

AUGUST 1983 • \$1.50

Stereo Review®

SPECIAL SPEAKER ISSUE

How to Get the Most from Your Speakers

How Julian Hirsch Chooses Speakers

Ten Tips for Speaker Buyers

Equipment Test Reports

- Mission 700S Speaker System
 - Realistic STA-112 AM/FM Receiver
 - JBL J216 Speaker System
 - Hitachi HT-68 Record Player
 - Yamaha K-2000 Cassette Deck
- Plus
- Alpine 7347 Car Stereo System

Disc Specials

ZZ Top • Santana • U2
Waylon Jennings & Willie Nelson
José Feliciano • *Say Amen, Somebody*
Berlioz's *Symphonie Fantastique*
Bishop's Schubert • Curzon's Mozart
Piano Music from France



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Speaker Cables
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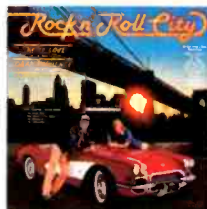
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COVER: Design by Borys Patchowsky; photo by Geoff Rosengarten. A coil of Monster Cable PowerLine is shown in front of a JBL J216 speaker. See page 36 for Hirsch-Houck Labs test results on the JBL speaker.

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Bulletin

Edited by Christie Barter and Gordon Sell

● VHS HI-FI, the stereo, high-fidelity sound system for VHS VCR's, has been announced by two companies, JVC and Matsushita (parent company of Quasar, Technics, and Panasonic). This greatly anticipated follow-up to Beta Hi-Fi is claimed to have a frequency response of from 20 to 20,000 Hz and a signal-to-noise ratio in excess of 80 dB. JVC demonstrated a prototype at the just-finished Consumer Electronics Show in Chicago; it is said to use a compander (compressor/expander) type of noise reduction but not dbx. Matsushita's unit, which the company says is on the market in Japan, does use dbx noise reduction. Matsushita says it is not putting the machine on the U.S. market yet because there is no stereo TV broadcasting here yet.

● DIGITAL COMPACT DISCS from CBS will be released at the rate of twelve a month for the next few months as CBS takes over distribution of its CD's from Sony. The repertoire will be more or less equally divided between pop and classical, and while the retail price will be at the dealer's option, it is expected to be in the \$17-to-\$20 range. Each CD, in its now-standard small "jewel box," will be issued in a 6 x 12-inch display pack along with notes and artwork....August is also the month that the PolyGram and Warner labels intend to enter the CD software market, joining the two front-running independents, Telarc and Denon....RCA and Capitol/Angel will not release their CD's until after Labor Day.

● TECH NOTES: Sony has announced the development of a digital tape recorder that uses a cassette that is half the size of a standard audio cassette and can store three hours of music. The tape recorder is said to use VCR-style rotating heads....dbx demonstrated a prototype speaker at the Consumer Electronics Show with phased-array drivers for an enhanced sound image. ...Also at Summer CES, Philips and Mitsubishi demonstrated prototype Compact Disc players for car use.... Tandberg of Norway recently celebrated its fiftieth anniversary....The

Compact Disc Group, an association of CD player and software manufacturers, has published the first CD catalog. Listing 250 titles that will be in stores by August, it is available for \$1 from: Compact Disc Group, P.O. Box 2395, Rockefeller Center Station, New York, N.Y. 10185....A full report on the latest developments in audio that were seen at the Summer Consumer Electronics Show will be in our September issue.

● THE BRITISH PHONOGRAPHIC INDUSTRY, BPI, originated this mail cancellation logo for use by its member record companies; it has come to us on several packages from EMI. We are reproducing



it here for its news interest, not as an editorial comment.

● SCHWANN CITED: The Music Library Association has honored William Schwann, publisher of the Schwann Record & Tape Guide, with a citation "in recognition of his distinguished services." The formal presentation in Philadelphia also marked 33-1/3 years in the life of the Schwann catalog itself and a total of 33-1/3 million copies printed and sold. Boston's Mayor Kevin H. White cited Schwann, as well, for his "vision and commitment" and for his "unique place within the music world."

● "VIDEO LP" TAPES are the latest in software from Sony. The first releases feature live performances by Lionel Hampton, Rob McConnell and the Boss Brass, and the Bill Watrous Refuge Band. Each contains roughly twenty-five minutes of digitally mastered stereo-music video and is priced at \$19.95 (Beta Hi-Fi) and \$24.95 (VHS). The tapes are the first commercially released videos with digital stereo music and Sony's first video releases of jazz.

Speaking My Piece

By William Livingstone

Editor Livingstone
with mezzo-soprano
Betty Allen



AUDITIONS

BEFORE I came to work for STEREO REVIEW, I was the humanities editor of a large encyclopedia. The change from making annual revisions on a fairly scholarly reference book to editing a monthly magazine about audio equipment and recorded music required a difficult shift of mental gears.

Facts and objectivity were our goals at the encyclopedia, and while I found a healthy respect for facts at the magazine (all those lab-test measurements!), STEREO REVIEW is also a journal of opinion. At first it was shocking for me to edit record reviews filled with subjective evaluations. Some even contained the pronoun "I."

Then there was the question of technical jargon. After a few years I got used to the word "optimize," but it took longer to accept the notion that one could "audition" loudspeakers. I had attended auditions at which actors, dancers, or singers tried out for parts in shows, and it seemed proper to me to speak only of auditioning people, not things.

The vocal competitions in which I have been a judge are much like auditions, and I have at times been surprised at the amount of disagreement among qualified judges. In a contest a few years ago, for example, although the panel agreed easily on the male contestants, we argued about the women. The soprano I liked best was Number Seven (we were not told their names), but her voice irritated another of the judges, the respected manager of a regional opera company.

I was about to abandon hope for my favorite at the end of the first round, but another judge, mezzo-soprano Betty Allen, director of the Harlem School of the Arts, spoke up for her. If the unpromising Number Four was being asked back for the second round, Miss Allen said, Number Seven certainly de-

served another chance. We compromised by allowing her to stay in for one more hearing. The next day two new judges joined the panel, and they liked Number Seven well enough to vote with me and Miss Allen to send her on to the finals.

For the finals we moved from a small hall to the opera theater at the Juilliard School of Music to hear the contestants in different surroundings. The change in acoustics made us change our minds about some of the singers. A few voices that had sounded vital in the little hall now seemed to lack substance, and others emerged with greater roundness and warmth. At Juilliard, Number Seven's voice sparkled with so much brilliance that she was voted one of the winners. Besides a cash award, she got a chance to sing in a New York recital and was well reviewed by the *Times*.

The opera-company manager did not change his mind about her. Instead, he gave a contract to Number Twelve, a soprano he liked better although she was not among the winners. That singer has been quite successful since then with his company and others.

To "audition" means to give a trial hearing to someone or something, and the word can be properly used to discuss trying out loudspeakers as well as voices. Like voices, speakers sound different in different rooms, and judges at speaker auditions sometimes disagree in their opinions of the contestants.

There may be no objectively correct choice, but the auditioning process can be entertaining. We have an article on listening tests and speaker cables on page 46, and to help you make auditioning useful there is some guidance for buying speakers on page 52. An article on page 54 will tell you how to use room acoustics to get the most from your speakers when you, the impresario, have awarded your contract. □

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"That night
I was listening to
the bass player cook.
As his hands went
spidering up and down
the strings
his thum-thum-thum
became the group's
heartbeat – and mine too.
In my living room, I had
traveled once again to that
smokey little jazz club long ago."
A JVC High Fidelity System
can take you to another
time and place, with components
that reduce six different
kinds of distortion down to inaudible.
Nothing interferes with the
reality of your music. You're there.

We take you there.



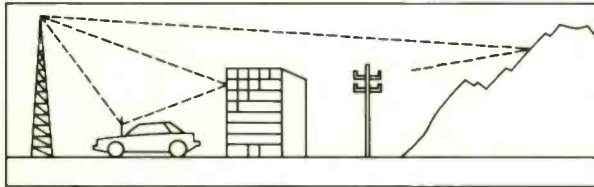
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CIRCLE NO. 2 ON READER SERVICE CARD

THIS IS THE CAR STEREO TECHNOLOGY EVERYONE ELSE WILL HAVE FIVE YEARS DOWN THE ROAD. SUPERTUNER III.™

In 1976, Pioneer introduced the first Supertuner technology. It elevated the car stereo tuner's ability to produce music. And sent every other car tuner maker scrambling back to the drawing boards. Now, just when they've



A lot of things stand in the way of clear reception. Like buildings, mountains, even telephone poles. Radio signals bounce off them like balls on a handball court. Creating static, signals cutting in and out. Unless you have a Supertuner III.

finally caught up to the advanced technology of the original

Supertuner, Pioneer introduces Supertuner III.

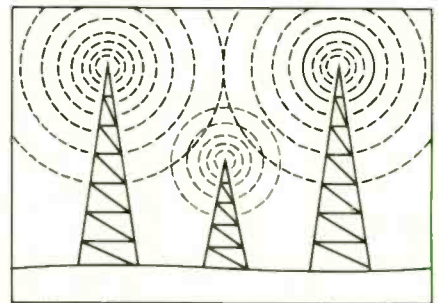
So long, fellas. See you down the road in another five years or so.

FM CAR STEREO RECEPTION
SO CLEAR YOU'LL THINK

YOU'RE LISTENING
TO A CASSETTE.

Because music and only music is important to the engineers at Pioneer, anything that gets in the way of the music is as

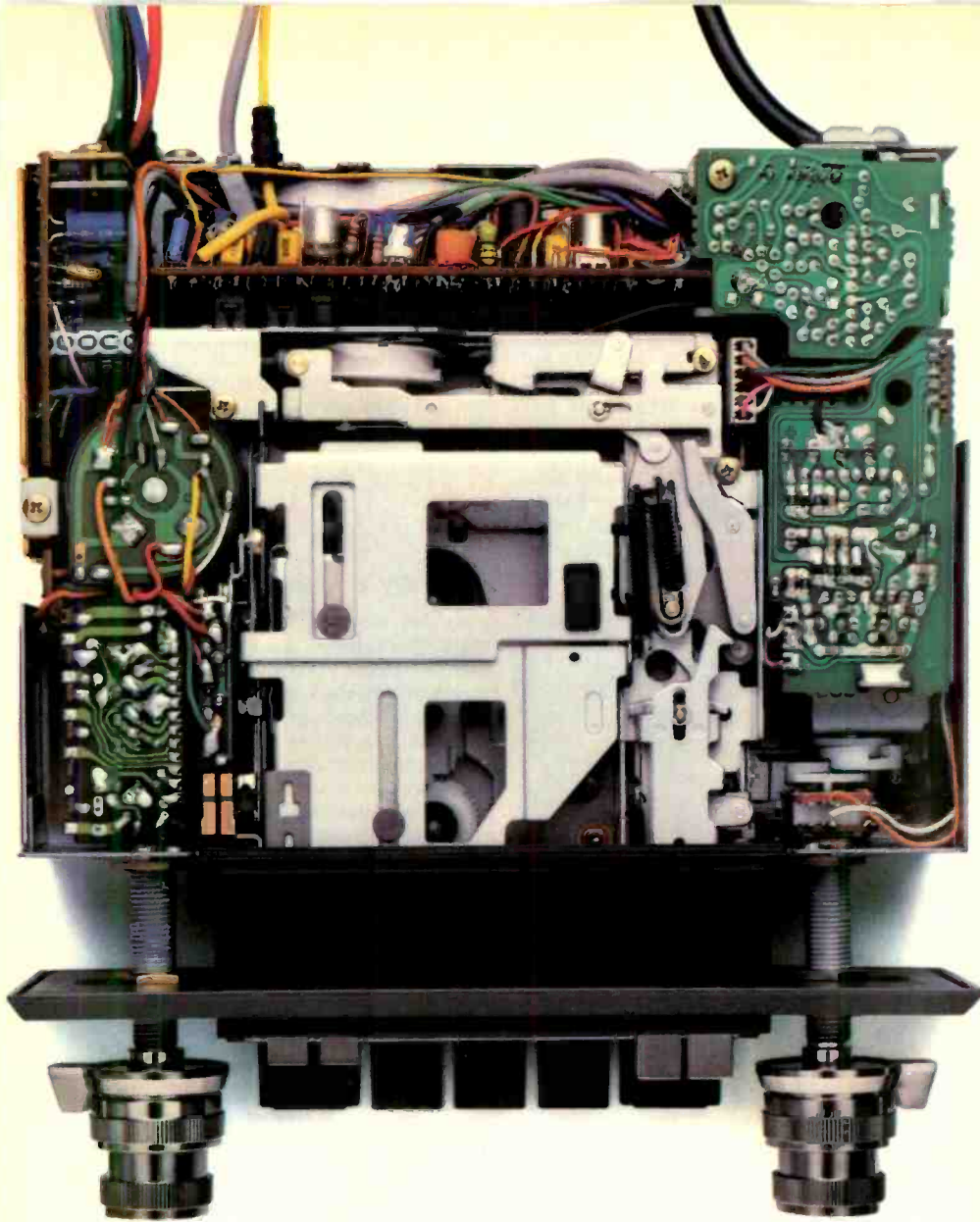
annoying to them as it is to you. So they've worked



Three-signal intermodulation is techno jargon for a weak signal that's surrounded by two stronger ones. This is what causes stations to cut into or bleed over others. Except in a new Supertuner III.

continually to develop technology so sophisticated and advanced it virtually eliminates the maddening interference common to all car tuners.

Like static. FM noise. Strong signals cutting in or bleeding



in Chicago, Illinois, perhaps the worst FM reception area in the country.

If Supertuner III outperformed the competition here, it would do it anywhere.

Using the same car, with the same antenna, and driving continuously around the same block on the Near North Side (where the world's tallest and third-tallest buildings create FM listening havoc), Pioneer put one tuner after another to the test.

And the clear winner, time after time, was Pioneer's Supertuner III. Downtown, only Supertuner III received stations that came across other tuners sounding like bacon sizzling on a hot griddle. And in the suburbs, only Supertuner III consistently was able to pick up weak stations located downtown, and hold on to them.

Of course, reading this now may impress you. But most likely you'd rather hear the real thing with your own two ears.

So, at your earliest conve-

on top of weaker ones.

In addition, Supertuner III can capture weak signals from a great distance and lock them in.

So, while Supertuner III offers a great many convenience gadgets like other tuners, it offers something that none of the others can.

The clean, clear, FM stereo reception you should be getting in this day and age.

WHICH CAR TUNER GETS THE BEST RECEPTION IS NOW PERFECTLY CLEAR.

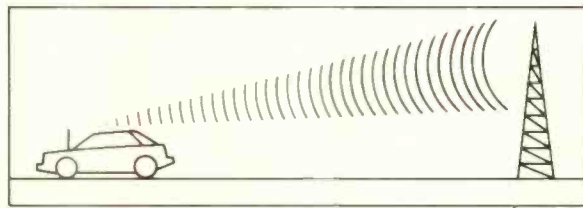
Of course, it's one thing to boast that no other FM stereo

tuner eliminates the irritants to your listening pleasure like Supertuner III.

It's another to prove it. Which is just what Pioneer did.

By road testing Supertuner III against the highest quality stereo tuners currently on the market.

The test was conducted



Cars move and radio stations don't. So the further you drive from the transmitter of your favorite station, the harder it is to capture its signal. Unless you have a Supertuner III. Which is just another reason we should have the market all locked up.

nience, visit your nearest Pioneer car stereo dealer and ask for a demonstration of Supertuner III.

And if, on the drive there, you get static and stations cutting in and out on your car stereo, don't just change stations.

Change car stereos.



PIONEER
Because the music matters.

CIRCLE NO. 3 ON READER SERVICE CARD

Letters

Car Stereo

● Congratulations to Julian Hirsch and Christopher Greenleaf for their discerning test report in June on the Jensen 530 car stereo unit. I became the proud owner of one three months ago when I had it installed in my 1983 Renault Alliance. Superb sound reproduction, operating ease, and impressive specifications characterize the Jensen 530. STEREO REVIEW should give it a Car Stereo of the Year award.

Congratulations also for Christopher Greenleaf and Gordon Sell's article on how to get real hi-fi in your car. More cleaner to your tape heads!

TAIWO OLUSEGUN ADELAJA
Morgantown, W. Va.

● I really enjoyed the article about car stereo acoustics in the June issue. It's the first time I've seen the subject covered so clearly. I now have a standard-equipment AM/FM radio and would like to put decent sound in my car, but I can't see spending over \$1,000 for it. From the article I get the impression I'd be better off doing nothing.

STEVE COSTA
Denver, Colo.

Not so. Although the article doesn't state it in so many words, it is our opinion that almost any replacement car stereo system we have heard is better than the standard-equipment systems delivered with most—but not all—new cars. The in-dash AM/FM/tape units generally work better and the speakers generally perform better than standard equipment even if the whole replacement system costs only a couple of hundred dollars. In the June article we were trying to convince audiophiles that it is now possible to achieve in an automobile sound quality approximating that of fine home systems, but it requires a carefully thought-out approach and usually the services of an experienced installer.

● I wonder how car stereo installer Rich Inferrera (June, page 57) plans to enjoy listening to music when his 500-watt, 124-dB sound-pressure-level auto installation snaps the last of his irreplaceable inner-ear hair cells. It seems ludicrous to invest so much attention on the output system and totally ignore the physical limits of the input system. Madness.

WILLIAM SCHROEDER
Orlando, Fla.

Tom Snow

● I agree with Peter Reilly's comments on Tom Snow's Arista album, "Hungry Nights" (reviewed in June), but I would label his performance "disappointing" rather than "promising." It is *not* "his first album

as a singer," since in 1976 he recorded a far superior album for Capitol ("Tom Snow," ST-11545) with a truly stellar group of pop "sessioneers." Not only were the songs better than on his Arista album, but two of them could easily be pop gold: *Hurry Boy*, featuring "Stephanie" Nicks (better known as Stevie) in her finest Welsh Witch incarnation, and *Rock & Roll Widow*, featuring Valerie Carter—who, like Snow, has little



Tom Snow on Arista

or no luck attracting the attention of playlist pontiffs. I found the Capitol album in the dollar bin. If anyone is to blame for its not selling, it may be the cover photographer and designer, who made Snow look positively consumptive. At least on the Arista album he looks healthy.

DAN HUMISTON
Arcata, Calif.

Phil Collins

● As an avid fan of Genesis, I found Mark Peel's June review of Phil Collins's latest solo album right on the mark. The only thing I might add is that Collins went through a very trying divorce around the time of his first solo album, "Face Value" (not "Face the Music," as Mr. Peel had it), and I think his songs reflected that. That might explain his being "a little down on love" in the new album too.

BRAD FUJII
Evanston, Ill.

Saint-Saëns Third

● David Hall says in his June review of the new London recording of the Saint-Saëns Third Symphony by organist Peter Hurford and the Montreal Symphony conducted by

Charles Dutoit that the earlier Deutsche Grammophon recording by Daniel Barenboim and the Chicago Symphony holds the edge sonically. On that I agree, but in my opinion *neither* of these recordings can hold a candle to the Chalfont digital recording with Loris Tjeknavorian conducting the Liverpool Philharmonic and Noel Rawsthorne playing the organ in the old Liverpool cathedral. This is one of the few recordings in which the organ and orchestra were recorded together under the same roof. The sonics are electrifying throughout, and so is Tjeknavorian's interpretation! In my book *this* is the one with which to compare all other recordings of the work.

JEFFREY A. MORRELL
Lindenhurst, N.Y.

Journey's Genre

● It took me quite by surprise to read in Mark Peel's June review of Journey's album "Frontiers" that the band "proves its unequalled mastery of heavy-metal" and that Neil Schon's guitar "practically defines the heavy-metal genre." The band that originally defined heavy-metal is still the unequalled master of the art: Led Zeppelin. Their rare blend of blues and heavy-metal has spawned a host of imitators since 1968, but none of them, including Journey, comes close to the successful style of Led Zeppelin.

M. E. DUNAWAY
Louisville, Ky.

● Mark Peel's theory that "trapped inside each [Journey partisan] is a symphonic-music lover struggling to get out" is absolutely right! At seventeen, I am the result of combining a thesis (my father is a classical aficionado with a B.A. and M.A. in music from Indiana University) and an antithesis (my friends are anti-classical rock-and-rollers). I am the synthesis. I enjoy Mahler, Beethoven, Copland, and Gershwin as well as Journey, Def Leppard, Pat Benatar, the Go-Go's, and the Police. You must tell the world—introduce those who are deprived to the other side of the coin!

DAVE GENTRY
Frankfort, Ky.

Audio / Videophile

● I've been a so-called "audiophile" since 1957 and a regular reader of STEREO REVIEW for almost as long. About three years ago I finally plunged into home video and have rapidly become an incurable "videophile." In the meantime, audio has more or less taken a back seat, something I enjoy more in my car or boat than at home as I await the "wedding of video and audio."

Contrary to the view expressed by William Norrish in the June "Letters" column, STEREO REVIEW has held my interest because it always has enough to say about video to make me think I might miss something from both hobbies if I don't keep reading. After all, I've never been too interested in the non-classical record reviews, but should I expect you to stop reviewing all other kinds of music?

JAMES R. HOLT
Cincinnati, Ohio

HOW COULD A CASSETTE DECK WITH TWO HEADS BE SO HARD TO GET?



The Kyocera D-801 Cassette Deck is hard to get because so much more is built into it. For example, it has five circuit boards where most decks have only one or two. But that's only the beginning.

It more than meets the ultimate tape deck challenge.

The challenge is to move tape across the heads at as nearly a constant speed as possible. Variations in speed, of course, come out in your speakers or headphones as wow and flutter.

Many decks claim a wow and flutter figure of 0.05% WRMS—trouble is, speed variations of 0.05% are clearly audible with piano music (one of the most revealing tests you can give a cassette deck—try it on the D-801 and marvel!).

The D-801 by Kyocera comes through with a remarkably low wow and flutter figure of 0.02% WRMS—and that is derived from a unique, three-motor, dual capstan drive mechanism. Two capstans are driven by a direct drive motor. A beltless/clutchless simple DC motor drives the feed and takeup reels, while a third motor is used as a head-position assist drive (it greatly prolongs head-to-tape azimuth accuracy). The dual capstan system provides that sensationally accurate tape travel, maintaining proper tension between capstans to eliminate external shock source modulating noise.

It more than meets the needs of the audio perfectionist.

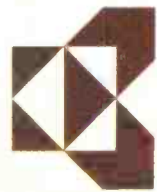
The D-801 goes above and beyond even the fussiest audiophile's needs with 3-position bias/equalization selection (with fine bias adjustment), 400 Hz calibration tone, Automatic Program Mute Recording, automatic search, and electronic 4 digit display, including counter, elapsed time and time remaining functions.

The D-801's noise reduction systems were built for the audio purist. It has two—Dolby* B & C—Dolby B for music material of limited dynamic range, Dolby C for music of the widest dynamic range, so noise reduction can be tailored to program material.

Finally, the specs everyone wants: frequency response of 30-20,000 Hz \pm 3 dB using metal or CrO₂ tape, and a S/N ratio of 78 dB with metal tape in Dolby C NR mode.

If you have any trouble finding a Kyocera dealer, contact: Kyocera International, Inc., 7 Powder Horn Drive, Warren, NJ 07060 (201) 560-0060.

CIRCLE NO. 4 ON READER SERVICE CARD



KYOCERA

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New Products

Latest Audio Equipment and Accessories

AR Introduces Three Bookshelf Speakers

□ Acoustic Research's new AR58B, AR48B, and AR38B (left to right in photo) all have a Twin Drive tweeter/midrange mounting arrangement. The common mounting plate for the 3/4-inch dome tweeters and 4 1/2-inch cone midrange drivers places them in close proximity to each other and allows for precise alignment in their independent acoustic-suspension subenclosure. Woofer diameters for the AR58B, AR48B, and AR38B are 12, 10, and 8 inches, respectively.

Other specifications for the speakers include (in descending order of model number) sensitivities of 90, 88, and 88 dB sound-pressure level with 2.83-volt inputs;



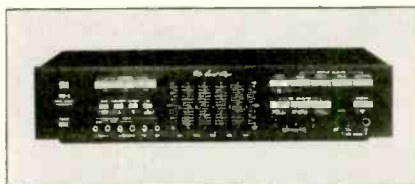
nominal impedances of 4, 6, and 6 ohms (minimums of 3.6, 4.5, and 4 to 5 ohms); and crossover frequencies of 600 and 4,500, 400 and 3,500, and 650 and 3,500 Hz. Frequency response for the AR58B has half-power (-3-dB) points of 39 and 32,000 Hz; for the AR48B these points are 45 and 32,000 Hz, and for the AR38B they are 52 and 32,000 Hz. Recommended maximum amplifier power is 175, 150, and 100 watts per channel, respectively. All the speakers have cabinets finished with a walnut-grain vinyl veneer. The AR58B measures 26 3/4 x 15 x 10 3/4 inches, the AR48B 26 x 14 x 10 3/4 inches, and the AR38B 22 x 12 x 7 3/4 inches. Respective weights are 49 1/2, 39 1/2, and 28 pounds. Prices: AR58B, \$350; AR48B, \$260; AR38B, \$200.

Circle 120 on reader service card

ADC Offers Two Video Sound Processors

□ ADC (Audio Dynamics Corp.) has introduced two signal processors for video sound, the Video Sound Shaper 1 and the Video Sound Shaper 2, that are said to im-

prove the sound quality of video recordings and broadcasts while fully integrating home audio and video systems.



The top-of-the-line VSS-2 (shown) connects to any audio amplifier through the tape-monitor loop and provides full moni-

toring and dubbing facilities for up to three video sound sources as well as a television set. A fader control lets the user fade out and in both sound and picture, and switching facilities make it easy to dub soundtracks from audio to video cassettes. A microphone input and a mixing control make it possible to add narration to video recordings. Included with the VSS-2 is an audio expander that increases the dynamic range of any video sound source by up to 40 per cent. The unit can also synthesize a two-channel pseudo-stereo signal from a mono input, and a "De-Hisser" function reduces

Tandberg's Top-of-the-Line Cassette Deck



□ The transport of Tandberg's new three-head TCD 3014 cassette deck is built on a 6-millimeter-thick aluminum base plate and uses four servo-controlled d.c. motors in a closed-loop dual-capstan system. The capstan flywheels, belt driven by the capstan motor, have different diameters and masses to prevent reinforcement of resonant frequencies. The two reel-hub motors provide constant tape-winding tension even in fast-winding modes. Tape slack is automatically taken up when any transport function is selected. The fourth motor moves the head assembly, preventing the mechanical shocks that the usual solenoids can impart.

An eight-bit microprocessor controls all transport functions. The multifunction transport-control buttons allow many combinations of scan, search, and memory-preset selection cueing. The front-panel digital counter always displays real-time readings, even in fast-wind modes. The primary transport-control functions are duplicated by an optional infrared remote-control unit.

The audio circuitry of the deck incorporates direct coupling throughout the signal path, discrete transistors for all the audio circuitry except the Dolby-B and Dolby-C IC's, and phase-compensated ultra-wideband amplifiers. Electrolytic and ceramic capacitors have

been replaced with high-grade polypropylene and polystyrene units; low-noise metal-film resistors are used in the signal path. A built-in fourth-order (24-dB-per-octave) infrasonic filter prevents distortions caused by ultra-low-frequency signals from analog disc warps.

Two built-in test-tone generators facilitate user fine-tuning of bias, sensitivity, and record-head azimuth. Equalized peak-reading meters with rapid-attack/slow-decay characteristics show the signal level being fed to the tape. Tandberg's Dyneq system automatically varies the amount of high-frequency record equalization to maximize the amount of high-level high-frequency signals that can be stored on the tape. The deck's Actilinear II transconductance amplifiers are said to increase the headroom of the record circuitry to a point 20 dB beyond the signal-current requirements of any tape made today.

Frequency response is given as 18 to 23,000 Hz ± 1.5 dB with metal tape (± 3 dB with Dolby-C). Other specifications with metal tape include harmonic distortion of less than 1 per cent (250 nW/m, Dolby-B) and a signal-to-noise ratio of more than 74 dB (A-weighted, Dolby-C). Wow-and-flutter is 0.09 per cent (record-play, wrms) or 0.12 per cent (DIN-IEC weighted). Price: \$1,395.

Circle 121 on reader service card

New Products

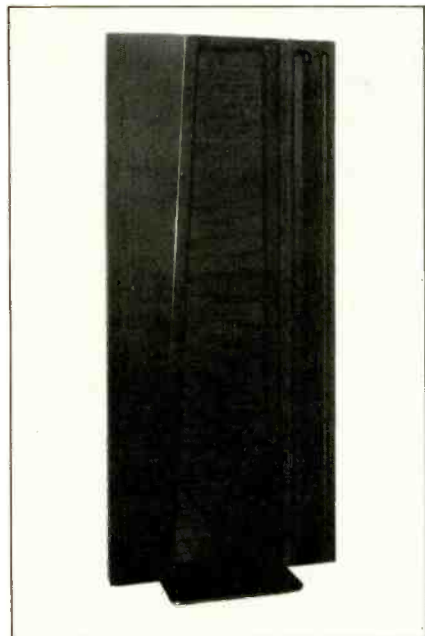
video-source audio hiss. A five-band equalizer (with band centers at 60, 250, 1,000, 4,000, and 8,000 Hz) has a control range of ± 15 dB in each band.

The VSS-1 lacks the VSS-2's microphone input, fader control, and expander circuits. It accepts video and audio inputs from two video components and has the same De-Hisser and stereo-synthesizer circuits as the VSS-2. Prices: VSS-1, \$250; VSS-2, \$400.

Circle 122 on reader service card

Apogee's Full-Range Ribbon Loudspeakers

Apogee Acoustics has introduced a loudspeaker system that is claimed to be the first ever to use ribbon drivers to reproduce the entire audio spectrum. The woofer, mid-



range, and tweeter of the Apogee system are all constructed of corrugated, tempered aluminum strands that measure less than 0.001 inch thick. Ribbon-driver technology is claimed to make possible tremendous improvements in sonic clarity over more conventional designs.

The midrange and tweeter ribbon elements of the Apogee speaker are fastened to the system's framework only at the top and bottom; magnetic and electromagnetic forces keep them centered in the vertical slots of the frame. The tweeter is constructed as a line source, using 1/2-inch ribbons, and directs equal output forward and to the rear for full horizontal dispersion. The midrange driver is a single 2-inch-wide ribbon. The ribbon woofer is trapezoid-shaped and averages 12 inches in width; the unusual shape is intended to avoid reso-

nances. The system's "seamless" crossover network has crossover points at 200 and 1,000 Hz. Overall frequency response is 30 to 30,000 Hz. The system can produce a sound-pressure level of 115 dB when driven by a 100-watt amplifier. The Apogee speaker measures 80 x 35 x 4 inches. Price per pair: \$5,000. Apogee Acoustics, Inc., Dept. SR, 920 Providence Highway, Norwood, Mass. 02062.

Circle 123 on reader service card

New Car Stereo Lines From Mitsubishi

Mitsubishi has introduced two lines of car stereo components, the Diamond Collection and the Specialty Series. The RX-735 (shown), in the Diamond Collection, is a quartz-controlled PLL digital-synthesis AM/FM/cassette player in a compact



chassis that can be installed in any car. It has five FM and five AM station presets and both automatic seek and automatic scan tuning. A distant/local circuit compensates for interference in crowded signal areas. Additional features include cassette auto-reverse with locking fast-forward and rewind, digital display for time and frequency, adjustable control shafts, a loudness switch, fader and balance controls for four-speaker systems, switchable muting, and a power antenna lead. Power output is 8 watts per channel into 4 ohms. Dimensions are 7 x 2 x 4 3/4 inches. Price: \$319.95.

The RX-755 AM/FM cassette player, in Mitsubishi's Specialty Series, uses a DIN chassis. It features a music program sensor that finds selections in either fast-forward or reverse mode. There are five AM and five FM pushbutton presets, auto-reverse with locking fast-forward and rewind, a tape program selector, cassette door illumination, adjustable control shafts, and fader and balance controls for four-speaker systems. Power output is 8 watts per channel. Dimensions are 7 x 2 x 6 inches. Price: \$269.95.

Circle 124 on reader service card

Heybrook Turntable Has Floating Subchassis

The belt-driven Heybrook TT-2 turntable, designed and manufactured in England by Mecom Acoustics, has a floating subchassis. The unit's plinth, or sub-base, is a solid, inert structure made of three layers of 18-mm chipboard and one of particle board. The space below it is filled with damping blocks to eliminate air resonance under the base. Set into this sub-base is a T-shaped chassis constructed from heavy-gauge rectangular steel tubing, acoustically isolated by three coil springs. The bearing, a 10-mm hardened-steel thrust ball with oil lubrication, is said to ensure low rumble. The plat-

ter is a two-piece, cast-aluminum assembly topped with a thick felt mat. The belt is driven by a low-speed synchronous motor



firmly attached to the plinth, which is said to keep motor noise from reaching the chassis assembly.

No tone arm is supplied, but the arm board of the turntable is designed to be easily adapted to all separate arms available from major manufacturers. Wow-and-flutter is rated at less than 0.1 per cent (DIN peak-weighted). Rumble is less than -73 dB (DIN-B weighted). The Heybrook TT-2 is available in either walnut or black base finishes. Prices: walnut, \$500; black, \$525. Mecom Acoustics, Ltd., Dept. SR, 11450 Overseas Highway, Marathon, Fla. 33050.

Circle 125 on reader service card

High-Fidelity JVC Personal Portables

JVC has introduced two high-fidelity personal portable stereos. The CQ-11K is an auto-reverse cassette player with a con-



tinuous-play option. It features Dolby-B noise reduction and is metal-tape compatible. The unit weighs 0.67 pounds with batteries. Price: \$119.95.

The CQ-F22K (shown) is more versatile, including an auto-reverse cassette player, an AM/FM tuner unit, a power pack, and folding headphones. When the cassette player is not being used, power for the tuner is supplied by the power pack. The cassette and tuner units can be connected to make one unit or can be attached separately to the headphones. The Dolby-B system uses a new integrated circuit that is able to function at only 3 volts (the power supplied by two penlight batteries). The CQ-F22K is also compatible with metal tape. Other fea-

tures include an antiroll mechanism and a high/low tone switch. Frequency response is given as 30 to 16,000 Hz with metal tape; wow-and-flutter is 0.2 per cent (wrms). The cassette unit weighs 10.7 ounces including batteries, the tuner pack weighs 2.1 ounces, and the power pack weighs 2.3 ounces including batteries. Price: \$189.95.

Circle 126 on reader service card

Boston Acoustics Upgrades A150 Speaker

□ Boston Acoustics has improved the drivers in its three-way A150 speaker system. The new A150 Series II has a 10-inch



acoustic-suspension woofer, a 1-inch CFT/1 dome tweeter, and a 3 1/2-inch midrange driver. The woofer has a longer voice coil than the one in the original version of the speaker, and the magnet structure has also been changed; it now consists of a bottom plate and pole piece forged together into a single steel-alloy construction. The woofer cone is made of a material that uses no wood or paper pulp. The dome tweeter is a copolymer unit that is ferrofluid-cooled to protect against overheating. The midrange unit is also ferrofluid-cooled and is mounted in a subenclosure that acoustically isolates it from the main cabinet, which is made of 3/4-inch particle board heavily braced to resist vibration.

Specifications of the A150 Series II include a frequency response of 38 to 25,000 Hz \pm 3 dB and a nominal impedance of 8 ohms. Crossover frequencies are 650 and 3,000 Hz. Power-handling capability is 100 watts. The speaker measures 32 1/2 x 16 x 8 3/8 inches. Prices: wood-grain vinyl finish, \$250; oak or walnut veneer, \$295, Boston Acoustics, Dept. SR, 130 Condor Street, Boston, Mass. 02128.

Circle 127 on reader service card

Harman Kardon Decks Feature Dolby-HX-Pro

□ Harman Kardon's three newest cassette decks—the CD-291 (shown), CD391, and CD491—all feature the Dolby-HX Professional headroom-extension system, which is claimed to improve high-frequency response and reduce distortion. The least-expensive model, the CD291, has a rated frequency response of 20 to 21,000 Hz \pm 3 dB. It has a solenoid-operated transport mecha-

nism, Dolby-B and Dolby-C noise reduction, a bias fine-trim control, a narrow-gap Sendust record/play head, auto repeat, record mute, and a memory counter.

The CD391 has many of the same fea-



tures plus bidirectional auto search, sixteen-segment LED peak-level indicators with a peak-hold function and a weighting system that allows for tape saturation so that maximum record levels can be used without danger of distortion. The transport is a closed-loop, dual-capstan system for lower wow and flutter. There is an auto-space switch to record a 5-second blank space between selections, and there are built-in test-tone generators for precise record-level calibration and bias fine-trim. Facilities for microphone mixing and timer control are also included. The rated frequency response is 20 to 22,000 Hz \pm 3 dB.

The top-of-the-line CD491 has all the features of the CD391 as well as three heads, for off-the-tape monitoring during recording, and an electronic clock/counter. The record head is Sendust for high overload capacity, and the narrow-gap playback head is ferrite. Frequency response is rated as 20 to 24,000 Hz \pm 3 dB.

All three decks measure 4 13/16 x 13 1/2 x 17 5/16 inches. Prices: CD291, \$435; CD391, \$575; CD491, \$785.

Circle 128 on reader service card

Three Linear-Tracking Sony Turntables

□ Sony offers three models in its new line of fully automatic, linear-tracking turntables, the PS-LX55, PS-LX500, and PS-FL77. All use P-mount plug-in cartridges.



The direct-drive PS-LX55 is a compact 14 inches wide, making it compatible with components in the Sony Prodigy Series. It features an automatic disc-size selector, audio muting, and a linear-torque, brushless, slotless motor. The PS-LX500 (shown), has all the features of the PS-LX55 as well as an optional full-function remote-control unit. The turntable rests on a 17-inch-wide, rigid, acoustically inert base made of Sony's Bulk Molding Compound. It has damped tone-arm cueing in both directions.

The most expensive model in the new line is the PS-FL77, which features Sony's Bio-tracer microprocessor-controlled tone arm. The system actively damps tone-arm resonances and is said to ensure optimum track-

ing. The PS-FL77 is a front-loading model with the tone arm, motorboard, platter, and controls in a slide-out drawer. The unit is 14 inches wide, requires no overhead clearance, and can be stacked under as much as 44 pounds of compatible Sony Prodigy Series components. Prices: PS-LX55, \$180; PS-LX500, \$200; PS-FL77, \$290.

Circle 129 on reader service card

Bose Again Upgrades Model 901 Speaker

□ Bose's new Model 901 Series V, the fifth in its 901 series of Direct/Reflecting speaker systems, is said to have improvements in



its drivers, its enclosure, and the included Active Equalizer. The 901 systems use a total of nine full-range drivers, one aimed directly at the listening area and the other eight aimed so that their output is reflected at an angle off the wall behind the speaker. The combination of direct and reflected sound is said to give complete stereo imaging as well as preserving an accurate tonal balance throughout the listening area. Each driver in the 901 Series V uses a helical voice coil made of densely packed wire wound on an aluminum bobbin and a specially shaped cone. The conversion efficiency of the new design is said to be greatly improved, allowing the voice coils to withstand pulses of up to 4,000 watts.

The Bose Active Equalizer, an integral part of the 901 Series V system, automatically adjusts the power radiated by the speakers at every frequency. Mid-bass and mid-treble slider controls are provided so that users can adjust the sound balance to the acoustics of their particular listening rooms, and there is a separate bass-contour switch to eliminate problems caused by turntable rumble and other forms of low-frequency interference. A built-in tape-monitor loop facilitates connecting the equalizer to an existing music system. Rated dynamic range is 106 dB at 35 Hz, and signal-to-noise ratio is 90 dB.

The Acoustic Matrix enclosure of the 901 Series V is a single rigid unit that is completely sealed on all sides to prevent air leaks and thus reduce vibration. The overall dimensions of the speaker cabinet, finished in walnut veneer with bronze anodized aluminum trim, are 21 x 12 5/8 x 13 inches. The Active Equalizer, finished in bronze anodized aluminum, measures 13 x 4 1/16 x

The Advent Living Trust.

Whereas Advent loudspeakers have lived in more homes for more time than any other speaker; and

Whereas the Advent commitment to quality is further increasing the value of all Advent loudspeakers; and

Whereas the new Advent 6003 is clearly the best medium-sized loudspeaker available for digital dynamics and other program input,

Be It Resolved that the Advent Living Trust shall continue to convey the Rights and Privileges of Advent Ownership unto all those who have the Visceral Fortitude (guts) to seek out an Advent Dealer, and listen to the Advent 6003.



SR883

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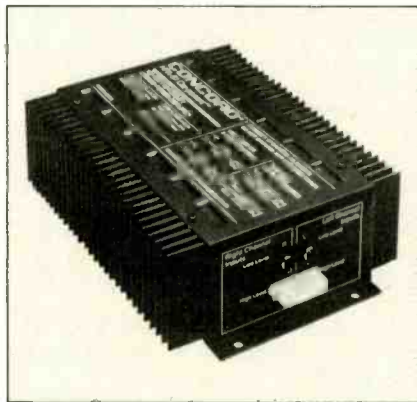
New Products

2¾ inches. Price per pair, including the equalizer: \$1,400; optional stands are \$65 in black, \$80 in chrome.

Circle 130 on reader service card

Concord's Low-Distortion, Self-Protecting Car Amps

□ Concord's new HPA-51 (shown) and HPA-71 car stereo power amplifiers are rated for 50 and 70 watts per channel, re-

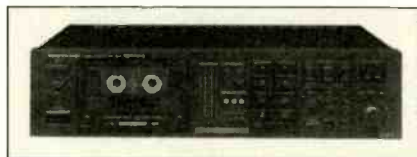


spectively, with 0.5 per cent or less total harmonic distortion from 20 to 20,000 Hz into 4-ohm loads. Both feature self-protection circuits to guard against short-circuits, thermal overload, and speaker transient overload. Both have provisions for low- and high-level inputs. Prices: HPA-51, \$199.95; HPA-71, \$269.95.

Circle 131 on reader service card

Onkyo Cassette Deck Has Auto-Reverse

□ Onkyo's TA-R77 auto-reverse cassette deck is part of the company's Integra series of components. For auto-reverse the deck



uses an optical sensor that is said to provide nearly instantaneous reversal of tape direction. The deck can record or play back a single side in either direction, record or play back both sides, or be set for continuous playback. The transport mechanism has three microcomputer-controlled motors to drive the capstan and reels and to position the head base. There is a Sendust record/playback head and both Dolby-B and Dolby-C noise-reduction systems.

The TA-R77 has an Automatic Music Control System that automatically winds

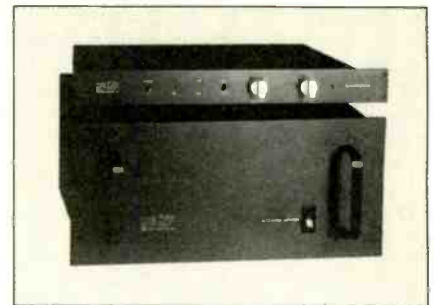
the tape to the beginning of each selection and plays the first 10 seconds before going on to the next (unless instructed otherwise). The AutoSpace button is used to record 5-second pauses on a cassette between selections. Other features include vertical-bar peak-level meters, a four-digit electronic tape counter, timer-controlled recording and playback, and an FM-multiplex filter. Indicators show whether the erasure prevention tabs have been removed from either side of the cassette. Specifications include a signal-to-noise ratio (without Dolby) of 50 dB with metal tape, wow-and-flutter of 0.04 per cent, and a frequency response of 30 to 18,000 Hz ± 3 dB. The unit is available in either black or silver finish and measures 17½ x 4¾ x 145/8 inches. Price: \$1,400.

Circle 132 on reader service card

Power Amp/Preamplifier Duo From Mark Levinson

□ The new ML-11 power amplifier (bottom in photo) and ML-12 preamplifier (top) from Mark Levinson Audio Systems are designed to work together. Rated at 50 watts per channel (or 140 watts bridged for mono) into 8 ohms, the ML-11 has total harmonic distortion of 0.5 per cent from 20 to 20,000 Hz. To eliminate wiring in the audio-signal path, each channel has a single integrated-circuit board that incorporates a series of gain stages, power-supply filtering, and the output stage.

The ML-12 preamplifier is equipped with a universal phono stage that can accommo-



date both moving-coil and moving-magnet cartridges. Gain is adjusted internally with miniature rocker switches. The preamplifier has a two-position input selector (tuner and phono), tape-monitoring facilities for one deck, a mono/stereo switch, and two volume controls. Line-amplification and power-supply redundancies are eliminated by using the ML-11 power amplifier for these functions. Prices: ML-11, \$1,700; ML-12, \$1,200. Mark Levinson Audio Systems, Ltd., Dept. SR, 2081 South Main Street, Route 17, Middletown, Conn. 06457.

Circle 133 on reader service card

Correction

□ The B.E.S. SM-280 speaker reported on in June's "New Products" (page 20) was incorrectly identified as an electrostatic system. All speakers from Bertagni Electroacoustic Systems (345 Fischer Street, Costa Mesa, Calif. 92626) use proprietary-design, hammer-driven diaphragms. We regret the error.

AUDIOPHILE FILE™ XL-S

GREATER DYNAMIC RANGE

Maxell XL I-S and XL II-S are the ultimate ferric oxide cassette tapes. Precision engineered to bring you a significant improvement in dynamic range.

XL I-S provides exceptionally smooth linear performance characteristics with high resolution of sound and lower distortion.

While XL II-S has a greater saturation resistance in higher frequencies resulting in an excellent signal to noise ratio.

How did we achieve this?

IMPROVED EPITAXIAL PARTICLES.

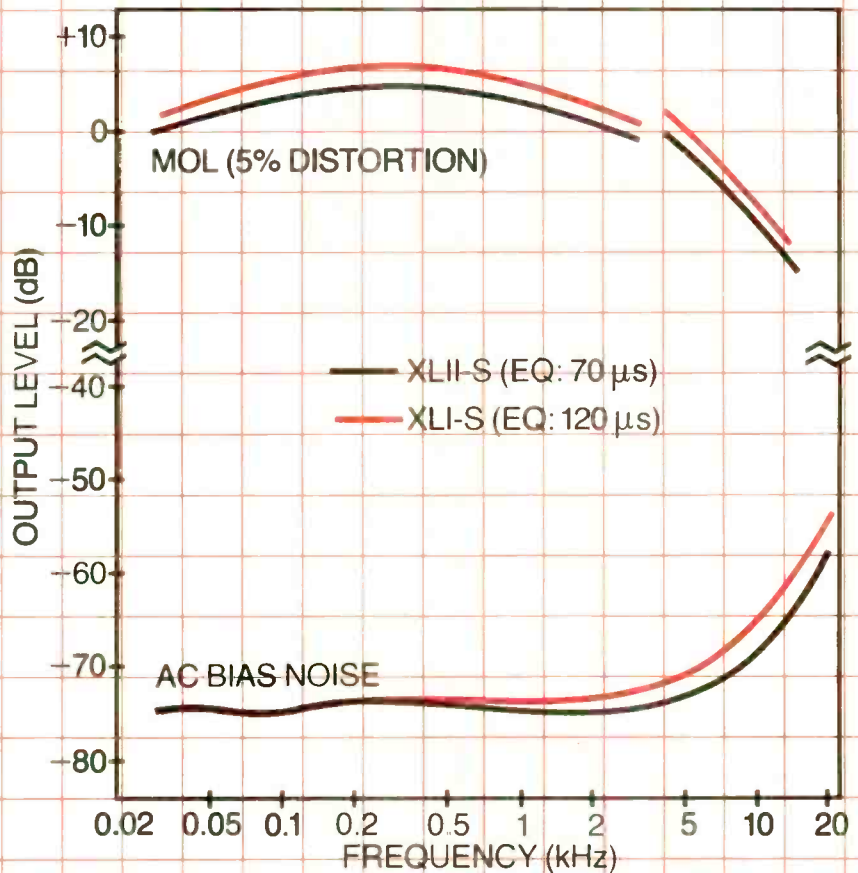
Maxell engineers have managed to improve the Epitaxial magnetic particles used on both tapes.

By developing a crystallization process that produces a more compact, smoother cobalt ferrite layer on the gamma ferric oxide core, they've been able to pack the particles more densely and with greater uniformity on the tape surface.

This increases maximum output level and reduces AC bias noise which in turn expands the dynamic range.

IMPROVED EPITAXIAL PARTICLE CHARACTERISTICS:
 MORE UNIFORM COBALT-FERRITE LAYER | SMOOTHER PARTICLE SURFACE

GAMMA-FERRIC OXIDE 470A
 COATING THICKNESS: 10-11A (1A = 1/10,000,000 mm)



So you get a better signal to noise ratio, greater resolution of sound and higher output levels.

Of course, greater dynamic range isn't the only reason to buy Maxell high bias XL II-S or our normal bias equivalent XL I-S.

Both tapes have more precise tape travel and greatly reduced distortion levels.

You'll see both these improvements covered in detail in future Audiophile

Files. In the meantime, we suggest you listen to them.

For technical specification sheets on the XL-S series, write to:

Audiophile File, Maxell Corporation of America, 60 Oxford Drive, Moonachie, New Jersey 07074.



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CIRCLE NO. 27 ON READER SERVICE CARD

Audio Q. and A.

By Larry Klein

Contributing Editor Klein examines the world's first 1/4-track tape recorder, Tandberg's Model 5, introduced in 1956.



Speaker Repair

Q. Where can I get information on re-pairing speakers? I am especially interested in information about replacing the cone material when it is torn.

JOEL SPACKMAN
Logan, Utah

A. I, for one, would not want to have a high-quality driver repaired by anyone except its manufacturer or his representative. The physical structure and weight of the cone, the structure and weight of the voice coil, and the compliance and damping of the inner and outer cone suspensions all have a direct influence on the performance of a driver. Exact replacement cones are likely to be available only to the manufacturer, who will also have the special jigs and cements necessary for their installation.

Large tears or punctures in a woofer or midrange cone can be patched easily with tissue covered with a thin coating of non-shrinking cement such as Elmer's glue. A small puncture hole can be covered with a spot of glue alone. To make sure that any cement you are considering won't deform the cone material, test it first: coat a piece of paper with a thin layer of cement and check for curling after it has dried.

Small dents in domes at the cone centers can sometimes be pulled out with a piece of adhesive tape, sticky side out, at the end of your finger. If a cone buzzes or rattles at certain frequencies, however, there is nothing that can be done except to return the driver to the manufacturer.

TV Stereo

Q. Recently I disconnected my TV speaker, spliced in additional wire, and hooked up two external speakers. Can this arrangement damage my speakers? And, since dozens of movies in stereo come in from my cable, how can I separate my TV sound into stereo?

J. P. SPRADLIN, JR.
Houston, Tex.

A. Connecting audio-system speakers to a TV set is not likely to damage them, but you might damage yourself if you make

the connection to certain older tube-operated TV's. Some of these older sets lack line-isolating power transformers, and there is a fifty-fifty chance that the chassis of such a set will be "hot," depending on which way the a.c. wall plug is inserted. The leads to the set's internal speaker may also be at a.c.-line potential, as will any leads spliced to it.

If you have any doubt about the safety of your hookup, connect a neon test lamp between a wall-socket screw ground and either of the speaker leads from your TV. If the lamp lights up when the set is turned on (with the speakers connected), reverse the TV's a.c. plug in the wall outlet.

As to stereo reception, many of the cable-TV companies do supply a stereo signal for movies with a Dolby-Stereo soundtrack. In my area, although both HBO and the Movie Channel cable systems advertise that certain programs are in stereo, only HBO actually makes stereo available. (The problem seems to be lack of room on the New York-area FM band to fit in another signal.) Connection is made via a 75-ohm TV/FM splitter installed at the end of the incoming cable. The TV socket on the splitter connects through a short cable to your TV; the FM socket is connected to the antenna terminals on your FM set through whatever cables and 75- to 300-ohm adaptors are necessary. Now, if you tune across your FM dial, you should find the stereo TV audio signal for the movie channels.

I understand that the cable companies consider the stereo signal a special service and that they are entitled to a monthly rental fee for the splitter and extra length of cable they provide. I would appreciate hearing from any readers who have a different stereo-sound cable arrangement and also about their satisfaction—or lack of it—with cable as an FM-broadcast source.

Eno Ambience

Q. On the back cover of his recent album, "On Land," Brian Eno advocates a three-speaker setup which he calls "ambient." The system consists of a regular stereo hi-fi with an additional speaker, ideally a minispeaker, the two terminals of which are connected only to both positive

terminals of the amplifier. The additional speaker is then located somewhere behind the listener. Eno claims there is a subtle but definite effect whereby the music is opened out and the room seems to enlarge acoustically. I have tried the system myself, and it does seem to make an appreciable difference with much recorded material, creating a spacious, airy quality. What I'd like to know is how this system works, whether it will cause any damage to my existing system, and, if not, how the effect can be optimized (through more wattage, specific type of speaker, etc.).

MARK NUGENT
Montreal, Quebec, Canada

A. What Brian Eno suggests has been known for many years as the Hafler circuit. David Hafler worked out the techniques for making full use of the effect and even manufactured and licensed an adaptor for optimum setup.

Connecting a speaker to the two hot terminals on a stereo amplifier provides an out-of-phase signal that frequently embodies the hall-ambience or reverberation components in a recording. The intensity of the effect will vary from recording to recording, but it is usually worth trying since the only cost is what you have to pay for an additional small speaker or two.

I would advise a couple of precautions, however. First, make sure that the two channels of your amplifier have a common ground (amplifiers with bridged or reverse-polarity output circuits won't work). And do *not* use a single 4-ohm speaker for the rear ambience channel. Two 4-ohm speakers connected in series would be okay. If you cannot get the speaker (or speakers) sufficiently far behind you, try positioning it on its back, radiating upward, against a wall.

Antiquated VCR's?

Q. I was interested in your test report on the Sony Beta Hi-Fi VCR (April), since I have been wanting a VCR for some time. However, I don't know whether I should buy or rent. Do you feel that present VCR's will become antiquated in the near future? Do you foresee any imminent major technical advances?

FRANK CARBUTTI
Ronkonkoma, N.Y.

A. It depends on what you mean by "antiquated." The recorded picture quality provided by the best VCR's today is practically indistinguishable from the original when viewed on a 19-inch screen. The only improvement I anticipate in the video area is improved recording and playback at slower speeds.

In regard to improved sound, the Beta Hi-Fi system and its VHS equivalent should be available under a variety of brand names in less than a year. And if and when stereo-sound TV broadcasting arrives, the detector sections of non-stereo VCR's will have to be either replaced with stereo circuitry or connected to a stereo converter. Keep in mind, however, that both stereo and super-audio are likely to be found only in expensive, top-of-the-line VCR's for at least the next few years. □

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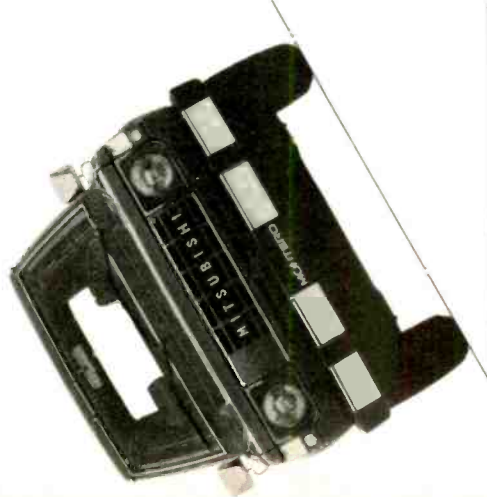
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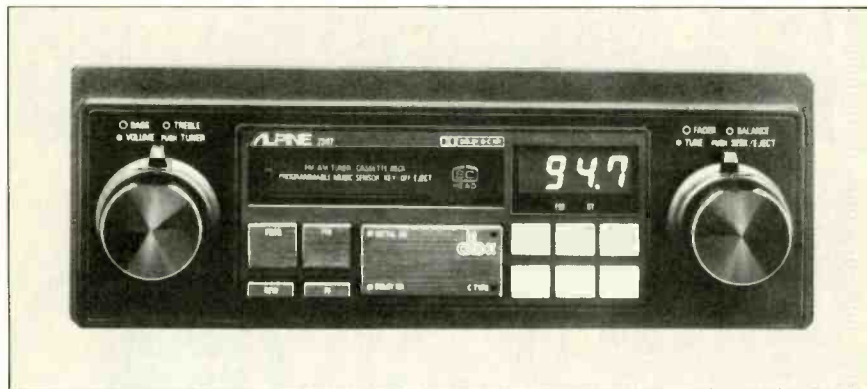
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Car Stereo

By Christopher Greenleaf and Julian D. Hirsch



ALPINE 7347

ALPINE'S Model 7347 is one of the more versatile car-stereo units we have seen since we began testing these products. It includes a digital-synthesis AM/FM tuner and a programmable cassette player, and it offers the choice of Dolby-B, Dolby-C, or dbx noise reduction. The noise-reduction system is selected by pressing a corner of the large rectangular plate on the front panel below the cassette loading port. The plate is pivoted at its center, and a small green light in each corner shows which function has been selected.

Unlike many car stereos, the Alpine 7347 provides for the use of its Dolby-B system not only with tape inputs but with FM broadcasts as well (since some FM stations transmit Dolby-B-encoded programs). The fourth corner of the control plate, marked METAL/DX, is used to select 70-microsecond equalization for metal- or chrome-tape playback or to provide maximum tuner sensitivity for receiving distant stations.

The Alpine 7347 has five tuner memory buttons, each capable of storing one FM and one AM frequency. Although it has a digital tuner, there is a conventional-looking tuning knob concentric with the balance and front/rear fader controls. The knob has a large number of detented settings, each of which changes the tuned frequency by 200 kHz for FM or 10 kHz for AM. A momentary push on the knob, however, starts automatic tuning: the unit scans upward in frequency until a signal is received or until the knob is pressed a second time. The tuned frequency is shown on a bright digital display above the preset buttons. When a tape is loaded, the numeral 0 appears in the display window.

The 7347 has a Programmable Music Sensor feature (P.M.S.) that allows a cassette to be scanned in either direction at high speed to find any one of up to nine selections on the tape. The user selects the desired program by repeatedly pressing the

P.M.S. button on the panel until the display shows the appropriate numeral. Pressing one of the fast-speed buttons will then initiate scanning; the numeral displayed progressively decreases as each silent interval between selections is passed. When 0 is reached, play begins.

The radio in the 7347 is turned on or off by pressing and releasing the spring-loaded volume-control knob, which is concentric with the bass and treble tone controls. The tape player is turned on automatically

whenever a cassette is inserted. The volume control has the same detented feel as the tuning knob, but it actually varies the level smoothly instead of in discrete steps. Pressing the tuning knob ejects a loaded cassette and switches in the tuner if that has been turned on previously. Cassettes are also automatically ejected when power is removed from the receiver by shutting off the car's ignition.

The Alpine 7347 is designed to work only with matching Alpine power amplifiers, to which it connects by an integral cable and an eight-pin DIN plug that carries both audio and power connections (a similar cable connects the rear channels in a four-speaker system). For our lab and road tests we used the Alpine 3506 amplifier, a compact 25-watt-per-channel (at 1,000 Hz) unit with specifications comparable to those of most home amplifiers having a similar power rating. The suggested retail price of the Alpine 7347 is \$599.95.

Lab Tests

All our measurements of the Alpine 7347 were made at the outputs of the connected amplifier, which was driving 4-ohm loads. For the audio measurements we supplied modulated test signals from our FM signal generator through the unit's antenna connector. The key test results are summarized in the box below.

The 7347's FM tuner has a signal-controlled automatic-blend circuit that smoothly combines the left and right channels as the signal strength is reduced, keeping the noise level low over a wide range of signal strengths at some expense in stereo separation. The blending action appeared to take place below about 40 dBf (26 microvolts, or μV). At lower signal levels most of what we heard was actually mono rather than stereo, although the ST light on the

Hirsch-Houck Lab Measurements

Alpine 7347 Car Stereo

FM Mono Usable Sensitivity (75-ohm input): 17 dBf (2 μV)

Mono 50-dB Quieting Sensitivity (75-ohm input): 20 dBf (2.8 μV)

Stereo 50-dB Quieting Sensitivity (75-ohm input): 22 dBf (3.5 μV) [Note: The left and right channels are mostly blended at this signal level.]

FM Frequency Response (referred to 1,000 Hz): +1.5, -0 dB from 30 to 15,000 Hz

AM Rejection: 56 dB at 45 dBf; 63 dB at 65 dBf

Capture Ratio: 2.04 dB at 45 dBf; 1.29 dB at 65 dBf

Alternate-Channel Selectivity: 63 dB

[Note: an average of highly asymmetrical readings—59 dB above, 67 dB below the signal frequency.]

Image Rejection: 42 dB

Stereo Separation (measured at 65 dBf) at 100, 1,000, and 10,000 Hz: 36, 38, and 22.5 dB [Note: Tuner has autoblend with reduced signal levels; output is essentially mono at very low levels.]

AM Frequency Response: nearly flat from 20 to 1,500 Hz; down 6 dB at 2,700 Hz

Tape-Playback Frequency Response (standard BASF test tapes, -3-dB limits):

120 μs , 31.5 to 18,000 Hz; 70 μs , 31.5 to 18,000 Hz [Note: Frequency limits are those of the test tape.]

Flutter: 0.07 per cent wrms; ± 0.11 per cent weighted-peak

Tape Speed Accuracy: 1.8 per cent fast at start of tape; 1.4 per cent fast at end

Fast-Forward/Rewind Time for C-60 cassette: 75 seconds

Tape-Playback Signal-to-Noise Ratio (referred to 250 nWb/m at 1,000 Hz): 120 μs —59 dB A-weighted, 70 dB CCIR/ARM-weighted with Dolby-B, 76 dB with Dolby-C, 78.5 dB with dbx; 70 μs (metal tape)—52 dB A-weighted, 66 dB CCIR/ARM-weighted with Dolby-B, 73 dB with Dolby-C, 78 dB with dbx

Tone-Control Range: +10.5, -10 dB at 100 Hz; +10.5, -11.3 dB at 10,000 Hz

Alpine 3506 Amplifier

Power Output at 1,000 Hz: 26.5 watts per channel at clipping into 4 ohms

Distortion at Rated Power (20 watts): 0.13 per cent at 1,000 Hz; 0.2 per cent at 20 Hz

[Note: measured through tuner with a 65-dBf input level.]

tuner stayed lit down to about 11 dBf, or 1.1 μ V into 75 ohms. This stereo indicator, therefore, merely signifies that the station is transmitting a stereo pilot carrier. Although the instruction manual says that the tuner has interstation-noise muting, our sample did not mute except when the station presets were used.

Most of the FM-tuner performance measurements ranged from good to excellent. Only the image rejection could be called marginal, and this characteristic is

"Alpine seems to have made a deliberate, intelligent choice of higher-fidelity sound rather than a minor convenience feature."

probably of little importance in mobile use. The power rating of the Alpine 3506 amplifier was accurate (it clipped at 26.5 watts), and the combined tuner and amplifier distortion was very low for a car stereo. The actual amplifier distortion could not be measured, since we have to include the FM-tuner distortion in the measurement.

We measured a reduction in FM sensitivity of 15 dB when the DX switch was disengaged. We also noted, though, that turning off the DX switch caused the noise level of most FM signals to drop appreciably. This is opposite to what one could normally expect and confirms that reception at low signal strengths is essentially in mono. The operating instructions state that using the Dolby-B system with FM or tape signals that have not been Dolby encoded is not recommended because it "intensifies the high frequency response while serving no other purpose." Actually, Dolby-B decoding reduces the high-frequency response of a nonencoded signal as well as the noise. Sometimes the result is a net improvement rather than a degradation of sound quality.

The tape-playback performance of the 7347 was excellent. The frequency response was essentially flat over the 31.5- to 18,000-Hz range of our standard test tapes. Unlike most similarly priced car stereo units we have tested, the 7347 does not have auto-reverse, thus avoiding the tape-head azimuth-alignment problems that make it almost impossible to get good frequency response in both directions. The eject and loading mechanisms, however, make turning a tape over very easy. Alpine seems to have made a deliberate, intelligent choice of higher-fidelity sound rather than a minor convenience feature. —J.H.

Road Tests

The performance of the Alpine 7347's tuner was superb both in and outside of New York City. Even when the multipath conditions near the steel clutter of the Brooklyn Navy Yard produced some FM hash, the noise was less obtrusive than I usually get from car stereos on this part of the test route. I heard listenable stereo

sound both at traffic lights in downtown Brooklyn, where reception often collapses into a gruesome muddle, and on the road up to sixty miles away from the broadcast antennas. In the seek mode, the tuner stopped at fairly short frequency intervals, suggesting that the unit considered most FM signal sources it came across to be receivable.

AM reception was clean and a little richer in tonal quality than I remembered from an earlier Alpine unit produced during the company's first year in the U.S. market. The interference effects created by partially disconnecting one of the spark cables were just barely audible; I had to short the cable directly to the engine block before getting any really noticeable disruption of the AM reception.

Since I can never remember to turn the volume down before ejecting a cassette, it was a pleasure to have the option of *not* having the system switch automatically to the tuner. Leaving the tuner switched off when you play tapes lets you avoid being startled by a blast of unwanted radio racket whenever you change cassettes.

I inserted a Dolby-C-encoded metal-tape cassette and tackled some back streets offering a wide selection of potholes, bumpy Belgian block, old trolley rails, and ripply asphalt. The 7347's tape transport was disturbed only once—when I hit a large hole at 40 miles per hour (unintentionally!)—and even then the only audible effect was a slight shiver in the music. During the rest of the test drive, only my prematurely aging Volvo, not the car stereo, showed distress at the road conditions.

On one of the quieter stretches of the interstate, I played a dbx-encoded cassette of

"... outstanding performance and ease of operation make the 7347 a true music lover's car stereo. ..."

a clarinet concert that I had recorded live the previous evening. With the tone controls set to equalize my car's acoustics as much as possible, the reproduction of this very wide-range cassette was exceptionally clear and open. Some other in-dash units I've encountered are unable to handle the extended high-frequency content of a metal tape, so I was impressed with the natural and unforced sound from the 7347. Although we were not specifically testing the Alpine 3506 amplifier, I must say that it powered my car speakers with no audible distortion or sense of strain even at unpleasantly high volume settings.

The 7347 does not have auto-reverse tape playback, and I did not particularly miss it. The unit's night illumination is good, none of the controls are at all ambiguous, and the most important buttons have LED indicators. The Alpine 7347's outstanding performance and ease of operation make it a true music lover's car stereo. It's not an inexpensive unit, but using it suggests that the cost goes mostly toward sonic performance, not flashy trimmings. —C.G.

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Technical Talk

By Julian D. Hirsch



How I Would Choose a Speaker

I AM often asked for advice on selecting audio components, and sometimes the question takes the form of "What would you choose for yourself?" That immediately brings us to the critical factor of personal taste. I can deal with personal taste fairly well when it comes to all-electronic components—amplifiers, receivers, and so on—and even tape decks and record players, among which there are usually enough feature and control differences to make some models preferable to others according to individual needs. If only taste were that simple to deal with when choosing a speaker system!

Let me explain that I have certain attitudes (call them prejudices if you will) about choosing a speaker. There are many speakers, of all sizes and prices, that have met my personal standards for listening quality, and I probably could live happily with any of them. But I am definitely *not* interested in buying speakers just because they are called "state of the art," especially if they require special room treatment and placement, are so large and heavy they dominate the room visually as well as sonically, are suitable for use only with specific amplifiers, or are of questionable long-term reliability or ruggedness.

I find that a good speaker will sound good when playing almost any good program; if a speaker sounds good to me only with exotic or special program material, I have little use for it. When I listen to FM broadcasts of high quality or when I play my own records, I am likely to be as interested in their musical content as in their sonic splendor,

for I listen to music for my own enjoyment, not as an exercise for my stereo system.

So what *am* I looking for in the sound of a speaker? Principally *balance* and *smoothness*, which I believe to be the indispensable characteristics of any speaker with pretensions to high-fidelity performance. Balance refers to the distribution of sound energy over the audible frequency range and throughout the listening area (the term therefore includes the dispersion characteristics of the speakers). This is akin to the "frequency response" that we often talk about and sometimes see in speaker specifications. Although we may be able to measure it, however, the frequency response of a loudspeaker cannot be heard directly, there being no firm relationship between any frequency-response measurement and the way a speaker sounds. The balance of the speaker's acoustic output is the subjective counterpart of its objectively measured response, and it can be evaluated only by a combination of the world's most sophisticated spectrum analysis and computing systems—the human ear and brain.

A balanced speaker does not unduly emphasize (or de-emphasize) any part of the audio range. Strings do not sound hard or "edgy" (or no more so, at least, than in real life); voices do not sound shrill, muffled, or tubby; the deep bass can be felt even at low listening levels; and so on. Of course, these are utopian requirements, and the truly balanced speaker has probably not yet been made (if it has, I have not heard it). The evaluation of speaker balance is complicated by the speaker's unavoidable interac-

tion with the listening room, which can destroy the designed-in balance of the speaker or supply a balance that the speaker would not possess in different surroundings. Still, balance is what I listen for in reproduced sound, and no speaker that is grossly misbalanced (in my room) would be likely to satisfy me.

Speaker balance has surprisingly little to do with size or price, which is fortunate for the majority of people who would like to enjoy good sound in their homes but are unwilling or unable to spend thousands of dollars for speakers that may not deliver it. I have heard large, high-priced speakers that, because of problems in their overall frequency balance, are literally unlistenable by my standards. They may please some people (most likely their designers and manufacturers), but they are not for me. By contrast, I sometimes have on hand simultaneously several small, inexpensive speakers that all sound so pleasing that I do not care which I am hearing at any given moment (and often cannot tell which system is on without looking at my speaker-comparator switches or going up to the speakers themselves). As I write this, for instance, I am enjoying the sound of some speakers selling in the \$100 to \$250 range to which I could happily listen for hours on end.

My other main requirement—smoothness—is related to balance but is not quite the same thing. A speaker's balance is primarily a function of its *octave-to-octave* sound-power output, including any directional effects that modify the sound distribution throughout the room. Balance has to

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do with the broad, overall frequency-response characteristics of the speaker—the sort of thing that can sometimes be corrected, or at least modified, by amplifier tone controls or an equalizer.

Real speakers, however, usually have in their output many sharp, narrow-band peaks and dips, which are not necessarily audible as such (although they can yield the most discouraging frequency-response graphs). The absence of such large, narrow-band changes in a speaker's response contributes to what I call its smoothness. These fluctuations can be caused by resonances in the drivers, diffraction at cabinet edges, reflections from room boundaries, and probably many other factors, and they may account for some of the more subtle sound-quality differences. On the whole, they are more likely to affect the *imaging* properties of the sound than its *tonal character*, and they are not correctible by any electronic system components.

Actually, many (perhaps most) people can hear these subtleties, but not everyone reacts to them in the same way. If they do not matter to an individual, they probably will not play a significant part in his selection process. To me, most of these effects are merely unavoidable aberrations, inherent in the current state of the loudspeaker art. Choosing a speaker then becomes a matter of deciding between *differently*

flawed products, rather than between essential perfection and obvious inferiority. Of course, this assumes that totally inadequate products have been winnowed out.

I have heard speaker demonstrations at which some listeners were ecstatic over certain sound or imaging qualities that I could hear but that I felt were so unimportant I would never allow them to affect my judgment of the speaker's overall merit. Even if I preferred some of these qualities, I am afraid that my own sense of values would probably not permit me to spend (say) five times as much for one product as for another where the advantage of the more expensive one was at best minuscule. Many people make the opposite choice every day, and I do not criticize their selections, but I am talking about how *I* would go about choosing a speaker.

Of course, more money (often a lot more) can buy substantially improved sound—but not necessarily! The cost of a speaker is an objective fact, but its sound quality is totally subjective. For me, a major additional investment can be justified only if it buys *demonstrably* superior performance. For example, at a live concert I cannot distinguish between the sounds from two violinists seated next to each other in the orchestra, nor would I consider it important or desirable that I be able to do so (though some people seem to be quite concerned about



that sort of thing). Therefore, a speaker that is represented as having "imaging" that allows such discriminations is hardly likely to appeal to me unless it also happens to please me for other reasons.

As you can see, I am not really giving a "cookbook" approach to speaker selection. Frankly, I would not know how to do that. You, the buyer, must have some idea what kind of sound quality you like. Visit audio showrooms and friends' homes, and listen to lots of speakers until you begin to hear some of that quality in the ones you audition. True, you may not choose your ideal speaker on your first purchase, but few of us are able to make an ideal choice of anything on the first trial. Next time you buy a speaker system, you will know what you like and do not like about the sound of your speakers, and you will be able to make a much closer approximation to the "right" choice.

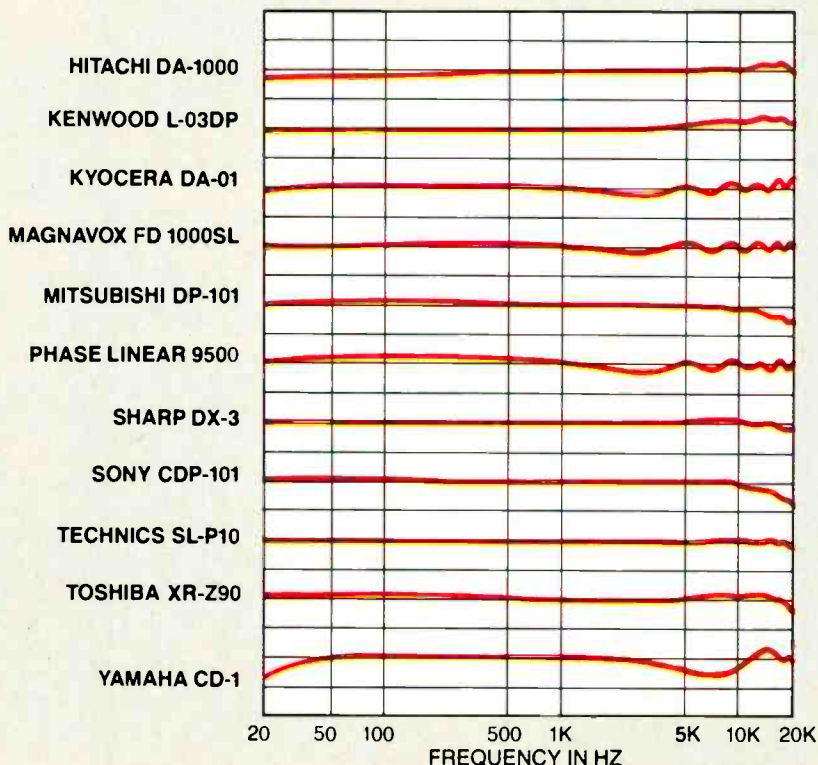
As I implied near the beginning of this column, your choice may be affected by powerful considerations unrelated to the sound of the speaker. For example, most people do not have the luxury of a separate music room that is furnished, decorated, and used primarily for listening to reproduced sound. Many of them probably have their stereo equipment in a room similar to my family room, where I spend a lot of time relaxing and listening to music. Quite different from my laboratory listening room, the family room does have a stereo system, but one of the ground rules for the installation there was that the speakers should not stand out or, if possible, that they should not be noticeable at all.

After much experimenting, I settled on a three-piece system with an unobtrusive bass module and two small satellites that could be disguised quite effectively. The sound happens to be quite good, by my criteria, but the point is that other systems with better sound were tried and discarded because they did not meet the requirement of unobtrusiveness, which was necessary for installation in this room.

I suspect that my family-room situation is not unique. It should be reassuring to others in the same predicament to know that it is not necessary to forgo the enjoyment of reproduced music simply because you cannot have a "Super-Audiophile" speaker system, 7 feet high, that occupies an entire wall of a room and costs between \$5,000 and \$10,000 a pair. □

CD PLAYER FREQUENCY RESPONSES

Through a printer's error, the frequency-response curves on page 52 in last month's test of eleven digital Compact Disc players were published inverted and backward. The chart below shows them as they should have appeared. Note again that the vertical scale is 1 dB per division instead of the 5 dB per division in our usual tape-recorder frequency-response plots. This scale change makes small (and for the most part inaudible) differences in response easily visible.



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Equipment Test Reports

Hirsch-Houck Laboratories: Julian D. Hirsch and Craig Stark



Photo by Roy Schneider

Mission 700S Speaker System

THE Mission 700S is a compact two-way speaker system with an 8-inch woofer that operates in a ported enclosure measuring 18½ inches high, 9⅞ inches wide, and 10⅝ inches deep. The wooden cabinet, veneered in walnut, has a black cloth grille (not removable). The system weighs 16¾ pounds. The heavy-duty binding posts in the rear of the cabinet are spaced ¾ inch apart to accept standard dual banana-plug speaker-cable connectors.

The woofer, whose cone is formed of a carbon-fiber-based material, operates up to 3,200 Hz, where it crosses over to a ¾-inch polymer-dome tweeter. Unlike most small speakers, the Mission 700S has its woofer at the top (when the cabinet is in a normal upright position). The tweeter is at the approximate center of the grille, and the bass port is at the bottom. There are no external level or balancing controls. The 700S has a frequency-response rating of 60 to 20,000 Hz \pm 3 dB. A nominal 8-ohm system with a sensitivity rating of 90 dB at 1 meter for a 1-watt input, it is recommended for use with amplifiers delivering from 20 to 100 watts per channel. The suggested retail price of the Mission 700S is \$399 per pair. The speaker is also available as the Mission 700 with a vinyl veneer cabinet for \$299 per pair. Mission Electronics North American Corp., 310 Carlingview Drive, Rexdale, Ontario, Canada M9W 5G1.

● **Laboratory Measurements.** The averaged room response from a pair of Mission 700S speakers was notably flat and well dispersed through the high-frequency range, with less than 5 dB of difference between the axial and 30-degree-off-axis output at 20,000 Hz. The close-miked woofer response, including the contribution of the port, was flat within \pm 1.5 dB from 90 to 600 Hz, falling at approximately 7.5 dB per octave at lower frequencies to $-$ 18 dB at 20 Hz. Between 600 and 700 Hz there was a sharp dip of about 5 dB, and the curve had a downward-sloping characteristic above 1,000 Hz.

When we spliced the two curves to form a composite frequency-response curve, the dip between 600 and 700 Hz could still be plainly seen in the room response, which removed most of the usual ambiguity from the splicing process. The overall frequency response was flat within \pm 2 dB from 700 to 2,000 Hz and within \pm 1 dB from 2,200 to 20,000 Hz. The lower-midrange response was only slightly elevated, the output from 100 to 700 Hz being typically about 5 to 6 dB above the average high-frequency level. The overall variation of the composite curve was \pm 3.5 dB from 60 to 20,000 Hz, a nearly exact match for the manufacturer's specifications (almost unheard of in our experience with speaker testing, given the different test conditions that usually prevail).

Beginning with this month's speaker tests, we have slightly modified the conditions for the bass-distortion measurement. We used to measure bass distortion with a constant drive level to the speaker, equivalent to 1 or 10 watts into its nominal impedance. Since this test did not take into account the widely different sensitivities of some speakers, the results could be misinterpreted. Now, however, our speaker distortion measurements will be made at a fixed voltage input derived from the measured sensitivity of the speaker and corresponding to the voltage (in the midrange) that would give a 90-dB sound-pressure-level output at a 1-meter distance. This should enable more meaningful bass-distortion comparisons between speakers of widely differing sensitivities.

The woofer distortion of the Mission 700S was about 0.5 per cent from 100 to 80 Hz, rising smoothly to 3 per cent at 50 Hz and 9.5 per cent at 30 Hz. The sensitivity of the 700S was 92 dB, about 2 dB better than rated. Its impedance reached a minimum of 5 ohms in the 3,000- to 6,000-Hz octave, varying between 6 and 13 ohms over the rest of the audio frequency range.

Quasi-anechoic response measurements with the IQS FFT spectrum analyzer confirmed the excellent performance of the Mission 700S. The axial response varied \pm 5 dB from 180 Hz (the lower limit of the

IQS normal measurement range) to 22,000 Hz. Measurements made at 45 degrees off the speaker axis showed a response dropoff, beginning at 8,000 to 9,000 Hz, which reached 7 to 10 dB at 20,000 Hz. This is a typical dispersion characteristic for a tweeter of this size. The excellent phase response of the 700S was demonstrated by its group delay, which varied only ± 0.2 millisecond from 2,000 to 20,000 Hz and did not change more than 0.7 millisecond down to about 200 Hz.

● **Comment.** Our measurements of the Mission 700S strongly suggested that it would be an excellent-sounding speaker, but that did not influence our subjective reaction to hearing it. We followed our usual practice of listening first and measuring later (it is harder to fool electronic

instruments into "hearing" one's preconceptions than vice versa!).

The 700S delivered a less colored sound than most speakers we have heard lately. This was most evident in the absence of artificial lower-midrange (or upper-bass) emphasis on male voices, which these speakers reproduced with exceptional naturalness. Obviously, the 700S will not reproduce the lowest audible octaves with the authority of some (but not all) larger and more expensive speakers. To compensate for this, it has one of the smoothest middle and treble ranges one is likely to find at any price, let alone in a light, compact, and surprisingly inexpensive speaker system.

The high sensitivity of this speaker would seem to qualify it for the digital-audio age that we are now entering (indeed, its manufacturer points out that this was one of their

design goals). We used it to audition a number of digital Compact Discs, via a 100-watt amplifier, and never found it lacking in any respect. It plays as loudly as the program peaks demand (and as our listening taste requires) with no sense of strain.

We have commented in recent months that the caliber of performance provided by a number of small and inexpensive speakers now comes unbelievably close to matching that of some large, highly regarded speakers that are priced several times as much. It would be foolhardy to attempt to rank these speakers, but we have no hesitation in placing the Mission 700S well up in the group. We could listen indefinitely to it without feeling the urge to change to something else.

—Julian D. Hirsch

Circle 140 on reader service card



Realistic STA-112 AM/FM Receiver

THE Realistic STA-112 is a compact stereo receiver rated to deliver 30 watts to 8-ohm loads from 20 to 20,000 Hz with no more than 0.05 per cent total harmonic distortion. Its AM and FM tuner sections feature digital frequency synthesis.

Except for a large volume knob, all the visible controls of the STA-112 are flat pushbuttons operated by very light pressure. Six of them are preset station selectors, each usable for both an AM and an FM channel, and another is the memory button used when storing a frequency in one of the station memories. Three longer buttons, pivoted at their centers, are used for tuning (up or down in frequency, depending on which end is pressed), selection of either AM or FM reception, and selection of either PHONO or AUX/TV inputs. Small red lights on the input selectors show which source is connected. The remaining controls are mechanically latching buttons, including one for SEARCH (which, when pressed after the TUNING button, causes the tuning to scan in the selected direction until a signal is encountered), one for the tape-monitor function, and a square power switch. There is also a headphone jack.

Much of the front-panel area is devoted to a large blackout window through which can be seen the tuner frequency display, five signal-strength LED's and a stereo in-

dicator light, and two groups of LED output-power indicators calibrated from 0.01 to 40 watts per channel into 8-ohm loads. Pressing and releasing the upper left corner of the window causes it to hinge downward, revealing a number of small knobs and pushbuttons. They include the tone and balance controls, switches controlling mono/stereo mode, FM muting, an FM-multiplex filter, a 30-Hz low-cut filter, and loudness compensation, and switches for the two sets of speaker outputs.

On the rear apron of the STA-112 are spring-loaded speaker connectors, binding posts for the antennas (300- and 75-ohm FM feedlines and a wire AM antenna), and a hinged AM ferrite-rod antenna, in addition to the various signal jacks. There is a single unswitched a.c. outlet. The Realistic STA-112 is 17 $\frac{3}{4}$ inches wide, 14 $\frac{1}{2}$ inches deep, and only 3 $\frac{1}{4}$ inches high. It weighs about 15 $\frac{1}{4}$ pounds. Price: \$339.95. The receiver is available from Radio Shack stores across the country.

● **Laboratory Measurements.** After a one-hour preconditioning warm-up at 10 watts output (which left it only slightly warm), the Realistic STA-112 delivered just over 40 watts per channel (at 1,000 Hz) to 8-ohm loads at the clipping point. The 4-ohm clipping output was 54 watts, and into 2

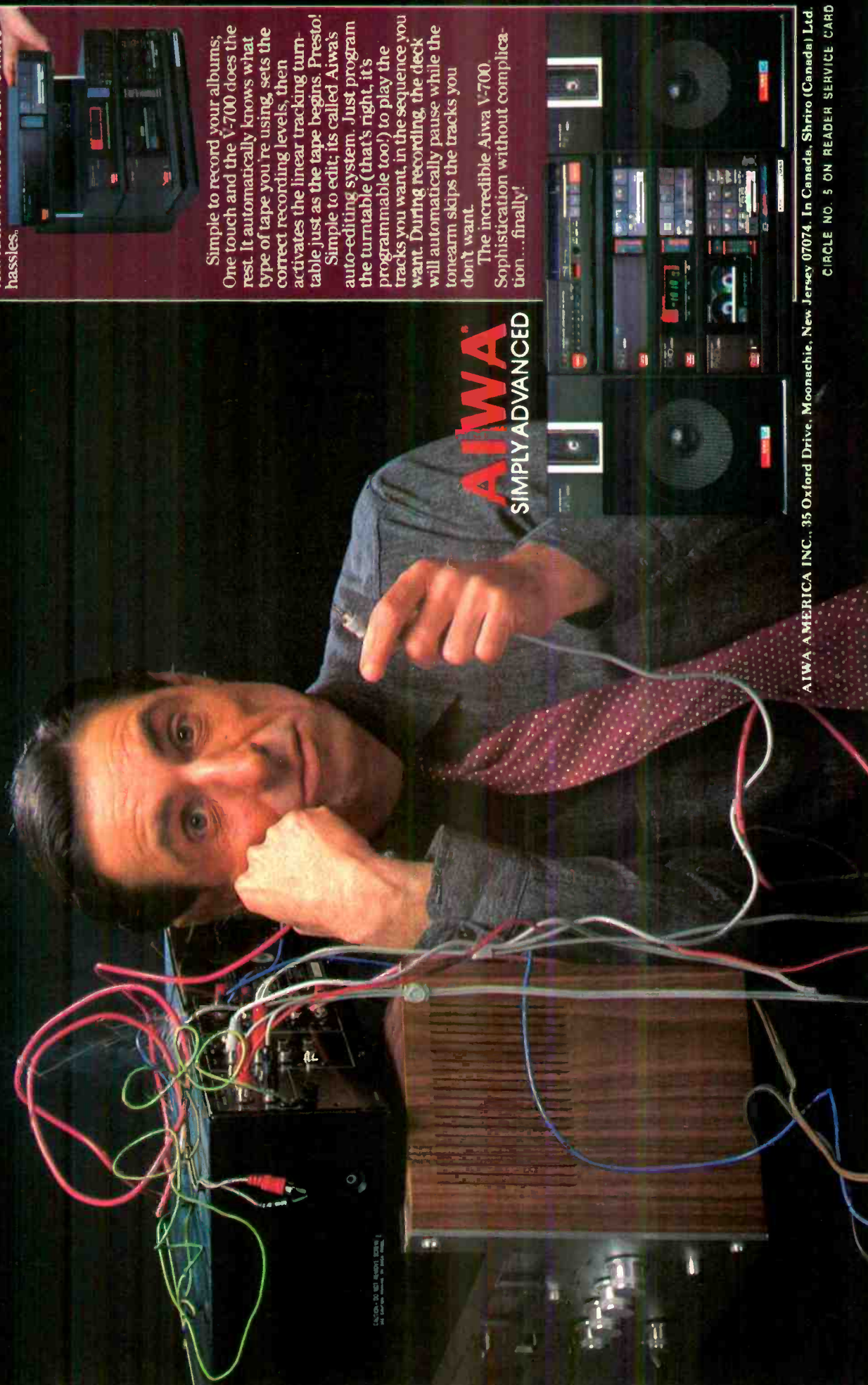
ohms it was 55 watts per channel. The dynamic power output, using a 20-millisecond 1,000-Hz tone burst, was 56 watts, 78 watts, and 66 watts into loads of 8, 4, and 2 ohms, respectively. The measured 8-ohm clipping headroom was 1.3 dB, and the dynamic headroom was 2.73 dB.

The 1,000-Hz harmonic distortion with 8-ohm loads was less than 0.002 per cent up to nearly 20 watts output, increasing to 0.0034 per cent at 40 watts. The distortion with 4-ohm loads was nearly as low, in the 0.002 to 0.004 per cent range from 1 to 25 watts, rising to 0.054 per cent at 55 watts. Even 2-ohm operation did not faze the STA-112, whose distortion was under 0.0056 per cent up to 10 watts and 0.02 per cent at 40 watts. After sustained high-power testing we could not drive the amplifier into clipping with 2-ohm loads, since its protective relays shut it down before there was visible waveform distortion. When that occurs, the power must be shut off for a few seconds to restore normal operation.

The total harmonic distortion of the STA-112 was extremely low over most of the audio-frequency range regardless of the power output. Readings were typically in the range of 0.001 to 0.01 per cent from 20 to 10,000 Hz and beyond at power outputs from 3 watts to the rated 30 watts. The

(Continued on page 35)

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TD-1200 Mobile Tuner/Cassette Deck

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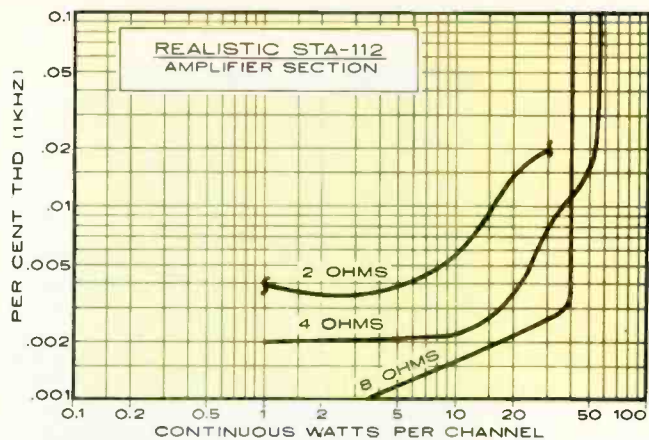
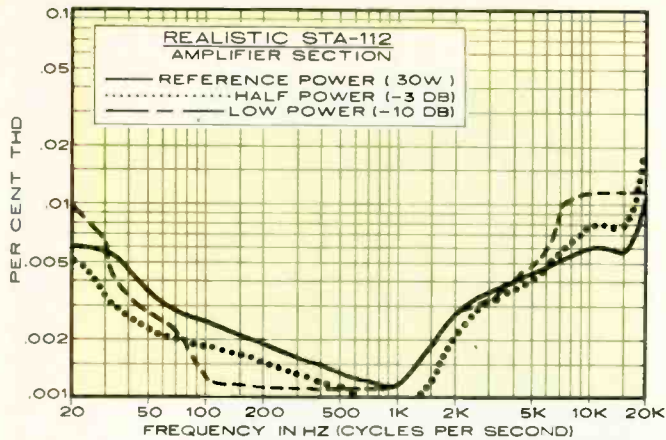
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worst-case condition was with the amplifier delivering 3 watts output at 20,000 Hz, when the distortion was all of 0.025 per cent! The IHF IM (intermodulation) distortion with inputs of 18 and 19 kHz was -90 dB for the second-order (1,000 Hz) component and -73 dB for the third-order component at 17 and 20 kHz. The amplifier was stable with reactive simulated speaker loads and with the standard IHF reactive load, and its slew factor exceeded our measurement limit of 25.

The input sensitivity for a reference 1-watt output at 1,000 Hz was 30 millivolts (mV) through the auxiliary inputs and 0.95 mV through the phono input. The respective A-weighted signal-to-noise ratios were 81.6 and 67.8 dB referred to 1 watt. The phono input overloaded at very safe levels, ranging from 152 mV at 20,000 Hz to 230 mV at 20 Hz. The measured phono input impedance was 50,000 ohms in parallel with 180 picofarads of capacitance.

The bass tone control had a sliding turn-over frequency that shifted from about 100 to 300 Hz as the control was varied. The treble response curves were hinged at about 3,000 Hz. The maximum bass boost of almost 23 dB at 20 Hz was more than anyone could need, especially for a modestly powered amplifier. If used carelessly, this could cause output clipping at low-bass frequencies, so discretion is advised in its application. The "30 Hz filter," on the other hand,

rolled off the response by only 1 dB at a frequency of 30 Hz and by less than 2 dB at 20 Hz. Assuming that its ultimate slope is 6 dB per octave, this filter could not be expected to have much audible effect on either program content or rumble, and in fact we heard no change in the sound when it was switched on.

The loudness contours boosted the low frequencies (under 300 Hz) moderately at reduced volume settings, with a very slight high-frequency boost beginning at about 7,000 Hz and reaching 5 db at 20,000 Hz. The RIAA phono equalization (measured at the tape-recording outputs) was flat within 0.5 dB overall from 50 to 20,000 Hz and down 2.5 dB at 20 Hz. It was not affected significantly by the inductance of a phono cartridge at the preamplifier input.

The tuner's FM usable sensitivity (mono) was 10.3 dBf (1.8 microvolts, or μV). The stereo sensitivity was set by the switching threshold of 28 dBf (14 μV). The 50-dB quieting sensitivity in mono was 12.8 dBf (2.4 μV), and in stereo it was 36 dBf (34.7 μV). The tuner distortion at 65 dBf (1,000 μV) was 0.11 per cent in mono and 0.16 per cent in stereo, with corresponding noise levels of -76.6 and -69.6 dB. The alternate-channel selectivity was an excellent 77.5 dB, and the adjacent-channel selectivity was 5 dB. The tuner's image rejection was a good 74.4 dB, its AM rejection was 56 dB at 65 dBf input, and the capture ratio was an

excellent 0.97 dB at 45 dBf (100 μV). The muting threshold was 27 to 29 dBf (12 to 15 μV), the 19-kHz pilot-carrier level in the audio was -69 dB, and the tuner hum was -69 dB. The IHF IM distortion (14- and 15-kHz modulating frequencies) relative to 100 per cent modulation was in the range of -73 to -92 dB, depending on the specific distortion product and whether the tuner was operating in mono or stereo.

The FM frequency response was flat within ± 0.5 dB from 30 to 15,000 Hz. The channel separation was 46 dB from 300 to 2,000 Hz, 35 dB at 30 Hz, and 38 dB at 15,000 Hz. The AM frequency response was flat from 40 to 1,500 Hz and down 6 dB at 30 and 2,600 Hz.

● **Comment.** The designers of the Realistic STA-112 have succeeded in creating a full-featured stereo receiver whose appearance and operation should not intimidate even the least-technical-minded user. Although all the standard receiver amenities are provided, most are out of sight behind the hinged window on the panel. The low-profile design also contributes to the ease with which the receiver can be accommodated in almost any home installation.

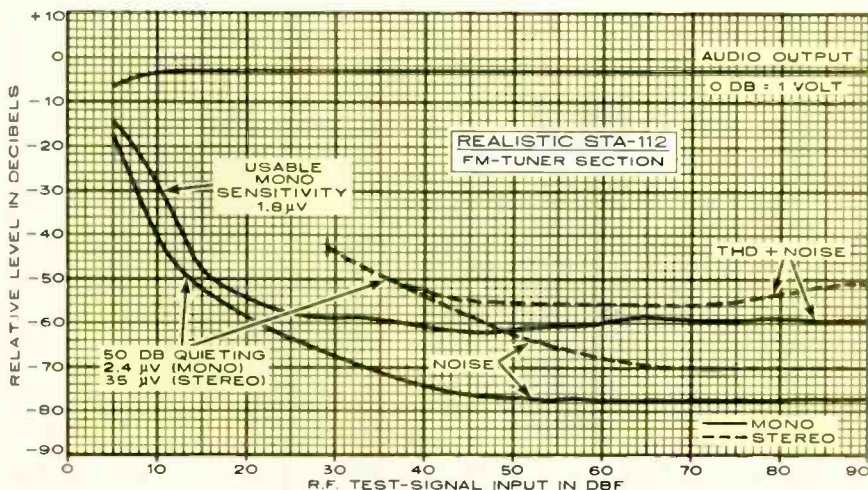
The ability of the STA-112 to drive 2-ohm loads at a substantial power level without distortion, damage, or interruption of operation sets it aside from most receivers with comparable power ratings. There has been no sacrifice of protection for the output transistors, as we discovered when the protective relay tripped under full drive conditions with a high-frequency square wave or when we approached clipping levels with 2-ohm loads.

All the control and operating functions of the STA-112 worked as expected, and we found no operating bugs during our use tests. During extended listening tests, the receiver always sounded excellent. It is also worth noting that the capture ratio and selectivity of the FM tuner section were both considerably better than we have measured on most tuners and receivers, including some priced well above the STA-112. Altogether, this receiver represents a lot of performance in a very compact and attractive package.

—Julian D. Hirsch

Circle 141 on reader service card

(Continued on next page)





JBL J216 Speaker System

THE Model J216 is the smallest and least expensive speaker system to bear the JBL name. It is a two-way system based on a newly designed 6-inch woofer that operates in a vented enclosure only 14¾ inches high, 10 inches wide, and 9¼ inches deep. There is a crossover to a 1-inch soft-dome tweeter at 4,000 Hz. The system has a nominal impedance of 8 ohms and a rated sensitivity of 87 dB sound-pressure level at 1 meter when driven by 2.83 volts (equivalent to 1 watt in an 8-ohm load). It is rated for operation with amplifiers capable of delivering 10 to 60 watts per channel. Each speaker weighs 17½ pounds.

JBL's aim in designing the J216 was to produce a small, unobtrusive speaker, suitable for today's smaller living spaces, that would sell for no more than \$100 and deliver a balanced and musical acoustic output suitable for all types of program material. To keep low-frequency distortion within acceptable limits despite a small woofer-cone diameter, the J216 uses a "symmetrical field" magnet structure, a JBL development introduced several years ago on some of the company's more expensive speakers. The electrolytic capacitors in the crossover network are bypassed with smaller capacitors to compensate for the asymmetrical charge-discharge characteristic of large capacitors. This is said to improve midrange and high-frequency performance. To keep the cost low, the J216 production line was heavily automated, including totally computerized quality-control checks.

The wooden cabinet of the J216 is finished in oak-grained vinyl on the sides and in black vinyl veneer on the top and rear, and there is a removable black grille. The two drivers are vertically aligned, with the woofer port in the lower right corner of the speaker board. The two binding-post termi-

nals are recessed in the rear to permit flush-mounting the speakers against a wall.

The JBL J216, with a suggested retail price of \$99 per unit, is packed and sold in pairs. JBL, 8500 Balboa Boulevard, Northridge, Calif. 91329.

● **Laboratory Measurements.** The averaged room response from a pair of J216 speakers in a typical wall-mounted installation was within ± 4 dB from 250 to 20,000 Hz. The major departure from flatness was in the upper midrange, with a minimum output at 2,000 Hz and a broad maximum at 4,000 to 6,000 Hz, representing a total change of 8 dB. The close-miked woofer output, after combination with a separate measurement at the port, had a maximum

at 150 Hz, falling off slightly down to 50 Hz and dropping at a 6-dB-per-octave rate from 200 to more than 2,000 Hz.

Because of their different shapes and slopes, splicing the two response curves was difficult without resorting to listening judgment and the results of quasi-anechoic response measurements made with the IQS FFT spectrum analyzer. The latter showed the same overall response contours as our other measurements, but they indicated approximately equal maximum output levels at low and high frequencies. Using this as a guide, we obtained an overall response curve of +6, -4 dB from 38 to 20,000 Hz relative to the 1,000-Hz level. The high-frequency dispersion of the dome tweeter was excellent, with negligible directivity below



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Then there's the sheer power of the SA-1010: 120 watts per channel, minimum continuous RMS, both channels driven into 8 ohms, from 20Hz to 20kHz, with no more than 0.003% total harmonic distortion.

And of course, the SA-1010 is ready for digital. It will be able to reproduce the flawless sound of digital sources soon to come.

Power. Perfection. And performance. The awesome SA-1010 Computer-Drive Receiver. From Technics.

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When a musician is in a room writing, playing and taping, he wants the sound that comes out of his speakers to be as real as the sound coming out of his instrument. A guitarist wants to recognize his own fingering on the frets. He wants to feel the unique acoustical character of the room in which he's working. When he listens to albums by other artists he demands the same honest accuracy. If his speakers dull the strings, break up the bass, and artificially color the room effects, he isn't hearing the music he bought.

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test reports

15,000 Hz and only about 15 dB difference between the axial and 30-degree-off-axis outputs at 20,000 to 23,000 Hz.

This is, to say the least, highly creditable performance for a \$99 speaker with a 6-inch woofer! JBL does not publish frequency-response data for their speakers, but they supplied us with response curves made on the test samples using one-third-octave spectrum analysis. Although their measurement method differed from ours, the features of both sets of response curves were essentially similar.

While its frequency response extends to a surprisingly low frequency, the 6-inch woofer of the J216 cannot be driven too enthusiastically without generating distortion. Following our new procedure of measuring the distortion of a speaker using a constant drive level equivalent to one that would produce a 90-dB sound level in the midrange at a 1 meter distance from the speaker, we applied 4 volts to the speaker and measured harmonic distortion from 100 Hz down to the point where it was clearly excessive. The

distortion started with about 1.8 per cent at 100 Hz and rose rapidly to 5.5 per cent at 70 Hz and 10 per cent at 56 Hz. These distortion readings must be interpreted in the context of the acoustic output level of the speaker, at least 90 dB over much of the measurement range.

The impedance of the J216 was a minimum of 6 ohms at 60 and 200 Hz, but it fell to only 3 ohms at 6,000 Hz. Paralleling these speakers with another pair should be done with caution and with due consideration for the limitations of the amplifier being used. The J216 had a sensitivity of 87 dB at 1 meter with a 2.83-volt input, exactly as rated.

● **Comment.** The sound quality of the JBL J216 belies its size and driver complement. It is not in the least "thin" or lacking in bass (or any other part of the frequency range, for that matter). The balance that JBL engineers sought has certainly been achieved in this speaker. As a matter of fact, we felt at times that the bass was slightly heavier

than we would have wished (with the speakers against a wall and at ear level). Measurements showed why this was so, since the bass output reaches a maximum at about 150 Hz, giving an illusion of more bass than is actually present an octave or two lower.

When we drove a pair of J216's with amplifiers in the 100- to 200-watt class (not recommended, but we exercised restraint), the available volume was more than sufficient for our taste, and the sound never became distorted or even strained at any reasonable volume. The quality was determined for the most part by the program source, which is as it should be. It was little short of amazing to hear the sounds these tiny speakers produced from digital Compact Disc programs. The J216 speakers are not a substitute for larger speakers, but they do a fine job of music reproduction. Of course, they will not crack the plaster in your walls, but neither will they shatter your budget.

—Julian D. Hirsch

Circle 142 on reader service card



Hitachi HT-68
Record Player

THE Hitachi HT-68 two-speed direct-drive turntable uses a "Unitorque" motor said to have a constant (nonpulsating) torque characteristic that results in very low rumble and flutter levels. The rotation of the brushless, slotless, and coreless d.c. servomotor is controlled by a quartz-crystal oscillator, giving it a speed accuracy of 0.003

per cent at 33 $\frac{1}{3}$ and 45 rpm. The cast-aluminum-alloy platter (with its rubber mat) weighs about 2 pounds.

The inner surface of the straight stainless-steel tone-arm tube is chemically treated to damp its mechanical resonances. The HT-68 is furnished with a Hitachi MT-35 dual-magnet cartridge, but the detach-

able plug-in shell accommodates all standard cartridges having $\frac{1}{2}$ -inch mounting centers and weighing between 4 and 9 grams. The arm's automatic operation is handled by a separate d.c. motor, so that record rotation is completely unaffected by tone-arm movement.

The HT-68 employs a photosensor system

to detect the presence and size of a record on the turntable. This is done by means of small holes at 90-degree intervals around the platter and mat (at diameters of about 5½ and 11 inches), illuminated from above by a light near the turntable rim. As the platter rotates, light reaches a photocell beneath it through any holes not covered by a record. This information is used to determine turntable speed and the tone arm's indexing diameter (the arm will not leave its rest unless a record is present). At the end of play another optical sensor initiates the arm return and shut-off cycle.

All operating controls of the Hitachi HT-68 are located on its top front edge, where they are accessible with the clear plastic dust cover lowered. Very-light-touch push-buttons are used for power switching, speed selection, repeat-play mode, and the tone arm's up/down (cueing) function. LED indicators next to the last three momentary-contact buttons show when they are engaged. A large flat plate serves as the START/CUT switch, initiating and terminating a playing cycle on alternate operations. The player, of course, shuts off automatically at the end of a record, and it can be operated manually by lifting the tone arm from its rest (which starts the motor).

The HT-68 is mounted on a silver-colored plastic base molded of a compound that is claimed to minimize vibration transmission to the pickup and record, thus reducing acoustic-feedback tendencies. It is supported on four softly sprung mounting feet. The turntable specifications include 0.025 per cent wow-and-flutter (wrms), a tone-arm tracking error of less than 2 degrees, and a lead-wire capacitance of 140 picofarads. The adjustable counterweight has a tracking-force scale calibrated from 0 to 3 grams at intervals of 0.1 gram.

The Hitachi HT-68 record player is 17½ inches wide, 14¾ inches deep, and 4¼ inches high. It weighs 13.2 pounds. The

price, including the Hitachi MT-35 cartridge, is \$259.95. Hitachi Sales Corp. of America, 401 West Artesia Boulevard, Compton, Calif. 90220.

● **Laboratory Measurements.** Although the MT-35 cartridge was not being evaluated, we did measure its frequency response, tracking at the recommended 2 grams. With the CBS STR 100 test record the response was flat to 6,000 Hz, rising to +6 dB in the 15,000-Hz region. Output level averaged 4.16 millivolts with a 3.54-cm/sec groove velocity. The cartridge could track up to the 70-micrometer level on the German Hi-Fi Institute HiFi:2 record.

The tracking-force scale calibration of the HT-68 arm was quite inaccurate on our sample. When the arm was initially balanced horizontally according to instructions, the actual force was typically 0.5 gram higher than the scale setting. When we rebalanced the arm for a correct reading at a typical operating force (1 to 2 grams), the error was 0.2 to 0.5 gram at all other settings. While the error was always in the safest direction (upward), we strongly recommend that this tone arm be set up with a separate stylus-force gauge.

The tracking error of the arm was within its 2-degree rating, and even when stated correctly (as a function of playing radius), it was less than 0.33 degree per inch over almost the entire record and a maximum of 0.67 degree per inch at a 3-inch radius. The antiskating compensation (adjusted by a small dial next to the base of the tone arm) was correct when set to match the *actual* (not indicated) tracking force. The capacitance of the tone arm and cable wiring was lower than rated, about 100 picofarads per channel. The combined effective mass of the arm and cartridge we used was 18 grams, suggesting that the arm's effective mass was in the vicinity of 12 grams, typical of many modern arms.

The weighted-rms flutter was 0.1 per cent, and the weighted-peak reading was ±0.13 per cent. The flutter energy spectrum was principally confined to the range under 10 Hz. The rumble was -30 dB unweighted, and with ARLL weighting it was -58 dB. Although the rumble spectrum for the most part was randomly distributed, there were small but distinct peaks at a number of discrete frequencies such as 10, 15, 30, and 80 Hz. The speed, being quartz locked, was accurate and invariable. The automatic cycle times of the HT-68 were relatively short, 6 to 7 seconds for either the start or stop operation. The arm cued up in less than 1 second and lowered in about 4 seconds. The lateral drift during the arm's descent, a result of the antiskating torque, caused about 3 or 4 seconds of the record to be repeated each time the arm was raised and lowered.

The isolation afforded by the base mounting was slightly better than average at audio frequencies (with the major transmission occurring at 40 to 50 Hz), and it was considerably better than most turntables at infrasonic frequencies. The record player was nearly immune to most ordinary jarring applied to itself or to the supporting shelf (its most sensitive frequency was about 12 Hz, comfortably located between the audible range and the very low frequency of a physical impact).

● **Comment.** The only respect in which the Hitachi HT-68 record player proved wanting was in the accuracy of its stylus-force adjustment calibration. With any record player it is desirable to check the tracking force with a separate gauge, such as Shure's inexpensive and accurate SFG-2, and that practice would remove any ambiguity as to tracking-force accuracy.

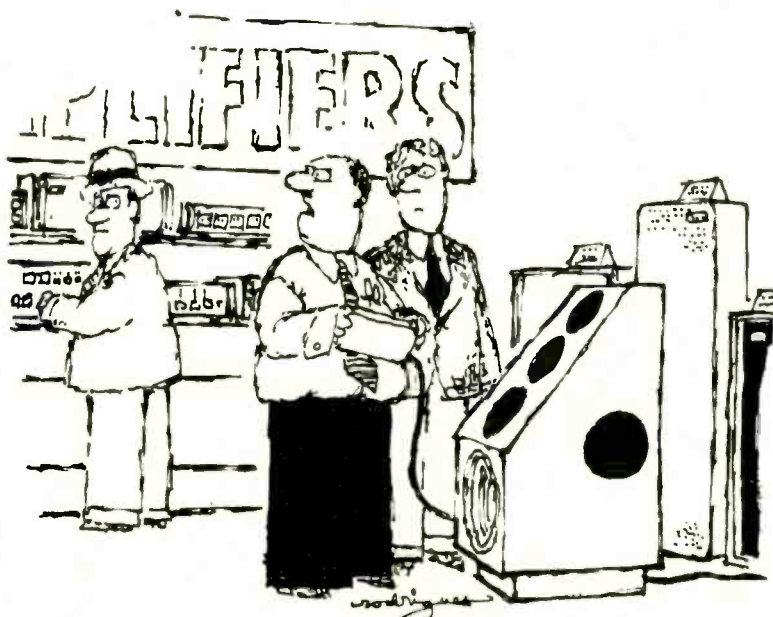
The measured flutter and rumble of the HT-68 are well below the point of audibility under normal listening conditions. Although our flutter measurements did not match Hitachi's figures, it is only fair to point out that commercially available flutter test records do not generally have the degree of flatness and concentricity required to obtain flutter measurements under about 0.05 per cent. In fact, we have not been able to get readings below 0.07 per cent with our various test discs. Possibly Hitachi uses a special record, or even measures the motor servo-control signals, to obtain its 0.025 per cent rating.

We especially appreciated the HT-68's single start/stop control, since it eliminated the possibility of accidentally pressing the wrong button (which has happened to us with some players where the two functions were handled by separate but adjacent buttons). In all, the HT-68 proved to be a very quiet (mechanically) and smoothly performing record player whose highly accessible controls could be operated without risk of jarring the player. This could be attributed to its better-than-average isolation from external vibrations at both audible and infrasonic frequencies.

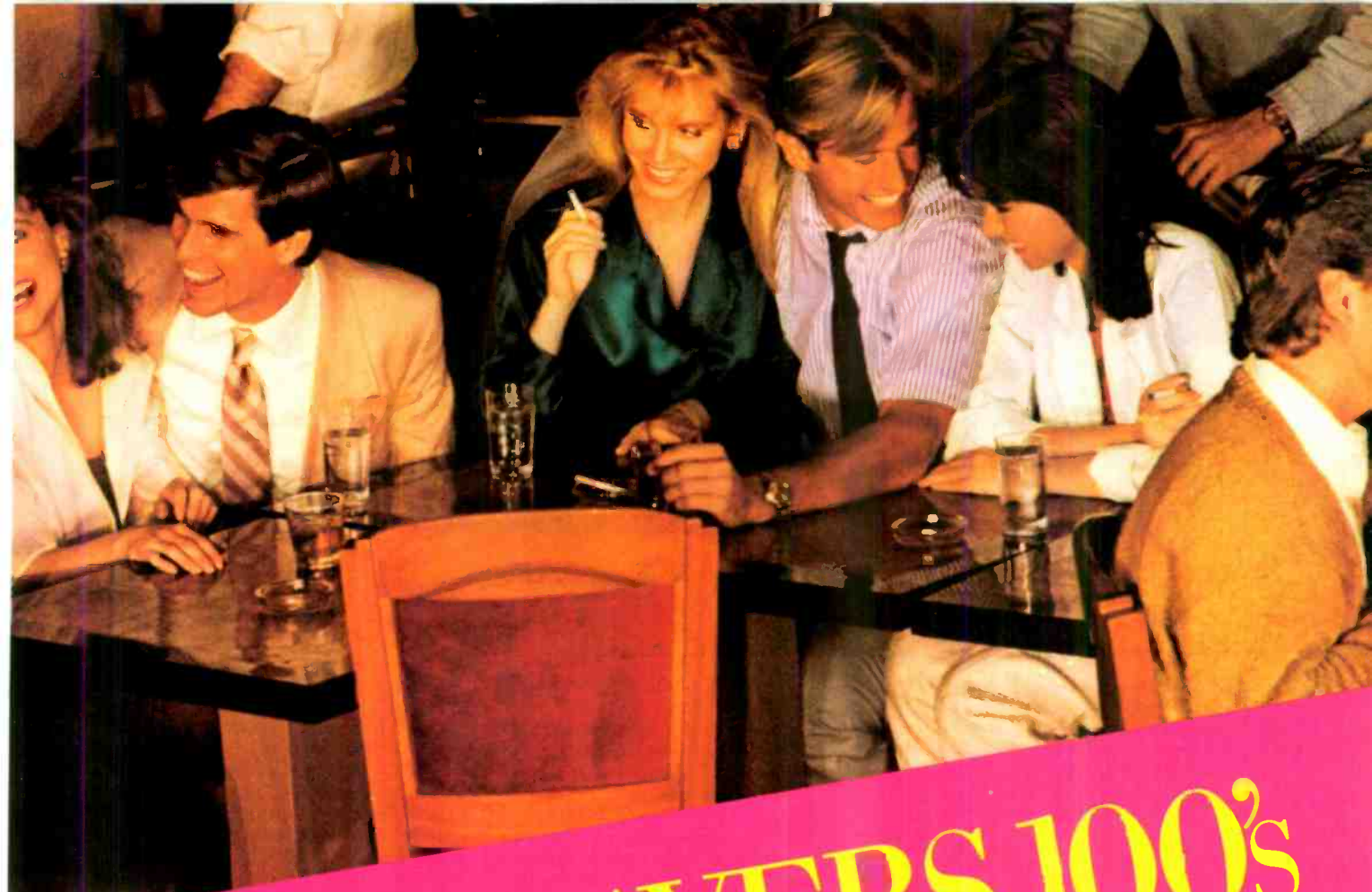
—Julian D. Hirsch

Circle 143 on reader service card

(Continued on page 42)



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Yamaha K-2000 Cassette Deck

DESIGNED for audiophiles who want to combine excellent performance with operational ease, the Yamaha K-2000 is a four-head, single-capstan cassette deck that includes both Dolby-B and dbx noise reduction and an automatic, microprocessor-controlled system for adjusting recording bias and tape sensitivity.

All the K-2000's tape heads are made of wear-resistant Sendust. The recording and playback heads are separate units held in a single case and permit instantaneous comparison between input and recorded signals. The regular erase head is an oversized unit that utilizes the large opening in the cassette shell to the left of the recording and playback heads, where a second pinch-roller would be located in a dual-capstan system. The fourth, "sub-erase" head, normal in size, is mounted to the right of the playback head—so it encounters the tape *after* it has been recorded or played.

The sub-erase head serves two purposes in the K-2000. First, it erases the test signals that are recorded during the automatic biasing operation. Second, when used with a MONITOR ERASE pushbutton, it enables the user to erase, *during playback*, such accidentally recorded material as the first few words of an unwanted commercial. Provided that the pause created is not too long, this post-erase facility is very handy, making it possible to monitor the exact material to be deleted.

The single capstan of the Yamaha K-2000 is direct-driven by a servo-controlled d.c. motor, and a second d.c. motor is used for the reel hubs. The cassette-well door affords excellent label visibility (and is easily removed for head cleaning and demagnetizing), and interior illumination of the well shows the relative amount of tape on each hub. Transport modes are solenoid-operated by a touchplate that tilts left for rewind, up for play, right for fast-forward, and down for stop. All but the STOP function have illuminated indicators. We found this tilting arrangement a little awkward, and several times when we intended to press only the REWIND control we found ourselves

also activating one of the adjacent buttons for RESET or MEMORY.

Yamaha has clearly spent considerable design effort to make the K-2000 as simple to operate as possible, however. Since tape type (normal, high-bias, or metal) is automatically determined by sensors that detect the cutouts in the rear edge of the cassette shells, the usual bias and equalization switch(es) have been eliminated. The type of tape in use, bias-tuning status, and the noise-reduction system that has been selected are all shown by appropriate legends on the front panel. The record and pause buttons, usually separate, have been combined into one REC/PAUSE button. When pressed, this button automatically initiates the bias-sensitivity optimizing program, which Yamaha calls "a-ORBiT." The program itself takes only two seconds, and since the test signals are automatically erased by the sub-erase head, the tape is not rewound. Thus, there is no difference between a general "factory-set" bias and an "optimized" bias, since every tape goes through the a-ORBiT process before being recorded. On the other hand, the system requires caution if you want to listen to a tape from which you have not removed the record-protect tabs on the cassette shell; if you press the REC/PAUSE button you'll erase 2 seconds of your recording, and if you then compound the error by hitting PLAY you will erase more of the tape.

The four-digit electronic tape counter of the K-2000 reads tape running time directly in all modes, and, while the accuracy is not that of a good clock (we found it off by about a minute, short on C-60's and long on C-90's), it is a great convenience compared with the usual hub-revolution counters. Recording level is set by a single slide control with a comfortable 2½-inch travel, and it is indicated on parallel fourteen-segment peak-reading displays that are calibrated from -40 to +18 dB. Although we found the numbers on the level display a bit difficult to read and the resolution somewhat vague in the critical area of 0 dB (the nearest segment divisions are at +3 and -3

dB), most users will probably find the green/red division adequate.

Other front-panel switches include buttons for muting, counter reset, memory marking, and tape vs. source monitoring. In addition, a fold-down door on the front panel gives access to less-frequently operated switches, which include memory rewind/play options, external timer control, and either Dolby-B, dbx, or no noise reduction. Here also are the MONITOR ERASE pushbutton, an FM-multiplex filter switch, a pitch control, a recording-balance control, and a headphone jack with its own level control. There is no level control for the main playback outputs, however, nor are there provisions for recording with microphones.

The rear panel of the K-2000 contains the usual input and output connectors, together with a jack for a remote-control accessory. Overall the deck measures 17¼ inches wide, 4¾ inches high, and 13½ inches deep and weighs about 19½ pounds. Price: \$795. Yamaha Electronics Corp., 6660 Orange-thorpe Avenue, Buena Park, Calif. 90620.

● **Laboratory Measurements.** Yamaha did not make any tape-brand recommendations, so we tested the deck with a variety of samples we keep on hand. Using Type I (normal-bias) tapes, we obtained essentially equivalent results with TDK AD, Sony SHF, and the IEC Type I reference tape and very slightly elevated (+2 to +2.5 dB at 17 kHz) treble response with Maxell XLI-S and BASF Professional I. For best overall response we selected TDK AD-X. With Type II tapes, the flattest response, by the smallest of margins, was obtained from TDK SA-X, though Maxell UDXL-II, TDK SA, and Fuji FR-II were almost identical. The official IEC Type II reference tape showed a treble rolloff above 15 kHz. Among Type IV tapes we selected Fuji FR Metal over the IEC reference and TDK MAR on the basis of a very slight increase in high-frequency headroom, but again the frequency-response traces from our chart recorder were almost identical.

(Continued on page 44)

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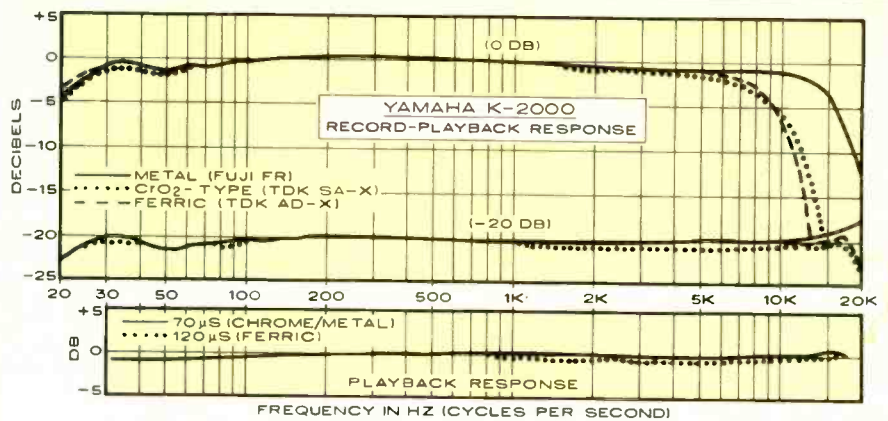
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test reports



The upper curves indicate overall record-playback response at the manufacturer's indicated 0-dB recording level using the tapes designated on the graph. In the center are the same measurements recorded at -20 dB relative to the upper curves, a level conventionally used for tape-deck frequency-response measurements. Bottom curves show playback response from laboratory-standard test cassettes and give an indication of the tape deck's frequency response with prerecorded cassettes and tapes made on other decks.

The playback-only frequency response of the K-2000, using our BASF IEC-standard 70- and 120-microsecond calibrated tapes, was exceptionally flat, varying within 1 dB between the 31.5-Hz and 18-kHz limits of the tapes. Overall record-playback frequency response at the conventional -20-dB level was also extremely smooth and wide, varying less than ± 1 dB over almost all of the audible range. The -3-dB points were reached only at the 20-Hz and 20-kHz extremes of our measurements with TDK AD-X and SA-X; Fuji FR Metal rose gently above 10 kHz to +2.5 dB at 20 kHz. At 0 dB (the 250-nWb/m IEC reference level, which is several decibels above the manufacturer's 0-dB indicator marking), treble response dropped by 6 dB at approximately 10 kHz with our normal and high-bias tapes. Metal tape extended the rolloff point to 17 kHz.

At the IEC 0-dB reference recorded level the third-harmonic distortion of a 315-Hz test tone measured only 0.25 per cent with the normal-bias TDK AD-X; TDK SA-X (chrome-equivalent) and Fuji FR Metal both had 1 per cent distortion at this level. To reach the 3 per cent distortion point required raising the recorded level by 5.4, 3.4, and 4.2 dB for the three tapes, respectively, and without noise reduction yielded unweighted signal-to-noise ratios (S/N's) of 53.1, 53, and 53.5 dB. With IEC A-weighting and Dolby-B noise reduction the S/N figures improved to 67.6, 66, and 67.4 dB. Because of its 2:1 compression/expansion characteristic the dbx system reduced distortion at 0 dB to 0.11, 0.36, and 0.38 per cent with the AD-X, SA-X, and FR tapes. Headroom before 3 per cent distortion also dramatically increased, to 17.8, 15.6, and 18 dB, respectively, and the CCIR/ARM-weighted S/N was 98.8, 96.4, and 100 dB.

With our Teac MTT-111 test tape the wow-and-flutter of the K-2000 measured 0.064 per cent (wrms) and 0.09 per cent (DIN peak-weighted). These figures do not quite match the published specifications and may be characteristic only of our sample, but it is a point to check out in a listen-

ing test (sustained piano chords are good for the purpose) before purchase of any cassette deck. Dolby tracking was very good (within 1 dB up to 16 kHz) at -20 dB; at -30 and -40 dB the Dolby error consisted of a slightly elevated midrange and treble (+2.5 dB), but this was not immediately apparent in listening tests.

An input signal level of 47 mV was required to produce an indicated 0-dB reading, at which point the output was 0.5 volt. These are entirely typical levels. With a C-90 cassette fast-forward and rewind times were a rather rapid 110 and 114 seconds; 76 and 79 seconds were required for a C-60. The pitch control varied tape speed by ± 15 per cent, and at the control's normal, detented position the tape speed was 0.5 per cent fast.

● **Comment.** Both with prerecorded Dolby and dbx tapes and with those we recorded ourselves the K-2000 acquitted itself admirably. It is increasingly apparent that with the very best sonic materials available today the Dolby-B noise-reduction system is inadequate, and for this reason we wish that Yamaha had chosen also to incorporate the superior Dolby-C system. Yet, the still more powerful dbx system in the K-2000 behaved perfectly, with no signs of "breathing" or frequency-response problems. Having recently added a Compact Disc player to our test bench to provide the most demanding musical signals available, we can report that if there was any audible difference between the original CD and the copy we made on the Yamaha 2000 it was so minuscule that only the most strenuous A/B comparison could show it.

The K-2000's monitor erase head is a useful new type of cassette-deck feature—not just another bell or whistle. For the rest, we feel that Yamaha has clearly accomplished its design intentions, and we are glad to be able to recommend the K-2000 for consideration by the serious audiophile.

—Craig Stark

Circle 144 on reader service card

6

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Speaker Cables: Can You Hear the Difference?

The results of blind listening tests with eleven audio experts

By Laurence Greenhill

SOME serious audiophiles strongly believe that the seemingly innocuous wires used to connect stereo amplifiers to loudspeakers actually have a considerable effect on a system's overall sound quality. Unsatisfied with the performance of 16-gauge heavy-duty lamp cord or "zip" cord ("gauge" is a measure of thickness; the lower the number, the thicker the wire), these purists install exotic, expensive, and physically imposing cables instead. A 30-foot run of special audio cable may cost anywhere from \$55 (for a pair of Monster Cables) to more than \$300 (for Levinson wire). After purchase, these thick and massive wires are terminated with special lugs or pressure-fitting banana plugs (\$25 per pair), coated with a contact cleaner (Cramolin), and installed with loving care.

Does it make any difference? Is all this trouble and expense necessary to achieve the best possible sound? The editors of STEREO REVIEW have long maintained that for normal home cable runs (in the 20- to 50-foot range) to 8-ohm speakers, 16-gauge zip cord provides optimal power transmission between a system's amplifier and speakers. The "official" view has been that heavier and/or more expensive audio cables represent—for ordinary home installations—electronic overkill.

Nevertheless, equipment-oriented audio hobbyists have continued to tinker and experiment with their systems' connections. Quick to respond to a felt need, audio manufacturers have filled the marketplace with a variety of exotically named wires: Discwasher Smoglifters I, AudioSource UHD, Live Wire 301X4, Mogami Neglex 2477, Oracle Leonische, Fulton Golds, Monster PowerLine, Big Red Live Wire, and so on. Is this just another case of the mystique and glamour of high-end audio inducing otherwise sensible music lovers to waste their money? Or is there some real sonic advantage to using audiophile speaker cables?

Our view is that *if* there are audible differences among speaker cables, they

probably derive from *measurable* differences in their respective electrical properties. Nelson Pass of Threshold Corp., for instance, claims that subtle sonic differences can be correlated with differences in electrical resistance, capacitance, and inductance, which vary according to overall cable length. And these factors *can* result in measurable differences in frequency response and signal level, depending on the particular speakers and amplifiers the cables connect. But the measurable differences in electrical characteristics and performance between audiophile cables and cheaper, 16-gauge zip cord seem too small to explain the apparently huge audible differences that are sometimes reported.

Just how different in electrical characteristics do cables have to be before there are audible effects on frequency response and signal level? In order to answer this question, among others, we embarked on a series of laboratory and listening tests. Because of logistical, time, and budget restrictions, only three cables were exhaustively tested: (1) 16-gauge heavy-duty lamp cord, purchased from a suburban hardware store for 30 cents a foot; (2) 30-foot lengths of New Monster Cable, costing \$55 a pair; and (3) 24-gauge "loudspeaker cable," available from many sources at about 3 cents a foot.

Although the high electrical resistance of 24-gauge wire makes it inadvisable for runs of more than a few feet, its low price and small diameter make it appealing to decorators, who use it unashamedly. It seemed the ideal "worst case" cable—if any cable would sound different, 24-gauge should be the one. The 16- and 24-gauge wires were cut to the same 30-foot lengths as the Monster Cable, and all the cables were terminated with Monster's X-Terminators for consistency in the connections.

Lab Tests

For the first part of our tests, Julian Hirsch measured the three selected ca-

bles' resistance and interconductor capacitance. The results are easily summarized: in 30-foot lengths, the 16-gauge zip cord had a resistance of 0.24 ohms, the Monster Cable 0.09 ohms, and the 24-gauge "loudspeaker cable" 1.8 ohms; their interconductor capacitances were 420, 600, and 400 picofarads, respectively.

The cables were then connected between a high-quality power amplifier (a Perreux PMF 2150B) and two pairs of high-quality speakers (Spendor BC-1's and KEF 105.2's). A 1,000-Hz square wave was fed to the speakers through the cables, and the cables' effects on the signal were monitored by subtracting the waveform at the speaker terminals from the waveform at the amplifier output. Photographs were made of the oscilloscope displays. There were no observable differences between any of the cables driving either speaker system. All the measurements were then set aside and not shared with the listening panel until after the listening tests.

Open Listening

In the initial open (non-blind) phase of the listening tests, the listeners individually evaluated the sound of seven different music selections played with each of the three different cables *while knowing which cable was in use at each moment*. They were asked to fill out an elaborate, eight-page questionnaire. In addition to ten questions about the sound of the different cables, the form asked about the panelist's age, occupation, degree and kind of involvement with audio, and any prior attitudes toward the specific cables being tested. The procedure was designed to collect information on the panelists' various biases and to suggest how those biases might change in a group-listening situation. For example, a listener's preference might be influenced by knowledge of a friend's preference or by the reputation that a particular brand or type of cable has acquired through reviews in the "underground" hi-fi magazines.

Controlled Listening

The heart of our whole project was the set of controlled listening tests. These differed from the initial open tests in that the listening procedure was designed to maximize psychoacoustical fairness. That is, in order to keep the listeners' biases about the weight, appearance, cost, or brand of the cables from influencing their sonic preferences, the tests in this part were double-blind—neither the listeners nor the test administrator knew which cable was being listened to. Switching between the different cables was practically instantaneous (less than 50 milliseconds) in order to make subtle sonic differences as apparent as possible (human beings have notoriously poor long-term memories for sounds).

To make possible such a double-blind, instantaneous-switching test, we used a laboratory-grade audio comparator developed and sold by the ABX Company. It consists of control circuits and relays that can rapidly switch between different inputs. The listener compares sounds and decides whether a particular source, designated X, is sonically the same or different from each of two other sources, designated A or B (hence ABX). The trick is that source X is actually either A or B; each connection is made at random by the ABX comparator and is not identified for either the listener or the tester. The listener writes his response on a test form. Digital memory circuits store the sequence of connections for retrieval and analysis at the end of the test.

Level matching between cables to compensate for their differing electrical-loss characteristics was not performed for every comparison in this part. The basic premise of these tests was that measurable differences among cables would become audible if they were large enough. Matching *all* measurable parameters—including signal loss—would make the hypothesis untestable. For one comparison, however, of Monster Cable with the 24-gauge speaker wire, we did compensate for level differences by switching in a precision attenuator between the preamplifier and the power amplifier whenever the lower-resistance Monster Cable was selected by the ABX system. The purpose of this was to determine if there were any audible differences between the two cables *other* than those resulting from a volume-level change.

Some audiophiles refuse to accept the validity of this kind of controlled listening test. They argue that either the test procedure or the switching systems will mask important sonic differences. The whole procedure and test setups are de-

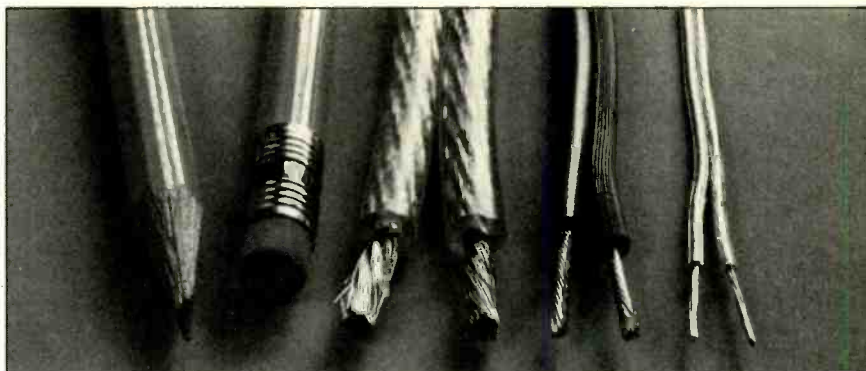
Photos by Geoff Rosengarten

signed to *increase* listeners' sensitivity to small differences and to bypass some of the limitations of the human hearing system so that the results will be applicable to all listeners, not just those participating in the tests. Let's review three of the main features of this phase of our tests: (1) The ability to switch almost instantaneously from one cable to another with a precision set of low-resistance relays makes perceived sonic differences as vivid as they can be given our limited sonic memories. (2) The double-blind listening setup relieves the tester *and* the listeners from having to compensate for preconceptions about the different cables. (3) The use of numerous listeners making a large number of comparisons produces sufficient data for meaningful statistical analysis and generalization.

The procedure for the controlled listening tests can be quickly summarized: six cable comparisons were carried out using the ABX comparator and either pink noise or a choral music selection. Monster Cable was compared with 24-gauge wire, gain matched and unmatched; next, Monster Cable was compared with 16-gauge zip cord; then the 16-gauge and 24-gauge cables were compared with each other. Each comparison consisted of a series of fifteen tests; in each test, as explained previously, the listener was asked to identify which of two constant sources, A and B, was the same as the switched source X. The choice and order of cables being compared and program sources being used were determined by a table of random numbers, with switching randomly controlled by the ABX comparator.

Results were examined only after each listener completed the series of comparisons, and results were held confidential so that each panel member knew only his own score—after all, the egos of these "golden ears" were on the line. Moreover, in our account of the results we will consider mainly the performance of the group as a whole; individual panelists will be identified by code letter—to protect the guilty! Further details of the test setup can be found in the box on page 51.

The listeners were all males with an average age of about thirty-nine years (ranging from thirteen to sixty). Although two were high-school students, most of the remaining nine were middle-aged professionals with a serious involvement with audio. Six panelists owned expensive esoteric twin-lead speaker cables, two owned interwoven audiophile cables, and one even used 14-gauge zip cord. Seven thought that controlled, double-blind tests like those we used were valid, but the others thought such tests missed the boat.



Left to right: pencils, Monster Cable, 16-gauge zip cord, 24-gauge "speaker wire"

Half the panelists thought that sonic differences between speaker cables could *not* be explained by measurable differences in the cables' electrical characteristics. Before the listening tests even began, ten out of the eleven listeners expected the "better" cables to show improved bass, "punchiness," and frequency response.

The left-hand portion of Table I on the facing page summarizes the pre-test attitudes of the listeners. In terms of attitudes, Monster Cable scored significantly higher on appearance and reputation than either 16- or 24-gauge cable. Although 16-gauge scored highest on frequency of use and cost-effectiveness, the preference was not statistically significant in these categories. Generally, the panel seemed to prefer Monster Cable from the start, suggesting that it would come out on top in the non-blind open listening tests, which is just what happened.

The Open Tests

When the listeners *knew* which cable they were listening to, Monster Cable scored significantly higher, as the data in the right side of Table I show. It was preferred to 24-gauge in seven out of ten categories. Monster Cable also scored significantly higher than 16-gauge in three categories. In the pink-noise portions of the test, 16-gauge scored higher than 24-gauge.

Subjective comments from the panelists were consistent with the numerical scoring. They reported that Monster Cable conveyed deeper bass, more impact, more ambience, and a fuller, lush sound with greater transparency and that the program could be played louder than with the other cables. In comparison, the sound with 16-gauge was said to be "congealed and homogenized," revealing less "space and expanse" in the music. Listeners also noted that 24-gauge produced a drop in level and rolloffs in frequency response at both ends of the audio spectrum. The

"clipped and compressed" qualities of 24-gauge were even said to give it a "New England" sound!

It is important to emphasize again that these ratings and comments came from listeners who knew which cables they were listening to. The panelists' strong pre-test biases in favor of Monster Cable could have influenced their reactions during the open listening tests no matter how conscientiously they tried to ignore them. Eliminating the listeners' awareness of which cable was being auditioned was, therefore, a major consideration in our design of the controlled listening tests.

The Controlled Tests

The most striking result of the controlled listening tests (see Table II) was the selecting out of the 24-gauge wire. All the comparisons in which it was *not* matched in gain level with the other cables show a high degree of statistical significance. With pink noise, every panelist was able to distinguish non-level-matched 24-gauge wire from either of the two heavier cables in at least twelve out of fifteen tries, or 75 per cent, which is an accepted threshold of significance in psychoacoustical testing. Even when the levels *were* matched between 24-gauge wire and Monster Cable (Comparison No. 2), four listeners still heard a difference. While *one* listener might have just been making lucky guesses, it is very unlikely that four out of eleven were doing so.

It is reasonable to assume that because Monster Cable is thicker and has lower electrical resistance than 24-gauge wire, it is a more electrically "accurate" signal conductor. The audible differences between them in our controlled listening tests strongly suggest, therefore, that 24-gauge is too thin for optimal audio performance—in 30-foot lengths, at least.

When 16-gauge wire was pitted against Monster Cable using pink noise as the program material (Comparison

No. 3), three of the panelists correctly identified it in twelve out of fifteen tries. Again, it is very unlikely that this could have occurred by chance (the odds are less than 1 in 999). But when choral music was used instead of pink noise (Comparison No. 5), none of the panelists correctly distinguished 16-gauge from Monster Cable to a psychoacoustically significant degree (75 per cent of the time). This suggests that both 16-gauge and Monster Cable are fine conductors for music signals of typical complexity, but a very sensitive listener under the best conditions might find an audible difference—not necessarily a preference—between them on wide-band (pink-noise) test signals.

In sum, five out of the six sets of controlled listening comparisons gave results that are statistically significant using the binomial distribution (see caption for Table II). In only two sets of comparisons, however—both testing 24-gauge wire against a heavier cable using pink noise—were the results above the stricter 75 per cent threshold usually considered necessary to establish an audibly significant difference.

Comments

While it may not be news that the thin 24-gauge speaker cable sounded different from the other cables tested, what does this result mean in terms of cable measurements and their audible effects? A 1- to 2-dB decrease in sound level was measured for the 24-gauge wire during the pink-noise listening tests, and a number of panel members reported a loss of treble and bass response with 24-gauge during open listening. Was the wire also changing the perceived frequency balance?

Julian Hirsch's measurements of the 24-gauge wire showed it to be much higher in resistance than Monster Cable or 16-gauge wire. Its 1.8-ohm resistance resulted in a 1.76-dB insertion loss with an 8-ohm resistive load, which means that fully one-third of the amplifier's output was being dissipated by the cable over the 30-foot runs we used. This accounts for the unambiguously audible decrease in level. Frequency response was also affected because the 24-gauge cable's relatively high series resistance interacted with the system

impedance of the KEF 105.2 speakers used in the tests to produce 1.25-dB frequency-response depressions at 100, 1,000, and 4,000 Hz. This perhaps explains the subjective impression that with the 24-gauge wire the sound was "duller." Note that even in the double-blind, matched-level test of 24-gauge vs. Monster Cable (Comparison No. 2), four panel members heard differences. The level-matching procedure corrected only for an overall level mismatch, not for frequency-response changes caused by the 24-gauge wire.

The panelists' initial preference for Monster Cable was only partly vindicated by their ability to distinguish it from 16-gauge cable in the controlled pink-noise test (Comparison No. 3). What the panelists noticed during this comparison was either the result of the measured 0.16-dB insertion-loss difference between the two cables or the corresponding 0.04-dB frequency-response variation when they were connected to the KEF 105.2 speakers. The former is far more likely.

It seems that tests with real music signals decrease the ability of listeners

TABLE I: LISTENING PANEL BIASES AND OPEN-LISTENING TEST RESULTS

	Pre-Test Evaluations				Ratings During Open Listening Test ¹									
	Appearance of Cable	Reputation of Cable	Cable's Value for Price	Personal Experience with Cable	Pink Noise	Deep Bass (Porch optimum score = 5)	Midrange I (Bonoff)	Midrange II (Mozart)	Wideband Orchestra (Berlioz)	Lower Midrange (John)	Wideband Rock (Dire Straits)	Lack of Distortion	Stereo Imaging	Overall Sound Quality
Evaluations and Ratings (highest score = 10) ¹														
Monster Cable	8.6 (±1.5)	6.9 (±3.0)	4.8 (±2.8)	1.8 (±3.3)	7.4 (±1.5)	7.1 (±1.6)	6.0 (±2.2)	6.8 (±1.9)	7.6 (±1.6)	6.2 (±1.9)	8.2 (±1.5)	7.8 (±1.3)	7.1 (±1.9)	7.2 (±1.5)
16-Gauge Wire	5.2 (±3.1)	3.0 (±2.8)	6.0 (±2.6)	3.6 (±2.7)	6.1 (±1.5)	6.5 (±2.1)	5.5 (±1.9)	6.8 (±1.9)	7.4 (±2.2)	5.8 (±1.9)	7.0 (±2.2)	7.0 (±1.9)	6.0 (±2.4)	5.9 (±2.0)
24-Gauge Wire	3.8 (±2.7)	2.2 (±1.9)	4.6 (±2.1)	2.2 (±3.1)	4.3 (±2.2)	5.3 (±2.3)	5.5 (±1.8)	5.6 (±2.2)	6.4 (±2.2)	5.0 (±2.0)	5.4 (±2.1)	6.1 (±2.1)	5.6 (±2.0)	4.8 (±1.5)
Statistical Analysis (probability in %)														
16-Gauge vs. 24-Gauge	NS	NS	NS	NS	97.5%	NS	NS	NS	NS	NS	NS	NS	NS	NS
Monster vs. 16-Gauge	98%	99.9%	NS	NS	95%	NS	NS	NS	NS	NS	NS	NS	99.5%	99.5%
Monster vs. 24-Gauge	99.5%	99.5%	NS	NS	99%	95%	NS	NS	95%	NS	95%	98%	98%	99.5%

¹except for deep-bass test

Table I shows the results of the listening panel's pre-test evaluations of the three cables tested (left part) and their ratings of the cables during the open listening tests (right part), together with a statistical analysis. The ratings in the upper half of the chart are mean scores derived by averaging the questionnaire responses of all the panelists;

the numbers shown in parentheses below them are their standard deviations—that is, the statistical spread around each mean score. Thus, the higher the standard deviation, the wider the range of scores.

The lower half of the table indicates whether the differences in the ratings of the three cables are statistically significant. The method of comparison used, the Stu-

dent's paired t-test, estimates the probability that an observed difference in preferences could have occurred by chance. The number given for each comparison in each category or test represents the probability that the difference did not occur by chance alone. Probabilities below 95 per cent are considered statistically insignificant and are indicated by "NS."

TABLE II: RESULTS OF CONTROLLED (DOUBLE-BLIND) LISTENING TESTS

Table II. The two charts on this page show the results of the controlled, double-blind listening comparisons of the three cables. At right are the results for the panel as a whole, together with a statistical analysis of the comparisons. The scores for each member of the panel in each comparison are shown in the chart below.

The ABX comparator system is statistically similar to flipping a coin and predicting whether it will come up heads or tails. Each of the two results is equally probable, so random predictions are likely to be correct 50 per cent of the time. Since each of our comparisons comprised fifteen trials, a listener would have gotten a score of 7.5 if he could hear no differences between the cables and were just guessing. Any score much above 7.5 is thus better than chance and might be significant.

Using published tables of the binomial ("bell-curve") statistical distribution, we calculated the likelihood of correct scores in each comparison for the entire panel. We found that 91 or more correct answers out of a total of 165 in each comparison gave a probability of 95 per cent or more that the results were not due to chance. Results meeting this criterion are thus indicated as statistically significant.

We also used, however, a stronger criterion: psychoacoustical significance. In psychoacoustical testing, it is generally accepted that the threshold at which a phenomenon can be considered definitely audible is when listeners are aware of it at least 75 per cent of the time. This is the basis for our definition of a "hit" as at least twelve out of fifteen correct answers. Applied to the scores of the whole panel, this meant

STATISTICAL ANALYSIS OF ENTIRE PANEL'S SCORES

	Average Score	Percentage of Correct Answers	Odds Against This Result's Being Due to Chance	Probability (in %) of This Result Occurring by Chance	Is Result Statistically Significant?	Is Result Psychoacoustically Significant by 75% Rule?
Comparison 1: Monster Cable vs. 24-gauge wire with pink noise, levels unmatched	14.9 (± 0.3)	99.4%	>999:1	<0.01%	YES	YES
Comparison 2: Monster Cable vs. 24-gauge wire with pink noise, levels matched	10.0 (± 2.7)	67%	>999:1	<0.01%	YES	NO
Comparison 3: Monster Cable vs. 16-gauge wire with pink noise, levels unmatched	9.8 (± 2.1)	65%	>999:1	<0.01%	YES	NO
Comparison 4: 16-gauge wire vs. 24-gauge wire with pink noise, levels unmatched	14.8 (± 0.4)	98.5%	>999:1	<0.01%	YES	YES
Comparison 5: Monster Cable vs. 16-gauge wire with choral music, levels unmatched	7.4 (± 2.4)	49%	2:1	<62%	NO	NO
Comparison 6: Monster Cable vs. 24-gauge wire with choral music, levels unmatched	10.3 (± 2.7)	69%	>999:1	<0.01%	YES	NO

> means "greater than" < means "less than"

that 124 answers out of 165 trials for each comparison had to be correct before we concluded that the differences between the cables were indeed audible.

Results that meet the 75 per cent rule are due to more vivid effects than those produc-

ing a merely statistically significant result. An additional clue to the magnitude of the differences between the cables tested is the number of listeners who scored a hit in each comparison; the more hits, the more striking were the audible differences.

INDIVIDUAL LISTENER SCORES

	Listeners identified by letters; "hits" ¹ shaded in color										
	A	B	C	D	E	F	G	H	I	J	K
Comparison 1: Monster Cable vs. 24-gauge wire with pink noise, levels unmatched	15	14	15	15	15	15	15	15	15	15	15
Comparison 2: Monster Cable vs. 24-gauge wire with pink noise, levels matched	9	13	7	10	— ²	8	9	6	14	12	12
Comparison 3: Monster Cable vs. 16-gauge wire with pink noise, levels unmatched	13	7	10	7	11	12	9	9	11	12	7
Comparison 4: 16-gauge wire vs. 24-gauge wire with pink noise, levels unmatched	15	15	— ²	14	15	— ²	15	14	15	15	15
Comparison 5: Monster Cable vs. 16-gauge wire with choral music, levels unmatched	4	6	11	8	9	5	5	7	6	10	10
Comparison 6: Monster Cable vs. 24-gauge wire with choral music, levels unmatched	14	7	15	10	8	10	6	10	11	12	10
Average Scores	11.7 (± 4.4)	10.3 (± 4.1)	11.6 (± 3.4)	10.7 (± 3.2)	11.6 (± 3.3)	10.0 (± 3.8)	9.8 (± 4.3)	10.2 (± 3.7)	12.0 (± 3.5)	12.7 (± 1.9)	11.5 (± 3.2)
Percentage of "Hits" ¹	66.7	50.0	40.0	33.3	40.0	40.0	33.3	33.3	50.0	80.0	50.0

¹A "hit" means that the panelist chose correctly in at least twelve out of fifteen trials.

²The panelist's scores in this comparison had to be discarded.

to distinguish small sonic differences between cables. Although three panelists heard a difference between 16-gauge and Monster Cable with pink noise, the panel as a whole was unable to hear any significant difference between them with choral music (Comparison No. 5). Even when Monster Cable was compared with 24-gauge using choral music (Comparison No. 6), only three panel members had psychoacoustically significant scores (twelve out of fifteen or better), though the group's score in this non-level-matched comparison did reach the less strict level of "statistical significance." It seems likely that differences between 24-gauge and Monster Cable would be even harder to hear (if audible at all) if the levels were matched *and* typical music, not pink noise, were used.

Because of our short auditory memories, noticing very subtle sonic differences requires a more or less constant signal as well as instantaneous switching between the components being compared. One must wonder how real are the vast sonic differences reported in the underground audio press among such components as cables, preamplifiers, and power amplifiers, since the results derive from uncontrolled, non-level-matched listening tests using only wide-dynamic-range musical material.

The final significant conclusion one can draw from our data is that at least one genuine "golden ear" does exist. Listener J on our panel had 80 per cent "hits" (psychoacoustically significant scores) with an average score of 12.7 (out of 15). Obviously, certain listeners—whether through talent, training, or experience—*can* hear small differences between components. But the majority of the panelists, although by no means poor or unskilled listeners, heard only differences resulting from the relatively large, easily measured variations in signal level and frequency response in the 24-gauge comparisons. Note, however, that J was the only panel member to score a hit for both music and level-matched pink-noise comparisons between Monster Cable and 24-gauge (Nos. 2 and 6). In these two tests only a third of the listeners achieved psychoacoustically significant scores, showing that the audible differences in these tests were not very obvious despite the overall *statistical* significance of the group's scores.

Conclusions

Our tests were certainly not exhaustive, since only three different cables were compared. Yet the results demonstrate that while Monster Cable and 16-gauge lamp cord are both audibly

TEST METHODS AND EQUIPMENT

BOTH parts of the listening test, the open and the controlled, were performed in a sparsely furnished living room measuring 18 x 11 x 28 feet. The hardwood oak floor is covered with a Persian area rug, and sheet-rock walls and large glass windows rise to a "semi-cathedral" ceiling. Acoustically the room is very live, with a reverberation time of about 1 second.

High-end equipment was used throughout the test setup. The system included an Accuphase AC-2 moving-coil cartridge (stylus wear approximately 75 hours), a Magnepan Uni-trac 1 tone arm, and a Linn Sondek LP-12 turntable (Valhalla modification, of course). Other signal sources included a Tandberg TD-20A open-reel tape deck (special equalization model) running at 15 inches per-second and a Magnavox FD 1000SL digital Compact Disc player. The Mark Levinson ML-7 stereo preamplifier that served as the control center was equipped with L-3 moving-coil phono sections. Levinson silver interconnect cable ran from the ML-7 to the power amplifier.

During the open listening sessions a number of high-quality power amplifiers were used, including an Electrocompaniet Ampliwire 1, a Mark Levinson ML-9, and a Perreux PMF 2150B. Each of these high-power units had been tested previously and found to be in perfect working order. For the controlled listening tests we chose the Perreux unit (more than 200 watts per channel).

The speakers were installed 6 feet apart along the room's short wall and about 2 feet out from each side wall. Infinity RS-3A, Spondor BC-1, and KEF 105.2 systems were all employed in the

early trial sessions and during the open listening phase. Only the KEF's were used during the controlled tests because of their built-in overdrive protection. Each listener was allowed to set the volume level to his taste at the beginning of his part of the controlled listening test; the volume was then left at that level for the entire test session. For one of the Monster Cable/24-gauge comparisons the two cables were matched in gain level within 1 dB using a potentiometer connected between the preamplifier and power amplifier and an Ivie IV-10 spectrum analyzer.

Program material for the open listening tests included a wide range of sources and musical styles. Among the recordings used were the pink-noise band from Telarc's "Omnidisc" test album (Telarc DG-10073/74), Mozart arias from Philips 9500 098, percussion instruments from Harry Patch's *Delusion of the Fury* (Columbia M2 30576), Karla Bonoff's *Restless Nights* (Columbia JC 35799), Berlioz's *Symphonie Fantastique* (Reference Recording R-11), and two selections from a Philips CD sampler disc (801 027 2), Elton John's rendition of *Blue Eyes* and *Once Upon a Time in the West* by Dire Straits.

The program material for the controlled tests was restricted to only two selections. The 3-minute pink-noise band from the "Omnidisc" was chosen by the panel as most revealing of subtle sonic differences. Choral music sung by the 300-voice Jay Welch Chorale (Varese Sarabande VSD 1000) was chosen because of the disc's unusual degree of stereo separation and the vocal resonances in the male chorus.

different from and probably superior to 24-gauge wire, 16-gauge is good enough to be indistinguishable from Monster Cable when playing music. An esoteric cable would have to be substantially better than Monster Cable in order to be demonstrably superior to 16-gauge wire. One of the listeners on the panel ran a quick but controlled listening test of Monster Cable against high-capacitance Mogami Cable (with its "damper" removed) and 8-gauge Levinson HF-10C twin-lead, both products more costly than Monster Cable. He did no better in distinguishing Monster Cable from the other two than chance would allow.

So what do our fifty hours of testing, scoring, comparing, and listening to speaker cables amount to? Only that 16-gauge lamp cord and Monster Cable are indistinguishable from each other with music and seem to be superior to the 24-gauge wire commonly sold or

given away as "speaker cable." Remember, however, that it was a *measurable* characteristic—higher resistance per foot—that made 24-gauge sound different from the other cables. If the cable runs were only 6 instead of 30 feet, the overall cable resistances would have been lower and our tests would probably have found *no* audible differences between the three cables. This project was unable to validate the sonic benefits claimed for exotic speaker cables over common 16-gauge zip cord. We can only conclude, therefore, that there is little advantage besides pride of ownership in using these thick, expensive wires. □

Laurence Greenhill is a research psychiatrist who is currently studying the effects of drugs on perception. He has been an audio enthusiast since the late Sixties and has written a number of articles on perception, audio, and subjective listening tests.

10 Tips for Speaker Buyers

By William Livingstone

YOUR loudspeakers have a greater influence on the sound from your hi-fi system than any other component. And since there is considerable variety in the sound produced by the speakers on the market today, it is in choosing the speakers for your system that you have the best opportunity to express your own taste in sonic quality.

The great variety in size, price, and design approach used in the many currently available speakers makes choosing one pretty complicated. But since you will be spending hundreds of hours with whichever speakers you decide on, it's worth the time and effort it takes to make a careful choice. The following advice is offered to help you make that choice whether you are buying your first speakers or trading up.

1 **Consult the experts.** You can do this by reading lab-test reports in audio enthusiast magazines such as *STEREO REVIEW*, which usually has at least one speaker review in each issue. Reviewers at different laboratories may argue about the best methods for testing, but, regardless of method, I don't think a really poor speaker has ever been given a good review by a reputable lab. You may not understand all the data in test reports, but you're permitted to skip to the reviewer's evaluating remarks in the summary. If you lack the time and inclination to do much comparative listening and shopping, you would not go wrong by choosing any speaker given a favorable review by Hirsch-Houck Labs in this magazine.

2 **Educate your ears.** Going to live performances is a lot of fun, but it's not a very effective way of training yourself to judge loudspeakers. Instead, try to hear as many speakers that have gotten good reviews as you can, listening particularly for qualities that have been commented on by reviewers. Also listen to the speakers that have been chosen by your most knowledgeable friends. When you start comparing speakers in audio showrooms, don't limit your listening to speakers in your price range. Try to find what you like best at any price, then look for the speakers that come closest to that ideal at the price you can afford to pay.

3 Compare only two different speakers at a time. It's confusing to try to pick the best from a group of speakers if you listen to them in sequence. You should switch back and forth between two pairs until you can decide which you like better. Then compare your choice with the next speaker under consideration. When making A-B comparisons, be sure the speakers are at the same volume level. In such comparisons, if one speaker (or pair of speakers) is louder than the other, almost everybody tends automatically to find the louder one more appealing.

4 Use familiar program material when trying out speakers. If you listen exclusively to rock or jazz at home, it doesn't make much sense to try to judge speakers in a showroom by listening to recordings of symphonic music and opera, or vice versa. And don't let a salesman demonstrate speakers using only music of his choice, which may have been selected to minimize a particular speaker's shortcomings. You should use recordings you know and like, and you should use enough different kinds of material to be able to check the way a speaker behaves over the whole frequency range.

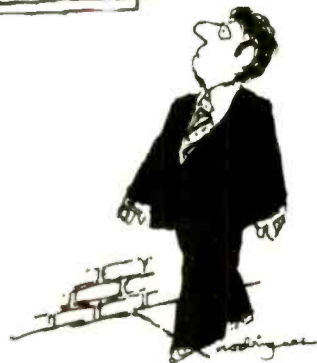
Low notes on a pipe organ or a bass drum roll will show you how it handles bass. A male speaking voice will help you spot unwanted boominess in the upper bass and lower midrange. Peakiness in the mid-frequencies will add a honky, nasal quality to a female singing voice. Check for this with a record by a mezzo-soprano or alto such as—take your pick—Carly Simon, Stevie Nicks, Aretha Franklin, Rosemary Clooney, Lacy J. Dalton, or Frederica von Stade. For high frequencies you will need music that includes snare drum, cymbals, or triangles. Make a cassette with brief passages of each kind of material and take it with you whenever you plan to audition speakers.

5 Listen for accuracy and balance. Don't be overimpressed by a lot of bass or extra-brilliant highs. A speaker with midrange boost will have more presence than a speaker with the desired flat frequency response, and such exaggerations may seem momentarily impressive in the showroom or on one musical selection, but they quickly become tiresome. What you want from a speaker is *absence* rather than presence, which is to say that you want a speaker that reproduces all the music without adding any sonic coloration of its own.

6 Move about the showroom while you are auditioning speakers. At home few of us listen to music only from the one ideal seat facing the two speakers of a stereo pair and placed equidistant from them. A good speaker should be able to disperse the high frequencies over a normal listening area, and if the sound coming from the speaker seems to change noticeably as you walk back and forth in front of it, this usually means that it has inadequate dispersion of highs. As you walk about, concentrate on the highs and check to see whether the stereo effect holds up reasonably well elsewhere in the room besides that one ideal seat.

7 Be sure you make your judgment on the basis of performance, not size or design approach. A bigger speaker is not necessarily a better speaker, and having a lot of drivers does not guarantee that a speaker system will outperform one with fewer drivers. Don't let talk of new design technology influence you unduly. We have tested excellent speakers that were designed in radically different ways, and although speakers on the whole have gotten significantly better in the last five years or so, some old solutions to problems of speaker design are still quite effective.

8 Try to hear the speakers you choose in your own listening room before you commit yourself finally. Speakers that sound good to you in a showroom may not please you as much at home, and it's a good idea to arrange for return privileges if you can. In any case, while shopping you should be prepared to give the dealer the dimensions of your listening room and a description of its furnishings, which will help him to advise you in making your choice. There are certain things you can do fairly inexpensively to fine-tune your room if it is acoustically too bright or dull, and the placement of speakers has a great deal to do with how they sound in a room. (See "Sound and Your Listening Room," which starts on the next page.)



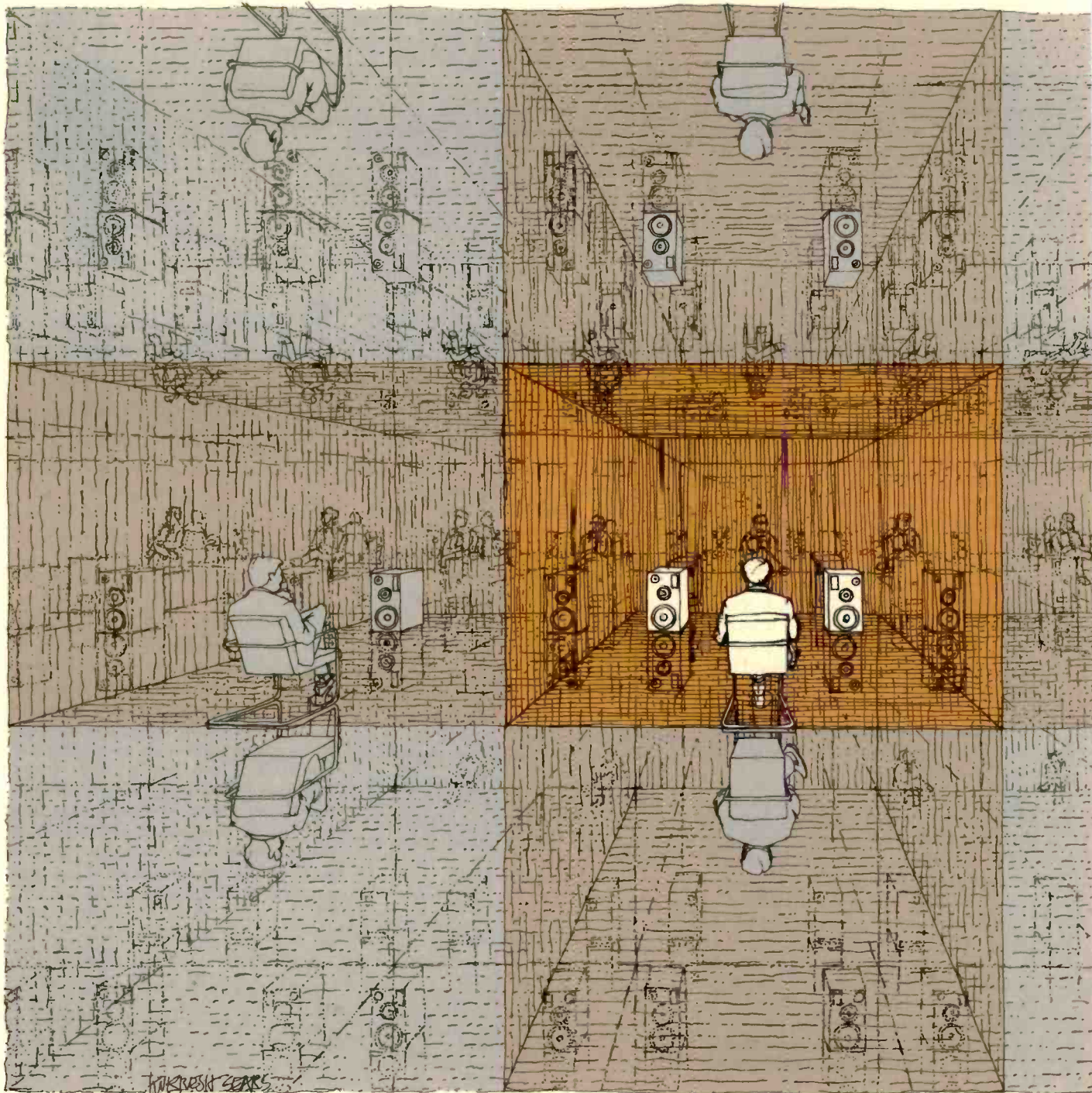
9 Don't think you have to spend a fortune to get speakers of decent quality. It is true in audio as in other fields that you usually get what you pay for, and if you really wish to spend a great deal of money on equipment, there are some wonderful expensive models on the market. But if you are trying to put together a budget system, there are a number of good speakers made by reputable manufacturers that retail for under \$100 each. In the range of \$100 to \$150 there are many excellent ones.

10 Remember that you are the one who will listen to the speakers, so buy to please yourself. Tastes in sound differ, and different people actually *hear* differently. Your choice should be made not to agree with a laboratory reviewer or to please your most knowledgeable audiophile friend, but to satisfy you. I hope you will wind up with a well-balanced, smoothly operating speaker that has no undue emphasis in any part of the frequency range, a speaker that will be so neutral you can forget it and concentrate on listening to the music. □

Sound and Your Listening Room

Understanding the nature of acoustics can help you get the most from your speakers

By Robert Berkovitz



THE listening room is one of the key components of a music system. It not only has a major influence on the sounds heard by a listener, but it is generally the element of a system that is hardest to alter or replace. While few listeners would be willing to change or rebuild their homes for acoustical reasons, some of the unwanted effects of listening-room acoustics can be avoided or minimized by less radical means: careful placement of loudspeakers, rearrangement or modification of the room's furnishings, and

optimal selection of the prime listening position. Being able to manipulate these factors to best advantage, however, requires at least a basic understanding of acoustical principles and how they apply to listening rooms.

What Is Sound?

Sound is vibration in a material medium, usually air. Vibrations in liquids, such as water, can be heard directly as sound if one's ears are immersed, but vibrations in solids are heard because they generate vibrations in air that our ears pick up. Sound vibrations occur in waves that move through the medium. Water waves are visible as alternating crests and troughs moving across the surface of the liquid, as on a pond or lake. Sound waves in air are alternating regions or layers of higher- and lower-density air. In fact, changes in barometric pressure could be considered sound that is too low in frequency (around 0.00001 Hz) for us to hear. Typical sound waves are generated by vibrating objects, such as the reed of a wind instrument, the strings and body of a violin, or the membrane of a kettle-drum. Vibrating objects change the density of the air around them, creating waves that reach our eardrums, where they in turn cause vibrations in the small bones of our inner ears that are picked up by our auditory nerves and transmitted to our brains.

The length of a wave is the distance between two successive high or low points—in water this is the distance between two crests or two troughs, and in air it is the distance between two high-density or two low-density regions (see Figure 1). The scientific symbol for a *wavelength* is the Greek letter lambda, λ . Wavelength and *frequency* are closely connected; for any kind of wave, if one of these characteristics is known, the other can be determined with a little arithmetic. For our purposes here it is enough to know that low-frequency sounds have long wavelengths and that high-frequency sounds have short ones. For a convenient frame of reference, take as an example the low-C note in music (such as that at the beginning of Richard Strauss's *Also Sprach Zarathustra*, used as the theme music for the movie *2001*): the frequency of the note is about 32 Hz, and its wavelength is about 35 feet. A note at the commonly accepted upper end of the audio band, with a frequency of 20,000 Hz, has a wavelength of about 0.6 inch.

Like waves in water and electromagnetic waves (light, radio, etc.), sound waves are *reflected* by some surfaces and are *absorbed* by others. If you drop a coin into still water in a sink or bath-

tub, you will see waves spreading out from the point of disturbance (where the coin hits the water) and then reflected back from the sides of the container. Also visible will be the way successive waves from the initial splash pass through the reflected waves without affecting the frequency (spacing of crests or troughs) in either direction. Waves that cross each other are not completely unaffected, however, since frequency is not a wave's only characteristic. A wave also has a specific *amplitude*, which is exactly half the total

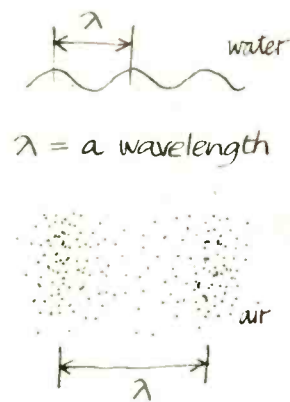
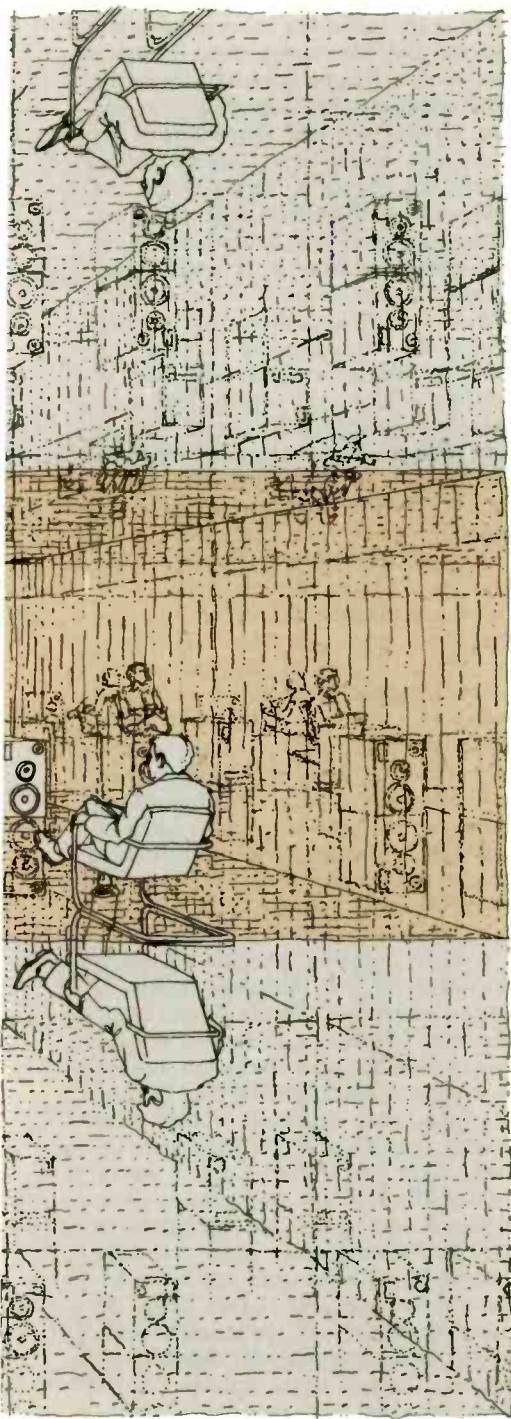


Figure 1

distance between its highest and lowest points. In water, this is the height of the crest above the surface or the depth of the trough below it; in air, it is the degree of compression (increased density) or rarefaction (decreased density) compared with still air. The pitch of a sound is determined by the sound wave's frequency, but its loudness is determined by the wave's amplitude.

A waveform's overall amplitude is its *maximum* variation from the "normal" or unexcited state of the medium (calm water or still air), and this number is always positive. But a wave always involves successive variations in opposite directions (up and down, in and out, denser or thinner), so *at any one point* along the wave it will have either a positive *or* a negative value relative to the normal state—which is why waves can reinforce each other or cancel each other out. Whenever two or more waves meet, the amplitude of the *combined* wave at the point where they meet is the *sum* of the amplitudes of the individual waves at that same point. Adding positive values creates a greater positive value, and adding negative values creates a greater negative value; but adding positive *and* negative values brings the total closer to zero.

Thus, if two water waves meet at their crests, the result is a crest bigger than either (their sum); if they meet at their troughs, the result is a deeper trough. But if a crest meets a trough,



the result will be a smaller crest or a shallower trough. If the amplitudes are exactly equal, but reversed in value (one positive and the other negative), the combined wave will have zero amplitude—the water will be smooth at that point. In just the same way, when a compressed portion of a sound wave meets a rarefied portion of another, they will cancel each other out to some degree, depending on the difference in their variation from the normal air density. If the amount of compression exactly equals the amount of rarefaction, there will be complete cancellation at that point; the air will be neither compressed nor rarefied relative to its normal state, and there will thus be no sound. A listener placed at such a point will hear nothing. Two sounds have canceled each other, producing silence. And this effect is entirely real, not just psychoacoustic. A microphone placed at that same point would also pick up nothing.

Room Effects

Now, what does all this have to do with the way room acoustics affect sound reproduction? The connection is simply that a listening room, being a sort of container, will cause sounds originating within it to reflect back toward the listener, just as the walls of a bowl or tub reflect the water waves set in motion by a coin dropped into the middle. Loudspeakers generate sound waves, and while some of them reach the listener's ears directly, most reach

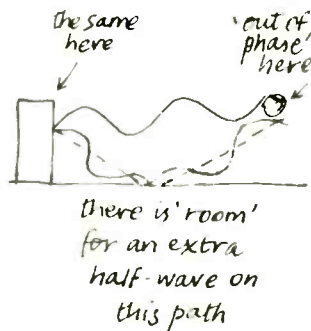
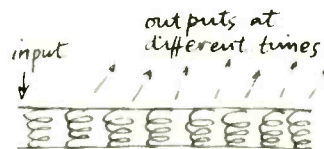


Figure 2

him only after being bounced off the room's floor, ceiling, and/or walls. When two sound waves have the same frequency and amplitude but arrive at the listener's ears at different times, they are more or less *out of phase*—that is, the peaks and troughs of the waveforms don't match in position, though their size and shape are the same. When two identical waves are perfectly out of phase, so that each peak overlaps a trough, they cancel each other out (Figure 2).

A room's size and shape can cause sounds of certain wavelengths to be strongly suppressed because the direct and reflected waves cancel each other out; on the other hand, sounds of different wavelengths may tend to be boosted because reflections of a given wave may be delayed enough to reinforce it. There is no way to avoid such effects completely, but manipulating the locations of loudspeakers and listeners can reduce their severity.

But sound cancellation or reinforcement is not the only room effect. Think of a listening room as a kind of filter that the loudspeakers' sound has to pass through before it gets to your ears. Sending music through such a filter is something like trying to tap out messages in Morse code on a bedspring (Figure 3). The first tap or two might be clear enough, but the reflections that the original tapping sets going in the other springs will soon drown out any message. In a listening room, the very beginning of a sound may pass from



A bedspring (internal cross section). The latest analog delay system. Not good for Morse code or music. Controls sexual (transient) response.

Figure 3

loudspeakers to listener relatively undisturbed, and this is used by the ear and brain to determine the direction the sound is coming from (or its *apparent* source when stereo imaging is taken into account). But in a room with poor acoustics, when reflections of the original sound (off the walls, ceiling, and floor) are joined with the continuing direct radiation from the speakers, the effect is to inundate the listener with conflicting acoustic information and to turn the transient response of the best hi-fi system into acoustic chop suey.

Room walls are good mirrors for sound waves, just as silvered glass is for light. It's a good thing, too. If you've ever shouted yourself hoarse trying to say something to someone in the next chair on a ski lift, you can appreciate what room reverberations contribute to acoustic communication. They concentrate sounds, making them loud enough

to hear easily. The acoustical situation in a typical domestic room is something like the optical situation in an old-fashioned barber shop where the walls are lined with mirrors (see the opening illustration of this article). Wherever you look in such a room, you see images of its contents. Similarly, in an ordinary room you hear images of sounds wherever you listen.

Acoustical Models

You are probably sitting in a room right now. If so, close your eyes for a moment and listen—you should be able to hear images of the room in every direction. Say your name aloud. Imagine that to your left, on the other side of the wall and just as far away from it as you are, another you said your name at exactly the same time. Upside down, above the ceiling, a third you did the same, and so did others in all the other directions—forward, behind, below, to the right—and beyond them still others in rows and columns of rooms extending outward in each direction. It is like sitting in a room faced on all sides with mirrors. Just as endless reflections in parallel mirrors get smaller and dimmer as they apparently recede further and further away, the sound images get weaker and weaker in volume as they become more distant in this imaginary space.

It is possible to use this model to analyze the acoustics of a real room. That is, we can derive valid, useful information about how sound behaves in a room by treating it as if it really were only one of an infinite number of rooms in a lattice that extends forever in all directions. Moreover, for most purposes the model can be adequately represented by a drawing in only two dimensions. Like an architectural plan, such a drawing will show where the acoustic images of a given room are relative to a given listening position with a given original sound source.

Using a computer, we generated such drawings for two different rooms, a large concert hall (Figure 4) and a living room (Figure 5). In each of them a cross marks the spot where the listener is sitting; to indicate scale, the lines of the cross each represent 2 feet. The sound sources—a single performer on stage in the concert hall, a pair of stereo loudspeakers in the living room—are shown as dots surrounded by concentric squares representing their acoustic images. The size of each square represents the sound level of that image as heard by the listener; the sources themselves have the biggest squares, of course. The nesting of squares results from our attempt to represent a three-

dimensional lattice in only two dimensions. Both diagrams show the rooms from above, and the smaller squares inside the larger squares represent the receding images upward and downward from the level of the sound source and the listener's ears. We thus see several generations of reflected acoustic images in all directions, as produced by the original sound bouncing off the walls, ceiling, and floor.

The diagrams involve several simplifications compared with concert halls and living rooms in the real world, but their merit is in their simplicity, which makes certain aspects of sound behavior more obvious. First, the shapes of the rooms are simple rectangles; we have ignored the structural complications of most real rooms. Second, we have assumed that the sound sources are perfectly omnidirectional—that is, that they radiate equally strongly in all directions. (They behave, in other words, like typical high-fidelity loudspeakers below about 250 Hz.) Third,

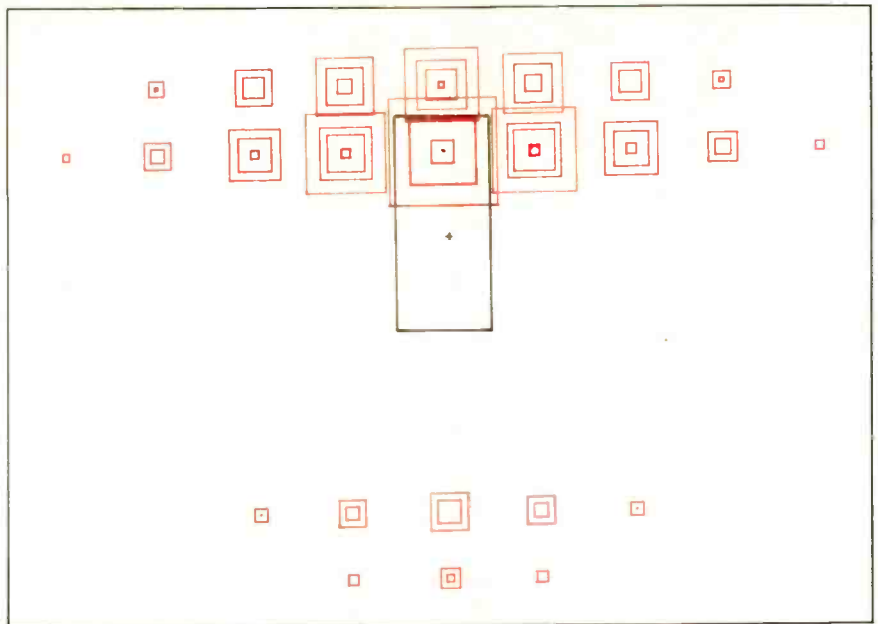


Figure 4. Colored squares show the apparent location and relative loudness of sound images heard by a listener (indicated by cross) near the center of a concert hall measuring 75 feet wide, 140 feet long, and 50 feet high. Source is a single performer on stage (dot).

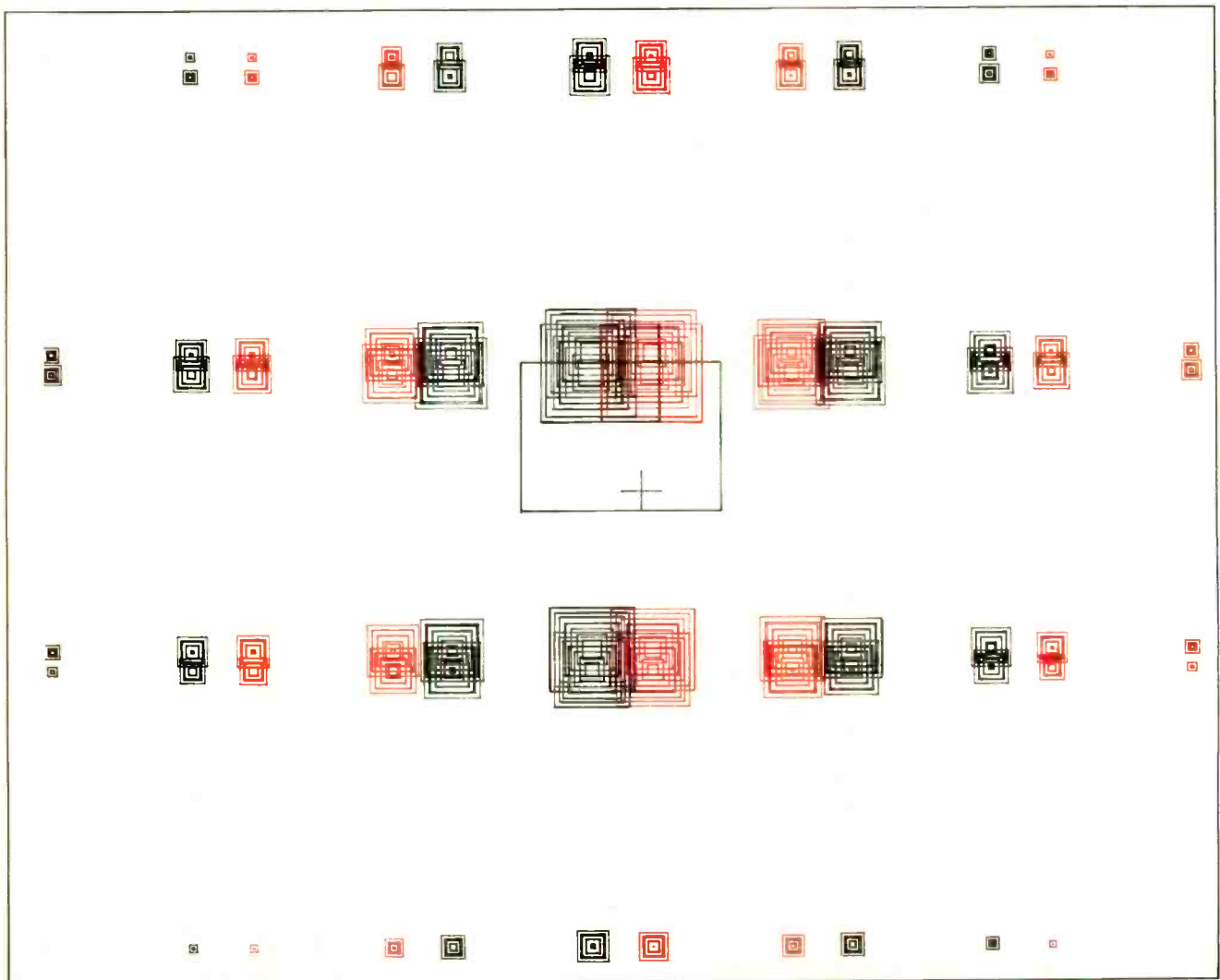


Figure 5. Enlarged-scale diagram of sound images (black and colored squares) heard by listener (at cross) from two speakers in a 15 x 20 x 9-foot living room. Adjacent images are more closely spaced than in Figure 4, with no strong reflections from distant surfaces.

we ignored such complications as seating, curtains, rugs, wall or ceiling moldings and decorations, etc. and simply used the right sound-absorption numbers for each surface of the rooms to give an overall reverberation time typical of a real room of similar size and shape. For the concert hall in Figure 4, we assumed a reverberation time of just over 2 seconds, and for the living room in Figure 5, just under 1 second.

Let's consider the concert hall first. The model closely resembles Boston's Symphony Hall in its overall dimensions and shape—75 feet wide and 140 feet long. We assumed there was a single performer on the stage and placed the listener in a good, central position. There is not a great deal to this pattern, but it does clearly show the hall's strong side-wall reflections and weaker but distinctly noticeable rear reflections. The time scale is important: it takes sound about one-seventh of a second to travel the length of the hall. Thus, strong lateral reflections reach a listener in a good seat about one-fiftieth of a second later than does the direct sound from the stage.

The time scale is very different, to say the least, in a typical home listening room. The room we modeled in Figure 5 is 15 feet wide and 20 feet long with a 9-foot ceiling. The two speaker systems

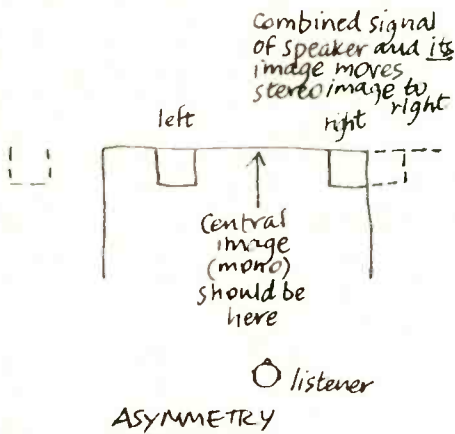


Figure 6

are placed 6 feet apart, centered against the long wall; their woofers are near the floor. As with the concert hall in Figure 4, the room is much simpler than a real room; there is nothing in it except two speakers, treated as point sources, and one listener, and the shape of the room is perfectly rectangular. The images of the left and right speakers are indicated by black and colored squares, respectively.

The most obvious feature of Figure 5 is how similar it is to Figure 4; the main difference, besides there being two sound sources instead of only one, is the

scale. The sound images are distributed in roughly the same pattern as in the concert hall, but all of the distances are much shorter and the delays between reflections are correspondingly smaller. As a result, the concert hall's sense of spaciousness is lacking in the smaller room. This is not because there are more early reflections, because these exist in the concert hall too, but because of the absence of strong delayed reflections. These can be restored by an electronic ambience system—a device that delays the stereo signals for about a fiftieth of a second and then plays them through extra speakers placed in appropriate positions.

Note that while the lattice pattern with a stereo pair of speakers is perfectly symmetrical, if the listener is anywhere in the room except exactly between the speakers, the sound field will no longer be symmetrical *with respect to him*. When a centered source—a singer or instrumental soloist—is being reproduced, the differences in the delay times and levels of each speaker's set of images can interfere with an off-center listener's sense of the directionality of the sound source.

Localization

How does the distribution of stereo sound images throughout the lattice affect perceived localization? After all, when the microphone picked up the original sound source (which, for simplicity, we are still assuming to be a single performer), it was in one place. But during stereo playback, it is coming from two places, plus all the reflected images generated by the room boundaries. So how do we process the reproduced sound in our brains in such a way that we hear something resembling the original sound?

The full answer is still unknown. In some way that we can only speculate about at this time, "the brain takes care of that." What we do know is that the ear-brain system manages to extract directional information from the earliest elements of the sonic information it receives—just the first few thousandths of a second of each tone. Everything that follows, if it has the same tonal character, is treated simply as a continuation of the same sound and more or less ignored as a source of directional information. This seems to be a result of the brain's general tendency to focus on *changes* in sensations as sources of significant data. If sound from the same source arrives at each ear at slightly different times, it is heard as being located off to one side—even if the time difference is only a few microseconds (*millionths* of a second)!

Room reflections can affect sound localization if a reflection is so strong and so quick that the ear and brain confuse it with the original sound, which can happen with certain speaker placements in small rooms. When a speaker system with wide high-frequency dispersion is placed close to a window or a smooth wall surface (for instance, in a corner), the reflected image of its sound may be nearly equal in strength to the direct sound but seem to come from off to the side, causing an overall shift in the localization of the composite stereo image (see Figure 6). The easiest cure for this problem is just to move the speaker away from the reflective surface, causing the reflected image to be delayed and weakened enough to be perceived as a reflection, not a displaced source. An alternative approach is to reduce the high-frequency acoustic reflectivity of the surface next to the speaker by use of acoustic tile, a highly absorbent wall hanging (a rug or tapestry), or some other treatment.

Given the choice, most listeners prefer home listening rooms that are more absorbent than reflective of high frequencies, because the dry, crisp sound that results provides stereo imaging that is undiluted by the effects of room reflections. Manipulating the absorption of middle- and low-frequency

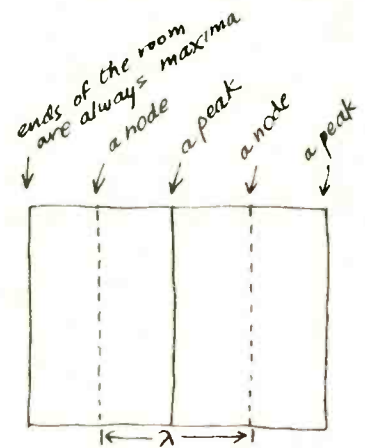


Figure 7

sounds is nearly impossible in a typical home, however, so acoustical problems in these areas are usually best solved through careful placement of loudspeakers and adjustment listening positions—or perhaps by electronic signal processing.

Standing Waves

As we explained earlier, sound waves can cancel out or reinforce each other

SOME DO'S AND DON'T'S OF SPEAKER PLACEMENT

DO follow the manufacturer's recommendations about where your speakers should go. For instance, although many people put bookshelf speakers on the floor, they are usually designed to sound best when installed at least 1½ to 2 feet above the floor. Put only those speakers on the floor that are *meant* to sit there.

DO place speakers with inadequate bass response in or near corners—or at least near one wall. Bringing the speaker and its acoustical mirror image as close together as possible permits maximum reinforcement of low frequencies.

DON'T choose listening positions at distances from room boundaries that are simple fractions of the room's overall dimensions. Bass response suffers if your listening position is, say, exactly one-half, one-third, or one-fourth of the way between two walls or between the floor and ceiling.

DO put speakers near walls that are fairly absorbent (covered with heavy curtains or hangings, faced with cork or acoustical tile, etc.) whenever possible. The next best thing—at least for optimal stereo imaging—is to place a speaker near a surface that produces complex diffuse reflections, such as a bookcase filled with many different-sized books. In any case, aim for a similar acoustical environment around each speaker in the stereo pair.

DO place speakers as near to your seated ear level as possible since most are designed to sound best when heard "on axis." If you can, aim the speakers toward your prime listening location.

DON'T put bookshelf-type speakers on open stands up against a wall. The cavity formed beneath the speaker can cause colorations in the upper bass and lower midrange.

DO use FM interstation noise (with the bass slightly boosted or the treble slightly cut) as a continuous-tone test signal while moving around the room to listen for standing-wave effects and other acoustical problems. Also use a male speaking voice (on the radio, tape, or discs) to check for upper-bass heaviness or boominess caused by the speaker placement.

DO use your amplifier's balance and tone controls—or an equalizer—to optimize the quality of the overall sound and the stereo imaging. Because of the absorptive effects of furniture, rugs, curtains, doors, etc., almost all listening rooms are acoustically asymmetrical at middle and high frequencies.

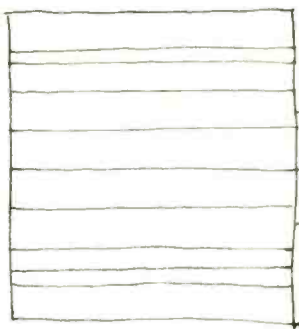
DON'T think it's wrong to experiment with different speaker and listening locations. If the rules don't work in your room, bend them.

depending on their wavelength, amplitude, direction, and phase. In any room, certain wavelengths of sound are exact fractions or multiples of one or more of the dimensions of the room. When a tone having one of these wavelengths is sounded continuously, the room boundaries will bounce the sound waves back and forth so that they fall over their own previous path. At perfectly regular intervals—so precise that they can be tested and marked out on the floor—there will be zones of cancellation or reinforcement where sustained sounds of the appropriate frequency are either extra loud or cannot be heard at all. (The effect does not occur with brief sounds, called transients, that are over before their reflections have had time to reach the ears.)

The dead spots are called *nodes* (see Figure 7), and the whole phenomenon is often called a *standing wave* (because the peaks and nodes are constant in position). The particular tones that produce the effect in a given room, identified by their frequency (or wavelength), are called *eigentones* (the German word *eigen* means something specific to an individual and signifies in this case that the standing-wave tones are specific to each room). The frequencies at which nodes are most likely to be noticed are those at the low end of the audio range, below 200 Hz or so. In most rectangular listening rooms, low-bass nodes fall along lines drawn across common fractions of the room dimensions: 1/8, 1/6, 1/4, 3/8, 1/2, 5/8, 3/4, 5/6, and 7/8 (see Figure 8). Where these lines along the length, width, and height of the

room cross, the quietest dead spots will form. The portions of the room that are away from these intersections will provide clear reproduction of the corresponding frequencies.

The implications for loudspeaker and



There seems to be
a line missing;
Students?

Figure 8

listener placement should be obvious: if you are listening in a node, you will hear little or no sound at the frequency associated with that node, and the reverse is true if you are listening in the peak points (anti-nodes) of standing waves. Interestingly, in a rectangular room there are exactly eight points where there can be no nodes, where speakers will excite the air most efficiently at all frequencies, and where a listener can be assured of hearing all frequencies fully. These are the eight

corners of the room—awkward places to listen from, to be sure, but very effective placements in cases where a speaker needs help in order to deliver adequately strong bass.

Corner placement is an extreme measure, however, since it can help *too* much—the bass response can be boosted to the point where it is hard to take. It works best for minispeakers that cannot reproduce bass adequately because they are simply too small to move enough air. Most good loudspeakers that are bookshelf-sized or larger, however, are designed to give the most uniform frequency response when they are placed against a wall away from a corner—or, in some cases, at the junction of a wall and the floor. Put into a corner, such speakers will have exaggerated bass; they will sound boomy and bottom heavy, not realistic.

The accompanying box lists some do's and don't's of speaker placement to avoid the various undesirable side effects of room reflections and absorption. There is no *one* solution that will be right for every room or every system, but understanding some of the reasons why listening rooms can have such a strong influence—for good or bad—on the ultimate sound quality of a music system should help you to find the optimal solution for *your* situation. □

Robert Berkovitz is an audio-industry veteran who has worked for Jensen, Dolby, and Acoustic Research. He is now an independent consultant in acoustic measurement, signal processing, and audio applications of computers.

The Basic Repertoire

By Richard Freed

Conductor Charles Munch (photo by Joe Petrovec)



FOR some years critic Richard Freed, a contributing editor of *STEREO REVIEW*, has listened to all available recordings of the nearly two hundred symphonic works that form the essential core of orchestral programs and classical record collections, selecting those versions he considered the best. We have published his choices in a pamphlet, which we have updated annually, and we are now publishing his selections of the best current recordings of the *Basic Repertoire* in a regular series in the magazine. If you want the pamphlet, the most recent updating (1982) is available for \$1 (check or money order) and a stamped (40¢) self-addressed No. 10 envelope; send to *Basic Repertoire*, P.O. Box 506, Murray Hill Station, New York, N.Y. 10156.

All the selections are two-channel analog stereo discs unless otherwise indicated by one of our usual symbols: \bullet for a digitally mastered analog disc, \odot for a digital Compact Disc, C for a stereo cassette, and, in a few instances, M for a mono recording.

\square **DEBUSSY: *La Mer*.** Karajan's third recording (Angel S-37438, C 4XS-37438) is especially stunning in Mobile Fidelity's half-speed remastering (MFSL 1-513). The 1956 Charles Munch/Boston Symphony version has responded impressively to similar treatment (RCA AT1-4157), but the best-sounding recording of all is the new one by Leonard Slatkin with the Saint Louis Symphony (Telarc \bullet DG-10071). Reiner's (RCA AGL1-1523, C AGK1-1523) and Martinon's (Angel S-37067, C 4XS-37067) are both first-rate performances, if less spectacularly recorded.

\square **DEBUSSY: *Nocturnes*.** Almost equal in appeal are the evocative Ormandy recording (CBS MG 30950), the idiomatic Martinon one (Angel S-37067, C 4XS-37067),

and the opulently recorded Haitink version (Philips 9500 674, C 7300 769, C 400 023-2). Stokowski's oldish one on Seraphim (S-60104) is not a bad buy.

\square **DOHNÁNYI: *Variations on a Nursery Song*.** First choice among the five fine versions now available has to be Earl Wild's with the composer's grandson Christoph von Dohnányi conducting (Quintessence PMC-7054, C P4C-7054). The one by pianist Béla Siki and conductor Milton Katims has the advantage of being coupled with the only current recording of Dohnányi's orchestral Suite in F-sharp Minor (Turnabout TV 34623).

\square **DUKÁS: *The Sorcerer's Apprentice*.** Leonard Bernstein (CBS MS 6943) and Jean-Pierre Jacquillat (Angel S-36518) give the most satisfying performances. On cassette, there's the economical Munch reissue (RCA Victrola C ALK1-4469) or the glittering recent David Zinman recording (Philips C 7300 677).

\square **DVOŘÁK: *Cello Concerto in B Minor*.** Pierre Fournier, with George Szell and the Berlin Philharmonic, is at once patrician and impassioned in this work (DG Privilege 2535 106, C 3335 106). Maurice Gendron's reading with Haitink is remarkably fresh-sounding, and he plays two additional Dvořák pieces (Philips Festivo 6570 112, C 7310 112). In Mstislav Rostropovich's six fine recordings of this work, his most sympathetic conductors are Václav Talich (Quintessence M PMC-7142, C P4C-7142) and Sir Adrian Boult (Seraphim S-60136, C 4XG-60136).

\square **DVOŘÁK: *Symphony No. 7, in D Minor*.** Carlos Païta's majestic, sumptuously recorded version (Lodia \bullet LOD 782, C

LOC 782) is expensive but worth the price. The radiant one by Pierre Monteux now shows its age but is quite a buy (London STS 15157). Also first-rate: the luminous Ormandy recording (RCA ARL1-3555, C ARK1-3555), the fierce one by Rostropovich (Angel SZ-37717, C 4ZS-37717), and the well-balanced Colin Davis version (Philips 9500 132, C 7300 535).

\square **DVOŘÁK: *Symphony No. 8, in G Major*.** The lambent stereo Bruno Walter version remains uniquely appealing (Odyssey Y 33231, C YT 33231), but the gorgeously recorded new one by Lorin Maazel and the Vienna Philharmonic (DG \bullet 2532 034, C 3302 034) comes very close to it, and the economical cassette reissue of the brilliant Munch/Boston reading is perhaps closer still (RCA Victrola C ALK1-4628).

\square **DVOŘÁK: *Symphony No. 9, in E Minor* ("From the New World").** With the present abundance of fine versions, it is not easy to narrow a choice down to this top half-dozen: a galvanic, brilliant new one by James Levine and the Chicago Symphony (RCA \bullet ATC1-4248, C ATK1-4248, C RCD1-4552); Enrique Bátiz and the London Philharmonic (Varèse Sarabande \bullet VCDM 1000.190); Jascha Horenstein and the Royal Philharmonic (Quintessence PMC-7001, C P4C-7001); István Kertész and the London Symphony (London Jubilee JL 41022, C JL5 41022); Eugene Ormandy and the Philadelphia Orchestra (RCA ARC1-2949, C ARK1-2949); Carlo Maria Giulini and the Chicago Symphony (DG 2530 881, C 3300 881).

\square **ELGAR: *Enigma Variations*.** The new Andrew Davis recording (CBS \bullet IM 37755) benefits from spacious sound, but Sir John Barbirolli's final one of this work strikes me as the best of all, and it comes with a glorious account of Elgar's *Cockaigne Overture* (EMI/UK import ESD 7169, C TC-ESD 7169). The recordings by Bernard Haitink (Philips 6500 481) and Sir Adrian Boult (Angel S-36799, C 4XS-36799) are nearly as fine.

\square **ENESCO: *Romanian Rhapsody No. 1*.** Constantin Silvestri and the Vienna Philharmonic bring out all the charm and brilliance of this lovable piece, and the fine 1959 recording doesn't show its age (Quintessence PMC-7070, C P4C-7070). Antal Dorati's Detroit Symphony remake (London CS 7119, C CS5 7119) and the latest Ormandy version (in RCA CRL3-0985) are almost as fetching.

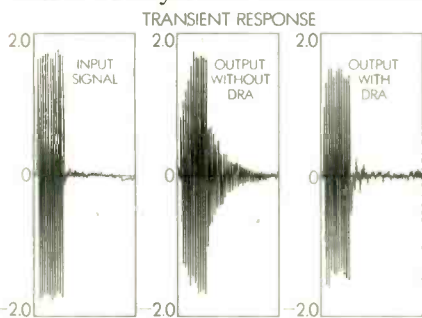
\square **FALLA: *Nights in the Gardens of Spain*.** With both of pianist Gonzalo Soriano's recordings gone now, the most appealing among the few remaining is the earlier of two by Alicia de Larrocha, with Jesús Arámbarri conducting (Turnabout TV 34761, C CT-2278).

\square **FALLA: *The Three-Cornered Hat*.** The complete score of this ballet seems to be superseding the two suites in the concert hall, and Enrique Bátiz has given us a virtually unsurpassable recording of it (Varèse Sarabande \bullet VCDM 1000.170). Eduardo Mata's recording is available on cassette (RCA C ARK1-2387). \square

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Thereby eliminating distortion which causes music to lose clarity and accuracy of reproduction.

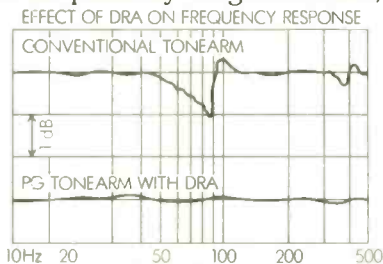
As if this weren't thrilling enough, there's also an exciting subplot. The DRA eliminates acoustic feedback that results when the turntable is too close to speakers played at high volume.



How the Dynamic Resonance Absorber causes all this to happen is actually quite simple, as most acts of genius usually are.

The DRA is composed of a damper made of extremely dense butyl rubber enclosed in a weighted collar on the tonearm.

Working within the precisely weighted collar, the butyl rubber acts just like a spring. When the pipe of the Polymer Graphite™ (PG) tonearm vibrates, the "spring" compresses and simultaneously soaks up vibrations.



That's why Pioneer can virtually promise that muddy reproduction is an out-of-date story. And why transient response is far more accurate. In fact, as you can see on the chart, the cartridge output (with DRA) closely resembles the original input.

Furthermore, frequency response, as you can also see, is tremendously flat.

But, while the Dynamic Resonance Absorber is a real blockbuster, it's not the only story here.

Every Pioneer turntable also features a Stable Hanging Rotor™ that improves stability by reducing friction which decreases wow and flutter.

A zero-clearance dust cover allows you to place the turntable flush against a wall, yet still open it all the way.

And another convenience item: all controls are located outside the dust cover.

In addition, the PL-S70 (shown here) has two other ease-of-operation features: an automatic disc size selector (ADSS) and auto repeat function.

Naturally, you'll want to audition each new Pioneer turntable with Dynamic Resonance Absorber at your earliest convenience.

If only to convince yourself that this story falls in the non-fiction, not the science-fiction category.

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sound, Hitachi gives you a choice — vertical or front load players. With 10 key or two key programmability and visible or hidden disc design. Both offer advanced features like forward and reverse, cue, repeat and auto search for a unique sound experience. Now you can

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Best of the Month

Stereo Review's Selection of Recordings of Special Merit

ZZ Top's "Eliminator": Hard-Rocking, Low-Riding, Sleazy, and Funny

I HAVE this fantasy about bursting through the doors of a road-house bar on a Harley, grabbing two cold beers and the best-looking girl in the place, and riding away in a swirl of gravel and dust. If I ever work up the moxie, I want ZZ Top's new album, "Eliminator," playing when I do it.

At its best, ZZ Top *defines* "raw power": Billy Gibbons's fuse-blowing,

fuzztone blues-rock chords, Dusty Hill and Frank Beard slamming out that knee-buckling backbeat. Even their *names* sound burly. And "Eliminator" is ZZ Top at its best: hard-rocking, low-riding, sleazy, and frighteningly funny. It may also be something of a landmark. On *Got Me Under Pressure*, the band finally answers the question of what kind of woman could be a match

ZZ Top: left to right, Billy Gibbons, Frank Beard, and Dusty Hill



for ZZ Top. Turns out she likes French cuisine, art museums, and "flippin' out with great danes," and she's apt to take out a nightstick and beat her man by the roadside "real, real bad" when things don't suit her. You *know* a band that could take that can play great rock-'n'-roll.
—Mark Peel

ZZ TOP: *Eliminator*. ZZ Top (vocals and instrumentals). *Gimme All Your Lovin'; Got Me Under Pressure; Sharp Dressed Man; I Need You Tonight; I Got the Six; Legs; Thug; TV Dinners; Dirty Dog; If I Could Only Flag Her Down; Bad Girl.* WARNER BROS. 23774-1 \$8.98, ©23774-4 \$8.98.

Elegant, Passionate, and Committed Mozart from Sir Clifford Curzon

BRITISH pianist Sir Clifford Curzon, who died last September 1 at the age of seventy-five, kept returning throughout his career to several of Mozart's late piano concertos, especially the last one, No. 27, in B-flat Major. He made three recordings of this work: one in 1964 with George Szell and the Vienna Philharmonic, paired with Concerto No. 23; one in 1967 with István Kertész and the London Symphony, paired with No. 26 (the *Coronation* Concerto); and one in 1970 with Benjamin Britten and the English Chamber Orchestra, paired with No. 20, in D

Minor. The 1964 and 1967 recordings were never released, and the 1970 set has only now been issued by London Records. It is a remarkable pair of performances, but Curzon agreed to the release only on condition that he first be allowed to make still another recording of No. 27 embodying his latest interpretive refinements, this time coupled with No. 21. Illness on his part and difficulties in engaging a compatible conductor delayed the project, and the pianist died before it could ever be completed.

London's decision to release the album posthumously was certainly a wise one, for it offers an ideal of modern-style Mozart piano performance. Curzon's elegant playing and unerring sense of phrase and nuance, together with the urgency and underlying nervous intensity of the orchestral contribution, give these readings immense vitality and passionate commitment. Britten's sympathetic accompaniment comes as no surprise given his similarly distinguished Mozart symphony recordings with the English Chamber Orchestra. Moreover, the work of both soloist and orchestra is superbly enhanced by the airy acoustic ambience of the Maltings, the converted brewery that served as the concert hall for Britten's famed Aldeburgh Festival. And everything has been flawlessly captured by the production team.

The *Don Giovanni* aspect of the opening pages of the D Minor Concerto gets its full due here. The ensuing solo passages are played with the utmost fluency and subtlety of dynamic shading, and there is a singularly impressive rendering of the Beethoven cadenza. The

Romanza slow movement is characterized by a melting tenderness, and the finale comes off as a wonderful amalgam of fierceness and elegance. Curzon and Britten bring the greatest spirit and sophistication to Mozart's last concerto. Especially noteworthy are the handling of the minor-key episode in the opening movement, the soloist's exquisite phrasing throughout the slow movement, and the keyboard runs in the finale, which Curzon succeeds in making go "like oil" (in Mozart's own words). This is an altogether exceptional disc—a must for any collection of Mozart piano concertos. —David Hall

MOZART: *Piano Concerto No. 20, in D Minor (K. 466); Piano Concerto No. 27, in B-flat Major (K. 595).* Sir Clifford Curzon (piano); English Chamber Orchestra, Benjamin Britten cond. LONDON CS 7251 \$10.98, ©CS5 7251 \$10.98.

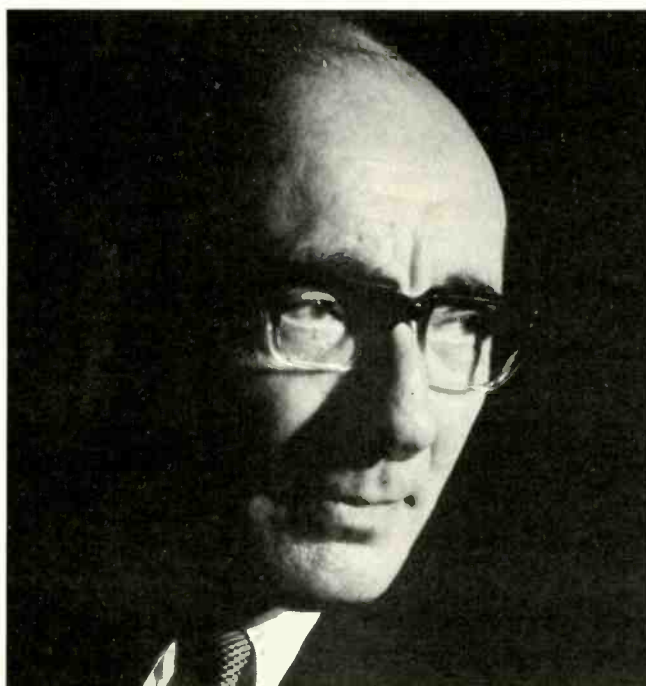
Vintage Joan Baez, Recorded in Concert In the Early Sixties

LISTENING to "Very Early Joan," an exquisite two-record Vanguard set of early, previously unreleased concert recordings by Joan Baez, caused an almost cinematic wash of images in my mind's eye: Baez leading thousands in singing *We Shall Overcome* at a massive political rally; Baez reacting angrily to Al Capp's joltingly witty "Joanie Phoenie" cartoon character; a slick magazine layout with a photo of Baez sitting on the floor in the administrative office of her school for non-violence; Baez strolling on stage as part of the Rolling Thunder Revue; Baez dressed as Bob Dylan's twin for a Rubin "Hurricane" Carter benefit concert; . . .

But the twenty-four performances preserved in this set were recorded during fifteen concerts between 1961 and 1963—long before Rolling Thunder, before the invention of heavy-metal, before "gay" generally meant something other than lighthearted, before Watergate, and before a lone folk singer out on stage with nothing but a guitar was suddenly deemed uncool, old-fashioned, and somehow even quaint.

If you have not listened to early Baez since her first records came out, you will have forgotten, as I had, what an extraordinary voice hers was then, how powerful and penetrating it was, what exceptional presence, pitch, and diction she had, how her shimmering, rabbit-quick vibrato hung in the air like jas-

The late British pianist Sir Clifford Curzon



London Records



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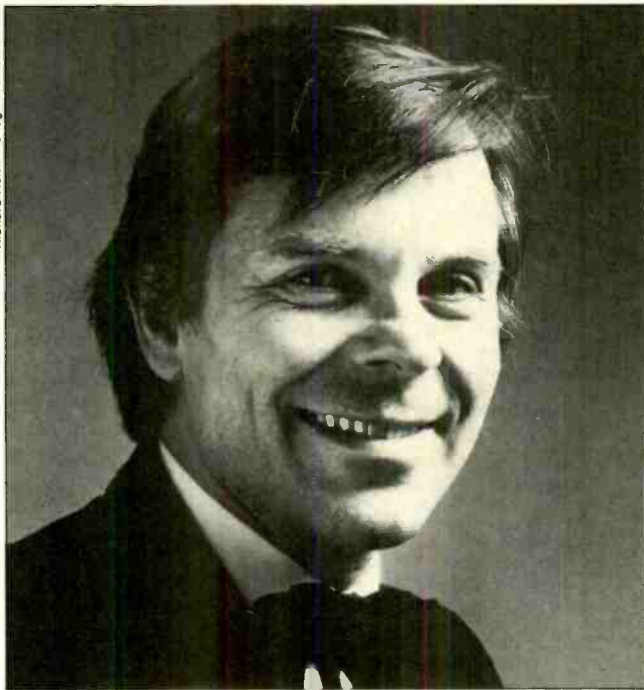
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Joan Baez



Stephen Bishop-Kovacevich

mine on a summer night. It is all here, though, in a breathtaking set that focuses more on her ballads than on her activist material, which grew more tiresome, didactic, and sanctimonious through the years. Some of it, such as *Tears in My Eyes*, punctuated with Baez's filigree guitar work, is so moving it will cause your bottom lip to tremble. Other songs, such as *In the Pines* and *Come All Ye Fair*, will simply chill your bones. And still others, including Baez's wicked send-ups of Peter, Paul, and Mary, prove she had as good an ear for humor as for music.

Although it is hard to believe we let it happen, folk songs in the balladeer tradition went out of style in the mid-Sixties, and Vanguard held off releasing these recordings until, as the liner notes say, "a more favorable time." Those of us who always loved folk music have maintained for quite a while that another folk revival is under way, even if *Time* magazine and the evening news haven't caught on to it yet. I can think of no better way of officially ushering it in than with "Very Early Joan," a spell-binding album by one of the most compelling and influential popular artists of our time.

—Alanna Nash

JOAN BAEZ: *Very Early Joan*. Joan Baez (vocals, guitar); Pete Seeger (vocals, in *Lonesome Valley* and *The Riddle Song*). *Last Night I Had the Strangest Dream*; *Willie Moore*; *She's a Trouble Maker*; *Tears in My Eyes*; *Somebody Got Lost in a Storm*; *The Water Is Wide*; *Man of Constant Sorrow*; *Freight Train*; *Lady Gay*; *Johnny Cuckoo*; *Lonesome Valley*; *The Riddle Song*; *Streets of Laredo*; *Railroad*

Bill; *My Good Old Man*; *Little Darlin'*; *In the Pines*; *Pilgrim of Sorrow*; *Where Have All the Flowers Gone*; *Rambler Gambler*; *Come All Ye Fair*; *Hallowed Be Thy Name*; *Twelve Gates to the City*; *Silver Dagger*. VANGUARD VSD-79446/7 two discs \$12.98.

An Exceptional Schubert B-flat Piano Sonata from Stephen Bishop-Kovacevich

WE can be happy and grateful that Hyperion, a small but enterprising independent British label, was able to borrow Stephen Bishop-Kovacevich from Philips to record Schubert's Piano Sonata in B-flat Major for the benefit of Amnesty International. Not only is the cause one with which hardly anyone is likely to be unsympathetic, but two of Philips's other star pianists, Claudio Arrau and Alfred Brendel, have recorded Schubert's valedictory sonata in recent years, so it is not too likely that Bishop-Kovacevich would have done it for the same label. We would otherwise, then, have missed an exceptional realization of a great work.

Bishop-Kovacevich is so unquestionably "inside" this music that comparisons with Arrau and Brendel, or with any other pianist, are almost beside the point. There are moments in which his playing reminded me a bit of Clara Haskil's recording of the work (which

Philips might do well to reissue), although Haskil did not take the big first-movement repeat, as Bishop does, and his approach overall is a good deal more dramatic than hers. The scherzo is less precipitous in Bishop's reading, for example, but its trio is uniquely radiant. The restraint that tempers his intensity in the first two movements is abandoned in the all-stops-out finale. In his own way, Bishop's heart beats with Schubert's, which may be the least as well as the most one can ask from a performer of this music. And one unarguable advantage his version enjoys over all others is the quality of the sound—a warmly realistic digital recording and, thanks to Direct Metal Mastering, impeccable surfaces. —Richard Freed

SCHUBERT: *Piano Sonata in B-flat Major (D. 960)*. Stephen Bishop-Kovacevich (piano). HYPERION Ⓢ A66004 \$13.98 (from Harmonia Mundi USA, 2351 Westwood Boulevard, Los Angeles, Calif. 90064).

Carlos Santana's Exuberant "Havana Moon": Soulful, Fresh, and Personal

BORN in Mexico, the son of a mariachi singer, Carlos Santana honed his chops in seedy Tijuana night clubs before moving to San Francisco in the late Sixties. His new album, "Havana Moon," reaches back to the music he

Best of the Month

Recent selections
you might have missed

POPULAR

- **Angela Bofilli: *Too Tough***. ARISTA AL 9616. "Polished, powerful, and pretty." (June)
- **Phil Collins: *Hello, I Must Be Going!*** ATLANTIC 80035-1. "... an eclectic, well-crafted album ..." (June)
- **Michael Jackson: *Thriller***. EPIC QE 38112. "Lives up to its title." (April)
- **Kate and Anna McGarrigle: *Love Over and Over***. POLYDOR 422-810 042-1 Y-1. "... an aural delight ..." (May)
- **John McLaughlin: *Music Spoken Here***. WARNER BROS. 23723-1. "... further explores and enlarges the acoustic/electric synthesis ..." (May)
- **Liz Meyer: *Once a Day***. ADELPHI AD 2009. "From toe-tappin' joy to faded love in an album of classic country music." (April)
- **Lou Reed: *Legendary Hearts***. RCA AFL1-4568. "Passionate and inspiring rock-and-roll." (July)
- **Simon & Bard Group: *Tear It Up***. FLYING FISH FF 262. "Sophisticated music played with feeling." (July)
- **Mel Tillis: *After All This Time***. MCA MCA-5378. "... one of country music's real vocal masters." (July)

CLASSICAL

- **Bartók: *String Quartets Nos. 1-6***. CBS 13M 37857. "The Juilliard Quartet's third Bartók set ranks among the very finest." (May)
- **Beethoven: *Piano Sonatas Nos. 4 and 11***. CBS M 36695. "Murray Perahia's first Beethoven recording is uncommonly convincing." (April)
- **Cesti: *Orontea***. HARMONIA MUNDI HM 1100/02. "Early Venetian opera returns to life in a fabulous performance. ..." (April)
- **Mozart: *Opera Arias***. PHILIPS 6514 319. "Marvelous music, gorgeous singing by Kiri Te Kanawa." (July)
- **Poulenc: *Solo Piano Music***. EMI/PATHE MARCONI C 069-73101. "A glowing new collection from Gabriel Tacchino ... irresistible." (June)
- **Purcell: *The Fairy Queen***. DG ARCHIVE 2742 001. "... a peak in the performance of English Baroque music." (March)
- **Rachmaninoff: *Symphony No. 3; The Isle of the Dead***. DEUTSCHE GRAMMOPHON 2532 065. "Definitive interpretations by Lorin Maazel, stunning digital sound." (July)
- **Shostakovich: *Symphony No. 5, Op. 47***. LONDON LDR 71051. "State-of-the-art sound, illuminating reading." (May)
- **R. Strauss: *Death and Transfiguration; Four Last Songs***. ANGEL DS-37887. "Profoundly satisfying ..." (June)



Carlos Santana

cut his teeth on—the blues, rock-and-roll, mariachi. Divided between classics or near-classics (such as the Chuck Berry title song and Bo Diddley's *Who Do You Love*) and idiomatic blues, r-&-b, and Latin originals by Santana himself, "Havana Moon" is a more personal statement than his recent commercial efforts and the best thing I've heard from him in a long time.

That "Havana Moon" manages to avoid sounding like a museum piece or a plastic, prefab review of "authentic American music" and instead captures the music's real exuberance is largely due to the impeccable sidemen: Booker T. Jones and the Fabulous Thunderbirds, a Texas blues band. Booker T.'s organ gives an overriding soulfulness to every track, and no one plays the blues more freshly and faithfully than the T-Birds. Jerry Wexler and Berry Beckett's production is right on the money: there's a big, fat sound that's exquisitely balanced.

The most interesting thing about the album is the way Santana's roots, suggested by his instrumental tributes to

Lightnin' Hopkins and John Lee Hooker (*Lightnin'* and *Mudbone*), are exposed in his original numbers, such as *Tales of Kilimanjaro*. (The most annoying thing is Willie Nelson's dreadful vocal on *They All Went to Mexico*—Nelson sounds as if he were just awakened from a nap, unable to find the beat and irritatingly nasal.) The album concludes with a performance by Carlos's father, José Santana, and a ten-piece mariachi band of the nearly fifty-year-old *Vereda Tropical*, a song the younger Santana recalls his father serenading his mother with after a quarrel. Sharing this memory and this music is, like all of "Havana Moon," a gift from Carlos Santana. —Mark Peel

SANTANA: *Havana Moon*. Carlos Santana (guitar); Booker T. Jones (vocals, keyboards); the Fabulous Thunderbirds (vocals and instrumentals); other musicians. *Watch Your Step; Lightnin'; Who Do You Love; Mudbone; One with You; Ecuador; Tales of Kilimanjaro; Havana Moon; Daughter of the Night; They All Went to Mexico; Vereda Tropical*. COLUMBIA FC 38642, © FCT 38642, no list price.

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Popular Music

News Briefs

Richard Young/Retina Ltd



Touring buddies and movie co-stars Elton John and Rod Stewart

THE British rock star Rod Stewart is in the midst of the biggest tour of his two-decade-long career. In support of his latest album, "Body Wishes" (see review on page 80), the tour includes twelve European countries, Australia, New Zealand, Japan, Southeast Asia, and Israel, all in a seven-month period. It is the first time Stewart has performed in a number of major outdoor arenas (capacity 30,000 to 50,000), and for the first time his band features a second keyboard, played by newest member John Corey.

THE commercialization of Columbia's megaplatinum act Journey continues apace. First a video game, "Journey Escape," was created in the band's honor, and now they are set to become the first rock stars to be the subject of a documentary film made by the National Football League. NFL Films is treating Journey exactly as they would treat a football team. Their filmmakers are traveling with the guys on their current tour and shooting concert footage as well as behind-the-scenes stuff after

The grand finale is planned for Hawaii in December.

Although the "Body Wishes" tour skips the mainland U.S., Stewart is planning a 1984 tour in this country with none other than **Elton John**. The British superstars will not only appear together in concert, but they will be releasing a feature-length comedy film patterned after the old Bob Hope/Bing Crosby "Road" pictures. If album sales by these performers are any indication, the forthcoming movie should be called *The Road to Riches*. **P.W.**

the gigs. (If the video game is to be believed, the band members spend most of their time running a gantlet of "shifty-eyed promoters.") One of the highlights of the movie, still untitled, will be "the voice of the NFL," John Facenda, who will provide the narration when the film is aired as a TV special in the fall. What's the connection between a bunch of high-decibel arena rockers and football? According to NFL Films' producer/director Steve Sabol, Journey is a lot like the Dallas Cowboys: "Both are well organized and

well disciplined." Of course, Journey doesn't have those lissome cheerleaders the Cowboys have. Yet. **S.S.**

ONCE one-third of the popular soul group LaBelle, **Nona Hendryx** ran into some opposition when she began striving for a more rock-oriented sound. With her new album, "Nona," on RCA, Hendryx may finally have shaken the "soul sister" tag that lingered after LaBelle's demise in 1976. *Keep It Confidential*, a single from the al-

RCA Records



bum, is climbing the charts at this writing.

"In the last few years, I've found out about myself and the kind of music I want to make," Hendryx told me recently. "After LaBelle, I had an album on Arista International that was never released. They wanted me to be 'more girly,' poppier. I wanted to do more rock material."

"Nona," a mixture of rock,

funk, and techno-pop, features a wildly varied lineup of guest artists, including Nile Rodgers, Valerie Simpson, Tina Weymouth, Nancy Wilson, Laurie Anderson, and former bandmate Patti LaBelle. "I just went and listened to them in concert," Hendryx said. "I'd go backstage and ask if they'd like to play this part for the album—they were all open to just being asked."

Not only did Hendryx co-produce (with the funk-jazz group Material), co-write, and perform for her album, but she has been involved in all aspects of the video made of the *Keep It Confidential* single, which features several Alvin Ailey dancers and choreography by Kenneth Ard of Broadway's *Cats*. With all the star power involved in Hendryx's projects, confidentiality is unlikely. **P.W.**

JAZZ bandleader **Count Basie**, drummer **Kenny Clarke**, and tenor saxophonist **Sonny Rollins** all received this year's prestigious Jazz Master award from the National Endowment for the Arts. The award is in recognition of "lifelong contributions to jazz" and is presented as a \$20,000 fellowship to each artist, to be applied to any project of his choosing in the area of jazz. This is only the second year of Jazz Master awards. Last year's winners were Roy Eldridge, Dizzy Gillespie, and Sun Ra.

While Basie, Clarke, and Rollins have earned the title "Master," jazz vocalist **Sylvia Syms** can add "Doctor" to her name. Last spring the Northwood Institute in Dallas granted her the honorary degree of Doctor of Humanities. Syms, whose last album, "Syms by Sinatra" on Reprise, was produced by one of her biggest fans, **Frank Sinatra**, has led musical-theater workshops at the institute for the past six years. **□**

Disc and Tape Reviews

By CHRIS ALBERTSON • PHYL GARLAND • ALANNA NASH • MARK PEEL
PETER REILLY • STEVE SIMELS • JOEL VANCE

JOAN ARMATRADING: *The Key*. Joan Armatrading (vocals, guitar); instrumental accompaniment. *Call Me Names; Drop the Pilot; Everybody Gotta Know; Tell Tale; What Do Boys Dream; Foolish Pride; Bad Habits*; and four others. A&M SP-4912 \$8.98, © CS-4912 \$8.98.

Performance: **Clinical**
Recording: **Good**

Joan Armatrading baffles me. She writes of love affairs with perception and detail, but she sings as if she's giving a recital; she never bites into a song. The production and instrumentation of her albums (loud drumming, berserk guitars) is almost offensively overbearing, but her approach remains

scientific; the emotions of her characters are reported, not felt. Her new assortment of characters includes a man who chases all the girls (*Tell Tale*), a couple who exchange sadomasochistic roles (*Call Me Names*), and an emotional loan shark (*The Dealer*). There are songs about romance itself but they are unisexual, even asexual. I'm afraid Armatrading's clinical approach leaves me as uninterested in her music as she seems to be in her subject matter. *J.V.*

STEVE ARRINGTON'S HALL OF FAME—I. Steve Arrington's Hall of Fame (vocals and instrumentals). *Nobody Can Be You; You Meet My Approval; Last Nite/Nite Before; Strange (Soft & Hard); Weak at the Knees*; and three others. ATLANTIC 80049-1 \$8.98, © CS 80049-1 \$8.98.

Performance: **Lots of handclaps**
Recording: **Satisfactory**

"Hall of Fame" is a misnomer, for there is little here that is memorable. At most, Steve Arrington (formerly of Slave) and his gang of seven generate modest interest by simulating the coy entreaties of lovers (*Last Nite/Nite Before*) or by coming on with some gritty innuendoes (*You Meet My Approval*). The octet is at its best rapping or

handclapping. When it comes to melody, some of these tunes have a haunting sweetness, but the musicians seem to lack the imagination or knowledge to develop them sufficiently. There's something to work with here, but there's also enormous room for improvement. *P.G.*

JOAN BAEZ: *Very Early Joan* (see Best of the Month, page 64)

PAUL BARRÈRE: *On My Own Two Feet*. Paul Barrère (vocals, guitars); vocal and instrumental accompaniment. *Sweet Coquette; High Roller; Love Sweet Love; Who Knows for Sure; She Lays Down the Beat; Fortune Cookie*; and three others. MIRAGE 7 90070-1 \$8.98, © CS-90070-1 \$8.98.

Performance: **Little Feat redux**
Recording: **Good**

Several times during the first listening of Paul Barrère's first solo album, you think there's been a mistake, that what you have is actually an old Little Feat album. Although it's natural for Barrère to bring something of his old band with him, since he was such an integral part of it, the gut feeling you get from this album is that Barrère means to continue the band's basic sound

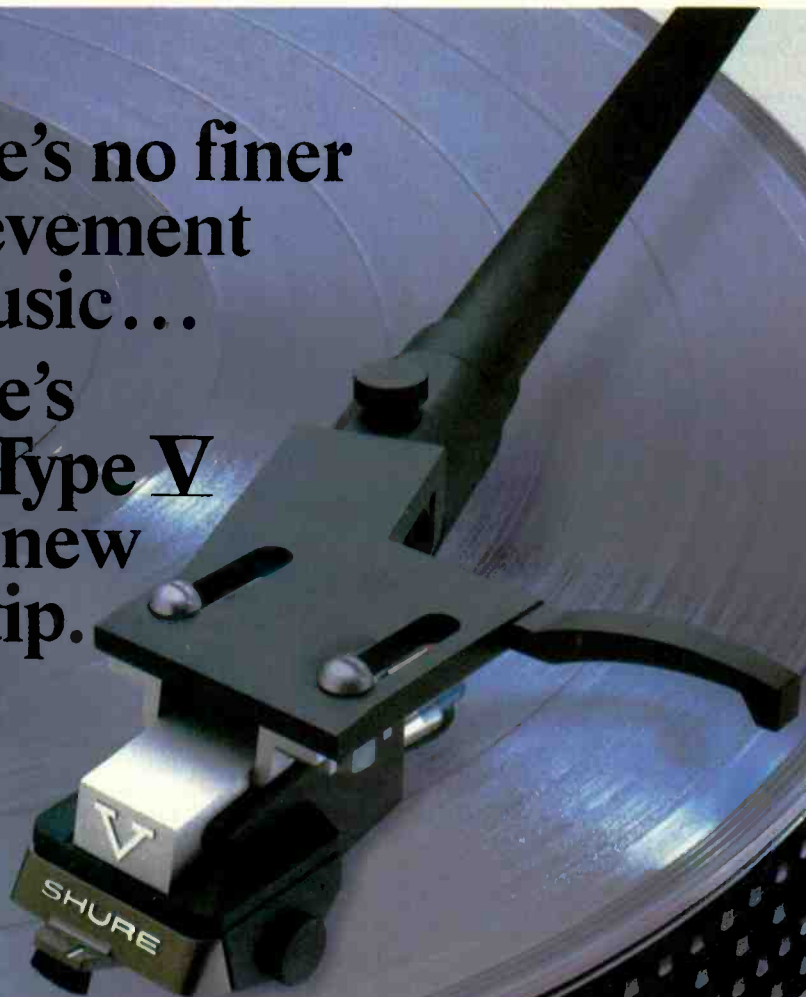
Explanation of symbols:

- ① = digital-master analog LP
- Ⓢ = stereo cassette
- Ⓣ = digital Compact Disc
- Ⓢ = eight-track stereo cartridge
- Ⓛ = direct-to-disc recording
- Ⓜ = monophonic recording

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

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and spirit on his own. That's pretty tough to do, since Little Feat often sounded like two or three different bands, but Barrère has it pinned down rather well in some areas. First he's called in ex-Little Feat keyboardist Bill Payne, found himself a horn section to replace the Tower of Power, and sought help from Bobby Lakind, Keith Knudsen, and Nicolette Larson, all of whom are connected with Ted Templeman, who produced Little Feat at one time.

It really starts to get spooky when you get to specific songs. There's a slowed-down, mellow encore of Barrère's *Hi Roller* (now spelled "High" for some reason), on which he does some slide guitar work that's more than reminiscent of Lowell George. Another original tune, *Love Sweet Love*, owes its very essence to George's *Dixie Chicken*, right down to its New Orleans-style r-&-b funk. There's a lot about Little Feat that's not here, of course, including the country flavor that both George and Bill Payne used to contribute, but it's clearly Feat blood that flows through Barrère's veins. *A.N.*

LAURA BRANIGAN: *Branigan 2*. Laura Branigan (vocals); vocal and instrumental accompaniment. *Solitaire; Deep in the Dark; Lucky; Mama; Find Me*; and five others. ATLANTIC 80052-1 \$8.98, © CS 80052-4 \$8.98.

Performance: **Lively**
Recording: **Good**

Laura Branigan is her usual lively, engaging self here, particularly in a flip little song

called *Lucky*. But somebody made a gross error of judgment in the choice of *Solitaire* as the first track. From its harmonic structure through its arrangement, production, and vocal performance, it might be more aptly named *Gloria 2*. It is understandable that many recording artists, particularly new ones, try to repeat their initial success in one way or another, but to manufacture an outright clone of a previous hit, in this case one that is still receiving an enormous amount of airplay, smacks of the kind of short-sighted greed that has killed many a budding career. *P.R.*

ELENA DURAN AND STEPHANE GRAPPELLI: *Yesterday/A Recollection of the Beatles*. Elena Duran (flute); Stéphane Grappelli (violin); Laurie Holloway Trio (instrumentals). *Yesterday; Michelle; Hey Jude; Eleanor Rigby; A Hard Day's Night*; and five others. RCA CPL1-4603 \$6.98, © CPK1-4603 \$6.98.

Performance: **Real charm**
Recording: **Good**

Here's a quirky and totally charming album of famous songs by the Beatles that should be avoided by Beatles fans at all costs. Beatles Believers will probably find this witty, discursive music making by Elena Duran on flute and Stéphane Grappelli on violin insulting and/or trivializing to the work of their heroes. Think of Thelonious Monk playing Cole Porter, and you've got the idea. If you were a Porter fan you'd hate it; if you were a Monk fan you'd love it. I'm

a Duran/Grappelli fan, so naturally I liked this album enormously. *P.R.*

MICKEY GILLEY: *Fool for Your Love*. Mickey Gilley (vocals, piano); vocal and instrumental accompaniment. *Fool for Your Love; Wish You Were Mine Again; It's Just a Matter of Time; Shakin' a Heartache; I Don't Want to Hear It Anymore; Ruby Louise*; and four others. EPIC FE 38583, © FET 38583, no list price.

Performance: **Suburban**
Recording: **Good**

"Whatever *did* happen to the Urban Cowboy?" asked a Western wear catalog I got in the mail the other day. "Did he move to the suburbs?" I already knew the answer from listening to "Fool for Your Love," hardly what I'd call music to buck your mechanical bull by. The first hint comes in the jacket photo, picturing a carefully coiffed, tuxedo-clad Mickey Gilley leaning against a white piano. And it's not the old-fashioned upright kind, mind you, but the cocktail-lounge variety. It doesn't fit the Urban Cowboy image, and neither does the music on "Fool for Your Love."

Mostly, this album is a slow-paced mix of MOR love ballads with occasional pieces of ersatz honky-tonk performed with all the conviction and spirit of a beached whale. It's almost a repeat of Gilley's last album, "Put Your Dreams Away," right down to the inclusion of another steamy Delbert McClinton tune, *Ruby Louise*, which is the album's one combustion point and the only

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time Gilley seems involved. Maybe the air's getting thin out there in the suburbs. *A.N.*

RECORDING OF SPECIAL MERIT

STEVE GOODMAN: *Artistic Hair.* Steve Goodman (vocals, guitar); instrumental accompaniment. *East St. Louis Tweedle-Dee; Let's Give a Party; Tico Tico; Chicken Cordon Bleus;* and eight others. RED PAJAMAS RPJ 001 \$6 (from Red Pajamas Records, P.O. Box 233, Seal Beach, Calif. 90740).

Performance: **Deft and droll**
Recording: **Variable**

Steve Goodman always *has* had a keen eye for the absurd. Take his album jacket, for

example. Bald as an aging eagle after his fourteen years of treatment for leukemia, Goodman leans smiling against the window of a barbershop, named, of all things, *Artistic Hair.*

It's been a while since we've heard from Goodman (he finished his string of Asylum albums several years ago), and now he's back with a live album on his own Red Pajamas label. The program, as Goodman explains in the notes, consists of "bits and pieces of ten years of club dates, concerts and television appearances." The sound quality varies wildly—regrettably some of the best material is the worst recorded—but Goodman has put together a good sampling of what you'd hear at one of his concerts: a

couple of his best-known original tunes (*City of New Orleans, You Never Even Call Me by My Name*), several traditional folk and Tin Pan Alley classics (*The Water Is Wide, Red, Red Robin*), and a lot of his deliciously wry humor and social commentary, best represented by the much-loved *Chicken Cordon Bleus* and the caustic but on-target *Elvis Imitators* done up in authentic rockabilly style.

Goodman built his reputation as one of the most talented of the urban folk revivalists, but during his Asylum days he got into what were, for him, some pretty strange bags, turning out albums full of smooth, sophisticated pop songs, complete with strings and silky-voiced background singers. By the end of the Asylum run, it seemed pretty certain that Goodman wasn't a folkie any more. In retrospect, I don't know about that—he has always liked to play around with musical styles. With the exception of *Old Fashioned* here, which sounds much better on the original album with its haunting tenor-sax break, "Artistic Hair" highlights Goodman's old zany, skeptical self. He doesn't always hit the notes as squarely as he might, but he sings *The Water Is Wide* beautifully. As usual, his guitar work is pure grace, and the great Jethro Burns on mandolin and David Amram on whistles, flute, and percussion add just the right amount of backing, accents, and fills. A delightful album. *A.N.*

KELLY GROUCUTT. Kelly Groucutt (vocals, bass, guitar); vocal and instrumental accompaniment. *Am I a Dreamer?; Oh Little Darling; Dear Mama; You Don't Need to Hold Me Tight; Midnight Train;* and five others. RIVA RVL 7502 \$6.98, © RVC4 7502 \$6.98.

Performance: **Overdone**
Recording: **Excellent**

Kelly Groucutt is the bass player for the Electric Light Orchestra, an association that's obvious from the opening bars of his first solo album. While ELO's leading light, Jeff Lynne, isn't credited anywhere, virtually every song here bears the unmistakable stamp of the Lynne school of pop songwriting: an embarrassment of melodic riches, lush arrangements with violins carrying the rhythm-guitar parts, and well-oiled doo-wop vocal harmonies. Groucutt even *sounds* like Lynne. Unfortunately, this extravagant treatment only makes the material seem even flimsier than it actually is. *Old Rock and Roller* is a clever variation on a time-honored rock-'n'-roll theme ("Where have you been all my life?"), and *Am I a Dreamer?* has "heavy AM airplay" written into the grooves. But most of the songs have been done and redone a thousand times by a thousand other pop songwriters. *M.P.*

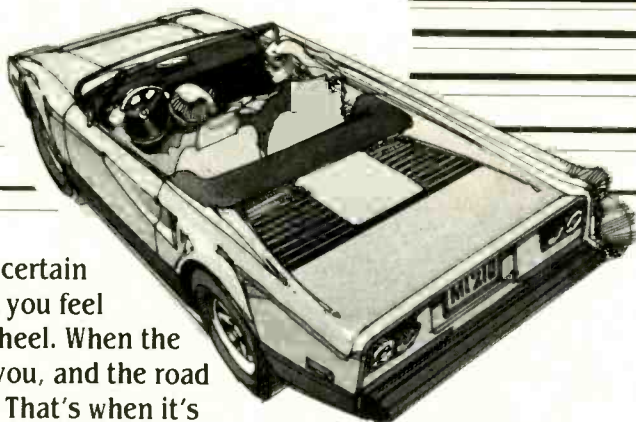
RECORDING OF SPECIAL MERIT

INXS: *Shaboo Shaboo.* INXS (vocals and instrumentals). *The One Thing; To Look at You; Spy of Love; Soul Mistake; Here Comes;* and five others. ATCO 7 90072-1 \$8.98, © CS-90072-1 \$8.98.

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

The U.S. debut of the Australian band INXS (or "in excess") is a welcome sur-

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prise—an intelligent coupling of silicon-chip-age polyrhythms and slashing, flesh-and-blood guitar-based rock. "Shaboo Shooabah" has a raw, wild sound, as if it had been recorded in a tropical rain forest. There are weird grinding noises, hoots, and whistles, and even the bass drum and tomtom have a sticky, humid resonance. Michael Hutchence's versatile vocals range from Gary Numan-like matter-of-factness to the hungry come-on of a Mick Jagger—in a single tune! And if the lyrics are teasingly oblique, at least you have the challenge of trying to figure out what INXS means by lines like, "I'm dancing and shaking hands/We're learning the primitive rites/We're doing as the Romans do." Frankly, I'm perfectly happy just to listen to Kirk Pengilly's frayed lead guitar and frantic sax (he plays both) slice the scenery into neat little pieces. *M.P.*

RECORDING OF SPECIAL MERIT

AL JARREAU: *Jarreau*. Al Jarreau (vocals); instrumental accompaniment. *Mornin'*; *Boogie Down*; *I Will Be Here for You*; *Save Me*; *Black and Blues*; *Trouble in Paradise*; and three others. WARNER BROS. 23801-1 \$8.98, © 23801-4 \$8.98.

Performance: **More mainstream**
Recording: **Very good**

Al Jarreau portions out his releases with just enough time between them to let us build up an appetite for more of his fresh, imaginative music. A special but difficult-to-define quality pervades each of his excellent albums. It goes beyond his obvious musicality, craftsmanship, and superb vocal virtuosity. His profound sense of joy in doing what he does and his deep involvement in his music must be part of it.

Like every other Al Jarreau record I have heard, this new one makes me feel good inside. It is a cornucopia of immediately appealing songs that leap across categories, though generally they lie much closer to the popular mainstream than his most notable offerings of the past. On most of the selections he has collaborated with other composers, including Jay Graydon, who served as producer. Yet the lyrics with their upbeat love messages and the lovely winding melodies with their interesting changes bear the distinctive Jarreau mark. *Mornin'* is most representative of the style we have come to associate with him. It sails forth on a silver cloud that is likely to turn to gold in terms of audience response. *Trouble in Paradise* and *I Will Be Here for You* (*Nitakungodea Milele*) are so buoyant that they nearly bound from the turntable, and *Not Like This* is a rare gem, even for this fine artist. Here is Jarreau at his most intimate and lyrical, displaying the rich textures of his balladry and singing as though the music is coming straight from his soul.

If there is any reason for disappointment here, it is that Jarreau has pulled back considerably from the sort of daring instrumental-like vocals with which he earned his reputation as "the man with a whole orchestra in his throat." He does some brief scatting, but there are only a few teasing snatches of it. He seems to have settled for a straighter, less demanding approach, at least for the time being. Now that the brilliant newcomer Bobby McFerrin has come onto the scene

as a more experimental and jazz-oriented singer than the current Jarreau, I do hope that this master of the form will not be content to rest in the calmer waters of the mainstream. *P.G.*

MADNESS. Madness (vocals and instrumentals). *Our House*; *Tomorrow's Just Another Day*; *It Must Be Love*; *Primrose Hill*; *Rise and Fall*; *Shut Up*; *House of Fun*; and five others. GEFEN GHS 4003 \$8.98, © M5 G-4003 \$8.98.

Performance: **A bit sedate**
Recording: **Very good**

Madness may not have been the best of the Two Tone label groups, but it was the za-

niest and the most fun. The group's move from the New Wave label Sire to the Geffen stable of rock all-stars finds their insanity somewhat strait-jacketed. "Madness," several steps removed from the ska-based sound of their first album, is almost completely in the music-hall style of Ian Dury. It's also much safer, saner music—still a clever blend of manic horn charts, racing guitars, tinny piano, and Vaudevillian vocals, but ratcheted down a couple of notches from "panicked" to "perky." The outrage of *Razor Blade Alley* or *Tarzan's Nuts* has been replaced by the considerably tamer slice of working-class life of *Our House* (backed by a string section, no less). Even when the lyrics get a little darker, as in

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Echo and the Bunnymen

If Echo and the Bunnymen have any antecedent, it is probably the Doors. And if there exists a visual analog for their music, it must be the glacier pictured on the cover of their new album, "Porcupine." The music is gloomy and forbidding, yet powerful and highly original rock.

Echo and the Bunnymen started out as a band with the moxie to get up in front of an audience without being able to play. With time, their very lack of formal training has freed them to explore music they might otherwise have dismissed as unapproachable. Though still basically a guitar, bass, and drums outfit, on "Porcupine" the Bunnymen occasionally add a saxophone, an electric violin, and percussion to the mix, creating a dense, grating, even terrifying wall of sound. The melodies are direct to the point of minimalism and sometimes incor-

porate Oriental elements. The rhythms are taut and mechanical. It's extremely difficult music, and it's made even more so by the oblique lyrics, which are all but indecipherable without a lyric sheet.

The best clue to the puzzle of this uncompromising, challenging album may be the tone of the lead vocals by Ian McCulloch, which suggest a prophet of doom proclaiming that the end of the world is upon us. Not a likable release, certainly, but one that's hard to dismiss. —Mark Peel

ECHO AND THE BUNNYMEN: *Porcupine*. Echo and the Bunnymen (vocals and instrumentals). *The Cutter; Back of Love; My White Devil; Clay; Porcupine; Heads Will Roll; Ripeness; Higher Hell; Gods Will Be Gods; In Bluer Skies*. SIRE KOROVA 23770-1 \$8.98, © 23770-4 \$8.98.

thesizer bass); vocal and instrumental accompaniment. *How Cool; Minimum Love; Lookin' for the Good Life; Nothin' but the Truth; Dark Ages*; and five others. GEFLEN GHS 2033 \$8.98, © MSG 2033 \$8.98.

Performance: **Eclectic**
Recording: **Snappy**

On this debut album for Geffen Records, twenty-five-year-old Mac McAnally comes across not as the eccentric young wizard he's cracked up to be but rather as the Rich Little of popular music. McAnally may have grown up in Mississippi and recorded

his album in Muscle Shoals, Alabama, but his music is a studied hybrid of L.A. pop/rock/folk and jazz, and almost every one of his original songs sounds like something already recorded by the likes of Andrew Gold, James Taylor, Christopher Cross, and America. His melodies are light, airy, unimaginative, and only occasionally catchy, and his lyrics, to cite Dorothy Parker, run the gamut of emotions from A to B. When he's not being "introspective" and "personal," he's making fun of somebody's social situation.

Oddly enough, McAnally is the co-writer of Alabama's *Old Flame*, a damn good tune. Oh, well. He must have had somebody else's mask on that day. A.N.

RONNIE McDOWELL: *Personally*. Ronnie McDowell (vocals); instrumental accompaniment. *Love Like We Were Strangers; I Should've Lied; 38 Special; It's a Dirty Job; You're Gonna Ruin My Bad Reputation; Huggin' My Lady, Kissin' My Baby; After You*; and three others. EPIC FE 38514, © FET 38514, no list price.

Performance: **Not bad**
Recording: **Very good**

Ronnie McDowell has always been a far better singer than he's been given credit for, mainly because he came into the business as an Elvis Presley coffin rider and then allowed himself to be turned into a heart-throb for the over-the-hill set. This time we get a piece of hokum called *38 Special* and a breathily delivered version of Karla Bonoff's wonderful pop/r-&-b hit *Personally* (in a regrettable disco arrangement), but otherwise the album is a cut above McDowell's usual output. It has a wider variety of material and better-crafted songs, including *It's a Dirty Job* by Don Cook and Rafe Van Hoy. Heck, I might even listen to this one on my own time. A.N.

SERGIO MENDES: Sergio Mendes (keyboards, synthesizers, percussion); vocal and instrumental accompaniment. *Rainbow's End; Love Is Waiting; My Summer Love; Carnaval; Voo Doo*; and four others. A&M SP-4937 \$8.98, © CS-4937 \$8.98.

Performance: **Glitter gulch**
Recording: **Excellent**

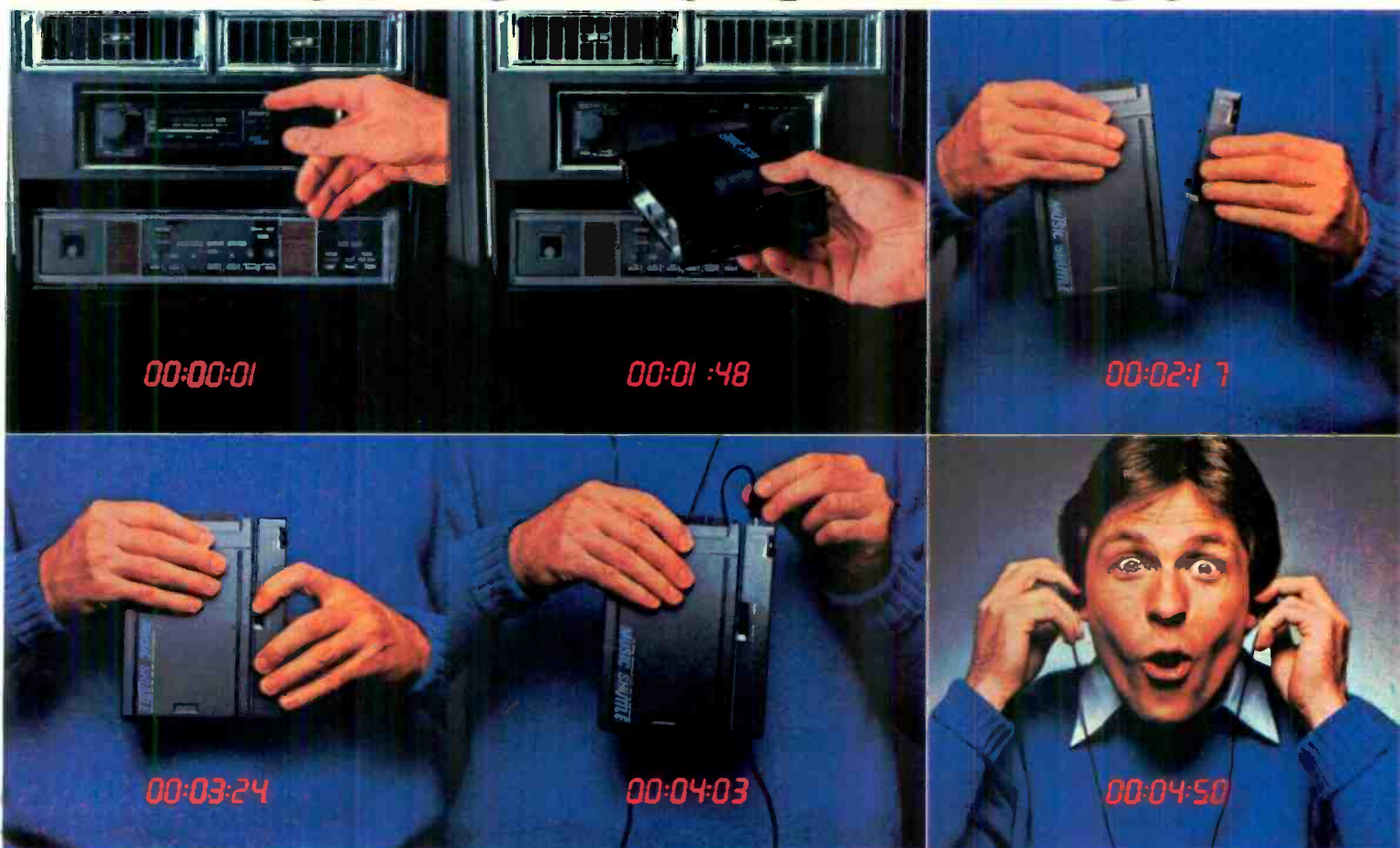
Here is Sergio Mendes once again. This time, minus the Brasil-anything tag, he's working with what is apparently a studio group, but his production, arrangements, and performances are as flossy and as overstuffed as ever. *Carnaval* and *Voo Doo*, to mention only two, are in his familiarly perfumed, complex "Technicolor Amazon Jungle No. 5" style. It comes as something of a surprise, then, that the most effective track in the album is a run-through of the ancient Barry Mann and Cynthia Weil hit *Never Gonna Let You Go*, wrapped in a mild MOR arrangement with appropriately soupy vocals by Joe Pizzulo and Leza Miller. The recorded sound throughout is sharp and clear enough to please even Rima the Bird Girl. P.R.

RONNIE MILSAP: *Keyed Up*. Ronnie Milsap (vocals, keyboards); vocal and instrumental accompaniment. *Stranger in My House; Show Her; Don't Your Memory Ever Sleep at Night; I'm Just a Redneck at*

Primrose Hill, the music refuses to succumb to dementia. A couple of vintage Madness tunes are reprised on this album, including the delightful novelty *Night Boat to Cairo*. But if this isn't as mad as one would hope from these guys, there is still more insanity here (as in *House of Fun*, which depicts the eroding confidence of a sixteen-year-old boy in a drug store trying to buy contraceptives for the first time) than most of us Yanks are used to. M.P.

MAC McANALLY: *Nothing but the Truth*. Mac McAnally (vocals, guitars, piano, syn-

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Heart; Like Children I Have Known; We're Here to Love; and four others. RCA AHL1-4670 \$8.98, © AHK1-4670 \$8.98.

Performance: **Bloated**
Recording: **Impeccable**

I've listened to the new Ronnie Milsap album three times, but you'd have to stand over me with a whip to get me to listen to it any more during my natural life. Before its release, word had it that "Keyed Up" would complete Milsap's migration to pop, but now that I've heard it, I'd have to say it completes his metamorphosis into a Barry Manilow clone. At least five of the ten songs here are pure Manilow.

At the start of his career, Milsap sang country with black rock and blues inflections, and he could wail with the best of them, but he managed to sound as if he'd never known a moment of real passion in his life. Now he sounds white, but it's still hard to get any emotional commitment out of him. The closest he comes on this album is *Stranger in My House* (not the Elvis Costello song), a dramatic, sinister-sounding tune he delivers with more bite than usual. It's really a shame. Milsap has some of the best vocal equipment around, and as a classically trained pianist, he can play just about anything. But when it comes to taste, well A.N.

VAN MORRISON: *Inarticulate Speech of the Heart.* Van Morrison (vocals, guitar); other musicians. *Higher Than the World; Connswater; River of Time; Celtic Swing;*

Rave On, John Donne; Inarticulate Speech of the Heart No. 1; and five others. WARNER BROS. 23802-1 \$8.98, © 23802-4 \$8.98.

Performance: **Personal**
Recording: **Fine**

Pop artist Van Morrison is lucky enough to be what once was called a "prestige" artist, which means he can record anything he wants and never really have to worry about the commercial consequences. But if you're going to release an LP's worth of aural navel-gazing, you'd better have a pretty interesting navel. Judging by this new album, Van seems just about out of lint. Basically, it's a George Benson record with metaphysical lyrics: standard Warner Brothers California pop-jazz leavened with Irish folk influences and an occasional heartfelt ode to William Butler Yeats. It's all pleasant enough as mood music, and Morrison remains a superior stylist with soul to burn, but it's anybody's guess what's bugging him here. S.S.

RECORDING OF SPECIAL MERIT

NIGHTHAWKS: *Ten Years Live.* Nighthawks (vocals and instrumentals). *Metropolitan Avenue; Guard Your Heart; Push and Shove; Jenny Lou; Moving Up in Class;* and four others. VARRICK 001 \$7.98.

Performance: **Lean and mean**
Recording: **Good llve**

The Nighthawks are the leanest and meanest of the "Blue Wave" bands (Roomful of

Blues, the Fabulous Thunderbirds, et al.). Recorded on New Year's Eve 1981 (their tenth anniversary year) at Washington, D.C.'s Bayou club, where the 'Hawks reigned as house band, "Ten Years Live" documents the work of a great live band in a genre that won't settle for anything less than great live music. The house was packed, the 'Hawks sizzling, and the energy spills over on every track. The material—mostly Chicago blues, a little rockabilly—is all original Nighthawks, which is to say, it all sounds as if it were written thirty years ago. Listening to the low, nasty whine of Jim Thackery's Gibson hollow-body electric guitar and the bargain-basement blues sound of Mark Wenner's harp, you can practically taste the smoke and feel the beer-soaked floorboards move under your feet. It's nothing but a great time. M.P.

OAK RIDGE BOYS: *American Made.* Oak Ridge Boys (vocals); vocal and instrumental accompaniment. *Love Song; She's Not Just Another Pretty Face; Amity; You're the One; American Made; Heart on the Line (Operator, Operator);* and four others. MCA MCA-5390 \$7.98, © MCAC-5390 \$7.98.

Performance: **Slick**
Recording: **Ditto**

When the Oak Ridge Boys decided to go secular a few years ago, country music fans couldn't get enough of them. The reasons were obvious: they had a sophisticated yet good-time sound that appealed to all ages,



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the four singers appeared to have distinctly different and interesting personalities, their early tunes, such as *Ya'll Come Back Saloon* and *Come On In*, were spritely and infectious, and their only real competition, the Statler Brothers, had become about as exciting as watching the weather channel on cable TV.

The Oak Ridge Boys continued to enjoy a fantastic popularity and to rack up truckloads of CMA awards over the years, but for me their charm had begun to tarnish long before *Elvira*, the hit that established their crossover career. If I hadn't already decided that the Boys were far more dedicated to commercial success than to music, *Elvira* would have convinced me. My first exposure to the tune was Rodney Crowell and Emmylou Harris's thrillingly low-life, chicken-pickin' version of 1978. The Oak Ridge Boys' homogenized rendition reduced all that raunchiness to the blandest common denominator.

Now they are back with another formula album, "American Made." Like its predecessors, it has a strong, commercial country-pop title song, a couple of ballads and uptempo numbers chosen purely as vehicles for the lead vocals of the various members, and at least one token nod to gospel. The Oak Ridge Boys are entertaining, for the most part. *Love Song*, a terrific little pseudo-gospel number that simply screams for the Dixie Humming Birds, is no less than mesmerizing, and the rest of the program gets good marks for variety. But on *I'm So Glad I'm Standing Here Today*, which

brought tears to the eyes when Joe Cocker sang it on the 1982 Grammy Awards show, the group reveals what a lot of us have suspected for years: the Oak Ridge Boys, among the biggest names in gospel music for some thirty years, have no soul. *A.N.*

PINK FLOYD: *The Final Cut*. Pink Floyd (vocals and instrumentals); other musicians. *The Post War Dream; Your Possible Past; One of the Few; The Hero's Return; The Gunners Dream; Paranoid Eyes; Get Your Filthy Hands Off My Desert*; and five others. COLUMBIA QC 38243, © QCT 38243, no list price.

Performance: **Excess most wretched**
Recording: **Great test record**

To paraphrase Oscar Wilde, you'd have to have a heart of stone not to laugh at this record. Which is to say that it's an *extremely* serious piece of work, concerning nothing less than the decline of the Western Post War Dream (*they* said it, I didn't). Now, I'm not a snob. I'm sure that wealthy rock stars have feelings just like the rest of us, and I'm equally sure that Margaret Thatcher has been spoiling the Floyd's collective breakfasts for several months at least. That said, I just can't imagine why they feel they have to take all that out on the rest of us, especially with music as turgid and overblown as the stuff on "The Final Cut."

When you slice through the undergraduate *Angst* of this album, it is strictly formula Floyd: leaden tempos, vaguely folk-

ie melodies, and expensive special effects. And as usual Roger Waters declaims it all in a style somewhere between Vincent Price and an Anglican priest with a hangover. Also as usual, it has been spectacularly produced and engineered—so spectacularly that for a few moments you might be able to ignore the fact that songs like *Paranoid Eyes* are several light years beyond banal. I like a band with a social conscience, but if this is what happens when Pink Floyd contemplates the sorry state of the world, I think they should go back to recording leaky faucets and birds chirping in the night. That, at least, said something. *S.S.*

THE ROCKATS: *Make That Move*. The Rockats (vocals and instrumentals). *Burning; One More Heartache; That's the Way; Go Cat Wild; Never So Clever; Make That Move*. RCA EP MFL1-8507 \$5.98, © MFK1-8507 \$5.98

Performance: **Good**
Recording: **Good**

Neo-rockabilly is a big thing in Britain, and English bands and expatriate American groups like the Stray Cats are re-exporting the style to the U.S. On "Make That Move" the Rockats begin with neo-rockabilly, especially on *Go Cat Wild* with its Carl Perkins guitar riffs, but they extend it with other references. At times the group vocals sound like early Manfred Mann circa 1964, there's a bit of Blondie, and they have no hesitation in taking on Smokey Robinson's *One More Heartache*, the best song and

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performance on this six-cut EP. Of course, the Rockats affect the DA haircuts and sleazy Elvis clothing of the 1950's, as neo-rockabilly bands are required to do, but there's substance in their music too. Quite a solid group, especially drummer Mike Osborne, and fun to hear. *J.V.*

SANTANA: *Havana Moon* (see Best of the Month, page 67)

PATRICK SIMMONS: *Arcade*. Patrick Simmons (vocals, guitar); vocal and instrumental accompaniment. *Out on the Streets; Don't Make Me Do It; Too Long; Dream About Me; Knocking at Your Door; Sue Sad;* and four others. ELEKTRA 60225-1 \$8.98, © 60225-4 \$8.98.

Performance: **Fair**
Recording: **Good**

Patrick Simmons is a former member of the Doobie Brothers, who disbanded last year to go their separate ways as solo artists. He is assisted here in part by Michael McDonald, another former Doobie (lead singer), with the result that "Arcade" sounds like a Doobie Brothers album. Your move. *J.V.*

RECORDING OF SPECIAL MERIT

ROD STEWART: *Body Wishes*. Rod Stewart (vocals); vocal and instrumental accompaniment. *Dancin' Alone; Baby Jane; Move Me; Body Wishes; Sweet Surrender; Ghetto Blaster;* and four others. WARNER BROS. 23877-1 \$8.98, © 23877-4 \$8.98.

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

With every Rod Stewart release since "Foot Loose and Fancy Free" I've found myself thinking, "All right, this is it: this is the one that's going to finish off his career for good." Album after album, Stewart has flirted with disaster, walking a thin line between being high spirited and being just plain sloppy, between being sensitive and being saccharine or—worse—sexist. And just when it looks as if he's gone too far, a million people prove me wrong and buy the record. By Stewart standards, "Body Wishes" never really comes close to the fine line. For once he has managed to give free reign to his raucous, fun-loving nature without being offensive or sounding like a wimp. But if I *like* this album, does *that* mean the end for Stewart? Don't bet on it.

For one thing, there's still The Voice, burnished by years of smokes, Scotch, and touring. It may actually be a little less raspy now, as though softened by sprays of V.S.O.P. from a dressing-room atomizer, but it still sandpapers everything it touches—whether disco, romantic ballad, or Stones-style blues—into something instantly recognizable as a Rod Stewart song. "Body Wishes" finds The Voice backed by the same band Stewart has worked with since 1981, and Tom Dowd is back as producer after a one-album sabbatical. It's sure to wind up on a few dance floors with such thumping rockers as *Ready Now* (a classic "You'll get yours, honey" cruncher), *Move Me* ("Your dog gets more attention than I do"), and the slinky *Body Wishes* (Rod's obligatory look at this year's sexual mores). The hottest cut is *Dancin' Alone*.

(Continued on page 82)

Waylon and Willie and Waylon

THERE'S a new energy on Waylon Jennings's "It's Only Rock & Roll," a vibrancy of spirit that's been missing in his work lately. It shows up not only in his confident vocal performances, but also in his choice of material, including three new tunes of his own, and in some instrumental touches that reflect the obvious care that went into the album. To my way of thinking, Waylon's done well being his own producer, but he may have found someone even better in Randy Scruggs, his co-producer here. With the Waylor and Richie Albright, Waylon's long-time drummer, back on board, the sound is cleaner, fresher, and more out front than we've heard from him in a while.

There's not a weak cut on the whole thing. It showcases the Jennings persona, with every song handpicked. *Let Her Do the Walking*, one of his originals, pays homage in its style and instrumentation to Hank Williams, who shaped so much of Waylon's vision, and the Rodney Crowell title tune and Little Richard's *Lucille* recall his early days as a rocker with Buddy Holly. My favorite cuts, though, are *Breakin' Down*, which features the best dramatic use of the harmonica since early Dylan, and *Living Legends (A Dyin' Breed)*, which is almost an insider's song, poking fun at some familiar Nashville characters.

"It's Only Rock & Roll" ends up with a medley of Waylon's Outlaw hits, suggesting a return to (or a new dedication to) his original direct, no-nonsense style. There's not much to suggest the Outlaw days in the production of Waylon's latest collaboration with Willie Nelson, however.

In the past, Jennings has hired Chips Moman to produce some of his solo albums, and Moman is responsible for Willie and Waylon's recent "Take It to the Limit." His production relies a good deal on gimmickry rather than straight-ahead good sense, and on several cuts his orchestrations create a sound almost as shapeless and slick as the Nashville Sound that drove Willie down to Austin to start with. Moman also produced last year's Jennings-Nelson collaboration,

"WWII," an undisciplined package mixed with something that sounded like a Sun-beam beater. There are no such problems here, but the famous Moman tunnel sound is back on *No Love at All, We Had It All, Take It to the Limit* (also junked up by some female back-up singers), and *Till I Gain Control Again*.

Despite production failings, "Take It to the Limit" is a collection of fine vocals: two proven artists singing proven songs. There's Willie on his own *Why Do I Have to Choose* and Rodney Crowell's classic *Till I Gain Control Again* (which he's recorded before); Waylon on *Why, Baby, Why*; and both of them on *Blackjack County Chains, Old Friends*, and the title song. Willie sings most of the songs on the LP, which is as clearly *his* album, released on his label, as "WWII" on RCA was Waylon's. But you'll be surprised at how many songs Waylon steals here by just showing up.

Willie's just fine, but the prize goes to Waylon this time out. With what passes for country music these days, it's comforting to know that at least somebody hasn't forgotten how to do it right. —Alanna Nash

WAYLON JENNINGS: *It's Only Rock & Roll*. Waylon Jennings (vocals, guitar); vocal and instrumental accompaniment. *It's Only Rock & Roll; Living Legends (A Dyin' Breed); Breakin' Down; Lucille (You Won't Do Your Daddy's Will); Angel Eyes; No Middle Ground; Let Her Do the Walking; Mental Revenge; Love's Legalities; Medley of Hits*. RCA AHL1-4673 \$8.98, © AHK1-4673 \$8.98.

WILLIE NELSON AND WAYLON JENNINGS: *Take It to the Limit*. Willie Nelson, Waylon Jennings (vocals, guitar); vocal and instrumental accompaniment. *No Love at All; Why, Baby, Why; We Had It All; Homeward Bound; Till I Gain Control Again; Would You Lay with Me (In a Field of Stone); Why Do I Have to Choose; Take It to the Limit; Blackjack County Chains; Old Friends*. COLUMBIA FC 38562, © FCT 38562, no list price.



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U2's Inspired "War"

U2: bottom left, Bono; left to right, Adam Clayton, Larry Mullen, the Edge



Steve Rapport/Reima Ltd

of cocksure rock-'n'-roll here, so I don't think we'll be hearing the last of Rod Stewart for a long time. *M.P.*

STYX: *Kilroy Was Here.* Styx (vocals and instrumentals). *Mr. Roboto; Cold War; Don't Let It End; High Time; Heavy Metal Poisoning; Just Get Through This Night;* and three others. A&M SP-3734 \$8.98, © CS-3734 \$8.98.

Performance: **Fun**
Recording: **Very good**

It would be easy to dismiss "Kilroy Was Here" as boilerplate sci-fi, a sort of poor man's "The Wall." The story line is familiar *Twilight Zone* stuff about a future where robots have taken control. A Big Brother villain, Dr. Righteous, keeps the populace sedated with mind-control programming over his MMM (Majority for Musical Morality) Cable Network. Rock-and-roll, of course, is outlawed. And our heroes are—what else?—rock stars.

It sounds so predictable that you could finish this review for me—except that you'd probably write the wrong review. Because Styx actually makes it work. The nine songs all manage to stick pretty close to the story (something that's almost unheard of on "concept" albums), and one or two unexpected twists make the concept a little easier to swallow. For instance, there are *two* heroes (possibly because the band has two stars with teen appeal, Dennis DeYoung and Tommy Shaw) who don't even meet until the end of the album. DeYoung is the imprisoned rock legend Kilroy, Shaw the young rock-and-roll guerrilla Jonathan Chance. Most of what happens on "Kilroy" revolves around their attempt to rendezvous at the Paradise Theatre, presumably to do a little clandestine jamming. The best thing on the album is what *isn't* on the album: the obligatory battle scene between the young rock heroes and the robots, played out on synthesizers and drum machines, never materializes. Styx is probably saving that for a sequel, since the plot is not resolved on "Kilroy Was Here."

The Styx veterans of the arena have no problem coming up with music to match their grand, futuristic adventure story. While "Kilroy" suffers from a couple of saccharine, pomp-rock ballads—the kind that finally drove me to kill my car radio the two-hundredth time I heard *Lady*—there's plenty of that bone-shaking Stygian wall of guitars that loosens the rivets in coliseum beams. That's not to say Styx can't do a plausible ballad; *Just Get Through This Night*, with its quietly stirring introduction on the Japanese shami-sen (a stringed instrument), will stop even the unruliest crowd dead in its tracks when Styx takes "Kilroy" on tour. With 1984 just around the corner, could "Kilroy" be a vision of a future saved by rock-and-roll? Frankly, as anyone out of high school who works for a living will tell you, the robots are going to win this one. But never mind. "Kilroy" is still good fun. *M.P.*

B. J. THOMAS: *New Looks.* B. J. Thomas (vocals); vocal and instrumental accompaniment. *New Looks from an Old Lover; Rock and Roll You're Beautiful; The Wind Beneath My Wings; Memory Machine; I Just Sing;* and five others. COLUMBIA/

LAST year was to have been the year for the Irish band U2 to make its mark in the States. The group had even planned to have its own float in New York City's St. Patrick's Day parade. But the presence of leaders of the Irish Republican Army threatened to turn the event into a pro-IRA demonstration; joining it could have been seen as tacit approval of the IRA's terrorism. Instead, U2 returned to Ireland and began work on its first political album after two critically acclaimed but socially noncommittal releases.

"War" is the inspired result. It is an album of brutal power and aching emotion. Everything about it is harsh, jagged, and unyielding, from the muffled bashing of the drums to the impassioned vocals and shattered guitar chords to the gloomy piano that wanders through the beat like a survivor picking through the rubble of a bombed-out city. Lead vocalist Bono's cracking, boyish timbre gives an added intensity to the band's blunt, unguarded playing. There's so much passion and honesty in this music, it's unsettling.

"War" is one of the finest fruits of New Wave rock, but it's New Wave in sensibility rather than instrumentation. There are no fancy synthesizer effects here, just the stark sound of the quartet—Bono on vocals and guitar; the Edge on guitars, piano, and vocals; Adam Clayton on bass; and Larry Mullen, Jr. on drums—augmented occa-

sionally by a violin, a trumpet, or a back-up vocal. Just as important as what is in these songs is what *isn't* in them. U2 spares us the platitudes and snap judgments that pass for "political consciousness" in much of American rock and instead wrestles with the tragic folly of killing in the name of an ideal: "Angry words won't stop the fight./ Two wrongs won't make it right." And, while recognizing the futility of war, U2 also recognizes its awful human toll in terms of the death of the spirit as well as the flesh: "A new heart is what I need,/ Oh God, make it bleed."

U2 doesn't pretend to have the answers to human conflicts—the band doesn't even take sides. What "War" does instead is to convey, in violent sounds and terrifying images, a picture of war's reality that may disturb even us Americans, accustomed as we are to watching the devastation in places like Ulster or Beirut on TV while we calmly eat our dinners. For a people so saturated with reality, yet so safely removed from it, "War" is more than a shock—it's a devastating reproach. —Mark Peel

U2: *War.* U2 (vocals and instrumentals); vocal and instrumental accompaniment. *Sunday Bloody Sunday; Seconds; New Year's Day; Like a Song; Drowning Man; The Refugee; Two Hearts Beat As One; Red Light; Surrender; "40."* ISLAND 90067-1 \$8.98, © CS-90067-1 \$8.98.

Every Rod Stewart album has at least one song that borders on outright plagiarism of the Rolling Stones, and this is it—complete with swaggering beat, raunchy harp, and high-pitched backing vocals. It won't surprise anyone to hear Stewart suggest that we're better off dancing than worrying about the troubles of the world, but it is surprising to hear his plea for the fight against world hunger on the funk anthem *Ghetto*

Blaster (he plans to give a portion of its royalties to World Vision). If the message doesn't sell records, the rippling synthesizer break and driving conga beat will.

"Body Wishes" is by no means a masterpiece. Some tracks, including the droopy ballad *Sweet Surrender* (do we really need another song with that title?) and the aimless *What Am I Gonna Do*, fall out of the speakers with a dull thud. But there's plenty

CLEVELAND INTERNATIONAL FC 38561, © FCT 38561, no list price.

Performance: **Gems in paste**
Recording: **Very good**

I've long admired B. J. Thomas. For warmth of tone and the ability to ingratiate himself with an audience there hasn't been anybody like him since Bing Crosby. All you have to do is point him at a song and he'll do it more than justice. Unfortunately, he's sometimes pointed at songs that don't deserve his efforts. Such is the case with this new album.

Producer Pete Drake has dropped Thomas into the center of an album that sounds like what Southerners call "gentlin'-up music," which is supposed to get you in the right mood for bed. But the arrangements and material here are so sweet and bland as to induce sleep instead of pucker-ups. Thomas himself is in fine voice, and his subtle readings attempt to give some flavor to the mush. But it's still mush. *J.V.*

THE TUBES: *Outside Inside the Tubes.* The Tubes (vocals and instrumentals). *She's a Beauty; No Not Again; Out of the Business; The Monkey Time; Glass House; Wild Women of Wongo;* and five others. CAPITOL ST-12260 \$8.98, © 4XT-12260 \$8.98.

Performance: **Sellout**
Recording: **Very good**

This is the Tubes? I thought these guys were supposed to be funny. If this is satire, then it may be time to re-evaluate Toto and Asia. Maybe all AOR is parody. Tubes fans will be alarmed by this album: the songs are characterless, hook-riddled, heavy-metal contrivances; the sound is hackneyed, hammering, high-distortion guitars; the vocals are strident, unbuttoned-to-the-waist posturing. I can see this album going to the top of the AOR charts, it's that good a rip-off. And I can see Tubes fans throwing themselves off the tops of tall buildings, it's that big a sellout. *M.P.*

THE WAITRESSES: *Bruiseology.* The Waitresses (vocals and instrumentals). *A Girl's Gotta Do; Make the Weather; Everything's Wrong if My Hair Is Wrong; Luxury; Open City; Thinking About Sex Again;* and four others. POLYDOR 422-810 980-1 Y-1 \$8.98, © 422-810 980-4 Y-1 \$8.98.

Performance: **Running out of steam**
Recording: **Okay**

The Waitresses are a terrific bunch of musicians. Chris Butler, who pulls the strings, is a bright guy, and lead singer Patti Donahue has an adorable voice. Fine. None of that has changed on their new album, either. It's just that, well, it's becoming obvious that this is a one-joke act that has outlived its usefulness. The point of this band was a satire of sexism, about which they pretty much said all they had to say on their first single, *I Know What Boys Like*, and since nothing on this new album suggests they've even come up with interesting ways of repeating themselves, I think it behooves them to stop beating the concept into the ground. *S.S.*

THE WHISPERS: *Love for Love.* The Whispers (vocals); instrumental accom-

paniment. *Tonight; Keep On Lovin' Me; Love for Love; This Time;* and five others. SOLAR 60216-1 \$8.98, © 60216-4 \$8.98.

Performance: **Looking up**
Recording: **Good**

When the Whispers are given the proper material and production, they can sing rings around most other male soul ensembles. Fortunately, after a series of disappointing discs, their new album gives them the opportunity to blend their five voices with velvet-like harmony on several songs worthy of their abilities. The first side, called "Dancin'," would be totally ho-hum were it not for the wonderful solo *This Time*, a beautiful ballad. The Whispers come into better

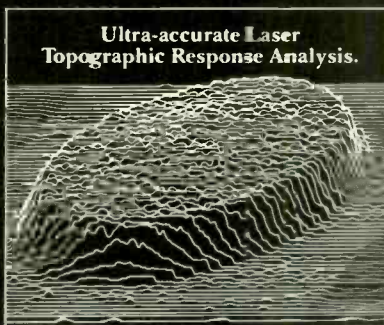
focus on the second side, called "Romancin'," particularly on *Had it Not Been for You* and *Do They Turn You On*. There are several throwaways here, but the better moments are really worthwhile. *P.G.*

DON WILLIAMS: *Yellow Moon.* Don Williams (vocals, guitar); vocal and instrumental accompaniment. *Stay Young; The Story of My Life; Wrong End of the Rainbow; Love Is on a Roll;* and six others. MCA MCA-5407 \$7.98, © MCAC-5407 \$7.98.

Performance: **Consistent**
Recording: **Flawless**

Don Williams is so laid back that sometimes I wonder how he stands up. From his

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Motown Records

Feliciano On Motown

IT has been about seventeen years since José Feliciano approached me at a benefit I was producing for a New York radio station. "I sing and play guitar," he said, "and I would like to perform for you tonight." I thanked him but declined his offer, explaining that we were already overbooked. After

all, waiting to one side of the Village Gate stage were such notables as John Coltrane, Jimmy Rushing, and Zoot Sims. I think Charles Mingus was there too, and I clearly recall that Thelonious Monk was in the kitchen, fast asleep. Feliciano was hardly known in North America at the time, and I didn't hear him perform until a few weeks later, but the impact was immediate. I was not at all surprised when he hit the popularity jackpot with *Light My Fire*.

Since then, Feliciano's music has brought me much pleasure, but I would be hard put to name another of his albums as thoroughly enjoyable as the new "Romance in the Night," his first for Motown. Never before have I heard him sound so immersed in his music; there is an added measure of sensitivity to his singing and playing. It is simply a stunning display of talent and taste. I think that Feliciano's appearance on Motown—it's the fulfillment of a dream he's had for many years—may have a lot to do with the artistic success of this album. Then, too, it reunites him with Rick Jarard, the producer of his earliest RCA hits, and the chemistry between them is stronger than ever. From the very first track, a definitive rendering of the Jackie Wilson hit *Lonely Teardrops*, to the title song, which he wrote himself, Feliciano will knock you out in this round. —Chris Albertson

JOSÉ FELICIANO: *Romance in the Night*. José Feliciano (vocals, guitar, bass); instrumental and vocal accompaniment. *Lonely Teardrops; If You Have a Heart; Play Me; Let's Find Each Other Tonight; So Into You; ¡Cuidado!; Taking It All in Stride; One Night; I Feel Fine; Romance in the Night*. MOTOWN 6035ML \$7.98, © M75-6035 \$7.98

days with the Pozo Seco Singers in the mid-Sixties, Williams has always delivered a song as if he never got uptight or even hurried in his entire life. Now, with essentially the same core of studio pickers he's used for ten years, songs just seem to roll out of him in perpetual, effortless motion.

Like Williams's other albums, "Yellow Moon" is made up of personal, well-crafted tunes about love and the things worth valuing in life. There aren't any songs here that jump out at you the first time you listen the way, say, *Amanda* and *Tulsa Time* did from his earlier albums. As usual, the production is so clean, the miking so up-close, that you'd swear Williams and the boys were right there in your living room. But, as with all of Williams's albums, there's the problem of overkill; most of his mellow songs sound alike. It would be nice if Williams would ferret out a few more up-tempo songs like *Tulsa Time*. His arrangements—tasteful and uncluttered as they are—could really benefit from a little kick every now and then. A.N.

RECORDING OF SPECIAL MERIT

YARBROUGH AND PEOPLES: *Heartbeats*. Cavin Yarbrough, Alisa Peoples (vo-

cal); instrumental accompaniment. *Heartbeats; Innermost Feelings; Feels So Good; You Love Me; What's That You Slipped into My Wine*; and four others. TOTAL EXPERIENCE TE-1-3003 \$8.98, © TE5-1-3003 \$8.98.

Performance: **A winning duo**
Recording: **Very good**

Yarbrough and Peoples are a good bet to succeed Peaches and Herb as the public's favorite male-female soul duo. They certainly have the talent, and Cavin Yarbrough's hot, buttered baritone is a perfect match for Alisa Peoples's rich, honey-sweet soprano. Some of the material here is clearly not up to the level of their abilities, with the title song being the dumbest and most repetitious dance tune on the album. Yet there are several real high points. One is the offbeat, catchy ditty *What's That You Slipped into My Wine*, and another is *Innermost Feelings*, which compares favorably with Lionel Richie's tenderest sweetheart songs and is downright irresistible the way Yarbrough and Peoples sing it. Cuts like these make up for the clinkers. P.G.

ZZ TOP: *Eliminator* (see *Best of the Month*, page 63)

JAZZ



RECORDING OF SPECIAL MERIT

DEE BELL, EDDIE DURAN, AND STAN GETZ: *Let There Be Love*. Dee Bell (vocals); Eddie Duran (guitar); Stan Getz (tenor saxophone); instrumental accompaniment. *Waltz for Debbie; Let There Be Love; There's a Lull in My Life*; and six others. CONCORD JAZZ CJ-206 \$8.98.

Performance: **Very good**
Recording: **Good**

Dee Bell was a waitress in a club where Eddie Duran was performing when she came to his attention. This album, her debut, makes certain that her hash-slinging days are over. She's very good. Her voice is clear and easy, and her phrasing and delivery are just plain gorgeous. Eddie Duran on guitar and Stan Getz on tenor sax are the kind of guardian angels that every debutante singer ought to be blessed with. They are especially superb buoying her up in a loose-jointed, totally amiable *There's a Lull in My Life* and in a joyous *Let There Be Love*. P.R.

RECORDING OF SPECIAL MERIT

RON CARTER: *Etudes*. Ron Carter (bass); Art Farmer (trumpet, flugelhorn); Bill Evans (soprano and tenor saxophones); Tony Williams (drums). *Bottoms Up; Last Resort; Doctor's Row*; and three others. ELEKTRA/MUSICIAN 60214-1 \$8.98, © 60214-4 \$8.98.

Performance: **Superb**
Recording: **Excellent**

Ron Carter can't make an album that is anything less than excellent. For "Etudes," his latest Elektra/Musician release, the distinguished bassist has assembled a fine quartet with a former fellow sideman in a celebrated Miles Davis group, drummer Tony Williams; a Davis sideman of more recent vintage, saxophonist Bill Evans; and, on trumpet, the ever-reliable, smooth-blowing Art Farmer. The six selections, four of them written by Carter, are all diversified studies in cohesive musical interaction. This album is a worthy addition to anybody's collection. C.A.

CHICK COREA: *Again and Again*. Chick Corea (keyboards); Steve Kujala (flutes, saxophones); Carlos Benavent (electric bass); Don Alias (percussion); Tom Brechtlein (drums). *Quintet #3; Waltze; Again and Again; 1-2=1234*; and two others. ELEKTRA/MUSICIAN 60167-1 \$8.98, © 60167-4 \$8.98.

Performance: **Fidgety fun**
Recording: **Excellent**

Chick Corea's quintet recorded this music during a tour of South Africa. Done in a

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Unfortunately, things got so bad in Europe, that Cybernet figured the only way to sell them would be to send them to the U.S. But, there were two problems.

First, Cybernet USA already had all the personal stereos they needed, and they didn't want these or know what to do with them.

Second, all the time these were sitting, first in Europe and then in the U.S., the price of personal stereos kept dropping.

Cybernet made these to sell for \$129 with a dealer cost of \$75. But, they really never got around to selling them here in the U.S.

DAK has been trying to buy them since January. But Japan Cybernet wouldn't let U.S. Cybernet budge on price. Finally, in April, the dam broke and frankly we've stolen them.

So, you'll get a fabulous personal cassette stereo, made in Japan, not Hong Kong, complete with an FM stereo tuner pack. And, you won't pay the suggested retail price of \$129, or even the \$75 dealer cost.

The Cybernet PS103, complete with all its accessories, is now just \$39 only from DAK (we have all 16,000). And of course, it's backed by a limited warranty from Cybernet USA (of KLH-Kyocera fame), right here in the U.S.

Now thanks to a terrible recession in Europe, you can get a fabulous sounding Cybernet Personal Cassette Stereo with its FM tuner pack for just \$39. And, there's no catch.

It's a fact. The price of both cassette and FM personal stereos has plunged. The market has become so competitive that the makers have done everything they can to lower their prices.

Gone are the days where they could make \$199 personal stereos in quantity. But, there are good reasons why the prices have come down.

Many makers now use plastic tape transports to save money. Plus, you'll find only one headphone jack, and you certainly won't find a mute switch on most portables.

You won't find linear volume controls, or a really heavy protective case. Plus, there's a lot you can't see that's missing too. Competition has caused cutbacks.

WELL, LOOK NO FURTHER

Cybernet built the PS103 when they thought they could get \$129 for it. They didn't cheapen it to compete. So, it's still loaded with all the features, sound quality and output power.

The sound quality is incredible and there's lots of power to run two headphones (one pair included). After all, sound this good should be shared.

One look at the heavy case, and a few minutes with the headphones is all it will take to convince you that Cybernet cut no corners on this high quality stereo.

FM STEREO TOO

Wait till you hear the quality of the sound from the slip-in FM tuner pack. It picks up stations that even some home tuners won't get. It's got a mono/stereo switch and it uses the headphone cable as an antenna for great reception.

It direct connects to the recorder via 5 retracting pins, so it works off the deck's power and feeds the FM signal directly into the deck's amplifier for powerful clean dramatically dynamic sound.

Plus, the deck is intelligent enough to

know when you are listening to a cassette or the tuner pack. It will automatically switch to the correct mode.

ENGINEERED FOR STRESS

Most fine stereo equipment is designed to be lovingly placed on a shelf and never moved. Obviously, this isn't a practical way to listen when you're walking your dog, jogging or skiing.

The Cybernet PS103 incorporates a special shock mounted drive system to keep your music smooth and stable even when you aren't.

BUT, IT'S THE SOUND

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The sound is nothing short of awesome. This personal stereo can easily beat the sound quality of a several thousand dollar home stereo.

The combination of superb electronics, and meticulous craftsmanship will be evident to you from the feel of the controls and the reproduction of sound.

The deck weighs only 14 ounces, and comes with full protective leatherette case, cassette/tuner case, super 1 1/2 oz stereophones and a shoulder strap.



It operates on 3 standard AA batteries, (not included). You'll be amazed



at the kaleidoscope of sound you'll hear when you put on the headphones.

MULTINATIONAL WARRANTY

Cybernet is an extremely large Japanese Company with a very large presence here in the U.S. They are part of the Kyocera group which also includes KLH.

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Deborah Feingold

Saxophonist Chico Freeman

Young Lions Of Jazz

ONE of the highlights of 1982's Kool Jazz Festival in New York was a Carnegie Hall concert titled "The Young Lions," and a recording of it has now been released on Elektra/Musician. It features seventeen outstanding performers, most of whom still find themselves perched on the brink of a promising career.

Some of the names are familiar. Wynton Marsalis, Chico Freeman, and Paquito D'Rivera already have their own albums on major labels; vocalist Bobby McFerrin recently made an impressive debut on Elektra/Musician; James Newton, Anthony Davis, and Jay Hoggard have also appeared, both together and independently, on labels dedicated to new music. Some of these "young lions" are in their thirties, and Hamiet Bluiett, the oldest, is forty-two, but recognition often comes late to talented jazz performers. If the lesser-knowns represented here maintain the same high quality of performance and composition, however, and if jazz-oriented recording executives such as Nesuhi Ertegun and Bruce Lundvall (who were responsible for preserving this concert) continue to get their pet sounds onto vinyl, I doubt there is a name on this set that will not soon ring a bell when dropped in jazz-loving circles.

It is particularly noteworthy that the compositions are all originals, in keeping with the Ertegun/Lundvall concept of presenting as many facets of fresh jazz talent as possible. The most interesting track is the opener, *B 'n' W*, written (actually, largely improvised) by trumpeter Marsalis with McFerrin and performed by them with splendid support from bassist Avery Sharpe. As far as I'm concerned, Marsalis can do no wrong. Combining a clear, sharp

tone with extraordinary improvisational skill, dazzling technique, and youthful fire, he sparkles on five of the album's ten tracks, and when he duets and exchanges jabber with McFerrin, his keen sense of humor also comes to the fore. McFerrin's voice is so lithe, and he manipulates it with such stunning results, that I can forgive his occasional lapses in taste.

Tenor saxophonist Chico Freeman makes five appearances here, one of which features him in a marvelous quintet with Marsalis, Sharpe, guitarist Kevin Eubanks, and drummer Ronnie Burrage. They play *Breakin'*, a boppish composition by Eubanks. Hearing this youthful quintet blow up a storm proves that even if jazz has not made significant stylistic strides in the past two decades, it can still send sparks flying. Eubanks, who also has his own album on Elektra/Musician, is twenty-six and full of promise, some of which he fulfills on *FMW*, a composition by pianist Anthony Davis that is played by a different quintet including the exceptionally gifted flutist James Newton. At thirty, Newton is still largely unrecognized by the general public, but he has already picked up an impressive following among critics and fellow musicians.

Trombonist Craig Harris's *Nigerian Sunset* and Jay Hoggard's *Pleasant Memories* are inspired by the sounds of Africa. The former features all seventeen musicians; the latter is a solo performance with Hoggard playing vibes and a xylophone-like African instrument, the balafo. Only Hoggard is absent from Freeman's *What Ever Happened to the Dream Deferred*, a sometimes brooding, sometimes boiling composition that derives its title from a poem by Langston Hughes. Freeman's *Dream* begins on the border of a nightmare, then conjures up images of beauty rising from the ruins. I still think Freeman is the most exciting saxophone player to turn up in the past ten years. One of the highlights of the set is when he soars above the rhythm section's turbulent waters just before John Purcell's oboe flight. Another such moment is provided by violinist John Blake on his own *Maiden Dance*, a sextet number with a Far Eastern flavor. Burrage and percussionist Daniel Ponce dominate this track, but Blake shines through. I guess that is what this set is all about: young talent shining through the veil of musical pollution that in recent years has all but obscured jazz.

—Chris Albertson

THE YOUNG LIONS. Bobby McFerrin (vocals); Wynton Marsalis (trumpet); James Newton (flute); John Blake (violin); Chico Freeman, Paquito D'Rivera, Hamiet Bluiett, John Purcell (reeds); Craig Harris (trombone); Jay Hoggard (vibraphone, balafon, marimba); Ronnie Burrage (drums); Abdul Wadud (cello); Anthony Davis (piano); Kevin Eubanks (guitar); Avery Sharpe, Fred Hopkins (bass); Daniel Ponce (percussion). *B 'n' W*; *Mariel*; *Thank You*; *Maiden Dance*; *What Ever Happened to the Dream Deferred*; *Breakin'*; *Nigerian Sunset*; *FMW*; *Pleasant Memories*; *Endless Flight*. ELEKTRA/MUSICIAN 60196-1 two discs \$15.98.

single day, with no overdubbing, it combines the intensity of a small jazz group in live performance with the sparkling, intimate sound of the studio. The quintet's playing is simply outstanding, especially in the intricate interplay among Corea, Steve Kujala, and Carlos Benavent. But because most of the material tends to be based on extremely skeletal melodies or sometimes just a rhythmic figure, this music is more titillating than engaging. *Diddle Diddle*, for example, although fun in a fidgety sort of way, sounds as if it could have been resurrected from Herbie Hancock's "Headhunters." *Waltze* is lovely enough but impossible to keep in your head. Still, the pulse of this music all but makes up for its lack of structure. Call it virtuoso toe-tapping. M.P.

MILES DAVIS: *Star People*. Miles Davis (trumpet, keyboards); Bill Evans (soprano and tenor saxophones); John Scofield, Mike Stern (electric guitar); Marcus Miller, Tom Barney (electric bass); Al Foster, Mino Cinelu (percussion). *Come Get It*; *Star on Cicely*; *It Gets Better*; and three others. COLUMBIA FC 38657, © FCT 38657, no list price.

Performance: **Mediocre Miles**
Recording: **Good**

In Miles Davis's new Columbia album, "Star People," a great trumpeter deteriorates before our very ears, serving up close to an hour of simple, fragmented shades of his own past against a horrendously sluggish rhythmic background. The notes seem to indicate some involvement in this session by Gil Evans, but the reference is rather vague, and there is nothing about the music that suggests Evans was involved. Some of the sidemen here are capable musicians, but none of them seems much involved either. Miles may eventually come back, but this is no way to do it. C.A.

LEROY JENKINS: *Mixed Quintet*. Leroy Jenkins (violin, viola, vocal); John Clark (French horn); James Newton (flute); J. D. Parran (clarinet); Marty Erlich (bass clarinet). *Quintet #3*; *Shapes*, *Textures*, *Rhythms*, *Moods of Sound*. BLACK SAINT BSR 0060 \$9.98 (from PolyGram Special Imports, 137 West 55th Street, New York, N.Y. 10019).

Performance: **Mixed**
Recording: **Good**

Violinist/composer Leroy Jenkins's music is not for everyone. More closely associated with jazz than any other form of music, Jenkins counts among his influences Jascha Heifetz, Charlie Parker, and Eddie South, but there is little to suggest any of them in the two extended works in this newly released 1979 album. *Shapes*, *Textures*, *Rhythms*, *Moods of Sound* is the more interesting piece. A sometimes dragging five-way conversation, it builds nicely into a coherent jumble of sounds that move with the composer's shifting moods, but then Jenkins throws judgment to the winds and recites some of the worst poetry I have heard in a long time. Profound it is not.

Quintet #3 is free of bad poetry, and Jenkins also gives himself a less prominent role as an instrumentalist, but I am bothered by long passages that sound like warmups from an orchestra pit. Still, there is much here to

please the ears. One note of interest: Jenkins composed this music under a grant from the National Endowment for the Arts, and the recording took place in New York City, but the album is available only as an Italian import. C.A.

BILL KIRCHNER NONET: *What It Is to Be Frank*. Bill Kirchner Nonet (instrumentals). *On the Sunny Side of the Street; Brother Brown; Theme for Gregory; Daahoud;* and three others. SEA BREEZE SB 2010 \$8.98.

Performance: **Okay, but . . .**
Recording: **Very good**

The Bill Kirchner Nonet is a New York outfit that is gradually building a reputation. Its members have worked individually with many well-known jazz men. Kirchner is primarily an arranger, and he's good, but I just don't care much for neo-bop. The soloists go on at some length here, but if they're communicating with the audience (or the band) it must be in code. J.V.

PAT METHENY: *Travels*. Pat Metheny (guitar and guitar synthesizers); Lyle Mays (keyboards); Steve Rodby (bass and bass synthesizer); Nana Vasconcelos (vocals, percussion, berimbau); Dan Gottlieb (drums). *The Fields, the Sky; Goodbye; Phase Dance; Farmer's Trust; San Lorenzo; Extradition; Song for Bilbao;* and four others. ECM 1-23791 two discs \$13.98.

Performance: **Smooth**
Recording: **Excellent remotes**

Pat Metheny has taken his music in a different, more ethereal direction since his first ECM outings, and his playing has improved considerably. His music is still souped-up, more so than ever perhaps, and the energy tends to be more physical than emotional, but he is capable of generating genuine musical excitement. When he tones his guitar down to a ballad tempo, he shows a sensitivity that I did not find in evidence three years ago.

"Travels" is a double album of Pat Metheny Group performances recorded at several concerts. The program includes selections that have appeared on previous albums, including *As Falls Wichita, So Falls Wichita Falls*, the tune that played a big part in garnering for the Missouri-born guitarist his current popularity. Metheny's audience includes devout jazz fans but consists largely of people whose taste straddles the borders of jazz and electronic funk. Anyone who thrives on the subtleties of a Lester Young or Chico Freeman solo will find the Tomita sound of *Wichita* too contrived and might like the jazz groove of *Song for Bilbao* better. This album contains a good collection of Metheny moods, so it is bound to have wide appeal. C.A.

ERIC ROSSER: *Making a Night of It*. Eric Rosser (piano). *Over the Rainbow; Cry Me a River; Two Sleepy People; Georgia on My Mind;* and ten others. REDBUD 1010 \$7.98 (from Redbud Records, 611 Empire Mill Road, Bloomington, Ind. 47401).

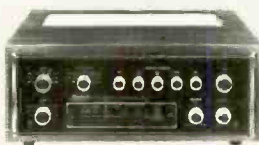
Performance: **Okay**
Recording: **Good**

Eric Rosser claims that he "always wanted to do a piano bar album." His wish has been

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Thomas A. Dorsey in George T. Nierenberg's *United Artists* film

"Say Amen, Somebody"

If you haven't already seen the remarkable film *Say Amen, Somebody*, do. It is an unforgettable, heartwarming documentary that captures the feeling, the flavor, and much of the living history of black American gospel music. And fortunately the film's soundtrack has been preserved on a new two-disc album from DRG Records along with some additional material recorded live.

Say Amen, Somebody centers on a tribute to "Mother" Willie Mae Ford Smith, a seventy-eight-year-old gospel pioneer, at her home base, the Antioch Baptist Church in St. Louis. Although she cut only one record before this album, she is considered to be one of the nation's greatest gospel singers and a major influence on some who went on to claim a greater share of the spotlight. The threads of history are skillfully interwoven with Mother Smith's personal story as her fellow travelers on the gospel highway come forward to speak—and sing—for themselves.

By showing the complex thinking and richly textured lives of the ostensibly simple church folk who create this thunderously impassioned religious music, *Say Amen, Somebody* slices through cultural barriers and layers of conditioning. Although the soundtrack can convey only one dimension of the story, much of the spirit and fervor so evident in the film shine through anyway.

The gospel roots of contemporary pop are very evident in the film and album's examination of the life and work of Thomas A. Dorsey—the man who coined the term "gospel music" and is widely acknowledged as its "father." Well into his eighties when the film was made, Dorsey was an accomplished blues composer and pianist for Ma Rainey back in the 1920's, when he was known as "Georgia Tom." Turning from secular to sacred music, Dorsey brought along the spirited rhythms and blues intonations of his past, and his aesthetic synthesis remains a dominant force in gospel to this day. In turn, the symbiotic relationship between gospel and pop helped to feed the heavy rhythm-and-blues directly into rock. Many of the best black pop artists got their start in the gospel ensemble of a Black Belt

church, from Dinah Washington and Sam Cooke to Aretha Franklin.

Say Amen, Somebody offers the rewards of hearing the superb singing of contemporary gospel artists, such as the O'Neal twins (Mother Smith's St. Louis protégés) and Delois Barrett Campbell and the Barrett sisters, with consistently inspired and robust support from the Gospel Unlimited Choir of the Antioch Baptist Church. But the most touching moments on the album and in the film have nothing to do with the delights of fine singing. It is simply extraordinary to hear Willie Mae Ford Smith in her own milieu or the poignant, quavering vocals of the aged Thomas A. Dorsey (in one case paired with a close associate of earlier years, Sallie Martin). Time has worn away such earthly endowments as beautiful tone or perfect pitch, and what is left in their performances is the very soul of the music—the most important element of all.

Mother Smith said of her own singing at this stage in her long, fruitful life, "I may have cracks in my voice as wide as the banks of the Mississippi River, but that ole Mississippi just keeps rollin' along." And so will gospel music, as this very special album cannot fail to convince any listener. Amen. —Phyl Garland

SAY AMEN, SOMEBODY. Original-soundtrack recording. "Mother" Willie Mae Ford Smith, Thomas A. Dorsey, Mahalia Jackson, Zella Jackson Price, the O'Neal Twins, Delois Barrett Campbell, the Barrett Sisters, the Interfaith Choir, Kansas City Kitty, Sallie Martin, Gospel Unlimited Choir (vocals). *I'm His Child; I'd Trade a Lifetime; We Are Blessed; Say a Little Prayer for Me; He Chose Me; No Ways Tired; Highway to Heaven; Singing in My Soul; What Manner of Man; When I've Done My Best; Take My Hand, Precious Lord* (two versions); *How Can You Have the Blues; If You See My Savior; God Is Love/Walkin' and Talkin' with Jesus; Canaan; Jesus Dropped the Charges; I'll Never Turn Back; The Storm Is Passing Over; It's Gonna Rain; He Brought Us.* DRG SB2L 12584 two discs \$10.98, © SB2LC 12584 \$10.98.

granted. Performing on an upright piano, he rinky-tinks his way through a series of standards with jolly imperviousness to any song's meaning. *The Man I Love*, for instance, a torch song if ever there was one, is galloped through as if it were *Ta-Ra-Ra-Boom-Dee-Ay*, and *Mack the Knife* sounds about as sinister as *We'll Gather Lilacs in May*. If you are an inveterate foot-tapper and don't particularly care what you tap to, this might be your kind of album. P.R.

RECORDING OF SPECIAL MERIT

COLLIN WALCOTT/DON CHERRY/NANA VASCONCELOS: *Codona 3*. Don Cherry (trumpet, organ, douss'n'gouni, vocals); Collin Walcott (sitar, hammered dulcimer, sanze, tabla, vocals); Nana Vasconcelos (berimbau, percussion, vocals). *Go-shakabuchi; Inner Organs; Hey Da Ba Doom; Clicky Clacky*; and three others. ECM ◉ ECM-1-23785 \$9.98, © 4-23785 \$9.98.

Performance: **Rare treat**

Recording: **Excellent**

Recorded digitally and pressed with unusual care, the third album by Codona (the trio's composite name) offers a compelling mix of sounds with roots in Indian, Japanese, African, American, and Brazilian music. Laid against that broad tapestry are vignettes that seem to recapture some of the individual players' personal past, the most intriguing being *Clicky Clacky* and *Inner Organs*, both by Don Cherry and both absorbing glimpses of black Americana. "Codona 3" is an album that gets better and better with each listening by a group that's also getting better and better. C.A.

RECORDING OF SPECIAL MERIT

JIMMY WITHERSPOON: *Sings the Blues with Panama Francis and the Savoy Sultans.* Jimmy Witherspoon (vocals); Panama Francis and the Savoy Sultans (instrumentals). *I Want a Little Girl; Good Morning Blues; Rain Keeps Falling Down; Gee Baby, Ain't I Good to You*; and five others. MUSE MR5288 \$9.98.

Performance: **Superb**

Recording: **Very good**

I never could muster up much enthusiasm for blues shouter Joe Turner; in fact, I have found his efforts, especially in recent years, not only uninteresting but downright mediocre. Jimmy Rushing, on the other hand, was wonderful from his Moten and Basic periods to the very last, and I have always enjoyed the work of Walter Brown, who sang with the old Jay McShann orchestra. I mention these three only because the notes for "Jimmy Witherspoon Sings the Blues with Panama Francis and the Savoy Sultans" compare Witherspoon to them and seem to suggest that while he is wonderful, he is not quite in their league. Nonsense! Jimmy Witherspoon has his own very distinctive style, and he can hold his own in any vocal company. This new album, recorded in Paris three years ago, is superb from beginning to end. Witherspoon has lost none of his ability to turn a song into a compelling personal statement, and in the Savoy Sultans he has found the perfect frame for his art. C.A.

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Classical Music

News Briefs



Beethoven Society medals are presented to Claudio Arrau (left) and Alfred Brendel (right)

THE Beethoven Society is by no means prodigal in bestowing its coveted medal upon those it recognizes for conspicuous "dedication to the works of Beethoven," but this spring the award was given to two pianists, both Philips Records artists, in less than three months' time. The first

to receive his Beethoven Medal from the society's president, **Robert E. Becker**, was **Claudio Arrau**, who was celebrating his eightieth birthday with a recital at Avery Fisher Hall. Then it was **Alfred Brendel's** turn. Brendel received his medal backstage at Carnegie Hall following the first of the

seven recitals in his now memorable Beethoven sonata cycle. Reflecting the general reaction to Brendel's performances of this music, both here and abroad, the society cited the pianist's commitment to the works of Beethoven "on the most profound musical and philosophical level." □

BEETHOVEN'S piano sonatas get performed in complete cycles at least occasionally, but the Mozart sonatas almost never are. This summer, however, the complete Mozart cycle is a highlight of the Santa Fe Chamber Music Festival, July 10 to August 15. The seventeen sonatas plus the three movements sometimes grouped together as No. 18 will be performed by six different pianists, one of whom is the Hungarian-born **Andras Schiff**, who has already recorded the complete set for London (only two single LP's have been released in the U.S. to date). The other pianists playing in Santa Fe are **Edward Auer**, **Kenneth Cooper**, **Ursula Oppens**, **Alicia Schachter**, and **André-Michel Schub**. □

THE Mozart Mafia never rests. Following swiftly upon the completion of the big symphony project undertaken

by Christopher Hogwood and the Academy of Ancient Music for L'Oiseau-Lyre comes the news that the American pianist **Malcolm Bilson** and **John Eliot Gardiner**, conductor of the English Baroque Soloists, have begun work on the complete piano concertos. They are being recorded in London for Deutsche Grammophon's Archiv label and, of course, are being performed on period instruments and according to authentic stylistic practices. Bilson's piano, in fact, is a modern replica of an instrument built by Mozart's preferred piano maker. The first multiple-record set will arrive in American shops toward the end of the year. □

THIS year for the first time the Pulitzer Prize for Musical Composition was awarded to a woman, **Ellen Taaffe Zwilich**. The licensing organization that controls performances of her music,

Broadcast Music, Inc. (BMI), promptly held a reception honoring the twenty-two BMI affiliates (including Zwilich) who have won Pulitzer Prizes over the last four decades.

At the reception Zwilich was introduced to the guests by **William Schuman**, the first

Pulitzer Prize winners Ellen Zwilich and William Schuman



Sam Siegel/Metropolitan Photo Service

recipient of the Pulitzer Prize for Music, which was awarded in 1943. Schuman said, "How tired she must be of being asked what it feels like to be the first woman to win the Pulitzer Prize for Music! She was not given the prize because she is a woman, but because she is a composer and a very good one."

Acknowledging the introduction, Zwilich said that one of the nicest things about winning was that it put her "in the unique position of being able to ask Bill Schuman, 'What did it feel like to be the first man to win the Pulitzer Prize for Music?'" □

Photos by Martin Reichenthal/Gurman and Murtha

THE International Schallplatten Prize, the German record industry's top award, equivalent to the American Grammy, has gone to the performance by **Riccardo Muti** and the Philadelphia Orchestra of Stravinsky's *Petrushka* (Angel ① DS-37822, © 4XS-37822) as the best symphonic recording of 1982. The album of oboe concertos by the eighteenth-century composer Ludwig August Lebrun, performed by **Heinz Holliger** and the Camerata Bern (Deutsche Grammophon Archiv ① 2742 005), was chosen best solo concerto recording, and Wagner's *Tristan und Isolde* with **René Kollo** and **Margaret Price**, **Carlos Kleiber** conducting (DG ① 2741 006, © 3382 006), was chosen best opera recording of the year. □

HONORARY doctorates were given during the commencement season just past to audio pioneer **Avery Fisher**, at the Manhattan School of Music; the harpsichordist, conductor, and musicologist **Gustav Leonhardt**, at Southern Methodist University in Dal-

las; conductor **Leonard Slatkin**, at Saint Louis University; mezzo-soprano **Frederica von Stade**, at the Mannes School in New York; pianist **Garrick Ohlsson**, at Thiel College in Greenville, Pennsylvania; and **Elliott Carter**, at Cambridge University in England, the first American composer to be so honored. □

THE young French pianist **Cécile Ousset**, who for years was virtually ignored in her native land, had to cross the English Channel to establish herself, unquestionably, as one of the leading performing artists of the day. Her latest EMI album of French music for piano solo (see the review on page 100) will be followed up by new recordings of the Poulenc Concerto and the Prokofiev Third, **Rudolf Barshai** conducting. Ousset is featured in a recital at the Edinburgh Festival this month and then goes into EMI's London studios again to record Rachmaninoff's Second Piano Concerto and his *Rhapsody on a Theme of Paganini* with the young British conductor **Simon Rattle**. □

Doug McKenzie



CONDUCTOR Andrew Davis was greeted recently by **Diana, the Princess of Wales**, in London. Looking on was **Christopher Bishop**, the managing director of the Philharmonia Orchestra, which Davis conducts under his contract with CBS Masterworks. Due for release next month (September) is a three-record set containing the three most popular Dvořák symphonies,

Nos. 7, 8, and 9, performed by the Philharmonia under Davis (CBS M3 36946, © M3T 36946). In a sense Princess Diana is also a CBS recording artist in that she can be heard saying her vows on "The Royal Tribute" (CBS 37655), a two-disc recording of the wedding service and the music associated with her marriage to the Prince of Wales in 1981. □

Disc and Tape Reviews

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

RECORDING OF SPECIAL MERIT

J. S. BACH: Brandenburg Concertos (BWV 1046-1051). The English Concert, Trevor Pinnock cond. ARCHIV ① 2742 003 two discs \$25.96, © 3383 003 \$25.96.

Performance: **Superb**
Recording: **Superb**

Although the use of early instruments generally makes it somewhat easier to cope with the almost insoluble problems of balance in Bach's *Brandenburg* Concertos, these recorded performances are the only ones I have heard in which all the soloists are clearly in focus. The harpsichord is never lost in the Fifth Concerto, and the re-

corde can be heard even against the aggressive trumpet part of the Second. The sonority of the low strings in the Sixth is limpid, and the sound of the full strings in the Third is breathtaking. While favoring rapid tempos and displaying brilliant virtuosity, the English Concert never overlooks the lyricism of the slow movements. These are some of the most exciting performances of these difficult concertos on record. *S.L.*

J. S. BACH: Concerto for Oboe, Violin, and Orchestra in C Minor (BWV 1060). **LECLAIR: Concerto for Violin and Orchestra in F Major, Op. 7, No. 4.** **VIVALDI: Concerto for Two Violins and Orchestra in A Minor, Op. 3, No. 8.** Bernard Thomas Chamber Orchestra. DOMINUS S 33101-DR \$15 (from Dominus Records, 215 West 13th Street, New York, N.Y. 10011).

Performance: **Very good**
Recording: **Good**

Although the heavy bowing and constant legato in this performance of the Bach concerto make its complex textures rather muddy and hard to hear, the simpler textures of the concertos by Leclair and Vivaldi come off very well here. The Vivaldi is especially pleasing indeed, and the Gallic wit

and charm of the splendid Leclair piece do the Bernard Thomas Chamber Orchestra proud. *S.L.*

RECORDING OF SPECIAL MERIT

BARTÓK: Sonatas Nos. 1 and 2 for Violin and Piano. Pinchas Zukerman (violin); Marc Neikrug (piano). CBS ① IM 36697, © IMT 36697, no list price.

Performance: **Idiomatlc**
Recording: **Warmly realistic**

Bartók's two sonatas for violin and piano have not wanted for attention in the last few years. Pinchas Zukerman's response to the Bartók idiom, even more here than in his recording of the big Violin Concerto, is complete and convincing, and in Marc Neikrug he has a vital partner. The approach here is measurably more expansive, but hardly less impassioned, than that of Zukerman's mentor, Isaac Stern. While the appeal of Stern's disc (also CBS) is in no way diminished, the warm immediacy of Zukerman's new digital recording and the silent surfaces may tip the scales in its favor for many collectors. *R.F.*

(Continued on page 95)

Explanation of symbols:

- ① = digital-master analog LP
- Ⓢ = stereo cassette
- Ⓢ = digital Compact Disc
- Ⓢ = eight-track stereo cartridge
- Ⓢ = direct-to-disc recording
- Ⓢ = monophonic recording

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



Colbert Artists Management

Conductor Varujan Kojian

An Outstanding Symphonie Fantastique

CONDUCTOR Varujan Kojian is off to a most auspicious start in his American recording career with a Berlioz *Symphonie Fantastique* that is outstanding musically and an audiophile's dream sonically. The 45-rpm two-disc Reference Recordings set is certainly premium-priced at nearly \$30 for a forty-eight-minute piece of music, but, like a Rolls-Royce, the quality of the product will make it money well spent.

As I have noted before in these pages, the *Symphonie Fantastique* is a fiendishly difficult piece to record properly, not only because of the complex sonorities and very wide dynamics of the spectacular final movements, "March to the Scaffold" and "Dream of a Witches' Sabbath," but also because of the delicate balance requirements and the mercilessly exposed melodic lines of the opening "Reveries—Passions" and the long-drawn-out "Scene in the Fields." Interpretively, there is also the ever-present problem of achieving a convincing balance between Berlioz's Gluck-like melodies and the violent passions evoked by the blockbuster instrumentation of his climaxes and the passages leading up to them.

Musically, Kojian and the Utah Symphony have surmounted all these obstacles with the greatest of ease. Their performance ranks with the best of its recorded predecessors, including those led by Pierre Monteux and Jean Martinon and Leonard Bernstein's with the Orchestre National de France. And that brings us to matters of production and recording techniques.

Keith Johnson's San Francisco-based Reference Recordings label has been dedicated to the proposition that with painstaking care and advanced technology it is possible to produce analog master tapes and discs that can equal or surpass digitally mastered records in sonic realism. (As a test of this belief, the Berlioz sessions were simultaneously recorded with digital equipment by Varèse Sarabande, which is releasing the results on a single 33 $\frac{1}{3}$ -rpm LP.)

Listening and relistening to these 45-rpm discs (the fourth side of which is a duplicate of side three, containing the big final movements), I sense that what Johnson and his producer, Jeffrey Kaufmann, sought was the closest possible approximation to what one would hear in a live performance from an ideal seat in the concert hall. Achieving this required the most careful calculation of microphone placement and monitoring of orchestral balances and perspectives. For instance, the bass drum is more apparent in the two final movements than is usual in recordings of the symphony, but the balance of sonorities really does correspond almost exactly to what one hears in a good concert hall, in this case Salt Lake City's Utah Symphony Hall.

Conductor Kojian rightly added Berlioz's cornet obbligato to his lovely reading of the "Ball" movement, and the producers added some other touches that work very effectively and without exaggeration. For instance, in the third movement the oboe was placed in the hall's top balcony for its dialogue with the English horn in order to achieve the sense of distance Berlioz calls for, and in the finale a second set of bells was placed offstage to create a more telling echo effect. The result is not to blow the listener out of the room with sound but to achieve maximal concert-hall realism throughout the sound-reproduction chain.

As with other super-audiophile discs that have been released over the past few years, for full enjoyment the high relative cost of the records must be matched by correspondingly high-quality playback equipment maintained in peak operating condition. Musically and sonically, this *Symphonie Fantastique* is one of the very best recordings you can buy, and nothing but the best will do to play it. —David Hall

BERLIOZ: *Symphonie Fantastique*, Op. 14. Utah Symphony Orchestra, Varujan Kojian cond. REFERENCE RR-11 two 45-rpm discs \$29.90.

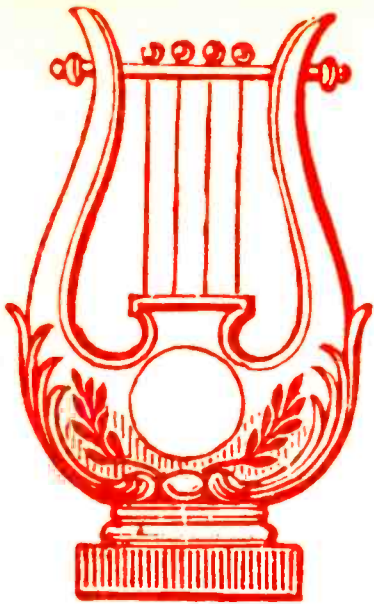
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RECORDING OF SPECIAL MERIT

BEETHOVEN: *Piano Sonata No. 17, in D Minor, Op. 31, No. 2 ("The Tempest"); Piano Sonata No. 18, in E-flat Major, Op. 31 No. 3.* Emil Gilels (piano). DEUTSCHE GRAMMOPHON 2532 061 \$12.98, © 3302 061 \$12.98.

Performance: **Outstanding**
Recording: **Limpid**

Emil Gilels's Beethoven has always been distinguished by an intellectual depth that, without any hint of self-consciousness, ensures the sense of solidity and proportion one wants in this music. Each installment in Gilels's unhurried traversal of the sonatas has been a joy, and this latest one especially so. *The Tempest* is given a strikingly dramatic reading, but its drama comes strictly from inside the music—nothing extraneous or overlaid, a drama of pure contemplation. The E-flat Sonata may seem a bit less playful in Gilels's hands than in some others, but the more one listens the more one acknowledges the distinction between surface humor and subtle wit. In terms of sheer technique, both performances are exemplary; add to that the elegance, insight, and overall sensitivity that characterize this superb artist at the top of his form, then add the limpid digital recording, and you have a very valuable piano release. **R.F.**

BERKELEY: *Flute Concerto; Flute Sonata; Flute Sonatina; Orchestral Works* (see *Going on Record*, page 106)

RECORDING OF SPECIAL MERIT

BRAHMS: *Hungarian Dances.* Katia and Marielle Labèque (piano). PHILIPS 6514 107 \$10.98, © 7337 107 \$10.98.

Performance: **Exciting**
Recording: **Excellent**

These are the Brahms Hungarian Dances, all twenty-one, in their original versions for one piano, four hands. No fiery Romantic virtuosos of the last century, no Gypsy-blooded Hungarians, ever played them, I'm sure, with more fire, zip, dash, feeling, style, and excitement than the Labèque sisters do here. Johannes Brahms was, by all accounts, a fairly reticent fellow, but I really think that even he would have been seduced by the dynamic musicality and personality of these performances. **E.S.**

BRAHMS: *String Quartets and Piano Quintet; Piano Works; Violin Sonatas* (see *Going on Record*, page 106)

DEBUSSY: *La Damoiselle Élie.* **RAVEL:** *Shéhérazade.* **DUPARC:** *Chanson Triste; L' Invitation au Voyage.* Elly Ameling (soprano); Janice Taylor (mezzo-soprano); San Francisco Symphony Orchestra and Chorus, Edo De Waart cond. PHILIPS 6514 199 \$12.98, © 7337 199 \$12.98.

Performance: **Stylish**
Recording: **Very fine**

Devotees of the art of French song will take much pleasure in this album. The silvery

timbre of Elly Ameling's voice is ideally suited to the attenuated and ethereal quality of Debussy's *poème lyrique* based on a famous work by Dante Gabriel Rossetti. The airy acoustics of San Francisco's Davis Hall also provide a lovely ambience for the women's chorus and Debussy's iridescent orchestral coloration. Mezzo-soprano Janice Taylor essays her quite substantial solo role in *La Damoiselle Élie* somewhat heavy-handedly at the start, but she does splendidly in her closing lines.

One may fancy a somewhat duskier vocal coloration for the three songs of Ravel's exotic *Shéhérazade*. Nevertheless, Ameling, aided by Edo De Waart's sensitive feeling for Ravel's orchestral nuances, achieves a lovely performance.

The somewhat somber songs of Henri Duparc, whose fourteen *mélodies* are among the masterpieces of the genre, provide welcome contrast to the Debussy and Ravel pieces. Duparc orchestrated the songs years after writing the voice-and-piano originals, and the orchestration for *L' Invitation au Voyage* is much the more effective of the two here. In any case, Ameling conveys the poignancy underlying them both with telling intensity. **D.H.**

DUPARC: *Chanson Triste; L' Invitation au Voyage* (see **DEBUSSY**)

FRESCOBALDI: *Keyboard Works* (see *Going on Record*, page 106)

(Continued on next page)

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RECORDING OF SPECIAL MERIT

GLUCK: *Alceste*. Jessye Norman (soprano), *Alceste*; Nicolai Gedda (tenor), *Admète*; Tom Krause (baritone), *High Priest*; Robert Gambill (tenor), *Evandre*; Siegmund Nimsgern (baritone), *Hercule*; Bernd Weikl (baritone), *Apollo*; Roland Bracht (bass), *Oracle*; Kurt Rydl (bass), *God of the Underworld*. Chorus and Symphony Orchestra of the Bavarian Radio, Serge Baudo cond. ORFEO S 27823 three discs, © CS 27823, no list price.

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

There are really two operas named *Alceste* by Gluck: the Vienna original of 1767, based on the Italian text by Calzabigi, and the Paris edition of 1766, with a vastly different French libretto by Le Blanc du Roullet. There is a great deal of musical material common to both, but the changes in the text as well as the music were so far-reaching that the Paris version simply cannot be thought of as a mere "adaptation" of the original. Curiously enough, while the Paris version is the one usually staged (when the opera is staged at all), the only previous complete recording (London OSA 1403, now deleted) used the Vienna version, which was edited for the occasion by conductor Geraint Jones but has not been republished since 1769.

The French edition, fortunately, was published by Bärenreiter in 1957, and the orchestral score I consulted (courtesy of Prof.

Edward Downes) shows that this new recording is quite complete. It omits only the final (and anticlimactic) ballet divertissement, which Gluck added reluctantly to conform to Parisian tradition and which modern audiences are not likely to miss. In any case, as the lengthy and highly informative preface to the Bärenreiter score makes clear, the ballet was largely the work of Gluck's friend François Gossec.

Alceste is by no means a fast-moving opera. It is solemn, cast in prevailingly dark colors, and its noble-sounding music yields few surprising turns. But there is much beauty in the work; the choruses especially make effective comments on the tragedy of *Alceste*, the heroic queen who offers her own life to save that of her husband, *Admète*. Not surprisingly, *Alceste* has the best music, not only the familiar "*Divinités du Styx*" but at least two other splendid arias. Dramatically, the third act of the French *Alceste* is rather silly: it follows Euripides by allowing Hercules, as *deus ex machina*, to bring the opera to a happy ending. But at least his aria is a jolly one.

Serge Baudo's tempo choices for this dignified and carefully prepared performance seem unflinchingly right, with sensible appoggiaturas and tiny embellishments imposed on the printed vocal lines, although the excessive reverence to which Gluck's music is all too often subjected is not entirely absent here. The choruses, in particular, could have used more incisiveness, as well as a sharper verbal articulation, but this is a relatively minor point.















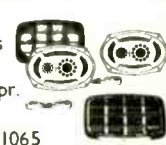
The casting is luxuriant, with major artists of the caliber of Tom Krause, Siegmund Nimsgern, and Bernd Weikl lending weight to episodic roles. Jessye Norman brings passion and poignancy to *Alceste*'s important dramatic recitatives and sings the arias with eloquence, particularly "*Ah, malgré moi*," in which her voluptuous midrange is displayed. Nicolai Gedda, who sang *Admète* at the Metropolitan Opera in 1960, returns to the role here with barely diminished resources. Robert Gambill brings a slight but pleasant tenor to the part of *Évandre*, but Kurt Rydl, a good bass, finds his high tessitura hard going. The sound is fine. Libretto and annotations were not included with my review copy, but they are supposed to come with the set. They will be supplied to any buyer who happens to get an album in which they are missing. (Write to Pantheon Records, 211 East 43rd Street, New York, N.Y. 10017.) G.J.

HAYDN: *Sonata in E-flat Major (Hob. XVI:49); Sonata in E-flat Major (Hob. XVI:52)*. Malcolm Bilson (fortepiano). NONESUCH 78018 \$8.98, © 78018-1 \$8.98.

Performance: **Crisp**
Recording: **Crisp**

Addressing himself to Haydn's two great sonatas in E-flat Major, Malcolm Bilson again reveals his unrivaled mastery of articulation and precision. The music fairly glistens with crystalline clarity of phrase and texture. Haydn's wit is certainly also

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present, but I suspect that Bilson could have achieved more warmth by using more pedal and drawing out the fortepiano's rich variety of tonal colors. Haydn exploited more of the instrument's available effects than any other composer who wrote for it, and we should not be denied any of them in performances of these sonatas.

Bilson plays two different instruments here, both modern reproductions of typical "Viennese" pianos of Haydn's time (the late eighteenth century), and the recorded sound is wonderfully crisp. *S.L.*

JANEQUIN: *Chansons. Le Chant des Oyseaulx; Toutes le Nuictz; J'Atens le Temps; Il Estoit une Fillette; Ung Jour Colin; O Doulz Regard; Le Chant de l'Alouette; Quand Contremont Verras; Hellas Mon Dieu Ton Ire; O Mal d'Aymer; Ma Peine N'est Pas Grande; Herbes et Fleurs; A Ce Joly Moys de May; Assouvuy Suis; Quelqu'un Me Disoit; M'y Levay ung Matin; M'Amye A Eu de Dieu; Le Chant du Rossignol.* Ensemble Clément Janequin. ***Two Lute Pieces After Janequin.*** Claude Debôves (lute). HARMONIA MUNDI HM 1099 \$11.98.

Performance: **Suave**
Recording: **Velvety**

The Ensemble Clément Janequin achieves its lush sonority by limiting its membership to male singers, and its clarity and precision by assigning only one singer to each part. The result is a rich but clear sound with well-articulated inner lines. The articula-

tion of old French is a miracle, and in Janequin's beloved bird calls the sound is enchanting. This album offers many sustained moments of great beauty. *S.L.*

LECLAIR: *Concerto for Violin and Orchestra in F Major, Op. 7, No. 4* (see J. S. BACH)

RECORDING OF SPECIAL MERIT

MAHLER: *Symphony No. 4, in G Major.* Lucia Popp (soprano); London Philharmonic Orchestra, Klaus Tennstedt cond. ANGEL ⓪ DS-37954 \$12.98, ⓪ 4XS-37954 \$12.98.

Performance: **Koenly felt**
Recording: **Spacious**

After the First, the Fourth is the most often recorded of the Mahler symphonies, and it has been the luckiest in terms of receiving distinguished recordings, beginning with Bruno Walter's in 1945. Klaus Tennstedt's new reading with the London Philharmonic and Lucia Popp as the excellent angelic soprano in the last movement at once takes a place in the "distinguished" category—and it is also a very distinctive one.

While there is nothing willful about Tennstedt's interpretation, it has a very individual character in its articulation and phrasing. The inner textures are highlighted without any undue exaggeration of details, most notably in the first movement and in the macabre half-lights of the second with its *scordatura* solo violin. The heart of

the symphony, its deeply reposeful slow movement, has all the needed serenity without ever becoming static. The mighty visionary outburst toward its close comes off almost as splendidly here as in Walter's recording, and, of course, the modern sound is incomparably richer and more brilliant. The recording overall is rich in body and superbly detailed. *D.H.*

MOZART: *Piano Concertos Nos. 20 and 27* (see Best of the Month, page 64)

RECORDING OF SPECIAL MERIT
















MOZART: *Serenade in B-flat Major (K. 361)* Collegium Aureum. PRO ARTE ⓪ PAD-137 \$9.98, ⓪ PCD-137 \$9.98.

Performance: **Spacious**
Recording: **Splendid**

The Collegium Aureum here offers the perfect opportunity to hear Mozart's magnificent Serenade in B-flat Major on original instruments. The ensemble sound of two oboes, two clarinets, two basset horns, two bassoons, four horns, and a double-bass is glorious. Mellow than their modern counterparts, the instruments have a velvety sonority that brings a noble quality to the music. Beautifully paced and scrupulously in tune, this performance sheds new light on the wind music of the period, and the recorded sound is splendid. *S.L.*

MUSSORGSKY/RAVEL: *Pictures at an Exhibition.* RAVEL: *La Valse.* London

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Cécile Ousset

Symphony Orchestra, Claudio Abbado cond. DEUTSCHE GRAMMOPHON ① 2532 057 \$12.98, © 3302 057 \$12.98; © 410 033-2, no list price.

Performance: **Good**
Recording: **High-powered**

Claudio Abbado's new DG recording of the *Pictures* lacks some of the sonic color and verve of Telarc's Maazel/Cleveland Orchestra recording, but it is still a performance of considerable distinction. The opening "Promenade" suggests a meditative amble rather than a purposeful stride, and the "Gnomus" episode seems to me rather on the analytic side, but there is a fine elegiac feel to "The Old Castle." "Tuileries" boasts exceptionally fine orchestral playing in the middle section, and the very deliberate handling of the "Bydlo" ox-cart episode is highly effective. The "Unhatched Chicks" do their thing with great precision. The "Two Jews" are expertly depicted, and the "Limoges Marketplace" has great verve and virtuosity. "Catacombs" is mostly very impressive, notably in its final pages, but Abbado fails to elicit from the crucial solo-trumpet lamentation all the eloquence it needs. The middle section of the "Hut on Fowl's Legs" is marvelously eerie thanks to the detail picked up by the digital recording, and the final "Great Gate at Kiev" emerges from the speakers with tremendous weight and brilliance. Outstanding throughout is the capture of transient peaks across the audible spectrum.

Abbado does an excellent job with Ravel's terrifying *La Valse*. He displays Toscaninian power and control, and yet there is a satisfying flexibility in tempo as the moment demands. Again the recording is finely detailed. *D.H.*

RECORDING OF SPECIAL MERIT

PERGOLESI (attrib.): *Concerti Armonici, Nos. 1-6.* Academy of St. Martin-in-the-Fields, Neville Marriner cond. ARGO ① ZRDL 1002 \$10.98, © KZRDC 1002 \$10.98.

Performance: **Overwhelming**
Recording: **Superb**

Although the *Concerti Armonici* are still generally cataloged under Pergolesi's name and have also been attributed to various minor composers (such as the publisher, Carlo Ricciotti), Michael Talbot's fine notes to this album present a convincing case that they were written by the Dutch music enthusiast Count Unico Wilhelm van Wassenaer. But whatever their authorship, there is no doubt about their beauty. To my mind they are on a level with the *concerti grossi* of Corelli and Handel and with Vivaldi's *L'Estro Armonico*—which is a very exalted level indeed. The strings of the Academy of St. Martin-in-the-Fields are at their best in these warm and glowing performances, and Neville Marriner's direction brings out the music's incredible subtleties. Not to be missed. *S.L.*

RAVEL: *Shéhérazade* (see DEBUSSY)

RAVEL: *La Valse* (see MUSSORGSKY)

SCHUBERT: *Piano Sonata in B-flat Major* (see Best of the Month, page 67)

A Joyous French Piano Recital

A NEWLY imported EMI/Angel album of French piano music joyously and evocatively played by Cécile Ousset offers a selection something like what one would encounter at a live recital. While it is convenient, of course, to have records devoted to the works of a single composer, and even more desirable to have such collections as Ravel's *Miroirs* and Chabrier's *Dix Pièces Pittoresques* in their entirety, performances such as Ousset's surely count for a good deal more. No matter how many integral sets of the piano music of Ravel, Debussy, Fauré, or Satie you may have in your collection, this is the sort of record you'll take off the shelf and play again and again just for the listening pleasure it affords.

With brilliance to burn and a technique so sure it needn't be discussed, Ousset is so impassioned and yet so elegant in her celebration of the contrasting colors and moods in her varied program that no one whose ears are in working order is likely to be less than simply swept away by the magic of it all. If my language sounds like puffery—well, see how restrained you can be after hearing this record and after feeling it get to you on a deeper level each time you return to it.

Ousset does offer two complete sets here: Debussy's *Estampes* and Satie's *Gymnopédies*. Her Debussy is gutsy, not in the veiled, "gossamer" style favored by some other pianists, and the mesmerizing splashes of color in the opening *Pagodes* are no superficial indulgence but serve to illuminate the music's distinctive character

with exceptional clarity and impact. The no less distinctive character of the *Gymnopédies*, on the other hand, is realized through unusually deliberate speeds and subtly restrained dynamics that serve to emphasize the essentially static concept of these marvelous pieces. Some listeners may miss some of the supposedly authentic dryness in Ravel's *Alborada del Gracioso*, but Ousset's heady emphasis on the rich coloring makes irresistible sense to me. Similar conviction shines in the Fauré, the Chabrier, and the Saint-Saëns.

Ousset must be in love with these pieces—and who, indeed, wouldn't be after hearing them played as she plays them here? Although I detected the faintest hint of pre-echo at the start of side two, the sound is for the most part as spectacular as Ousset's playing—gloriously vivid and enhanced by flawless German pressing.

—Richard Freed

CÉCILE OUSSET: *French Piano Music.* Fauré: *Impromptu No. 2, in F Minor, Op. 31; Impromptu No. 3, in A-flat Major, Op. 34.* Debussy: *Estampes.* Ravel: *Miroirs: No. 4, Alborada del Gracioso.* Chabrier: *Dix Pièces Pittoresques: No. 10, Scherzo-Valse; No. 6, Idylle.* Satie: *Trois Gymnopédies.* Saint-Saëns: *Allegro Appassionato, Op. 70; Étude, Op. 52, No. 6 (En Forme de Valse).* Cécile Ousset (piano). EMI/ANGEL ① ASD 4390 \$12.98, © TCC-ASD 4390 \$12.98 (from International Book and Record Distributors, 40-11 24th Street, Long Island City, N.Y. 11101).

SCHUBERT: *Piano Sonata in B-flat Major, Op. Posth. (D. 960)*. Sviatoslav Richter (piano). EURODISC 86222 MK \$9.98.

Performance: **Wayward first movement**

Recording: **Good**

RECORDING OF SPECIAL MERIT

SCHUBERT: *Piano Sonata in A Major, Op. 120 (D. 664)*; *Piano Sonata in A Minor, Op. 143 (D. 784)*. Sviatoslav Richter (piano). VOX CUM LAUDE D-VCL 9027 \$10.98, © D-VCS 9027 \$10.98.

Performance: **Irresistible**

Recording: **Good**

While Sviatoslav Richter has consistently performed a number of Schubert sonatas and has recorded several of them over the years, it appears that this recording of the great B-flat Sonata, made in Salzburg in 1972, has never before been issued in the U.S. The performance may strike some listeners as more than a little wayward, at least in the sprawling first movement, which really does sprawl here. Richter not only takes the exposition repeat but favors a very leisurely tempo, which draws out the movement to nearly twenty-five minutes' playing time. It is episodic, but apparently deliberately so—held together tenuously by the undercurrent of intensity alone. Many listeners will find this approach too cluttered to be convincing, but many others may be won over by Richter's unquestionable absorption and commitment. The remaining three movements show these same qualities and do not stray from what we have come to regard as the norm in interpreting this work. In the final movement Richter is especially mindful of the "ma non troppo" appended to the *Allegro* marking, which ensures that the substance of the piece emerges in full to provide a satisfying balance.

The two shorter and earlier sonatas on the Vox Cum Laude disc were recorded live by JVC in Tokyo in 1979. Although the digital sound is not appreciably better than Eurodisc's analog product and is, in fact, a little dullish in the opening of the A Minor, for the most part it is certainly realistic enough. These two performances otherwise are more thoroughly appealing than that of the B-flat Sonata. Claudio Arrau, in his recent Philips recording of the A Major Sonata, replaces the work's traditional character of naïve sweetness with an unsuspected sense of depth and restlessness; Richter seems to juxtapose these two conflicting notions quite effectively in the opening movement, which he takes even more broadly than Arrau, and in the middle movement. The finale comes off with great charm and spirit.

The A Minor Sonata upside is equally successful. Curiously, while the opening of this work has always suggested a certain "Russian" character to me, it does not do so here in the hands of this Russian pianist. The final movement has all the drama and fire one could want, kept free of excess by a superb sense of balance in which lyricism is given its due. This record is a definite winner—indispensable, I would think, in any good collection. R.F.

(Continued on next page)

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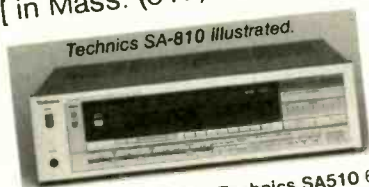
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R. STRAUSS: *Ein Heldenleben, Op. 40.* Boston Symphony Orchestra, Seiji Ozawa cond. PHILIPS Ⓢ 6514 222 \$12.98, Ⓞ 7337 222 \$12.98; Ⓞ 400 073-2, no list price

Performance: **Characterful**
Recording: **Very good**

Seiji Ozawa's approach to *Ein Heldenleben* is more than usually interesting. In effect, as William Mann's annotations imply, he eschews Teutonic bombast and treats Strauss's score as "absolute" music. The rhetoric in the opening pages is kept relatively low-keyed, and the interpretive emphasis is on musical flow and the illumination of textural inner voices. The treatment could be described as analytic but affectionate. The performance is also singularly distinguished by concertmaster Joseph Silverstein's wonderfully characterized evocation of the Hero's Helpmate (the composer's wife, Pauline, of course). More often than not these passages are pretty boring, but Silverstein brings the lady inimitably to life. The rest of the work comes off in much the same manner as the opening episodes, with the "quotations" section going particularly well. The first-desk wind players are in top form throughout, and the Philips sound is warm and appropriately spacious. All in all, this is an unusual yet curiously satisfying recording. **D.H.**

SIBELIUS: *Symphony No. 7, in C Major, Op. 105; Tapiola, Op. 112.* Philharmonia Orchestra, Vladimir Ashkenazy cond. LONDON Ⓢ LDR 71080 \$12.98, Ⓞ LDR5 71080 \$12.98.

Performance: **Very good, but . . .**
Recording: **Very good**

The Sibelius Seventh Symphony is a tough nut to crack interpretively, in terms of integrating its varied and complex musical strands into a meaningful whole. Texture, tempo relationships, and dynamics must all be given their due, and in such proportion that nothing slips out of place. Among the available stereo versions, Colin Davis's, with the Boston Symphony, is generally the most satisfying.

Vladimir Ashkenazy's new reading with the Philharmonia Orchestra has splendid moments, however. It succeeds brilliantly in some places where others have failed, such as in blending the famous solo-trombone motive into and out of the general texture. At other times the music thins out almost to a chamber-music texture that I feel is out of character. There are also problems with the lilting lyrical motive that makes its appearance after the central climax; this performance does not capture its elemental surge toward the next transitional climax.

Tapiola, the last of the Sibelius masterpieces, comes off much better. Ashkenazy has a nice feel for the implicit speech rhythms of the piece, and he and the Philharmonia players conjure up the atmosphere of the Northland's dusky forests in fine fashion. London's digitally mastered recording is altogether splendid in its clarity of detail and general ambience. **D.H.**

VIVALDI: *Concerto for Two Violins and Orchestra in A Minor, Op. 3, No. 8* (see J. S. BACH)

(Continued on page 105)

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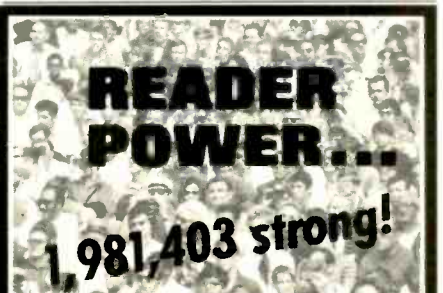
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VIVALDI: The Four Seasons. I Musici, Pina Carmirelli cond. PHILIPS ● 6514 372 \$12.98, © 7337 275 \$12.98.

Performance: **Solid**
Recording: **Excellent**

Yet another *Four Seasons!* But a fine one. I Musici plays with a consistently high standard and proves that using twentieth-century performance practices can still be a valid approach to older music. Pina Carmirelli plays the solo violin part with a dash that highlights the onomatopoeic aspects of Vivaldi's writing. Fine sound too. S.L.

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VLADIMIR HOROWITZ: In London. Chopin: *Polonaise-Fantaisie, Op. 61; Ballade No. 2, in G Minor, Op. 23.* Schumann: *Kinderscenen, Op. 15.* Scriabin: *Etude in D-sharp Minor, Op. 8, No. 12.* Vladimir Horowitz (piano). RCA ● ARC1-4572 \$12.98, © ARK1-4572 \$12.98.

Performance: **Compelling**
Recording: **Harsh**

"Horowitz in London" was taped live in the Royal Festival Hall in May 1982 at Vladimir Horowitz's first European concert in more than thirty years. The Prince of Wales was there, and, through television, so were millions of home viewers on both sides of the Atlantic.

There seems to be no end to the gimmick possibilities for such historic-event records. This one has a minute of applause at the start followed by Horowitz's playing of *God Save the Queen*—not a fantasy or variations, just plain old *God Save the Queen*. Then there's a little bonus tucked inside the jacket: a small "flexible disc" with recorded excerpts from a televised interview with the artist about his life and music. On it Horowitz is disturbingly fatuous about almost everything, but he does say one thing that made me sit up. He plays "much more simply now" than he used to, he says. In the old days, he (and everyone else) exaggerated everything for an audience that didn't know the music—"selling" the music, so to speak. That isn't necessary now, he says.

In fact, however, what makes Horowitz so precious to us still is precisely that he "sells" the music; he makes us know it in his way. He plays the music, not the notes. The performances on this record are not examples of technical perfection. Neither is the recording. The piano sounds harsh and metallic, and big passages, especially in the bass, are so ugly and blurred that it is hard to tell what notes he is playing. But *musically* we always know.

Only a very great artist could choose Schumann's *Kinderscenen* (*Scenes from Childhood*), a work of utter simplicity and understated lyric poetry, as the major work and focus for a concert program and carry it off totally. Horowitz's Chopin is always worth listening to, and the *Polonaise-Fantaisie*, rare enough in my experience to seem a novelty, is especially fine here. Both it and the ballade, however, while magnificently interpreted, suffer from a few smears and from the generally ineffective recording; the soft and nonpyrotechnic Schumann emerges much more clearly. E.S.

Going on Record

By Christie Barter



MORE BRAHMS AND OTHER ANNIVERSARIES

It was bound to happen. Some scurrilous soul has tried to undermine the lofty spirit of the Brahms sesquicentennial celebration this year by leaking to the press that, when he was a kid, this revered composer paid his rent by playing the piano in Hamburg's brothels. Most affected by this shocking news, according to the *Times* of London, were music lovers who believed that only the Beatles got their start in Hamburg and others who labored under the misapprehension that only Jelly Roll Morton got his start playing in a cat house.

The Brahms Year has survived all this, however. Record companies and performing organizations large and small have all had, and will continue to have, their contributions to make. The New York Public Library has published a handsome facsimile edition of its treasured manuscript of Brahms's *Alto Rhapsody*. An American Brahms Society was formed during a recent international conference and festival of Brahms's music at the Library of Congress. And any number of more modest observances will follow in the wake of these.

Meanwhile, the new records and tapes devoted to Brahms are marvelously diverse in the repertoire they explore and the artists they bring to the fore. Most welcome is the repackaging by Philips of the three string quartets played by the Quartetto Italiano and the F Minor Piano Quintet with Maurizio Pollini (6717 010, three discs). The quintet, originally released by Deutsche Grammophon, is an interesting example of one up-market label (Philips) raiding or being permitted to raid the catalog of another (DG) under the aegis of the parent company (PolyGram).

Other recent, worthwhile additions to the Brahms discography are the vigorous accounts by Stephen Bishop-Kovacevich of the two Rhapsodies, the Waltzes of Op. 39, and the Six Piano Pieces, Op. 118 (Philips 6514 229, © 7337 229), and the posthumous Glenn Gould release featuring the Four Ballades, Op. 10 (CBS 1M 37800, © IMT 37800), reviewed in these pages last month. Add to these the expressive, amazingly mature performances by the twenty-year-old Anne-Sophie Mutter, with Alexis Weissenberg, of the three violin sonatas

(Angel 4 DSB-3937 two discs, © 4X2S-3937) and the album devoted to the two cello sonatas played by Mstislav Rostropovich and Rudolf Serkin (DG 2532 076, © 3302 076), drawn from the mammoth Brahms Edition I discussed last month.

Just having a birthday, though, even a very senior, round-figure one, doesn't guarantee a thing. Look at Girolamo Frescobaldi, who was born four hundred years ago this year. Not one Frescobaldi record has crossed my desk since January, although an album of his keyboard music, in buoyant performances by Christopher Hogwood, arrived in the mail last November (Oiseau-Lyre D260D 2 two discs). And Orlando Gibbons, born the same year (1583), is almost completely the forgotten man; his representation in the Schwann catalog has remained unchanged for a couple of years. Jean-Philippe Rameau (1683) isn't doing too badly. In fact, the two Rameau ballets reviewed in recent issues—*Anacréon* (Harmonia Mundi HM 1090) and *Pygmalion* (Pro Arte PAL 1082, © PAC 1082)—are real winners.

BUT I guess it helps if you're still around. Elliott Carter and Olivier Messiaen are both seventy-five this year; Morton Gould is seventy; Ned Rorem is sixty. And not one of them is being allowed to forget it. One composer who is much loved by those who know him and his music is Sir Lennox Berkeley, who was eighty in May. I happen to be a fan myself and can wholeheartedly recommend a couple of recordings of his music, both imports from International Book and Record Distributors. One is a new collection of his music for flute—a sonatina and a concerto dating from the late Thirties and Forties and a fairly recent sonata—all idiomatically scored and beautifully performed by James Galway (RCA RS 9011, © RSK 9011). The other offers a generous sampling of some of Sir Lennox's most engaging orchestral music (Lyrita SRCS 74). In both, the composer himself conducts the London Philharmonic.

Finally, don't forget that in 1985 we'll have another birthday to celebrate: the hundredth, of Ferdinand Joseph Morton, better known as Jelly Roll. □

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