Baroque. All the music is most pleasantly performed and recorded by Hogwood and the Saint Paul players. *E.S.*

WAGNER: Der Fliegende Holländer

Soloists: Budapest Radio Chorus; ORF Symphony, Vienna, P. Steinberg NAXOS 8.660025 (two CD's, 138 min) Performance: Very good Recording: Excellent

With an intense, well-paced performance, captured with theatrical realism, this budget-price recording of Wagner's *The Flying Dutchman* compares well with several other versions boasting more



QUICK

BRAHMS: Nine Hungarian Dances DVORAK: Symphonic Variations; Czech Suite

North German Radio Symphony, Gardiner DEUTSCHE GRAMMOPHON 437 506 (62 min)

Seemingly ready-made for some classical radio station's "afternoon drive" playlist, this CD is less noteworthy than you'd expect from conductor John Eliot Gardiner, who has so often challenged the status quo. The Dvorak pieces, less familiar than the Brahms, are rhythmically buoyant, melodic, and performed with seriousness though no special sparkle. D.P.S.

GERSHWIN: Rhapsody in Blue STRAVINSKY: Ebony Concerto BERNSTEIN: Prelude, Fugue and Riffs; Suite from "West Side Story" COPLAND: Fanfare for the Common Man

Netherlands Wind Ensemble, Dufallo CHANDOS 9210 (62 min)

A Dutch clarinetist (Harmen de Boer), a French-Canadian pianist (Louis Lortie), and the Netherlands Wind Ensemble under an American conductor (Richard Dufallo) in very cool performances of some jazzy symphonic Americana. Everything is neatly laid out—you'll hear more inner voices in *Rhapsody in Blue* than even Gershwin knew existed—with energy, charm, and Dutch know-how. *E.S.*



MAHLER: Symphony No. 4 McNair; Berlin Philharmonic, Haitink

PHILIPS 434 123 (58 min)

Bernard Haitink's authority as a Mahlerian is unassailable, but in his third recording of this most ingratiating of the symphonies he seems determined to avoid that quality at all costs. Better a straight face than contrived charm, to be sure, but despite the superb orchestral playing and Sylvia McNair's luminous, beautifully characterized singing in the final movement, this is a pretty drab affair. *R.F.*

MENDELSSOHN: Violin Concerto in E Minor BRUCH: Violin Concerto No. 1

Vengerov; Leipzig Gewandhaus Orchestra, Masur

TELDEC 90875 (51 min)

Maxim Vengerov's performances of these well-loved works offer just about all one

could ask in the way of revivifying them without altering the characteristics that have earned and preserved their popularity. Fire and elegance are superbly balanced throughout, and Vengerov's partnership with Kurt Masur and the Leipzig Gewandhaus Orchestra is an exceptionally happy one. R.F.

NOBRE: Reminiscencias; Homenagem a Villa-Lobos VILLA-LOBOS: Twelve Etudes Joaquim Freire (guitar)

LEMAN/QUALITON 44601 (55 min)

Exquisite performances of a cornerstone of modern guitar music, Villa-Lobos's Twelve Etudes, combined with two attractive works by a contemporary Brazilian. Marlos Nobre's homage to his predecessor is serious, contemporary, and respectful, but it is the timeless reminiscences of his home town of Recife that confirms this sometime avant-gardist as a worthy successor of Villa-Lobos. Joaquim Freire is an immensely talented Brazilian guitarist who makes the difficult sound easy and then moves on to make music. *E.S.*

THE BOSTON CAMERATA Nueva España

ERATO 45977 (75 min)

Joel Cohen, his Camerata, and other Boston musicians make a persuasive case for this mostly sacred music from Spain's American colonies. It often sounds more energetic and more beautiful than music of that period (1590 to 1690) written in the old country, perhaps because of hybrid vigor from blending European music with indigenous and African influences.

William Livingstone

SYLVIA MENAIR

Exsultate Jubilate Monteverdi Choir; English Baroque Soloists,

Gardiner PHILIPS 434 920 (59 min)

In addition to Mozart's motet *Exsultate* Jubilate, with a particularly brilliant performance of its famous "Alleluia," this CD offers Handel's less familiar but very satisfying *Silete Venti* and *Laudate Pueri Dominum*. Soprano Sylvia McNair uses her pure, nearly vibratoless voice to fine effect and with thoughtful musicianship. John Eliot Gardiner's conducting of the period-instrument ensemble conveys the controlled power of the music. *R.A.*

WHITE NIGHTS

Romantic Russian Showpieces

Kirov Orchestra, Gergiev PHILIPS 442 011 (60 min)

Except for the fanciful Baba-Yaga and Kikimora by Anatole Liadov, these are all tried and true warhorses: Glinka's Russlan and Ludmilla overture, Khachaturian's Sabre Dance, the Polovstian March and Dances from Borodin's Prince Igor, and Tchaikovsky's 1812 Overture. Valery Gergiev leads respectable run-throughs, but the orchestra is hardly world-class, and the recorded sound seems cramped. D.H. illustrious names. Actually, the principals are far from unknown; baritone Alfred Muff (the Dutchman), soprano Ingrid Haubold (Senta), and tenor Peter Seiffert (Erik) are front-line singers in Munich and Vienna. All three are thoroughly inside their roles, and, supported by a good chorus and an excellent orchestra under Pinchas Steinberg, they form a seasoned ensemble.

Seiffert's Erik, in fact, is as good as any on records; he is a lyric tenor for whom a melting legato is not out of place in Wagner. Muff is a commanding Dutchman, if not a tonally ingratiating one, and he is particularly effective in the opera's closing moments. Despite instances of unsteadiness, Haubold is a moving and committed Senta. The Daland of Erich Knodt may have already weathered too many storms at sea, but he manages his music adequately, while Jörg Hering (the Steersman) and Marga Schiml (Mary) are more than competent.

There are notes in English, French, and German, but the libretto is in German only. Otherwise, my only complaint about this highly commendable set is that Senta's Ballad is split between the two discs. *G.J.*

Collection



CECILIA BARTOLI AND ANDRÁS SCHIFF The Impatient Lover: Italian Songs by Beethoven, Mozart, Schubert, and Haydn LONDON 440 297 (68 min) Performance: Gratifying Recording: Lovely

n addition to being a spectacular Rossini heroine, mezzo-soprano Cecilia Bartoli, a native Italian, appears to be a natural recitalist as well. Except for a few forays into the French repertory, she has championed the music of her homeland. But though she has successfully built entire recitals around Rossini's lightweight song output, one can't do that for long. The programming of this CD suggests an attempt to broaden her repertory without abandoning the Italian language. It consists of songs by Beethoven, Mozart, and Schubert on Italian poems about romantic longing, plus Haydn's Italian cantata Arianna a Naxos. Aside from the Haydn, most of the music is rarely heard second- and third-rate stuff. Bartoli's performances are probably better than it deserves. D.P.S.



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July

TIME DELAY

HiFi/Stereo Review



30 Years Ago

In his June 1964 editorial, Furman Hebb took umbrage at a number of fake (electronically enhanced) stereo records that had recently crossed his desk, most priced a dollar more than equivalent mono releases. "Pseudo-stereo is something of a sham," he declared, "and the moral of this story is that for once, at least, cheapest is best."

For the issue's cover story, Julian Hirsch and Gladden Houck tested twelve new stereo phono cartridges, from the Empire 880P (\$19.95) to



The Empire 880P, 1964

the Weathers PS-11 (\$129.50). "The past year," they observed, "has produced three noteworthy developments: the semi-standardization of the 15-degree vertical tracking angle, the introduction of a number of cartridges with elliptical styli, and a dramatic reduction in prices."

In "The Anatomy of a Best Seller," contributor James Goodfriend wrote, "Naked girls on the cover will help the PP 2504 speaker, 1984

sales of some records and

hard to know in advance

which is which."

hinder the sales of others. It is

Stereo Review

20 Years Ago

Our Reviewers (We Think

to the editor, reader Robert

Illinois, sang the praises of

describing him as "a credit to

In Best of the Month, Richard

Freed recommended a Karl

Böhm/Vienna Philharmonic

performance of Beethoven's

Ninth Symphony ("the finest

recording in which Böhm or

presented"), and Noel Coppage

raved about "Seeds," the latest

effort by British folk-rockers

Gallagher and Lyle ("neato-

keeno all the way"). In other reviews, Leonard Maltin was

wild about "Fifty Years of Film

Music" on Warner Bros. ("the

Heinz Holliger oboe recital on

Philips ("one can only gasp in

Reilly, reviewing the first (and

next best thing to having the

films themselves"), Eric

Salzman was stunned by a

astonishment"), and Peter

only) album by glam-rock

act sounds better.'

wannabe Jobriath, remarked,

"Vocally, Marcel Marceau's

the Ninth has yet been

reviewer George Jellinek,

criticism.

Dell'Aringa of Chicago,

We'll Keep Them): In a letter

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New products this month included Sonv's MX-20 portable mixer console, with eight input channels and four output channels (\$1,050), the Koss HV/1LC "high velocity" stereophones with level controls on each earcup (\$49.95), and Scott's R77S receiver, rated at 70 watts per channel (\$599.90). In test reports, Julian Hirsch extolled the merits of the Dynaco Stereo 400 power amp (200 watts per channel), which he described as having "no sound of its own-it is absolutely neutral and clean."

Our Reviewers (We're Beginning to Worry About Them): Confronted with "Catch My Soul," a rock version of *Othello* starring Richie Havens, Peter Reilly said, "It whetted my appetite for the inevitable version of *Hamlet* set in the Continental Baths and starring Holly Woodlawn."

10 Years Ago

Sony's MLV-1100 stereo TV decoder, Jamo's PP 2504 tower

speaker, an impressive-looking four-way bass-reflex system, and Toshiba's pricey secondgeneration XR-Z70 programmable CD player (\$750) were among the new products this month. Julian Hirsch said of the high-performance Proton 930 AM/FM receiver from designer Larry Schotz (\$360) that it "easily outperforms anything we have seen at anywhere near its price." And Craig Stark tested the Denon



DR-M44 cassette deck, a three-head machine with Dolby B and C that he found he could "recommend without hesitation."

It's Got a Good Beat and You Must Dance to It: Reviewing Mel Brooks's Hitler Rap, in the soundtrack for To Be or Not to Be, critic Louis Meredith dubbed it "Grandmaster Flash Meets Field Marshal Goering." —Steve Simels





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