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Stereo Review®

How to Choose a Record Player

How to Read Turntable Specs

How to Spot Record Defects

Equipment Test Reports

- NAD 7150 AM/FM Receiver
- Technics SB-X700 Speaker System
- ADC Sound Shaper Thirty Equalizer
- Crown Power Line 3 Power Amplifier
- Bang & Olufsen MMC 2
Phono Cartridge

Plus

- Kenwood KRC-922
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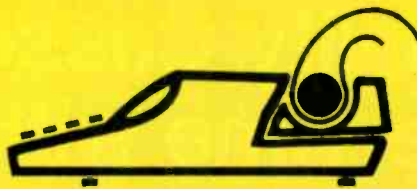
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Edited by Christie Barter and Gordon Sell

● A COMPACT DISC mastering and production facility in McLean, Virginia, is expected to start producing CD's for independent recording companies by this September. The Digital Images Corporation expects to produce between 1 and 3 million CD's the first year, in lots as small as 1,000. This plant will be the first to manufacture CD's in the United States; CBS/Sony's U.S. facility is not expected to begin production until 1984. The world supply of the digital Compact Discs is provided at present by one factory in Germany that belongs to PolyGram and two in Japan, one belonging to Sony and the other to Denon.

● ROCK SINGER DEBORAH HARRY of Blondie is the latest recording star to make a Broadway debut as an actress. Playing the title role in Teaneck Tanzi, which opens in mid-April, Harry is required literally to wrestle with her problems in the ring, refereed by comic Andy Kaufman. The play, by British playwright Claire Luckham, is a nonmusical import Americanized for the United States audience. Harry, who has movie acting credits, has now added her name to the growing list of pop, rock, and r-&-b artists who have made it in the legitimate theater, including Linda Ronstadt and Rex Smith (Pirates of Penzance), Patti Labelle and Al Green (Your Arms Too Short to Box with God), David Bowie (Elephant Man), and Cher (Come Back to the Five and Dime, Jimmy Dean, Jimmy Dean).

● TECH NOTES: The U.S. Supreme Court heard the so-called Betamax case this January and is expected to announce a ruling in June. If those who favor a royalty tax on tape and VCR's lose, they are expected to seek a legislative solution through their allies in Congress....The Canadian Department of Communications is planning to take action on the AM stereo question. The powerful CBC (Canadian Broadcasting Corporation) is said to be pushing for adoption of a single standard instead of going along with the FCC's free-market approach....Sansui plans to begin selling home and car AM stereo

units in September. Units will feature Sansui's universal AM stereo circuit that can work with Kahn, Harris, Motorola, and Magnavox systems.... According to a Magnavox study, only 1 per cent of the American public is aware of the Compact Disc. The company plans to change this with heavy promotion in "fashion" department stores in twenty-two cities; Philips/Magnavox CD players will initially be sold only in these stores....In an industry that is not noted for corporate longevity, Thorens is celebrating its hundredth birthday as a manufacturer of music reproduction equipment....National Semiconductor's DNR is now the second-best-selling noise-reduction system, with 2 million channels sold in less than a year. According to National Semiconductor's figures, Dolby is expected to sell 31 million channels in 1983, DNR 4 million, dbx 1.2 million.

● RECORD BARGAINS: The least expensive discs and tapes by well-known classical artists are on Moss Music Group's new Allegro/Melodiya label--a recital by pianist Emil Gilels and mainstream instrumental repertoire by the Moscow Chamber Orchestra and the Orchestra of the Bolshoi Theater--all retailing at the rock bottom price of \$2.98....The lowest prices for digital recordings are claimed by Pro Arte's new Sinfonia line of orchestral classics on discs and tapes selling for \$5.99 to \$6.99. ...CBS Records' Nice Price series now totals about 1,000 former hit albums reduced to \$5.98. Recent additions include titles by James Taylor, Heart, and Elvis Costello.

● STRAVINSKY's Rite of Spring recorded by Antal Dorati and the Detroit Symphony is the first Compact Disc to win an award. The London CD (400-084-2) has been given a Grand Prix du Disque by the Académie Charles Cros in Paris (see "Classical Briefs" for other winners). The same recording is one of a group of thirty-five CD's, on PolyGram pop and classical labels, currently available nationally in the department stores chosen to introduce Magnavox's new CD digital audio players.

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COVER: Design by Borys Patchowsky; photo by Bruce Pendleton. For more on the Pioneer PL-7 turntable shown on the cover, see page 46.

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Speaking My Piece

By William Livingstone

Editor Livingstone (right) with Michael Koss, marketing vice president of Koss Corporation



GIMME RECORDS

LIKE almost everyone who cares for recorded music, I have been concerned about the plight of the record industry in the current recession. Some articles in the business press have been so gloomy that they made me wonder whether the government would eventually be asked to subsidize the major record companies. I am always pleased, therefore, by any sign of improving health in the industry that supplies new cassettes for my deck and new discs to keep my turntable turning.

Such a sign came recently from the Recording Industry Association of America (RIAA), which announced that in February it had certified Gold Awards for six albums and five singles and Platinum Awards for five albums. This was twice the number of certifications for the same month in 1982.

When things began to look bad for the record industry in the late Seventies, it seemed to me that companies should trim their catalogs and bring out fewer records—and better ones. I was surprised that RCA, CBS, and London chose that moment to add new series of reissues, all well remastered on tape or disc and attractively priced.

At the same time that the industry was supposedly depressed, Harmonia Mundi, a French classical label, founded a branch in Los Angeles that is now doing well in the U.S. market. Its catalog lists more than 1,500 titles.

And PolyGram, apparently not satisfied with the share of the American market commanded by its subsidiaries, including Deutsche Grammophon, London, Philips, and Polydor, has set up PolyGram Special Imports. PSI brings in popular and classical records from Europe and Japan that are not released here. Its list exceeds 3,000 titles, and business is said to be brisk.

A new three-year report on U.S. sales of records and prerecorded tapes has

just been released by the RIAA covering the years 1979, 1980, and 1981. It tells us that men buy more than half the records sold here and most of the recordings of rock (63 per cent), classical music (63 per cent), and jazz (78 per cent). Buyers between the ages of fifteen and nineteen account for only 17 per cent of the market, and 50 per cent of the records sold go to buyers between twenty and thirty-four.

RIAA figures show that between 1979 and 1981 the number of records shipped to dealers dropped by 13 per cent, but the retail value of total shipments dropped only a little—from \$3.676 billion to \$3.626 billion. Adjusted for inflation, however, this represents a decrease of about 9 per cent.

What a relief! Things could be better, to be sure, but at least at this rate record companies won't be shutting up shop right away. The advent of the digital Compact Disc should bring new excitement to the audio and record industries, and any upturns in the general state of the economy should beef up sales of records and equipment.

When cassette players reached hi-fi quality, those of us who bought decks considered them as *additions* to our installations, not as a replacement for the turntable. Wonderful as the digital Compact Disc player is, for probably another decade it will be an additional signal source in an installation that includes a conventional turntable for long-playing analog records. With that in mind, this month we bring you some pointers on visual inspection of analog records from David Ranada (page 56). Alan Lofft has some advice on shopping for turntables (page 45), and Julian Hirsch will tell you how to evaluate turntable specs (page 54). Listening to CD's will make you very critical, and you're going to demand more from your LP's and record player. □

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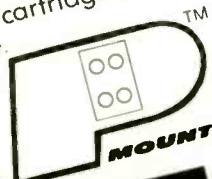


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Letters

Noel Coppage

● It was with great sadness that I read in the March issue of Noel Coppage's passing. I have always valued his well-crafted reviews for their skillful coverage of diverse musical topics, historical and cultural insights, and perceptive and just evaluations. I just spent a memorable evening playing albums and rereading Noel's reviews of them. He will be greatly missed.

RUDI SCHMID
Kensington, Calif.

● Noel Coppage's death is indeed a loss. I'll especially miss his astute coverage of contemporary folk music. His last article, "The Second Urban Folk Revival" in the March issue, is a fitting *adieu* from one of the few critics who realized that just such a revival is under way, however underpublicized. Such second-wave "troubadours" as Stan Rogers, Bill Staines, and David Mallett as well as such "tradition-oriented but quirky bands" as Silly Wizard, the Tannahill Weavers, and Touchstone all owe a debt of thanks to Noel for saying on behalf of their music: *Listen*.

EARLE HITCHNER
Lyndhurst, N.J.

● Like many people I collect bits of wit and wisdom from the things I read. Poets and scientists, novelists and theologians are represented in my notebook, and so is Noel Coppage for a line from a review of his published in October 1981: "We are here on earth to learn, I have concluded (possibly because it's clear that I'm never going to make any real money)." That line is representative of Noel Coppage's gift for expressing a serious thought with enough humor to make it delightfully wry (and worth repeating!) without belittling it.

BONNIE JO DOPP
Takoma Park, Md.

We regret that we cannot print all the letters of condolence that have come from readers following the death of Noel Coppage. Those letters have been much appreciated by the editors, and all of them will be forwarded to his family.

Frequency Response

● Peter Mitchell's March feature on frequency-response specifications was excellent. I have a basic knowledge of audio electronics, but I had never really understood the importance of "flat" frequency response. For the first time I think I understand how speakers, recorders, room acoustics, etc. act to color sound, making it seem warm or cold, dull or bright, mellow or harsh. By experimenting with the equalizer in my car, I was able to demonstrate for

myself the effects Mr. Mitchell described. Thank you for this interesting and informative article.

MAC STEIGER
Vallejo, Calif.

Songs for the Unemployed

● In reply to George d'Urso's question in February "Letters"—"Do you really think the laid-off auto workers sing to the music of Gary U.S. Bonds?"—I'd have to say yes. The first cut of Bonds's last album, "On the Line," produced by Bruce Springsteen and



Gary U.S. Bonds

Miami Steve Van Zandt, happens to be entitled *Out of Work*. It's a jumpy, fast-paced song about being out of a job. Springsteen's own album "Nebraska" has potential, but I practically had to force myself to listen to its boring tunes. Bonds's music can bring you out of the slump of not working, while Springsteen's drags you further down.

CHRISTOPHER TINGLER
Grafton, W. Va.

Car Stereo Tests

● Julian Hirsch's lab test of the Blaupunkt CR-3001H in the March issue was a disservice to the unit in question, to the readers of *STEREO REVIEW*, and to Mr. Hirsch himself. As a regular reader for the past fifteen years, I have come to look forward to Mr. Hirsch's reviews of state-of-the-art home components. To apply his experience and resulting frame of reference to car stereo is like giving A. J. Foyt a job behind the parts counter of a local auto dealer.

MICHAEL R. HARTIGAN
Lockport, N.Y.

● I applaud *STEREO REVIEW*'s road test of the Blaupunkt CR-3001H in March, and I look forward to road tests of other car stereo products in future issues. At last there is a



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MARK DOUGLAS PINGREE
Oakland, Calif.

Mozart's Church Music

● I cannot agree with Eric Salzman's statement, in his March review of a new Philips recording of sacred music by Mozart, that the young composer "churned out" his lesser church works. In the case of the *Litaniae*, K. 125, for example, the young Mozart himself valued the work, as is evidenced by an entry in his manuscript. The biographers Wyzewa and Saint-Foix

devote three pages to analyzing this 1772 work and point out the "particular care" that went into its composition. We also learn from the diary of Mozart's sister that K. 125 was still performed eleven years later on Palm Sunday at the Salzburg Cathedral. Finally, it must have escaped Mr. Salzman's attention that this work appears here on records for the very first time.

ERIC OFFENBACHER
Seattle, Wash.

Rolling Stones

● After taking in the new concert film *Let's Spend the Night Together* by the

Rolling Stones (more like *Geriatric Rock*), I'm convinced that rock-and-roll must be on a life-support system. It's time someone pulled the plug. Yesterday is gone.

SCOTT HARDY
Concord, N.H.

"Men Without Women"

● Steve Simels and STEREO REVIEW were right on target in honoring Miami Steve Van Zandt and his new band by citing their album as one of the "Best of the Month" in March. "Men Without Women" is a joy to listen to, and I don't know if it will ever leave my turntable. Along with February's "Record of the Year" honorable mention for "On the Line" by Gary U.S. Bonds, this leaves me in no doubt that Steve Simels is right in judging East Coast (Jersey) rock as the music most from the heart.

THOMAS VORELL
Ravenna, Ohio

Thelonious Monk

● Many thanks for Chris Albertson's comments in March on two recently released albums by Thelonious Sphere Monk. I, for one, feel that every note Monk ever recorded should be made available for the world to hear. Monk was a genius, and, as is the nature of geniuses, he experienced turmoil. That we experience this turmoil on his recordings only helps us to understand that Monk was a human being with feelings, strengths, and weaknesses. Although the discs that Mr. Albertson reviewed will not be my favorites among Monk's recordings, they are very welcome additions to my library. The only real crime here is that Monk is no longer around to collect what little proceeds these releases would have netted him.

ANGEL M. ROSADO
Bronx, N.Y.

Inflation Buster

● It is with great respect and sincerity that I wish STEREO REVIEW a happy twenty-fifth anniversary. Twenty-five years ago I first purchased *Hi Fi & Music Review* and also joined the RCA Victor Society of Great Music. I have been buying the magazine and RCA records ever since. The magazine has improved with age, but, alas, it has also increased in price from 35¢ per issue to the current \$1.50.

I paid \$3.98 for RCA records in 1958, however, and I am able to buy the same performances with improved sound on cassette tape for the same price today! The new RCA Victrola cassette series, which premiered last September with fifty titles, is fantastic in both quality and value. It includes the Boston Symphony under Leinsdorf, Monteux, and Munch, the Chicago Symphony under Reiner, and the NBC Symphony Orchestra under Arturo Toscanini! I urge all readers interested in classical music to support RCA's efforts to make available its gold mine of Red Seal recordings in this new format.

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DESIGN INTEGRITY:

WHAT MAKES DENON CASSETTE DECKS UNCOMMON IS HOW MUCH THEY HAVE IN COMMON.

Denon has never built multi-thousand dollar cassette decks in order to sell unrelated inexpensive machines. Instead, Denon has concentrated its full engineering effort to produce rationally-priced cassette decks that would impress serious music lovers with their sound rather than their features. Now, the new DR-M4, DR-M3 and DR-M2 cassette decks exceed Denon's previous sonic performance levels, while adding significant technological and convenience features.

Denon's Tape Tension Servo Sensor System has been further refined to provide automatic sensing and correction of tape tension for optimum tape-to-head contact throughout the entire play of each cassette. A new SF combination head extends frequency response to 23kHz (metal) with a 70dB S/N ratio (Dolby C). A new computer controlled silent tape transport mechanism provides entirely quiet and safe tape handling. An electronic computer digital counter using a laser detector system automatically indicates tape used and tape remaining information.

The DR-M Cassette Decks feature Denon's Flat Twin direct capstan drive; non-slip clutchless, beltless, reel drive mechanisms; Dolby B & C noise reduction; direct-coupled amplifier design, and separate amp/mechanical power supplies.

The DR-M3 offers computer tape tuning for bias and sensitivity. The DR-M4 adds programable random access, stopwatch function and dual-capstan transport. Otherwise, all the Denon DR-M Series Cassette Decks are principally the same—each offering the highest performance and quality at its price in the industry.

Denon products share more than name alone.

Denon DR-M2 Three Head Cassette Deck
with Dolby C; Tape Tension Servo;
SF Combination Head. \$399

Denon DR-M3 Three Head Cassette Deck
adds Computer Tuning System. \$499



Denon DR-M4 Three Head Cassette Deck
adds Dual Capstan and Music Search. \$599
(Including side panels) Prices for comparison purposes.

DENON

Imagine what we'll do next.

Denon America, Inc., 27 Law Drive, Fairfield, N.J. 07006
CIRCLE NO. 19 ON READER SERVICE CARD

WHY PUT TWO FILTERS INTO ONE GREAT COMPACT DISC PLAYER?



Kyocera goes to double lengths to make sure there's no distortion in its DA-01 Compact Disc Player. It's got both digital and analog filters—so nobody hears distortion.

The advantage of digital and analog filtering systems.

Modern technology has made analog filters pretty effective. But there can be a problem— analog filters by themselves render limited performance. By combining an analog filter with a digital filter, and precisely applying both types in just the right way, the limitations found with analog filters are not there anymore. Thanks to the unique use of these filters, and an impressive array of very advanced circuitry, the Kyocera CD Player provides accurate, crystal-clear, life-like sound.

The awesome specs that only digital can provide.

Needless to say, the Kyocera DA-01 comes through with some specs that are mind-boggling: A full 90 dB dynamic range... flat frequency response from 20-20,000 Hz... quiet 90 dB S/N ratio... and total isolation 90 dB channel separation.

And, just in case you didn't realize it, with the fabulous disc player system, as provided in Kyocera's DA-01 Player, there is no contact between disc and playback head. No ties, clicks, pops, scratches or record wear. And the DA-01 plugs right into your present audio system—Kyocera or others—just like a conventional turntable.

Easy to use, but total control of every function.

The DA-01 is easier to use than a modern cassette deck—slide the compact disc into the disc compartment, shut the door and hit the play button. With the DA-01's feather-touch controls, you can play the whole thing (60 minutes a side)...repeat a track...scan... pause...skip... advance...index... and program up to 24 different segments with an electronic memory. A functional LED digital panel tells you program running time and just where the optical scanner is on the disc.

Admittedly, our DA-01's are carried only by selected dealers. If you have trouble finding one, contact: Cybernet International, Inc., 7 Powder Horn Drive, Warren, NJ 07060 (201) 560-0060.



New Products

Latest Audio Equipment and Accessories

Sherwood Receiver Has Low-Distortion Amplifier

□ Sherwood's S-2680 CP AM/FM stereo receiver uses slide controls for bass, treble, balance, and volume, pushbuttons for all other receiver functions. Those functions include eight AM and eight FM station presets, auto-scan or manual tuning, input se-



lection, loudness compensation, muting, tape monitor, and power. Connections and switching are provided for two tape decks and two speaker pairs in addition to a pair of phono inputs. A bass-EQ function supplies an ultra-low-frequency bass boost to flatten the response of bookshelf speakers. Displays include those for output power, station frequency, signal strength, and FM stereo.

The FM tuner circuit incorporates a dual-gate MOSFET input stage, ceramic i.f. filters, quadrature detector, and PLL multiplex decoder. The power-amplifier section is a "sliding class-A" design with an input stage configured to minimize both "hard" and "soft" transient intermodulation distortion. The unit is rated to deliver 70 watts per channel into 8-ohm loads from 20 to 20,000 Hz with no more than 0.008 per cent total harmonic distortion. Price: \$479.95.

Circle 120 on reader service card

Technics Analyzer Aids Room Equalization

□ The Technics SH-8000 audio-frequency analyzer enables users to adjust graphic equalizers to a specific listening environment. Using a warble tone as its signal source, the unit generates thirty-one tones



over one-third-octave bands from 20 to 20,000 Hz. An easy-to-read precision sound-level meter has a switchable five-step sensitivity range (from 50 to 90 dB) and allows accurate measurement of sound-pressure level in 1-dB steps from 35 to 105 dB. To avoid tweeter overload or burnout, a protection switch prevents the unintentional generation of tones of 10 kHz or higher. The unit comes with an omnidirectional back-electret, condenser-type measuring microphone calibrated for extremely flat response from 20 to 20,000 Hz and with a cord more than 13 feet long. The SH-8000 has a carrying case and is easily hooked into a sound system through an amplifier's auxiliary input jack.

Overall frequency response is 20 to 20,000 Hz \pm 2 dB. Frequency precision of

the oscillator section is within \pm 6 per cent. The analyzer uses a 9-volt battery, the microphone a 1.5-volt battery. Dimensions of the analyzer are 8 1/2 x 2 1/2 x 4 3/4 inches; weight is 2 1/4 pounds. Price: \$150.

Circle 121 on reader service card

Sennheiser's Ultralight "Inside-Out" Headphones

□ Sennheiser's new "Inside-Out" Model MS 100 stereo headphones are meant to be used with both personal portable stereo equipment and sophisticated home equipment. Not counting the cord, the headphones weigh under 1 1/2 ounces. The built-in 4-foot steel-reinforced cable has a mini

Lower-Cost KEF Speakers



□ Various attributes of KEF's Reference Series of loudspeakers also appear in the company's new, less-expensive Standard Series. Vertical driver alignment, advanced driver materials, low-diffraction baffles, computer-designed cabinet bracing, newly developed bass-loading techniques, and sophisticated crossover networks are all used in the three speakers in the new series.

The largest system shown, the Carlton III (SP3020), is a two-way design with a passive bass radiator for reduced distortion at very low frequencies. The frequency range is given as 47 to 20,000 Hz \pm 2.5 dB at 2 meters along the frontal reference axis. Directional characteristics are within 2 dB of the reference-axis response up to 20,000 Hz within \pm 5° vertically and up to 10,000 Hz within \pm 20° horizontally. Sensitivity of this 8-ohm speaker is 86 dB sound-pressure level (SPL) at 1 meter with a 1-watt input. Minimum recommended amplifier power is 15 watts. Dimensions: 27 1/2 x 12 3/8 x 11 inches. Weight: 26 1/4 pounds.

The smallest system shown, the Coda

III (SP3011), is also a two-way design. Its tweeter has a ferrofluid-cooled voice coil for increased reliability and power-handling capacity. Frequency range for the Coda III is given as 65 to 20,000 Hz \pm 3 dB. An 8-ohm system, the Coda III has a sensitivity of 87 dB SPL. Minimum amplifier power is 10 watts. It measures 18 1/2 x 11 x 8 1/2 inches and weighs 13 1/4 pounds.

The Carina II (SP3014) is also a two-way system but has three drivers. The two low-frequency drivers provide improved power handling and increased efficiency. Frequency range is given as 60 to 20,000 Hz \pm 3 dB. Also an 8-ohm model, the Carina II's sensitivity is given as 89 dB SPL. Minimum recommended amplifier power is 10 watts. Dimensions are 23 1/2 x 11 3/4 x 9 3/4 inches; weight is 20 1/2 pounds.

All three speakers are finished in simulated walnut and have removable brown textile grilles. Prices per pair: Coda III, \$300; Carina II, \$500; Carlton III, \$750.

Circle 122 on reader service card

CAMEL

Where a man belongs.



8 mg tar.

Camel Lights.
Low tar. Camel taste.

8 mg. "tar", 0.7 mg. nicotine av. per cigarette, FTC Report DEC. 81.

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

New Products

stereo phone plug, making the unit directly compatible with all personal portable equipment. A supplied 5-foot extension cable

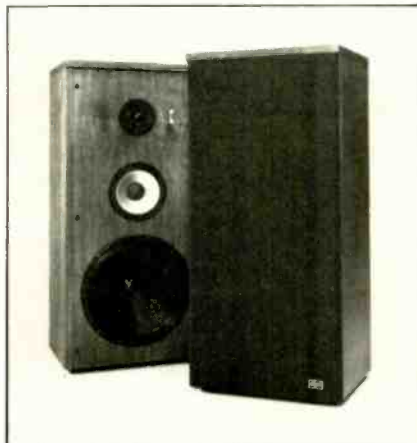


adapts the headphones for at-home listening. An extra pair of pads for the adjustable earpieces is included. Nominal impedance is 42 ohms. A 1-milliwatt input produces a nominal sound-pressure level of 96 dB. Frequency response is given as 20 to 20,000 Hz. Price: \$85.

Circle 123 on reader service card

Three-Way Bozak Loudspeaker System

Bozak's LS-330A speaker system includes a 1-inch, wide-dispersion tweeter, a 6-inch Curvilinear aluminum-diaphragm



midrange driver, and a 12-inch bass driver. The midrange unit's diaphragm is said to operate virtually as a rigid disc, without the usual "cone break-up." The woofer has a pulp/lamb's-wool cone of varying density.

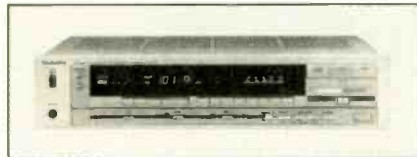
The speaker is protected by an incandescent-lamp limiter against tweeter damage from amplifier clipping and other dangerous signals. The crossover networks have 6-dB-per-octave rolloffs with crossover frequencies of 500 and 2,500 Hz. The hand-finished walnut-veneer cabinet is designed to be free from typical cabinet resonances.

Frequency response is given as 40 to 20,000 Hz \pm 3 dB. Nominal impedance is 8 ohms (6.5 ohms minimum). Sensitivity is 85 dB sound-pressure level with a 1-watt input at 1 meter. Minimum recommended amplifier power is 25 watts. Dimensions are 34 1/2 x 15 1/2 x 12 1/4 inches. Shipping weight is 64 1/2 pounds. Price: \$499. Bozak, Dept. SR, 68 Holmes Road, Newington, Conn. 06111.

Circle 124 on reader service card

Microprocessor-Driven Technics Receiver

Technics' SA-410 Digital/Analog Computer-Drive receiver employs microprocessor technology to monitor signal conditions



and heat-sink temperature changes on a dynamic basis and to adjust the output-transistor bias instantaneously to optimum levels. These features are claimed to minimize crossover distortion.

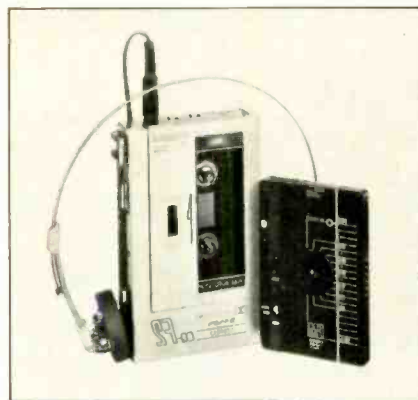
Most conventional stereo amplifiers, says Technics, utilize thermistors to monitor transistor temperatures and to alter the required bias-voltage levels to reduce signal distortion. Thermistors do not work instantaneously, however, because of thermal resistances between the power transistors and the thermistor. The effects of this do not show up in steady-state bench testing, according to Technics, but can distort dynamic music reproduction. The microprocessor-drive system in the SA-410's push-pull output circuitry is said to respond instantaneously.

Other features include sixteen station presets, both dial and numerical display of station frequency, connections and switching for two tape decks and two pairs of speakers, switchable infrasonic filter, sliding volume, bass, and treble controls, and a display for the Computer Drive circuitry. Output power is specified as 45 watts per channel from 20 to 20,000 Hz with no more than 0.007 per cent total harmonic distortion. Price: \$300.

Circle 125 on reader service card

JVC Personal Portable Has Dolby-B, FM Tuner

JVC's CQ-F2K personal cassette player comes with a cassette-sized stereo FM tuner pack. Power is supplied to the tuner by the batteries of the CQ-F2K through a row of contacts on the tuner pack. The contacts also carry the headphone signals. The tuning dial can be turned through an opening



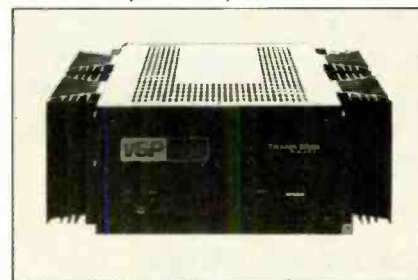
in the player's cassette door. Dolby-B/ANRS noise-reduction circuitry is included for correct playback of Dolby-B-encoded tapes. The unit's Metaperm head has a wide dynamic range to handle the higher-level signals that can be recorded on metal tape.

To reduce the problem of irregular tape movement, an anti-rolling mechanism using two vibration-canceling flywheels helps stabilize the tape transport. An electronically governed d.c. motor also contributes to the player's wow-and-flutter rating of 0.2 per cent. There are cue-and-review facilities and a full auto-stop mechanism. The CQ-F2K comes with shoulder and wrist straps and a belt clip. The supplied headphones weigh 9/10 ounce. The player measures 3 1/4 x 5 3/8 x 1 3/16 inches and weighs about 4/5 pound with batteries. Price: under \$159.95.

Circle 126 on reader service card

VSP's MOSFET Power Amplifier

Said to combine the best of tube and solid-state design, the all-solid-state VSP Trans Mos power amplifier uses transcon-



ductance operation of its output stages the way most tube amplifiers do. The output stages—using MOSFET's for accurate wideband response, low distortion, and self-protecting operation—are claimed to be "optimally balanced" for instant, thumpless turn-on. A switchable infrasonic filter rolls off at 18 dB per octave. An r.f. filter prevents interference. According to VSP, the Trans Mos is exceptionally stable with all loads, and its "Z" switch permits more efficient operation into lower impedances.

The Trans Mos is rated to deliver 150 watts per channel into 8-ohm loads from 20 to 20,000 Hz with total harmonic distortion of less than 0.05 per cent. Headroom with 8-ohm loads is given as more than 2.8 dB. Slew rate is greater than 70 volts per microsecond. Maximum instantaneous output current is greater than 44 amperes. Dimensions are 5 x 15 x 14 inches. Weight is 40

New Products

pounds. The unit is rack-mountable with an optional mounting kit (RM-AM01). Price: \$825. VSP Labs, 670 Airport Boulevard, Ann Arbor, Mich. 48104.

Circle 127 on reader service card

Lightweight, Low-Priced Koss Headphones

□ The Koss K-20 stereo headphone set is a non-sealing design with dynamic transducer elements and burgundy-colored foam ear



cushions. It weighs 2½ ounces (4¼ ounces with its 8-foot Y-type cord). Frequency response is given as 18 to 20,000 Hz. Headphone impedance is 110 ohms; total harmonic distortion is rated at less than 1 per cent. Price: \$19.95.

Circle 128 on reader service card

Nakamichi's Plug-In Infrasonic Filters

□ The Nakamichi SF-10 Subsonic Filters have been designed to minimize infrasonic interference when making cassette recordings. The SF-10 consists of a pair of passive filters that plug directly into the left and right line-input terminals of a cassette deck



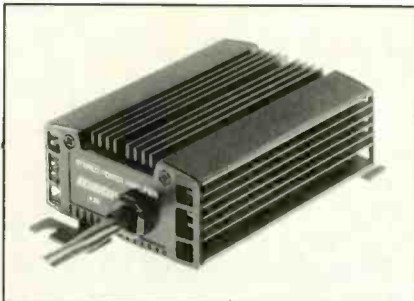
or into the corresponding record outputs of a preamplifier, integrated amplifier, or receiver. They provide 10 dB of attenuation at 10 Hz (-3 dB at about 25 Hz). Nakamichi

says that the filters can improve recording quality when taping from a source that contains substantial amounts of infrasonic energy, such as a warped phonograph record played with a tone-arm/cartridge system that resonates at too low a frequency. Such infrasonic energy can cause a wow-like sound in playback; under extreme conditions, it can even cause tape overload. Price: \$15 per pair.

Circle 129 on reader service card

Full-Featured Jensen Car Power Amplifier

□ Delivering 15 watts per channel minimum continuous average power into 4-ohm loads from 20 to 20,000 Hz with no more



than 0.3 per cent total harmonic distortion (or 40 watts per channel with 10 per cent distortion), Jensen's A35 car stereo power amplifier features full electronic protection from thermal overload and reverse polarity. In addition, the unit has high- and low-level inputs, short-circuit protection, and a fused power lead. Measuring about 5 x 3 x 2 inches, the amplifier is compatible with virtually any car stereo receiver or tape player. Frequency response is 20 to 50,000 Hz ± 3 dB. Signal-to-noise ratio is given as 80 dB. Price: \$74.95.

Circle 130 on reader service card

First Three-Way Advent Loudspeaker System

□ The Advent Model 6003 speaker system contains a 10-inch woofer, a 5-inch midrange driver, and a Direct Report dome tweeter. The midrange driver's diaphragm is made of a specially formulated polypropylene, and the combination dome/cone structure is said to provide a dome's excellent dispersion in high frequencies together with a cone's ability to reproduce lower frequencies. The midrange unit has a 20-ounce magnet with a 2-inch high-temperature voice-coil assembly suspended in high-viscosity ferrofluid. The 6003's tweeter and woofer have been designed for improved power-handling capacity. The tapering of the front of the cabinet prevents sound reflection from cabinet edges, thus eliminating sound-wave aberrations, minimizing room and cabinet interference effects, and improving dispersion. The cabinet is finished in walnut veneer.

Sensitivity is given as 89 dB sound-pressure level at 1 meter with a 1-watt drive level. Nominal impedance is 8 ohms. Frequency response is 39 to 22,000 Hz ± 2.5 dB. Power-handling capacity is 150 watts con-



tinuous, 300 watts peak. Minimum recommended amplifier power is 10 watts. Total harmonic distortion is 0.5 per cent above 50 Hz with a 1-watt drive level, 1 per cent with a 10-watt input. Crossover frequencies are 750 and 4,500 Hz. Dimensions are 32 x 22 x 8 inches. Price: \$379.95.

Circle 131 on reader service card

Budget-Priced dbx Noise-Reduction Unit

□ Using dbx's simultaneous encode/decode linear 2-to-1 companding process, the new NX-40 is said virtually to eliminate tape noise during recording while increasing dynamic range to as much as 110 dB. While the NX-40 provides full decoded monitoring capability only with three-head recorders, it is also compatible with two-



head tape decks. A front-panel switch turns the unit into a decoder for dbx-encoded discs. Frequency response is given as ±1.5 dB from 50 to 15,000 Hz. Effective noise reduction is 30 dB. Harmonic distortion is less than 0.5 per cent from 100 to 15,000 Hz, typically 0.1 per cent at 1,000 Hz. Dynamic range is 88 dB (peak signal to weighted background noise). Input impedance is 50 kilohms; output impedance is 100 ohms. Dimensions are 17½ x 67½ x 9½ inches; weight is 3 pounds. Price: \$159.

Circle 132 on reader service card

NOTE: All product descriptions and specifications quoted in these columns are based on materials supplied by the manufacturers, who will respond directly to reader requests for further information.

Domestic inflation and fluctuations in the value of the dollar overseas affect the price of merchandise imported into this country. Please be aware that prices quoted in this issue are therefore subject to change.

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.

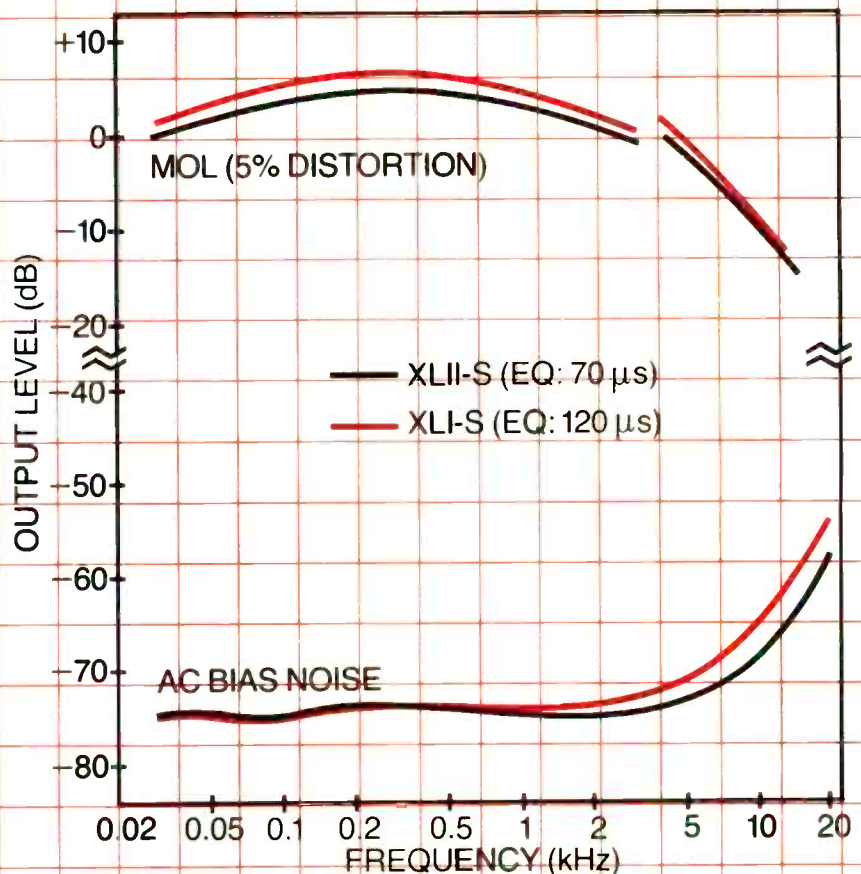
Maxell engineers have managed to improve the Epitaxial magnetic particles used on both tapes.

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.



IT'S WORTH IT.

© 1983 Maxell Corporation of America, 60 Oxford Drive, Moonachie, NJ 07074

CIRCLE NO. 27 ON READER SERVICE CARD

WE DON'T KNOW WHEN TO STOP.

One top-of-the-line cassette deck is sufficient for most manufacturers. But not for Teac. We make three. Our new Series Z. The most advanced, most feature-filled cassette line we've ever built.

Most manufacturers would be content with two direct drive motors. Our new Z-6000 and Z-7000 have three.

Having Dolby^{*} B and C noise reduction was not enough. We had to add dbx^{**} and dbx disc. Plus more bias control, more automatic systems, more professional features than anyone ever dreamed of in a cassette deck.

They all come with Computomatic, Teac's micro-chip memory system. Combine the memory with its list of programmable functions and Series Z's capabilities are expanded to unheard-of levels of performance.

But the unheard-of is commonplace at Teac. When it comes to building tape recording equipment our obsession with excellence drives us beyond the bounds of all reason.

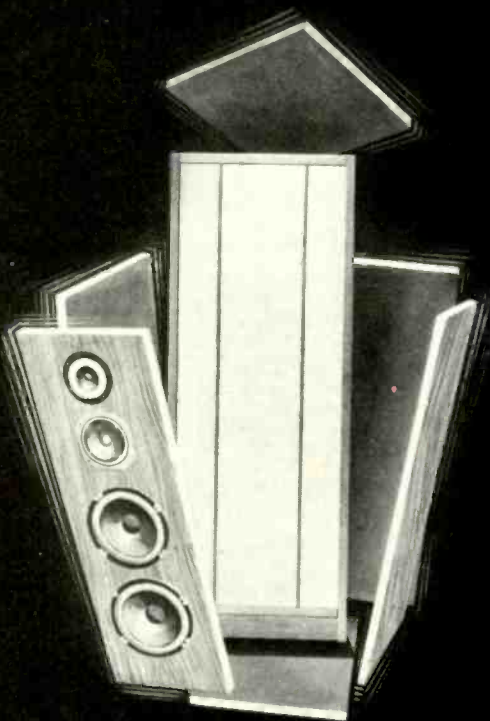
TEAC MADE IN JAPAN BY FANATICS.

COPYRIGHT 1983 TEAC CORPORATION OF AMERICA, 7733 TELEGRAPH ROAD, MONTEBELLO, CA 90640.
*DOLBY IS A REGISTERED TRADEMARK OF DOLBY LABORATORIES, INC. **dbx IS A TRADEMARK OF dbx, INC.

CIRCLE NO. 11 ON READER SERVICE CARD

Unbox your sound

WITH
Magneplanars®



To hear the
boxless, open sound of
Magneplanar screens,
see dealer list
on page 96,
column number 3.

MAGNEPAN

1645 9th Street
White Bear Lake, MN 55110

CIRCLE NO. 20 ON READER SERVICE CARD

Tape Talk

By Craig
Stark

Contributing Editor Stark
checks out Phase Linear's
Compact Disc player at
the Winter CES.



Gordon Self

Cold-Weather Blues

Q. Does it hurt to leave my cassettes out in the car during really cold weather? If I play them when they're cold they seem to drag severely.

TERRY MEYER
Miranpa, S.D.

A. I think you've answered your own question. Assuming that it's not near-frozen motor bearings on your car's cassette player that are causing the sluggish tape movement (test for this by playing a cassette warm from the house in the cold player), if a cassette shell has contracted sufficiently to impose a severe drag on the tape, your deck's drive system could easily stretch or even break the tape. If bringing your cassettes inside with you is not practical, you might experiment with Loran cassettes, which have Lexan shells that are said to hold their shape even in temperature extremes, although most premium-quality cassettes can withstand ordinary cold and heat just fine. Cassettes with Lexan shells might be a good choice too if you find it necessary to park for any length of time under the hot summer sun.

Trading Treble Loss

Q. A friend and I both own high-quality three-head cassette decks, and we use the same type and brand of tape with the same bias and equalization settings. When we play each other's (non-Dolbyized) recordings, however, both of us encounter large treble losses that do not occur when we play the tapes on our own machines. Does one (or both) of our machines need its playback-head azimuth adjusted, and, if so, how is this done?

MANNY GOMEZ, JR.
Brooklyn, N.Y.

A. Your diagnosis is correct, and let's hope that only one of the two decks is out of alignment, because after you fix a misaligned deck all the tapes recorded on it before the adjustment will sound just as dull when you use it to play them as your tapes now do played on your friend's machine! To avoid losing use of these tapes permanently,

first determine if you and your friend have one properly aligned deck between you. (You can do this by playing a high-quality prerecorded cassette on both machines. While prerecorded cassettes are not always perfect, the better ones are close enough to give you an indication of misalignment by sounding noticeably dull.) If one of your machines is correctly aligned, before you fix the other, use it to dub all of the recordings made on it. Play them on the misaligned deck and record on the correctly aligned one; after being fixed, the first deck will play back the dubs without treble loss. (Since dubbing unavoidably increases hiss, I recommend using Dolby when you make the copies and in playing them back.)

As for how to make the necessary adjustment—frankly, azimuth realignment is not the kind of thing you should attempt on your own unless you have had some training and experience in this area. A competent repair shop or dealer will have both the necessary instruments and the experience required. If you insist on doing it yourself, however, you'll need the following: a calibrated playback-alignment tape (Nortronics, Teac, or TDK versions may be available at some audio stores), a sensitive a.c. voltmeter (0.1-volt full-scale is marginally adequate; 0.03-volt may be necessary with some decks), and a nonmagnetic screwdriver to fit the azimuth-alignment screw on the problem deck (this screw is normally located immediately next to the side of the head and is usually spring-loaded). If you can also get an oscilloscope it will make the job easier.

Play the calibrated tape, whose azimuth tone(s) will generally lie between 8 and 12 kHz (the higher the better once you're close to final adjustment), and monitor the output from one channel on the voltmeter. (You can monitor the tape itself on the other channel through your regular system.) Turn the azimuth screw slightly one way, then the other, to obtain the maximum reading. Then change channels and repeat the meter—they'll be close, but probably not identical. Split the difference until you get the best compromise setting for maximum output at the highest frequency from both channels. If you have an oscilloscope, you can connect the left- and right-channel outputs from the deck to the X and Y inputs

of the scope (use the X-Y position instead of a horizontal sweep). Adjust the azimuth screw for a diagonal line (from upper right to lower left) or as narrow an ellipse as possible, checking other frequencies on the tape as well as the azimuth tones. A diagonal line indicates zero phase shift between the two channels.

The "Best" Tapes?

Q. *In your tape-deck reviews I've noticed the same "premium" tapes noted again and again as having given the best performance on the recorder. Why won't you and STEREO REVIEW come right out and say, "These are the best tapes on the market"? Better yet, why not test the decks with the less-expensive tapes that many of your readers use and can afford? And does anyone need metal tape at twice the price?*

CARL THOMAS
Bloomfield, N.J.

A. In a sense, one of your questions almost answers another: for you the "premium" tapes (including metal) that I normally use are not the "best" tapes because their technical advantages aren't worth their higher price. That's one reason we don't say "Brand So-and-So" is the best on the market. Besides, if you look closely, you'll see that I do use a fairly wide number of tapes—and the brands change from time to time, not only with the particular machine being tested but as I receive upgraded formulations.

The main reason I use premium-grade tapes rather than more attractively priced ones is that I want to make sure—so far as I can—that I am testing what the deck is capable of doing. I could use a cheaper tape that might measure almost as well, but then I could never be sure what the limits of the machine were, and I'm trying to test decks, not tapes. In other words, while two decks might give identical results with a second- or third-line tape, one of them might do a far better job with a top-line tape. Without using the best tapes available, I couldn't be sure that I wasn't doing an injustice to the better deck.

Replacement Tape Boxes

Q. *I have about fifty 7-inch open-reel tapes whose boxes have been badly damaged, though the tapes themselves are fine. Is there anywhere I can get the right size boxes for protection, labeling, etc.? Some of the tapes are very rare.*

JANICE L. CROZETTI
Prescott, Ariz.

A. While a number of parts stores (Radio Shack, for instance) will sell boxed empty reels, I haven't found any source for just the boxes. My suggestion is to call a professional recording studio in your area, since they undoubtedly do a lot of custom duplicating and may have a supply of boxes on hand. Also, watch the classified ad pages of this and other audio magazines. For reels where maximum protection is needed you can get metal 8-mm movie-film cans in the right size from a photo dealer. □

ANTICIPATION



You've already waited 20 years for the technology. Please wait a few more weeks until your dealer receives his next shipment of CARVER TX-11 FM Tuners. Response to the TX-11 has been so overwhelming we are working around the clock to keep pace with demand.

Here is what the reviewers say about the CARVER TX-11:

"It is by a wide margin the best tuner we have tested to date. "What distinguishes the TX-11 is its ability to pull clean noise-free sound out of weak or multipath ridden signals that would have you lunging for the mono switch on any other tuner we know of."

HIGH FIDELITY (January, 1983)

"Breakthrough in FM tuner performance: Carver TX-11."
"The significance of its design can only be fully appreciated by setting up the unit, tuning to the weakest, most unacceptable stereo signals you can find, then pushing those two magic buttons."
"Separation was still there; only the background noise had been diminished, and with it, much of the sibilance and hissy edginess so characteristic of multipath interference."

"A tuner which long-suffering fringe area residents and those plagued by multipath distortion and interference have probably been praying for..."

Leonard Feldman **AUDIO** (December, 1982)

"...enjoy the music and forget about noise and distortion." "Under conditions of weak signal stereo reception the effectiveness is almost magical."

OVATION (December, 1982)

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Julian D. Hirsch **STEREO REVIEW** (December, 1982)

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Car Stereo

By Christopher
Greenleaf
and
Julian D. Hirsch



KENWOOD KRC-922

KENWOOD'S KRC-922 combines an auto-reverse cassette player, a frequency-synthesis AM/FM tuner, and a preamplifier in an in-dash unit. Its center-detented fader and balance rings, on the right-hand tuning-knob shaft, permit it to control four speakers, a front pair and a rear pair, which are connected to front and rear power amplifiers with a pair of five-pin DIN plugs. For our road tests of the KRC-922, we used Kenwood's 100-watt-per-channel KAC-901 amplifier to drive a single speaker pair. The cassette player has Dolby-B (also used for Dolby FM broadcasts), a switch labeled

METAL for choosing between 120- and 70-microsecond (μ s) equalization, locking fast-forward and fast-reverse, an eject button, a tape-reverse control, and a tape program-search function (tape advance) for finding selections on a cassette. There are indicator lights to show tape direction, Dolby on, METAL (70- μ s) equalization, and the fast-wind modes. Shutting off the car's ignition partially ejects the cassette to protect both tape and pinch-roller.

The quartz-synthesis tuner has three tuning modes: five AM and five FM memory presets, scan, and seek. In the scan mode,

the tuner automatically samples stations for 5 seconds each, progressing up the frequency scale. Pushing the scan/seek lever up locks in the station being sampled. Pressing the same lever down places the tuner in the seek mode, a "manual" version of scanning that simply tunes in the next station on the dial. The tuning knob turns right or left to decrease or increase the tuned frequencies by fixed increments (200 kHz for FM, 10 kHz for AM). Holding it turned right or left causes the tuner to advance up or down the scale very rapidly. Pulling the tuning knob and then releasing it "opens" the memory for a period of 5 seconds to enter station presets before "closing" it again. A local/distant antenna switch and the AM/FM selector complete the normal tuner functions. A button labeled ABSS, for Automatic Broadcasting Search System, causes the tuner to move up to the next receivable station if it receives more than 5 seconds of near noise-level signal. A cassette standby primes the unit to switch over to the cassette player instead of the next-higher station under poor signal conditions.

Tone controls consist of bass and treble rings (with center detents) on the volume-knob shaft and a loudness switch. Inserting a cassette or punching the volume knob turns the unit on. The rear panel has umbilical DIN jacks for the power amplifiers, main-power and memory-power leads, a ground wire, an antenna jack on a short cable, and an automatic-antenna control lead. Price: \$550.

Laboratory Tests

The Kenwood KRC-922 is an exceptionally full-featured tuner/cassette player with several conveniences not found on most oth-

Laboratory Measurements

FM Mono Usable Sensitivity (75-ohm input): 13.8 dBf (1.3 μ V)

Mono 50-dB Quieting Sensitivity (75-ohm input): 19.8 dBf (2.5 μ V)

Stereo 50-dB Quieting Sensitivity (75-ohm input): 41 dBf (30 μ V)

FM Frequency Response: ± 1.5 dB from 30 to 15,000 Hz referred to 1,000-Hz level

AM Rejection: 54 dB at 45 dBf; 60 dB at 65 dBf

Capture Ratio: 1.26 dB at 45 and 65 dBf

Alternate-Channel Selectivity: 68 dB (Note: average of highly asymmetrical readings [from 54 to 83 dB] above and below signal frequency)

Image Rejection: 82 dB

Stereo Separation at 100, 1,000, and 10,000 Hz: 35, 35, and 32 dB (Note: measured at 65 dBf—tuner has auto-blend with reduced signal levels, but separation remains adequate at all usable levels.)

Tape Playback Frequency Response (standard BASF test tapes, -3 -dB limits): 120 μ s, 65 to 16,000 Hz; 70 μ s, 65 to 12,500 Hz.

Flutter: 0.09 per cent wrms; ± 0.15 per cent weighted peak

Tape Speed Accuracy: 1.1 per cent fast

Fast-Forward/Rewind Time for C-60 cassette: 77 seconds

Tape Playback Signal-to-Noise Ratio (referred to 250 nWb/m at 1,000 Hz): 120- μ s EQ, 57 dB (A-weighted); 70- μ s EQ, 61.5 dB (A-weighted); 120- μ s EQ with Dolby, 61.5 dB (CCIR/ARM-weighted); 70- μ s EQ with Dolby, 68 dB (CCIR/ARM-weighted)

Voltage Output: 300 mV at 100 per cent FM modulation; 350 mV at 250-nWb/m tape flux

Tone Control Range: ± 9.5 dB at 100 Hz; $+11$, -9.5 dB at 10,000 Hz



The Kenwood KRC-922 is an in-dash unit that includes AM and FM tuner sections, an auto-reverse tape player, and a control preamplifier. Under poor FM reception conditions it will automatically switch either to the nearest strong signal or to the tape player.

er such units we have tested. For example, in addition to the features mentioned above, the right and left channels of a stereo FM signal are smoothly and progressively blended as the signal strength decreases, eventually becoming fully mixed (mono) and ultimately muting when the signal becomes unreceivable. It is apparent from these features that the designers of the KRC-922 have gone to considerable lengths to provide a user with music entertainment under a wide variety of adverse receiving conditions with a minimum of action on his part. This sort of ingenuity is demonstrated in some other car stereos, but it seems to us that Kenwood has carried it further than most manufacturers.

The actual performance of the KRC-922 is well above average for car radios we have tested. Kenwood provides full specifications for it, and in our tests it met or surpassed almost every one that we tried to verify. The only front-panel control that failed to produce the expected result was the DX/LO tuner-sensitivity switch, which had no effect on the sensitivity of the FM-tuner section. This may have been a defect in our test sample (and a very minor one at that, unlikely to be detected in normal use). —J.H.

Road Test

STEREO REVIEW's test route was more punishing than usual as snow, a nasty drizzle, and six-foot ridges left by snow plows set the stage for my three test drives. The weather conditions kept me from seeing the sources of multipath usually so prominent on the New York skyline, but, on the day devoted to the tuner section, I expected at least to hear them. With few exceptions—in the traditional concrete-and-steel multipath gorges around the Empire State Building and near the high chain-link fences by the Brooklyn Navy Yard—I heard only small reminders of the multipath jungle in which I was driving. The noises were audible but rose to the level of the music only in the worst areas. The mild hash or electronic burping was always far better than I remember hearing from most other tuners. I could not detect any FM crossmodulation (the annoying tendency of one broadcast signal to intrude on another), even on troublesome West 35th Street, on two different days. The KRC-922's automatic variable-separation noise reduction is always on during FM reception, obviating the need for a mono/stereo switch in most cases, though I still prefer to have the option of controlling this function myself. The circuit's operation was unobtrusive and nicely graduated even in very bad reception conditions. Only in the immediate vicinity of a transmitter did I feel the need to use the local setting of the antenna-sensitivity switch, although doing so had little readily apparent effect on the reception quality.

I enjoyed the smooth, relatively polished AM sound from the unit. I did *not* care for its apparent sensitivity to pulse noises within and outside of my car's electrical system. I purposely loosened a spark-plug cable and effectively shot down an AM announcer (sonically speaking), and an electrically unshielded truck that pulled up next to me at a light caused some interesting unsolicited sound effects. My one trip outside the city showed uniform AM reception up and down

the dial, with the frequencies between 560 and 750 kHz being the most prone to noisy reception.

The automatic search system (ABSS) works, but I prefer to make my own station choice if the signal I've been listening to peters out. If the user could set the ABSS to tune in the next preset station when the current station disappeared, I would call that useful. Much the same goes for the cassette standby. I can't for the life of me imagine enjoying having a rush-hour traffic report replaced willy-nilly by a cassette just be-

"With few exceptions . . . I heard only small reminders of the multipath jungle in which I was driving."

cause I'm stopped for a light or backed up in a tunnel and can't move to regain a temporarily blocked signal! I'm glad the standby can be switched off.

The acres of venerable granite-block streets around the Navy Yard intimidated my car's suspension, as they do every time I go there, but didn't make a noticeable impression on the KRC-922's tape-transport mechanism. Even a reckless experiment with some of the celebrated potholes in the area failed to do more than cause a quick flutter in a held piano chord. The Dolby noise reduction was effective, but playback with the 70- μ s equalization setting was just a trifle opaque sounding.

The tone-control knobs are convenient, smooth, and handy for groping fingers. Though the bass control extended a little too far into the midrange for my car, most users would find it satisfactory. I wished only that the upper-frequency part of the loudness curve had coincided less with the treble control's effect. The KRC-922 can be used with an equalizer/four-channel amplifier in the Kenwood line, and that would probably offer the best tone control of all. The volume control was smooth and steady, with no surprise jumps in level.

After I had developed familiarity with the unit's controls and features (a quick process), the small buttons fell into logical groups of subtly but effectively differentiated functions. Slight but readily felt differences in control and switch resistance and unambiguous detents gave me a sense of security even when I used the unit at dusk. The digital-readout panel is a little too deeply recessed to be convenient for tall drivers since the upper portion of the display is partially obscured when viewed from above. This effect will vary depending on the height and angle of installation in different cars.

Despite their tininess, most of the center-panel controls were a cinch to use. Although I couldn't use even my thinnest driving gloves without activating one or even two additional functions in some cases, bare-finger control was excellent. The overall ease of use of the Kenwood KRC-922 made my three long test drives a pleasure. In fact, my only significant complaint is that I had to return the unit after the test! —C.G.

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Technical Talk

By Julian D. Hirsch



Upgrading Your Stereo System—Part 3

In the last two issues, I outlined what I consider the most valid reasons for replacing the speakers, record player and cartridge, and tape deck in a music system. Although a loudspeaker is perhaps the most durable hi-fi component, ongoing design improvements may justify replacing your speakers after a number of years even if they are still in perfect working condition. Record players and tape decks are subject to mechanical wear that can necessitate their eventual replacement. Also, as with loudspeakers, technological developments may warrant the purchase of a new turntable or deck simply for the improved sound it will provide even when your old one is still in good working order.

The situation is not so clear-cut in the case of the purely electronic components of the system: the tuner and amplifier (or receiver, if the two are combined). Barring actual failure of an internal component (a transistor, switch, etc.), an electronic audio product can continue to give good service for a surprisingly long time. With an occasional touch-up alignment, there is no reason a tuner or amplifier should not still meet its original operating specifications after twenty or thirty years of service. (I still have a communications receiver that is going strong after more than thirty-six years with no failures or even a tube change!)

Granted, there are few hi-fi components that will satisfy the tastes of today's audiophiles after a couple of decades of service. For one thing, a mono system is *passé* today no matter how well it works. For another, our standards of audible performance are

higher than they were in the Fifties and Sixties; the hum and noise levels of the best components of those decades would probably not be acceptable today. Finally, as I pointed out in the first part of this series, maintenance of an old piece of tube equipment can become unreasonably expensive or even impossible.

Therefore, let us consider an "old" system to have electronic components that are all solid-state, stereo, and no more than five to fifteen years old. Furthermore, we will assume that the components were good enough to have been called "hi-fi" when they were new and still function adequately in most important respects. It is certain that the written specs of those older components, even if they were expensive, top-grade products in their time, would be surpassed even by lower-priced equivalents today. But, for a variety of reasons, even major differences in some specifications are rarely audible, so it is usually inadvisable to use specs as the only, or even the main, criteria for deciding whether to replace something that still works properly and sounds good.

Older FM tuners usually have a number of adjustable internal components (mostly in the i.f. and multiplex-decoder sections) that should be checked at regular intervals (such as annually) and realigned if necessary to ensure full performance. Owners tend to ignore such routine maintenance, especially if their systems seem to function normally without it. Most current tuners do not require as much routine maintenance as older ones, and they have generally superior

performance characteristics as well, so it is quite possible that replacing an old, neglected tuner with a new one will make a noticeable improvement in sound quality.

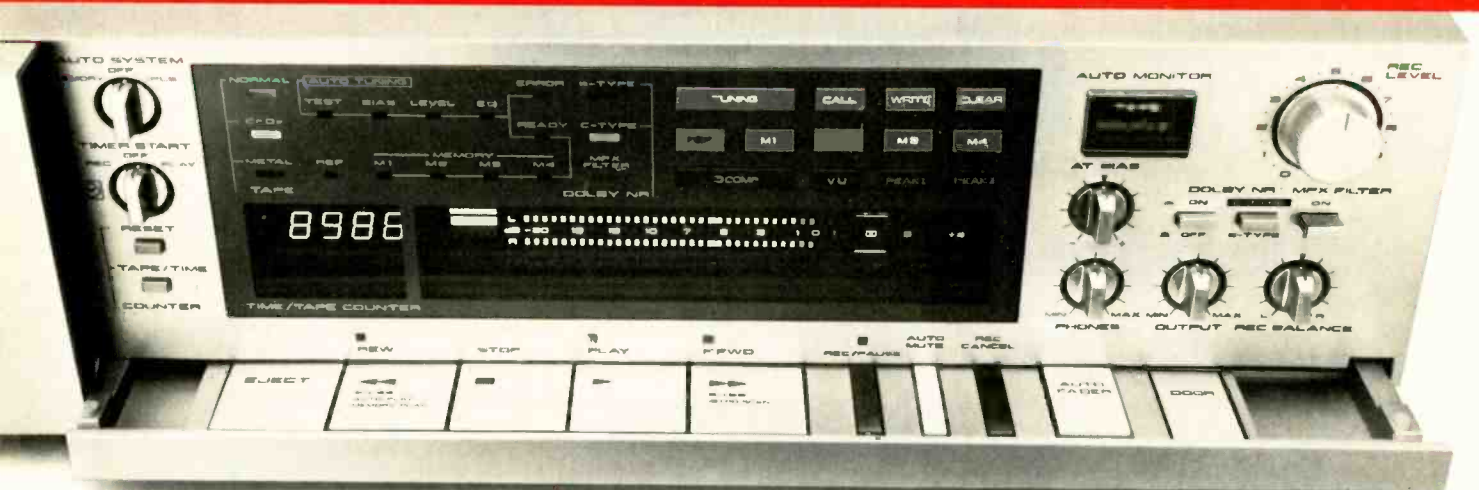
But not always! Most FM listeners need only a small fraction of the total performance capability of a reasonably good tuner, which, after all, must be designed to meet the needs of a very diverse group of users. Moreover, most FM broadcasts in this country offer sound quality ranging from mediocre to terrible. Therefore, replacing an undistinguished older tuner with the latest "state-of-the-art" model may make *no* audible difference at all. If you have a specific, identifiable reception problem (distortion, noise, interference from another station, or the like), a new tuner with superior qualities in that area may help. But the only way to be sure of this is to try it out at home before buying, if you can find a dealer who will allow this or if you can borrow a comparable unit from a friend.

Before digital-synthesis tuning became common even on inexpensive units, some degree of guesswork (and skill) was usually required to tune in a station correctly. Tuning meters and similar aids sometimes failed to deliver their implied tuning accuracy. Dial calibration was not always good to begin with and usually deteriorated over time (this is correctible with a simple alignment procedure, but if you already know where your favorite stations appear on the dial the actual calibration is less important). Although digital tuners have no fundamental performance advantages, they at least leave no doubt of the received frequen-

Tested This Month

NAD 7150 AM/FM Receiver • Technics SB-X700 Speaker System
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cy, and, with no dial to be calibrated, they require no realignment to maintain tuning accuracy throughout their useful lifetimes. While I cannot guarantee that digital tuners will always be trouble-free, they should be substantially more reliable over the long run than the older analog variety.

To sum up: if your old tuner sounds good, don't replace it—unless, like so many of us, you find the various features of the current crop irresistible. If you have a specific reception problem, look to your antenna system first (ordinarily, multipath distortion can only be treated effectively in the antenna system, although a number of recent developments in tuner circuit design offer other avenues of improvement). Then try to borrow a better tuner to see if it really makes a difference. Even if it does, your old tuner may still be acceptable after a thorough overhaul, although that might be a less appealing alternative than buying a new digital tuner with its advantages of compactness and potentially more reliable operation.

There are several valid reasons for replacing an old amplifier even when it is still working well. A new speaker system might benefit from substantially higher amplifier power, although a *small* power increase is barely worthwhile (*doubling* the output power can increase the sound level by only 3 dB). Alternatively, your new speaker's impedance may be too low for best results with your old amplifier, especially if you plan to drive additional speakers in a differ-

ent room at the same time. Or perhaps the preamplifier you have lacks the flexibility you require for your upgraded system (you may have added a second record player or cassette deck, and not all preamplifiers are designed to control a large number of ancillary components with equal effectiveness). Another reason for upgrading is that today's amplifiers are usually very quiet, and your old one may be showing its age in the form of hiss, hum, or crackles.

The parts of a hi-fi component most prone to wear out or deteriorate over a period of time are the switches and potentiometer controls that fill the front panels of most preamplifiers and integrated amplifiers. After some years you may find that turning a volume or tone control produces scraping or crashing sounds from your speakers or that a switch does not always make contact properly the first time you move it (moving it through several positions and then back to the one you want may help). These problems are often easily and inexpensively solved with various spray cleaners and lubricants, but if the control (particularly a rotary function-selector switch) actually requires professional replacement, the expense could be enough to justify replacing the whole unit.

Obviously, if you have a receiver, it can only be replaced as a unit even if just one part of it is not performing properly. This is one of the very few real disadvantages of a receiver (there are no inherent drawbacks in performance compared with equivalent

separate tuners and amplifiers). On the other hand, it is likely that a receiver that has been used for a number of years will no longer be the equal of a new receiver in many important performance characteristics and features (such as peak output-power capability or digital-synthesis tuning).

So far in this discussion of system upgrading, I have not mentioned one of the most compelling (though not particularly logical) reasons to replace older equipment every once in a while. Human nature is such that we insist on occasional change in our personal surroundings. That is why our homes are periodically redecorated or refurbished, why we buy new clothes even though last year's are still perfectly serviceable, why we may trade in a car for a new one long before it has ceased providing reliable transportation—and why we avidly read about the newest audio components and, in many cases, add some of them to our systems.

I suppose it is fruitless to be *too* rational when dealing with something as personal and subjective as a stereo system. The appeal of those new components with their microcomputers, digital readouts, flashing LED displays, and so on is undeniable and, for many of us, irresistible. But for those who are not lured by the technological trappings of audiophilia and just seek the best possible musical reproduction for their money, I hope I have put into perspective the factors that affect a system's actual sound over the long run. □

Equipment Test Reports

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



NAD 7150 AM/FM Receiver

THE FM section of the NAD 7150 stereo receiver features the Schotz Variable Bandwidth PLL detector, whose announcement last year aroused much interest in audio circles. The detector of an FM tuner—the circuit that converts the varying frequency of the received FM signal to a varying-voltage audio signal—is one of the tuner's more critical elements. Its bandwidth

must be sufficient to accommodate the maximum frequency deviation of the broadcast signal (up to at least ± 75 kHz) without significant nonlinearity (which would result in distortion of the audio signals). However, the noise in the converted signal increases with the detector's bandwidth. The Schotz tuner circuit maintains the detector's bandwidth at the minimum value

required by the reception conditions (signal strength, noise level, and amplitude modulation of the FM signal caused by multipath interference) in order to keep the noise level in the detected signal as low as possible.

This automatic bandwidth control is made possible by the PLL (phase-locked loop) detector, whose internal oscillator

(Continued on page 28)

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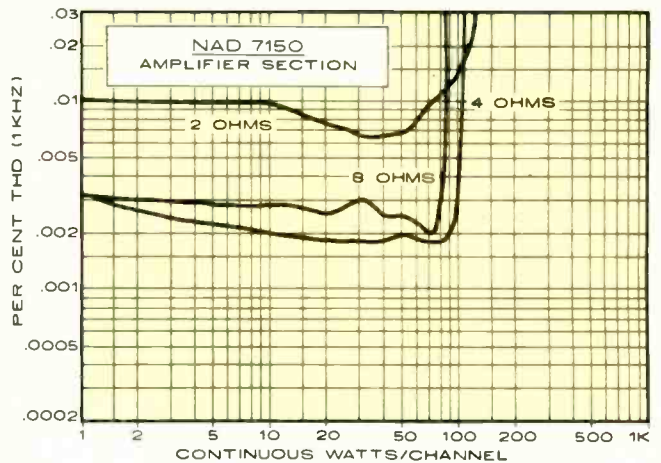
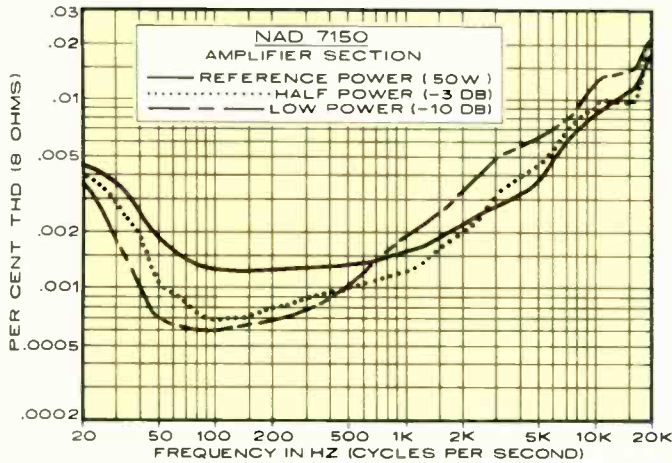
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locks onto the FM signal and tracks its instantaneous frequency. The low-frequency voltage that controls the PLL internal oscillator is an accurate analog of the demodulated audio program; modifying the characteristics of the PLL's filter with a composite signal-quality voltage (derived from circuits assessing signal strength, noise, and AM content) allows the effective detector bandwidth to be varied without increasing distortion.

The most obvious benefit of this detection system is greatly enhanced tuner sensitivity for both mono and stereo signals. At moderately high signal levels the NAD 7150's tuner section offers performance comparable to that of top-quality FM tuners, but under weak signal conditions the Schotz circuit can deliver clean audio with markedly lower noise and distortion than conventional tuners. There is no sacrifice of other desirable tuner characteristics such as capture ratio, channel separation, selectivity, or frequency response. On the whole, NAD's Schotz tuner is unquestionably one of the most advanced FM tuners available to the consumer.

For example, its rated usable sensitivity in mono is 7 dBf (1.2 microvolts, or μV). The stereo 50-dB quieting sensitivity is rated at 33 dBf (25 μV). Both figures are considerably better than those claimed for (or achieved by) even the best conventional tuners. In addition, the NAD 7150's Schotz tuner has distortion and signal-to-noise (S/N) ratings that help place it among the top FM tuners of our time. This caliber of performance would be unusual for a deluxe separate tuner (the Schotz tuner is offered separately in the NAD 4150, incidentally) and was unheard of in a receiver until the NAD 7150 made its appearance.

NAD emphasizes utility and function in its products. NAD amplifiers, for example, have very high dynamic-headroom ratings and are able to drive very low load impedances (such as 2 ohms) at surprisingly high power levels without clipping or other distortions. The amplifier section of the Model 7150 is an excellent illustration of the NAD design approach. It is rated to deliver 50 watts per channel into 8-ohm loads from 20 to 20,000 Hz with no more than 0.03 per cent distortion. Good performance, certainly, but hardly suggestive of any unusual power-output capabilities. The first clue to

that quality comes in the clipping-output ratings: 65 watts into 8 ohms, 75 watts into 4 ohms, and 85 watts into 2 ohms. Next we come to the dynamic-power figures: 100 watts into 8- or 4-ohm loads and 130 watts into 2 ohms. Finally, the Model 7150 can be operated as a bridged (mono) amplifier rated at 125 watts (150 watts clipping power or 225 watts dynamic power) into an 8-ohm load. A companion amplifier (the Model 2150) can be used to supply the second stereo channel, making the NAD 7150 into a veritable "super receiver."

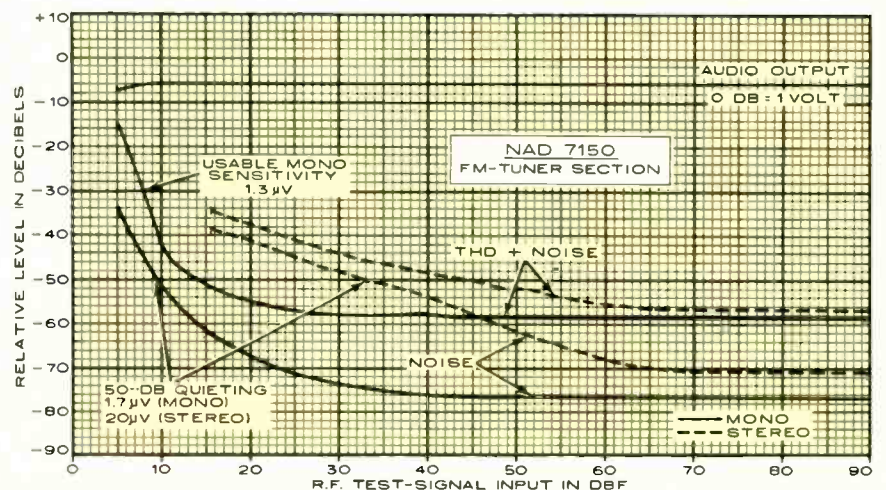
The tuning of the NAD 7150 is digitally synthesized, with 100-kHz steps for FM and 10-kHz steps for AM, the frequency being displayed by large LED numerals in the center of the panel. Also in the display window are five LED's that light progressively to show relative signal strength and small green arrows that light when a station is mistuned by one increment (100 kHz) to show the direction of the required tuning correction. Tuning is done with UP and DOWN pushbuttons, and a large button below them engages the scanning mode, which causes the tuner to stop on the next receivable signal it encounters.

The tuner has five station-preset memories (each usable for one AM and one FM frequency), and a button selects either AM or FM reception. Lights next to the tuning display show when a stereo signal is re-

ceived and when the SOFT CLIPPING switch in the rear of the receiver has been engaged. This latter feature, previously introduced in other NAD amplifiers, causes clipping to occur gradually when the amplifier's power limit is exceeded, reducing the harshness of the resulting distortion.

Square buttons below the frequency-display window activate a SPEAKER EQ 55-Hz boost circuit (for improving a system's low-bass response), an infrasonic filter with a 12-dB-per-octave slope below 15 Hz, mono operation for the amplifier and tuner, and FM interstation-noise muting. Another pair of buttons (LOW LEVEL and LOUDNESS) reduce the audio gain by 20 dB and turn on the loudness compensation. The volume and balance knobs are concentric, and the latter is lightly detented at its center. The bass and treble tone controls are also center-detented. Other knobs operate rotary switches. The speaker selector connects either, both, or neither of two pairs of speaker outputs to the amplifiers (the front-panel PHONES jack is always "live"). The RECORD and LISTEN switches provide independent control over what a user is recording from and what he is listening to. Each has positions for aux, tuner, phono, tape 1, and tape 2 (the record control also has an off switch position).

The rear apron of the NAD 7150 contains phono jacks for the various signal in-



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puts and outputs as well as spring-loaded insulated connectors for speakers and antennas. The PRE OUT and MAIN IN jacks are joined by removable jumpers; when the jumpers are removed, a signal-processing accessory or speaker equalizer can be inserted in the system or the 7150 can be used in the bridged mode to power one channel while an external power amplifier supplies the other. There are two a.c. outlets (one of them switched) and a pivoted AM ferrite-rod antenna. Rear-panel slide switches connect the amplifiers in the bridged mode, switch in the SOFT CLIPPING circuit, and set the output-transistor supply voltage for optimal operation with speakers having either HIGH (8-ohm) or NORMAL (lower) impedance. Finally, one slide switch changes the phono-preamplifier gain for use with either moving-magnet (MM) or moving-coil (MC) phono cartridges, and another selects a phono-input capacitance of 100, 200, or 320 picofarads across the fixed 47,000-ohm phono-input resistance.

The NAD 7150 is finished in black with white markings. It is 16½ inches wide, 12¼ inches deep, and 4¼ inches high, and it weighs 22 pounds. Price: \$598.

● **Laboratory Measurements.** After preconditioning, the amplifiers of the NAD 7150 clipped at 81.3 watts per channel with both channels driving 8-ohm loads at 1,000 Hz. The 4- and 2-ohm clipping outputs were 110 and 146 watts per channel, respectively. The dynamic-power output was 100 watts into 8 ohms, 178 watts into 4 ohms, and 225 watts into 2 ohms. The 8-ohm clipping headroom was 2.11 dB, and the dynamic headroom was 3 dB, as rated.

The 1,000-Hz harmonic distortion with 8-ohm loads was between 0.002 and 0.003 per cent at most power outputs from 1 to 70 watts, reaching 0.038 per cent at 80 watts. With 4-ohm loads the distortion was even lower at most output levels, reaching as

"high" as 0.0075 per cent only at 100 watts and 0.25 per cent at 110 watts. The 2-ohm distortion was roughly 0.01 per cent from 1 to 100 watts, 0.28 per cent at 140 watts.

At the rated 50 watts into 8 ohms, the distortion was less than 0.002 per cent from 50 to 3,000 Hz, rising to 0.0045 per cent at 20 Hz and 0.018 per cent at 20,000 Hz. At lower output levels, the performance was similar, with only slightly higher distortion readings. The IHF intermodulation (IM) distortion with 18- and 19-kHz input signals was a low -87 dB at 1,000 Hz and -88 dB at 20 kHz. The amplifier was stable with high- and low-frequency reactive loads. The slew factor was greater than 25.

The auxiliary-input sensitivity was 21.5 millivolts (mV) for a 1-watt output, with an A-weighted noise level of -83.5 dB. The phono (MM) sensitivity was 0.3 mV, with the very low noise level of -81.1 dB. The MC switch setting increased the sensitivity to 11.5 microvolts, with a noise level of -64.4 dB. The moving-magnet phono preamplifier overloaded at very high inputs, 230 to 260 mV over the 20- to 20,000-Hz range. The impedance for both MM and MC inputs was 47,000 ohms in parallel with the indicated capacitance values of 100, 200, or 320 pF.

The tone controls had a moderate but adequate range, about ±10 dB for the bass and ±8 dB for the treble. The bass turnover frequency varied from less than 200 Hz to over 400 Hz, and the treble curves were hinged at about 3,000 Hz. The loudness compensation boosted the low frequencies moderately and the highs (above 10,000 Hz) only slightly as the volume setting was reduced. The infrasonic filter reduced the response by 2.5 dB at 20 Hz, and the 55-Hz EQ boost peaked at 38 to 40 Hz with an amplitude of about 10 dB (it varied somewhat with the volume setting). The EQ circuit also attenuated the response rapidly below 30 Hz (presumably to prevent amplifier

overload from turntable rumble and other infrasonic disturbances) and had little effect above 70 Hz. The phono equalization was almost perfectly flat (0.5 dB overall variation from 20 to 20,000 Hz) and was not affected by cartridge inductance.

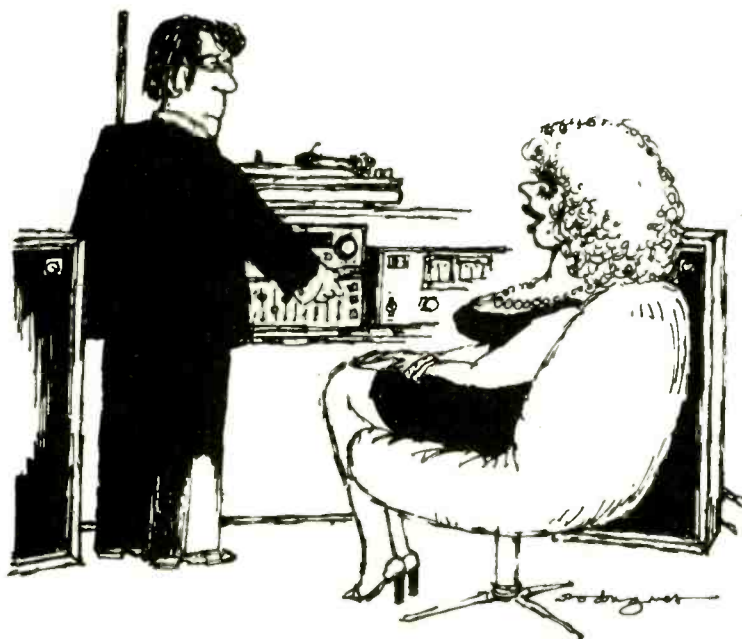
The FM-tuner sensitivity of the NAD 7150 was indeed extraordinary. The usable sensitivity in mono was 7.8 dBf (1.3 microvolts, or μV). The 50-dB quieting sensitivity in mono was 10 dBf (1.7 μV), and in stereo it was 31.2 dBf (20 μV). The stereo threshold was 15.6 dBf (3.3 μV). The tuner noise level at 65 dBf (1,000 μV) was -77 dB in mono and -70.5 dB in stereo, with corresponding distortion readings of 0.11 and 0.15 per cent. The IHF intermodulation distortion (IM) of the FM tuner was very good in mono: -78 dB for the 1,000-Hz difference component with the 14- and 15-kHz modulating signals we used and -66 dB for the third-order distortion at 13 and 16 kHz. In stereo, both distortion readings increased substantially, to -49 and -50 dB, and there were the usual numerous spurious IM products throughout the audio range. (Also as usual, none of these distortions were audible or identifiable with complex musical program material.)

The stereo frequency response of the tuner was virtually ruler-flat, varying only ±0.5 dB from 30 to 15,000 Hz. The channel separation was about 50 dB in the mid-range, falling to 42 dB at 30 Hz and 45 dB at 15,000 Hz. Other tuner performance parameters also measured very well. Although the capture ratio (1.86 dB at 65 dBf or 1.12 dB at 45 dBf) did not quite match the tuner's ratings, it was certainly good, and the 70-dB AM rejection was outstanding. The image rejection was a very good 92 dB, and the alternate-channel and adjacent-channel selectivity measurements were excellent at 86 and 15 dB, respectively. The 19-kHz pilot-carrier leakage into the audio was a low -72 dB, and the tuner hum was -66 dB.

Even the signal-strength lights are designed to show meaningful differences in received signals: the first four lights came on at intervals of about 20 dB, from about 20 dBf (5 μV) to 82 dBf (7,000 μV); the fifth light was only 3 dB above the fourth, at 85 dBf (10,000 μV). The AM-tuner frequency response was unusually flat over most of its range, varying about ±2 dB from 26 to 2,200 Hz and down 6 dB at 3,200 Hz.

● **Comment.** Since the Schotz PLL detector circuit is always active, its effect may not be obvious from merely listening to the NAD 7150 receiver. Clearly, the tuner is far above average; indeed, there is no other we know of that can match its overall measured performance, and everything we heard from it in our use tests was consistent with our laboratory findings. The SPEAKER EQ 55-HZ feature was one of the more useful receiver features we have encountered, since its effect is to give a solid "bottom end" with little or no obvious bass coloration. Even with speakers having a good bass response, we found it beneficial. If the speakers are at all bass-shy, it is invaluable.

We did not make any measurements of the SOFT CLIPPING circuit of the NAD 7150, having done so with other NAD amplifiers we have tested. For the type of listening we



"... Oh, you're right, Walter! That new gadget makes it sound just like I'm sitting in the concert hall listening to dumb classical music!"

do, it offers no particular advantage, but if you like to push an amplifier to its limits, this could be worthwhile. The loudness compensation was good, although we rarely use that feature with any amplifier. In this case, the LOW LEVEL button allows the volume control to be operated at a considerably higher setting than usual, which in turn makes it possible to add a slight amount of loudness compensation with no ill effects.

Both in the performance of its various subsections and in its overall capabilities, the NAD 7150 is an exceptional receiver. You'd have to try a receiver with substantially higher amplifier power (more than double) before you'd have any possibility of bettering the sound of this one, because the 7150's high dynamic headroom makes it perform and sound like a unit with a much higher power rating. The NAD 7150 re-

flects few, if any, of the usual compromises in performance or features found in receivers, and it is difficult to imagine a combination of separate tuner and amplifier units that could match this receiver's functional and listening qualities, let alone surpass them to any significant degree.

—Julian D. Hirsch

Circle 140 on reader service card



Technics SB-X700 Speaker System

A GOOD dynamic speaker driver should have a rigid, low-mass diaphragm, or radiating surface, and speaker designers have tried for years to develop driver shapes and materials that approximate a rigid-piston ideal. Rigidity is important because a flexing driver radiating surface produces an uneven frequency response through the effect known as "cone breakup." A low-mass material is needed for a driver to have reasonably high efficiency; a massive cone may be satisfactory otherwise, but it requires higher amplifier driving power.

Most dynamic drivers use cone-shaped diaphragms (the cone shape imparts considerable rigidity to a driver) molded of paper or low-mass plastic mixtures. A few years ago, Technics developed a "honeycomb" diaphragm structure that the company believes comes closer to the piston-radiator ideal than previous designs, and it has introduced a line of speaker systems whose drivers employ this honeycomb construction.

The "cone" of a Technics honeycomb driver is a flat plate shaped like the classic circular piston. It is made of a very light

aluminum honeycomb whose "axial symmetry" gives it equal rigidity (resistance to bending) in all directions. The honeycomb's cell density increases toward the center of the disc, concentrating the vibration nodes (regions around which the flexing modes pivot) near the center. This enables the voice coil to drive the diaphragm at a vibration node, further minimizing flexing and spurious resonances.

The honeycomb is sandwiched between two layers of thin aluminum-foil "skin," forming a disc about 1/4 inch thick, with a conventional (though relatively large-diameter) voice coil bonded to its rear surface. In other respects a Technics honeycomb driver is much like a conventional cone speaker, except that its extremely light, rigid diaphragm (about 1,000 times more rigid than paper) is relatively free of the usual cone breakup (resonance) effects. Also, flat-diaphragm drivers mounted in the same plane are necessarily aligned in signal phase; expensive crossover-network designs or unusual cabinet shapes are therefore not needed in order to compensate for the dif-

ferent depths of the drivers in a system.

The SB-X700 is the largest of three honeycomb-driver systems Technics has introduced to the American market. It is a three-way system with a vertically aligned 12-inch woofer, a 3 1/8-inch midrange driver, and a 1 1/8-inch tweeter. The two lower-frequency drivers have honeycomb diaphragms, and the tweeter uses a flat laminated-mica diaphragm radiating through a radially slotted disc so as to improve its dispersion. The crossover frequencies are 1,000 and 4,000 Hz, and the woofer operates in a ported enclosure.

The Technics SB-X700, nominally an 8-ohm system, is rated to deliver a 90-dB sound-pressure level at 1 meter with an input of 1 watt. It is rated to handle a drive power of up to 180 watts of music signal. The frequency response of the SB-X700 is specified as 39 to 30,000 Hz "at 10 dB below average level," with no explanation of this unconventional rating.

The walnut-grain-veneered cabinet of the SB-X700 is 26 3/8 inches high, 15 inches wide, and 13 inches deep, and the system

weighs about 36½ pounds. The black cloth grille unsnaps to reveal the drivers and two knobs for adjusting the levels of the midrange and high-frequency drivers. A thermal circuit breaker with a front-panel reset button protects the speaker against burnout during sustained high-power operation. Price: \$250.

● **Laboratory Measurements.** The close-miked woofer response of the Technics SB-X700 showed a smooth rise with decreasing frequency below 1,000 Hz to a maximum of +5 dB at 75 Hz, falling off at lower frequencies to -5 dB at 25 Hz. The averaged room response was very smooth, varying only 3 dB overall from about 1,000 to 9,000 Hz. The directivity of the tweeter was apparent (but not excessive) above 10,000 Hz, and splicing the woofer and room-response curves yielded a composite frequency response of +3, -4 dB from 35 to 20,000 Hz. The midrange level adjustment varied the output between 1,000 and 4,000 Hz, reducing it by as much as 10 dB at its minimum setting. The tweeter-level control operated above 3,000 Hz, reducing the output by up to 25 dB above 10,000 Hz. The flattest response (and best sound balance) was obtained with both level controls set at their maximums.

The quasi-anechoic frequency-response measurements made with our IQS 401-L FFT analyzer confirmed the smoothness of the SB-X700's frequency response as well as extending our measurement range slightly. The axial response at 1 meter varied ±3

dB from 180 Hz to 23 kHz (the normal range of the analyzer). The phase response was very good, with a group delay falling between 0.1 and 0.4 millisecond from 1,000 to 21,000 Hz.

The system impedance was between 5 and 8 ohms over most of the range from 30 to 15,000 Hz, reaching 30 ohms at the bass resonance of 66 Hz and 20 ohms at 20 Hz. The minimum of 4.3 ohms was measured at about 2,700 Hz. The bass distortion with a 1-watt input was between 1 and 2 per cent from 100 to 50 Hz, rising to 8.5 per cent at 35 Hz. At 10 watts input it was about 5 per cent down to 65 Hz, reaching 15 per cent at 50 Hz. These seemingly high figures must be interpreted in the light of the speaker's very high sensitivity, which measured 93 dB sound-pressure level at a 1-meter distance with an input of 2.83 volts (1 watt). This is some 6 dB higher than the sensitivity of a typical speaker system of this size; the distortion of such a typical speaker would have to be measured with inputs of 4 and 40 watts to be compared with the performance of the Technics SB-X700 at 1 and 10 watts (and few such speakers would take kindly to this abuse).

● **Comment.** We first heard the Technics honeycomb speakers, then being introduced to the Japanese market, a couple of years ago on a visit to the company's Osaka headquarters. We were favorably impressed by what we heard and looked forward to hearing and testing them in a familiar environment. (Only too often we find that speakers

that sound impressive in the field fail to live up to their promise when they finally come to us for testing.) Although the SB-X700 probably differs slightly from the speakers we heard in Japan, we were not at all disappointed by what we heard and measured in the lab.

To some extent, the sound of the SB-X700 can be predicted from its measured frequency response. Its sound was warm and sometimes bordered on heaviness in our rather absorbent listening/test room. The sound was best with the speakers placed on the floor; positioning them about 28 inches above the floor and against a wall produced excessive bass emphasis in our room (of course, the results in another environment would probably be very different). The middles and highs were smooth and uncolored; the sound stage, at times remarkably lifelike, was located approximately in the plane of the speakers and a couple of feet in front of the wall. These are thoroughly listenable and enjoyable speakers, standing up well in comparisons with a number of far costlier systems.

Frankly, when we heard the Japanese version of the SB-X700, we expected that it would be a rather expensive product when it came to the American market. Instead, the SB-X700 is priced very competitively with many other good speakers in a popular price range, and it should definitely be heard by anyone looking for top-quality sound at reasonable cost.

—Julian D. Hirsch

Circle 141 on reader service card



ADC Sound Shaper Thirty Equalizer / Analyzer

THE ADC Sound Shaper Thirty (SS-30) is a combination of an octave-band stereo equalizer, pink-noise generator, and real-time spectrum analyzer. It is designed to be plugged into the tape-monitor loop of an amplifier or receiver. The nominal gain of the SS-30's equalizer section is 1.0 with its controls centered. Its input impedance is 75 kilohms, and the output impedance is 100 ohms. The SS-30 is rated to deliver a maximum output of 10 volts rms into a 10-kilohm load. The frequency response is

specified as 5 Hz to 100 kHz +0.5, -1 dB. The spectrum display has a rated accuracy of ±1 dB on the 10-dB range and ±3 dB on the 30-dB range. Its input sensitivity is 150 millivolts (mV) for the line inputs and 0.5 mV for the microphone input. The pink-noise generator has an output of 150 mV.

Vertical sliders adjust the gain in each of the ten equalizer bands (whose frequencies correspond to those of the spectrum-analyzer section) over a range of ±12 dB. The sliders have positive detents at their center

and ±6-dB settings. The equalizer sliders for the two stereo channels are grouped at the left and right sides of the panel, with the bright blue-green fluorescent spectrum-analyzer display in the center.

Most of the operating modes of the SS-30 are set by pushbuttons along the bottom of the panel. The equalizer (EQ) section can be inserted into the signal path or bypassed by one button; another button supplies either an equalized or unequalized signal to

(Continued on page 36)



The sleek handset can be placed up or down.

Bedside Big Mouth

Now you can reach out to the world from the comfort of your bed with this elegant new electronic clock radio, telephone and speaker phone.

You're lying in bed. And, you are discussing the day's events with your mate. The lights are out, you're relaxed and your hands are at your sides.

So what's so new? Well for one thing, your mate is out of town and the two of you are talking on the latest in hands free speaker phones. What's more, if the two of you were in bed together, you both (or your whole family for that matter) could talk to anyone on the phone simultaneously.

Of course you can pick up the decorator designed phone handset with its long coiled cord, and talk or make calls as you would with your regular telephone. But with this new phone, you'll have all the new telephone advances rolled into one.

And best of all, you won't have to pay the phone company's monthly rental charges for their dumb phones ever again. Just plug in the standard modular plug and the AC line cord and you're ready to go.

You'll have universal push button dialing that gives you the convenience of push buttons anywhere and works on your current phone line and your own number.

A last number redial key redials busy numbers with the touch of a button. And, you'll really enjoy the delightful chirping electronic ring that won't send you into shock if it sounds when you are asleep.

If you want momentary privacy from the person you're talking to, a mute key lets you have it. It's like electronically putting your hand over the mouthpiece.

The sound quality is nothing short of incredible. An electret condenser mike lets you be heard loud and clear at the other end, whether you're using the handset or the hands free speaker phone.

When you use the handset, you hear the other person through a high quality transducer like you'd find in fine headphones. With the speaker phone, you'll hear fab-

ulous sound through the Hi Fidelity speaker used for the AM/FM radio.

AND WHAT A CLOCK RADIO

If you're impressed with this telephone system (I hope you are) wait till you find out about the timing conveniences and sound quality of this electronic clock radio.

First the controls. The large green LED display with high/low brightness switch, is extremely easy to read. You won't have to worry about losing the time if there's a power failure once you install the standard 9V battery (included) for protection.

You'll have fast and slow set for both the regular and alarm times. And, once you've set the alarm, you can choose to be awakened by your favorite radio station or an electronic chirp alarm. If you aren't quite ready to get up, just tap the handy snooze button for a few minutes of extra sleep.

And since getting up is no fun, this radio will also help put you to sleep. A touch of the sleep button will give you up to an hour of your favorite radio station to relax you. The radio will then shut itself off and wait to perform its next programmed task.

GREAT SOUND SAYS IT ALL

It doesn't take many features to beat the phone company's phones. But, there are lots of regular clock radios.

Once you hear the sound of these fine sensitive radio receivers, you'll be sold on the sound as well as the phones.

This FM radio really pulls in the stations. And the full range speaker has a very pleasing and full rich sound.

Of course, with the touch of a switch you can also tune in your favorite AM stations too. You can keep up with the latest news or your choice of music on AM.

This all new electronic clock radio telephone brings a really elegant look to your bedroom, office, den or kitchen. What you can't see in our pictures is the elegant

sound you'll enjoy for years to come.

The sound quality shouldn't really be a surprise. You see, it's made by Unitech, the enormous personal stereo company. In the personal stereo business, sound quality is everything. And it's backed by their standard limited warranty.

TRY THE BEDSIDE BIG MOUTH RISK FREE

Be prepared for a shock. If you haven't tried any of the new electronic phones you're in for a pleasant surprise. And, for that matter if you haven't bought a new clock radio for a few years you're going to be pleasantly surprised too.

Try this all new Electronic Clock Radio Telephone risk free in your own bedroom. If you aren't 100% satisfied, simply return it to DAK within 30 days for a refund.

To order your all new Unitech Bedside Big Mouth (our name for it), Electronic AM/FM Digital Clock Radio Telephone, with both handset and speaker phones risk free with your credit card, call toll free.

Or send your check not for the up to \$129 to \$159 price tag we've seen on other telephone clock radios without the speaker phone, but send the incredibly low price of just \$68 (\$5.50 P&H) Order No. 9507. CA res add 6% tax.

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A photograph of several horses in a stable. In the foreground, two dark horses are prominent, one on the left and one on the right, both looking towards the camera. Behind them, several other horses of various colors (brown, white, black) are visible. In the background, a person wearing a white cowboy hat is partially visible, looking towards the horses. The scene is lit with warm, indoor lighting, creating a sense of a stable environment.

Come to Marlboro

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

Kings: 16 mg "tar," 1.0 mg nicotine—100's: 16 mg "tar,"
1.1 mg nicotine av. per cigarette, FTC Report Dec '81



Country.



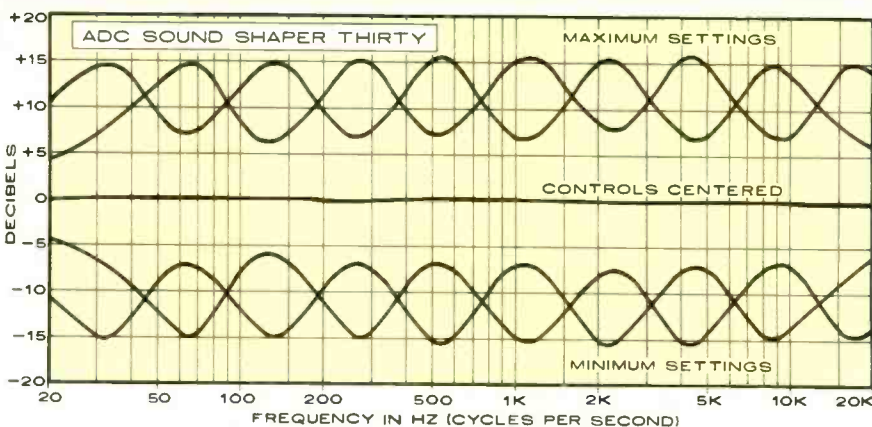
Marlboro Red or Longhorn 100's—
you get a lot to like.

the tape-recording output jacks in the rear of the unit (replacing the functions of the tape jacks in the amplifier to which the SS-30 is connected). In the EQ mode, red LED's in each of the slider handles are lit. The SS-30 is supplied with a battery-powered electret microphone that plugs into a front-panel jack for equalizing (or analyzing) the response of the speakers and room. The omnidirectional microphone has a "compensated" frequency response of 50 to 13,000 Hz. A button connects either the line or microphone signal to the spectrum-analyzer input, and another inserts a SUBSONIC FILTER into the signal path, cutting off signals below 15 Hz at an 18-dB-per-octave rate.

A pair of buttons below the analyzer display switches the analyzer circuits to monitor either the left- or right-channel signal (from the line source) or the sum of both channels when both buttons are engaged. Since the microphone supplies only a mono signal, the analyzer automatically operates in the mono mode during acoustic analysis. A button supplies the internally generated pink-noise signal (a hissing random noise that has equal energy in each frequency octave) to the amplifier via the line outputs, replacing the regular program. This is used for equalizing a room or speaker response. Pressing the PEAK HOLD button retains the instantaneous display readings for at least 20 seconds as an aid to monitoring levels with transient program material.

The spectrum-analyzer display, measuring approximately 1 1/4 x 2 1/2 inches, contains eleven vertical columns of LED segments. The length of each illuminated column is proportional to the signal energy in its corresponding frequency band. The bands' center frequencies are 31, 62, 125, 250, and 500 Hz and 1, 2, 4, 8, and 16 kHz, matching those of the equalizer section (the rightmost display column shows the average level over the entire frequency range).

The column height is divided into ten equal intervals, with full-scale ranges of 10, 20, or 30 dB set by a rotary switch on the



front panel. Thus, each vertical division corresponds to a level change of 1, 2, or 3 dB. Another knob provides continuous adjustment of the input sensitivity of the analyzer. Two small knob switches control the tape functions of the SS-30. One cross-connects two tape decks for dubbing from either machine to the other, and the second knob connects either the source signal or the playback output of either deck to the inputs of the SS-30 circuits. The final front-panel control is a pushbutton power switch. The rear apron of the SS-30 contains only the various signal (and tape) input and output jacks and a single unswitched a.c. outlet.

The ADC SS-30 is finished in black with contrasting light-colored panel markings. It measures 16 7/8 inches wide, 8 3/8 inches deep, and 4 1/2 inches high and weighs about 10 1/2 pounds. The battery-powered microphone is fitted with an integral cable, about 18 feet long, and a standard 1/4-inch phone plug. Price: \$400.

● **Laboratory Measurements.** The individual octave-band equalizer sections had the specified responses. Their maximum adjustment range was between ± 14.5 and 16 dB, and the center frequencies were very close to the indicated values. Driving a standard

IHF load of 10 kilohms in parallel with 1,000 picofarads, the SS-30's 1,000-Hz output clipped at 11 volts with a gain of 0.95 (approximately -0.5 dB).

The SUBSONIC FILTER lowered the frequency responses of the unit by only 0.5 dB at 20 Hz and by 33 dB at our lower measurement limit of 5 Hz. The harmonic distortion at a 1-volt output was 0.0025 per cent, increasing to a still negligible 0.045 per cent at 5 volts. The unweighted noise level of the SS-30 was unmeasurable, being less than our measurement limit of 100 microvolts (-80 dB referred to 1 volt). The pink-noise generator's output level was 150 millivolts, as rated.

● **Comment.** We used the ADC SS-30 with a couple of different music systems to equalize the room and speaker response at the listening position. The process is uncomplicated, although the inevitable interaction between adjacent (or even alternate) sliders may require several repetitions of the adjustment in some parts of the frequency range. (We actually ran out of adjustment range at low frequencies because of a sizable room resonance.) The result was similar to what we have achieved with previous efforts at room equalization. The instruction manual for the SS-30 does point out that a flat response at the listening position usually sounds too bright and suggests a slight rolloff in the highest (16-kHz) band. This conforms to our experience. If the final equalization is done by ear, using the pink noise only for the initial adjustments, the result is most likely to be pleasing.

The analyzer display is both interesting and informative to watch, if for no other reason than its clear indication of the concentration of music energy in the midrange and the minuscule levels to be found in the upper octaves with most program material. The ADC Sound Shaper Thirty is a versatile and useful adjunct to a well-equipped stereo music system. While it is possible to buy a "plain" equalizer for less money, the convenience of the SS-30's built-in spectrum analyzer and pink-noise generator is undeniable. When used with care and intelligence, this instrument should make a good home music system sound even better.

—Julian D. Hirsch



"No, officer, I wasn't dimming my headlights to signal you. My car stereo has a 700-watt amplifier, and when the music hits peaks, it drains the juice from the electrical system."

Circle 142 on reader service card

(Continued on page 38)



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Crown Power Line 3 Power Amplifier

THE Crown Power Line 3 basic power amplifier is rated to deliver 90 watts per channel into 8-ohm loads from 20 to 20,000 Hz with no more than 0.05 per cent distortion, or 140 watts into 4-ohm loads with no more than 0.1 per cent distortion. Like the other Power Line amplifiers, it features Crown's proprietary Multi-Mode circuit, which continuously varies the operating mode of the amplifier between class A and class B according to the instantaneous signal output it is called upon to deliver. The purpose of the Multi-Mode system is to provide the lowest possible distortion at all signal levels together with maximum overall circuit efficiency.

Unlike the variable-mode (or variable-class) circuits used in some other amplifiers, which affect only the output stage, the Multi-Mode circuits control the operating conditions of the three highest-level amplification stages (pre-driver, driver, and output). At low output-power levels (up to 20 milliwatts) all three stages operate in class-A mode, which is inherently completely free of crossover distortion as well as being the most nearly linear amplification mode. Crown points out that with ordinary music program material the amplifier actually operates in this mode most of the time. As the instantaneous power of the signal waveform rises above 20 milliwatts, the output transistors change to class-B operation, the highest-efficiency mode of a linear audio amplifier. Since the drivers and pre-drivers continue to operate in class A, Crown calls this the "Class A plus B" mode.

Finally, at the highest power levels, the driver and pre-driver stages change to class-AB operation so that they can drive the output transistors (operating in class B) to their full power output (a class-B amplifier requires actual driving power, instead of only a voltage or current input, in order to develop its full output). Crown refers to this as the "Class AB plus B" mode. These three basic operating conditions of the Multi-Mode circuit vary more or less continuously throughout the signal waveform and are separately determined for the positive and negative portions of the waveform cycle.

The Power Line 3 is protected against overdrive or improper load conditions by several internal systems. A fast-acting limiter instantaneously holds the output power to a maximum safe value in the event of an output short or undesirably low load impedance. According to Crown, this circuit produces a muffled snapping sound when it operates, but it will not be activated if the load impedance is 4 ohms or higher. Since the Power Line 3 is completely direct-coupled from its input jacks to the speaker outputs, the speakers are protected with a low-frequency interrupt circuit that places the amplifier in a stand-by mode if it senses more than 10 millivolts of direct current at the output. Each channel has its own thermal protection system, which also places the amplifier in stand-by mode until it has cooled to a safe temperature. Finally, an a.c.-line fuse protects the entire amplifier against a catastrophic internal failure. The very comprehensive manual for the Power Line 3 provides recommendations for fusing the speaker lines externally.

The Crown Power Line 3's front panel has a silver-colored satin finish with matching handles and knobs. The chassis and large heat-sink fins that extend to the rear are finished in flat black. The front panel contains a pushbutton power switch, two input-level knobs with thirty detented settings, and a headphone jack. Two groups of colored LED's between the knobs, designated a "Frequency Analyzing Display," show the approximate frequency content of the program (for each channel, yellow, green, and red lights, respectively, come on for low-, medium-, and high-frequency signals). Above the display are two red lights marked IOC (input/output comparator). The Power Line 3 has circuits that constantly compare the input and output waveforms, and any difference between them causes the corresponding channel's IOC light to flash. This is a very sensitive type of clipping indicator whose warning signal precedes any audible distortion.

On the rear of the Crown Power Line 3 are two pairs of five-way binding posts for the speaker outputs and a slide

switch that connects the amplifier for bridged mono operation. In the mono mode, the power ratings and recommended load impedances are doubled (to 180 and 280 watts and 16 and 8 ohms), the signal is connected to the left input, and the speaker is connected to the two "hot" output terminals. The two phono-input jacks and the line fuse complete the rear-apron features.

The Crown Power Line 3 is 19 inches wide, 10¹/₈ inches deep, and 5¹/₄ inches high (the handles extend 2³/₈ inches in front of the panel). It weighs about 25 pounds. Price: \$949.

● **Laboratory Measurements.** Following its preconditioning period, the exterior of the Crown Power Line 3's chassis (and especially its heat-sink fins) was very hot to the touch, although no part of it became more than faintly warm to the touch after hours of normal listening operation. The 1,000-Hz output clipped at 104 watts per channel into 8 ohms, 169 watts into 4 ohms, and 53 watts into 2 ohms. The clipping headroom was approximately 0.63 dB for 8 ohms and 0.82 dB for 4 ohms. With the 20-millisecond burst signals of the dynamic-power test, the maximum output was 124, 191, and 51.2 watts, respectively, for loads of 8, 4, and 2 ohms. The dynamic headroom was 1.4 dB for 8 ohms and 1.35 dB for 4 ohms.

With both channels driving 8-ohm loads at 1,000 Hz, the harmonic distortion was less than 0.002 per cent from below 1 watt to beyond the 90-watt rated output of the amplifier. With 4-ohm loads it was typically about 0.002 per cent up to 100 watts, rising to 0.0035 per cent at 150 watts and 0.0047 per cent at 160 watts. Distortion measurements could not be made over the full range of power outputs with 2-ohm loads because of the operation of the protective system at higher power levels, but the distortion was in the range of 0.003 to 0.005 per cent up to at least 10 watts output.

At the rated 90-watt output into 8-ohm loads, the distortion was about 0.002 to 0.003 per cent in the midrange, rising below 100 Hz and above 4,000 Hz to maximum

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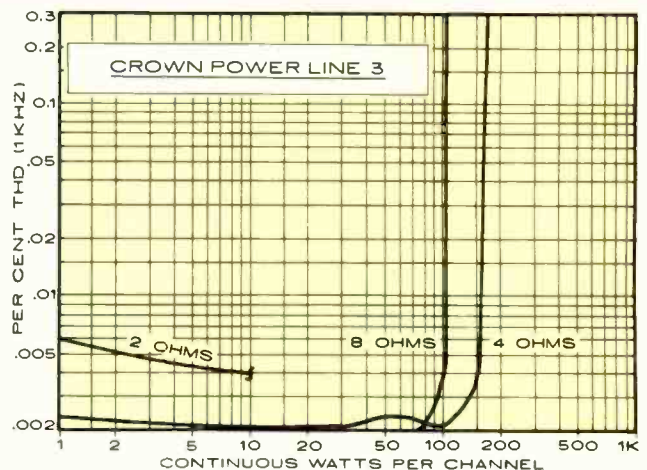
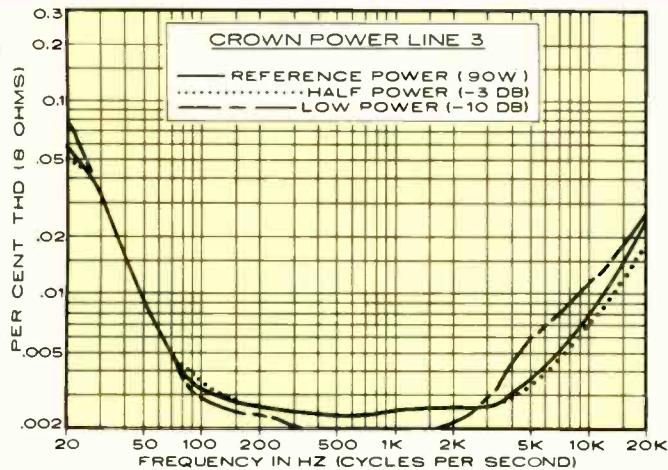
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readings of 0.09 percent at 20 Hz and 0.02 percent at 20,000 Hz. At half-power and one-tenth power the distortion was very nearly the same as at full power. The IHF intermodulation (IM) distortion was measured with 18- and 19-kHz input signals at a peak output equal to that of a 90-watt sine-wave signal. The second-order distortion at 1,000 Hz was not detectable (it was less than -96 dB), and the third-order component at 17 kHz was -92 dB relative to 90 watts. The amplifier's slew factor was 3.2, with the full-power waveform changing from sinusoidal to triangular at about 65 kHz. The Power Line 3 was stable with reactive simulated speaker loads and with a standard IHF reactive load.

The amplifier's sensitivity for a 1-watt reference output was 0.135 volts, and the A-weighted noise level was below our measurement limit of -90 dB referred to 1 watt. The frequency response was flat down to 5 Hz (our lower measurement limit) and down by 0.1 dB at 20,000 Hz and 3 dB at 160 kHz. The Frequency Analyzing Display operated with an output as small as 1.5 milliwatts, making it visible under all normal listening conditions. The LOW light was on for frequencies between 5 and 180 Hz,

the MED light was on from 180 to 2,500 Hz, and the HIGH light was on for frequencies higher than 1,700 Hz.

● **Comment.** Obviously Crown's engineers have devoted considerable effort and ingenuity to their Multi-Mode circuit design, and we do not doubt that it works as described. In our listening tests, repeated A/B comparisons between the Power Line 3 and two other, more powerful amplifiers failed to reveal any audible differences, which did not surprise us in view of the three units' almost identical measured performance (except for output power).

The Power Line 3 is an absolutely first-rate product, solidly built and attractively styled. From its nominal 90-watt rating it might seem to be a relative lightweight (middleweight?) in terms of output power, but it is well equipped to hold its own against almost any amplifier on the market. And with the many speakers whose actual impedance falls to 4 or 5 ohms at some frequencies, the Power Line 3 begins to show some of its true mettle. Touching the exposed metal surface of the amplifier during and after an extended period of operation gives convincing evidence of its high effec-

tive operating efficiency; very few components we have tested—let alone high-powered amplifiers—run as cool as this one.

The IOC indicators are a truly useful feature since they give an extremely accurate indication of the onset of clipping. If they are not lit, the amplifier is not distorting, period. This is in sharp contrast to the "power" displays featured on many receivers and other amplifiers, whose true function seems to be merely cosmetic. On the other hand, we were unable to figure out any really useful purpose for the Frequency Analyzing Display other than to provide a mild form of visual entertainment.

The Crown Power Line 3 is a rather expensive amplifier, and buyers of products in its price range are usually looking for special qualities beyond mere low-distortion amplification. Crown's products in general stand apart from the mass of consumer audio components by virtue of their design features, ruggedness, and distinctive appearance. The Power Line 3 obviously belongs in the Crown family. Its design, function, and performance all reflect the company's long tradition. —Julian D. Hirsch

Circle 143 on reader service card

Bang & Olufsen MMC 2 Phono Cartridge

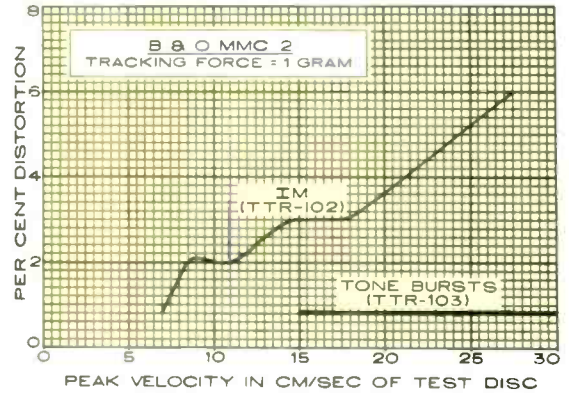
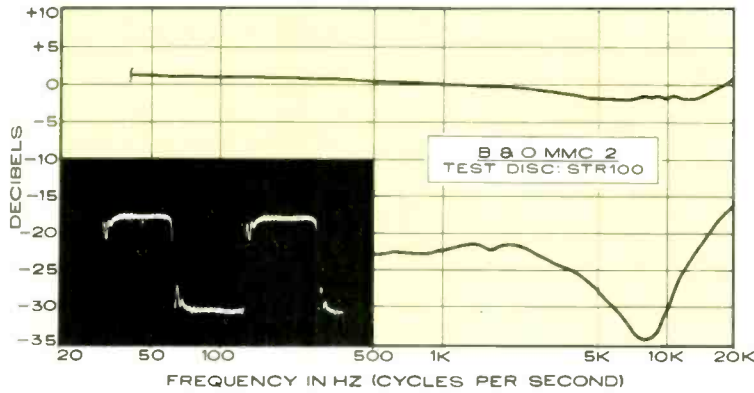


THE Bang & Olufsen MMC 2 phono cartridge, one of a new series from the Danish manufacturer, represents a further refinement of the "Moving Micro-Cross" design that has long been a feature of B&O cartridges (it predates stereo by several years). The MMC 2 is a moving-iron car-

tridge in which the flux from a fixed magnet is divided between four pole pieces in accordance with the motion of a tiny X-shaped magnetic armature. The signal voltages are generated in two pairs of push-pull coils surrounding the pole pieces.

This basic construction is essentially sim-

ilar to that of other B&O cartridges. The special properties of the MMC 2 derive from the materials and processes used to reduce its effective tip mass and total weight. The stylus is a line-contact diamond (a derivative of the Pramanik stylus shape introduced by B&O some years ago for play-



In the graph at left, the upper curve represents the frequency response of the cartridge. The distance (measured in decibels) between it and the lower curve is the average separation between the two channels (anything above 15 dB is adequate). The inset oscilloscope photo shows the cartridge's response to a recorded 1,000-Hz square wave, which indicates resonances and overall frequency response (see text). At right is the cartridge's response

to the intermodulation-distortion (IM) and 10.8-kHz tone-burst test bands of the TTR-102 and TTR-103 test records. These high velocities provide a severe test of a phono cartridge's performance. The intermodulation-distortion readings for any given cartridge can vary widely, depending on the particular test record used. The actual distortion figure measured is not as important as the maximum velocity tracked before a sudden increase in distortion occurs.

ing CD-4 quadrasonic records) whose shank, only 0.12 millimeter square, is nude-mounted on a single-crystal sapphire tube cantilever. The pivoted end of the cantilever moves a miniaturized Micro-Cross armature, whose small size also contributes to the very low effective tip mass, specified as 0.3 milligram.

The low overall weight of each of the new MMC series cartridges, as well as their small size, has been achieved by using a powerful samarium-cobalt magnet. The cartridge body is a tiny tapered rectangular tube whose four integral pins plug into a special mount that can be installed in any standard tone arm with 1/2-inch mounting centers. The cartridge body weighs only 1.6 grams, and the combined weight of the MMC 2 cartridge and its mounting bracket is only 4.6 grams (about 2 grams lighter than most other magnetic cartridges). An additional weight is supplied to increase the total weight to 6.3 grams for use in arms that cannot be balanced at the lower weight.

The MMC 2 is fitted with an integral hinged stylus guard to protect the stylus during installation or removal of the cartridge. The stylus assembly is not replaceable by the user, but it is actually easier to insert or remove the cartridge body from its mount than it is to install most replacement styli. A small stylus-cleaning brush is furnished with the cartridge.

The B&O MMC 2 is designed to use a 1-gram vertical tracking force and is rated to deliver an output of at least 2.12 millivolts for a recorded velocity of 3.54 cm/sec. The channel levels are matched within 1.5 dB. The rated frequency response is 20 to 20,000 Hz \pm 1.5 dB, with a channel separation of at least 25 dB at 1,000 Hz and 20 dB or better over the full 50- to 15,000-Hz range. Each cartridge is supplied with a computer printout of its output voltage, balance, separation, tracking ability, and 20-kHz output level. The MMC 2 does not have critical loading requirements, and a resistive load of at least 47,000 ohms, shunted by no more than 400 picofarads of capacitance, is satisfactory.

The MMC series currently includes five models, from the MMC 1 to the MMC 5, having identical dimensional and electrical specifications but differing in their stylus tip shapes and compliance specifications, and therefore in their overall frequency-response uniformity. The price of the B&O MMC 2 is \$290.

● **Laboratory Measurements.** We used the B&O MMC 2 in the low-mass tone arm of a Dual 741Q record player. Initial response measurements with different load capacitances showed a negligible difference (less than 1 dB) for load values between 200 and 435 picofarads, and the lower value was used for subsequent tests. The frequency response with the CBS STR 100 test record showed a gentle drop above 500 Hz to about -2 or -3 dB from 1,000 to 16,000 Hz. The output rose slightly at 20,000 Hz, resulting in an overall response variation of 3 dB over the 40- to 20,000-Hz range of the test record. The average channel separation was measured as 20 to 25 dB in the mid-range, 28 to 30 dB at 10,000 Hz, and 15 dB at 20,000 Hz.

As expected, other test records yielded different frequency-response curves. The best was obtained with the JVC 1007, which produced a response flat within \pm 0.5 dB from 1,000 to 20,000 Hz. The B&K 2009 record, on the other hand, showed a rising response above 7,000 Hz. The square-wave response with the CBS STR 112 test record was excellent, with a single damped overshoot and very low-level ringing visible on the square-wave output. The cartridge's output was 2.85 millivolts, with a 0.9-dB channel imbalance. In the Dual arm, the total effective mass of the arm and cartridge was 14 grams, and the low-frequency resonance was about 8 to 9 Hz. The vertical tracking angle was measured as 24 degrees.

At its rated 1-gram tracking force, the MMC 2 tracked our high-level low- and middle-frequency records easily, and it was able to play the 80-micrometer level of the German HiFi:2 record. Its intermodulation distortion with the Shure TTR-102 test rec-

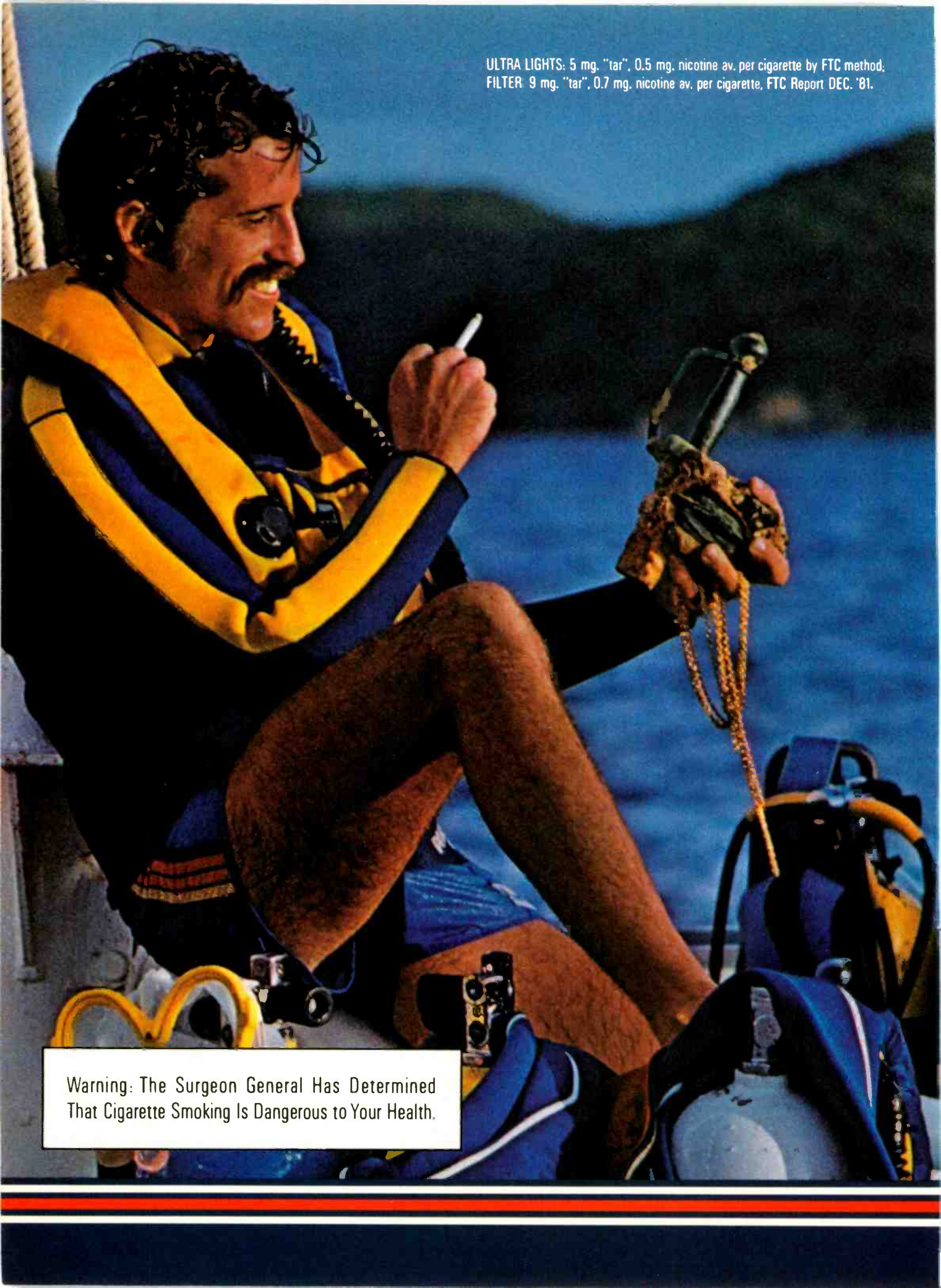
ord rose smoothly from less than 1 per cent at 7 cm/sec to 6 per cent at 27 cm/sec. At no time was any obvious mistracking visible on the output waveform. High-frequency tracking, measured with the 10.8-kHz tone bursts of the Shure TTR-103 test record, was also very good, as evidenced by a virtually constant (and very low) distortion of about 0.8 per cent over the 15- to 30-cm/sec range of the record.

● **Comment.** The subjective tracking performance of the B&O MMC 2 lived up to the promise of its bench tests. The Shure ERA IV "Audio Obstacle Course" record could be played without audible distortion except at the highest level of the flute section, and the ERA V record was tracked successfully at all levels. The sound character of this cartridge was much like that of earlier B&O cartridges we have used. Compared with some other cartridges having exaggerated high-frequency response, this one might seem unexciting, but we would prefer to describe its sound as "neutral." Its frequency response is undeniably smooth (the actual output variation, as our tests show, is largely a function of the particular test record used for the measurement).

Installing the MMC 2 is very easy since the mounting bracket is installed without the cartridge, eliminating any risk to the delicate stylus. One must be careful to seat the cartridge firmly in its socket, however, since we noted a tendency (on our test sample, at least) for the cartridge to work loose from the socket, especially when its stylus was being brushed free of dust or lint. The open design of the stylus protector enables the entire stylus assembly to be seen when cueing the pickup or playing a record, a feature we greatly appreciated.

The B&O MMC 2 impresses us as being a logical evolutionary development, almost certainly better in its record-playing performance than its predecessors and with its bulk and weight trimmed substantially to match the capabilities and requirements of modern tone arms. —Julian D. Hirsch

Circle 144 on reader service card

A man with a mustache, wearing a blue and yellow life vest, is sitting on the deck of a boat. He is holding a lit cigarette in his right hand and a scuba tank in his left hand. The background shows a blue sky and a body of water. The overall scene is set during the day.

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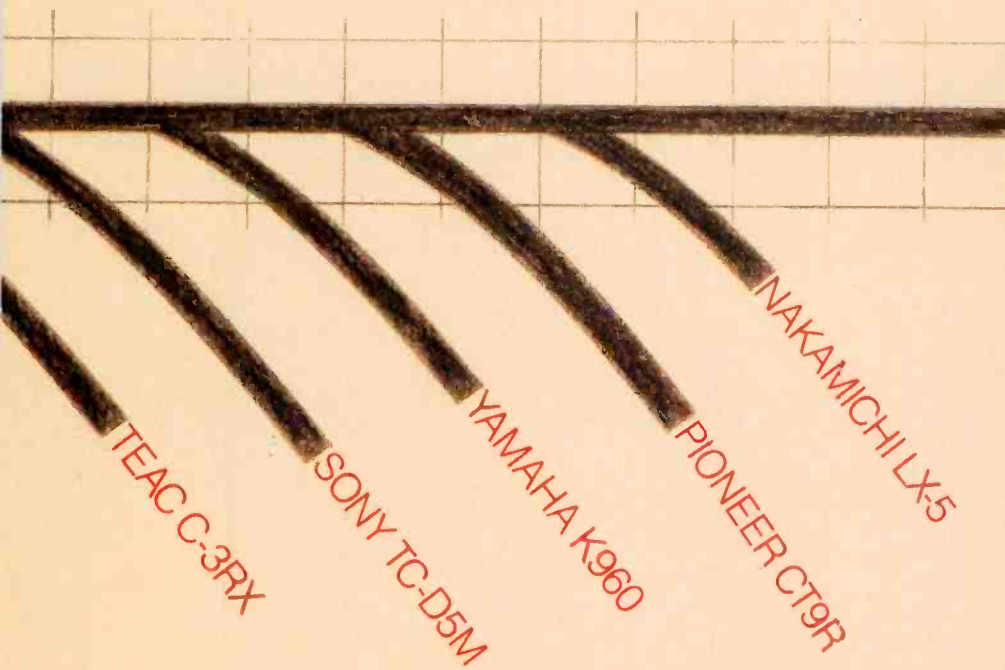
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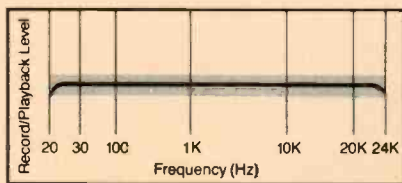
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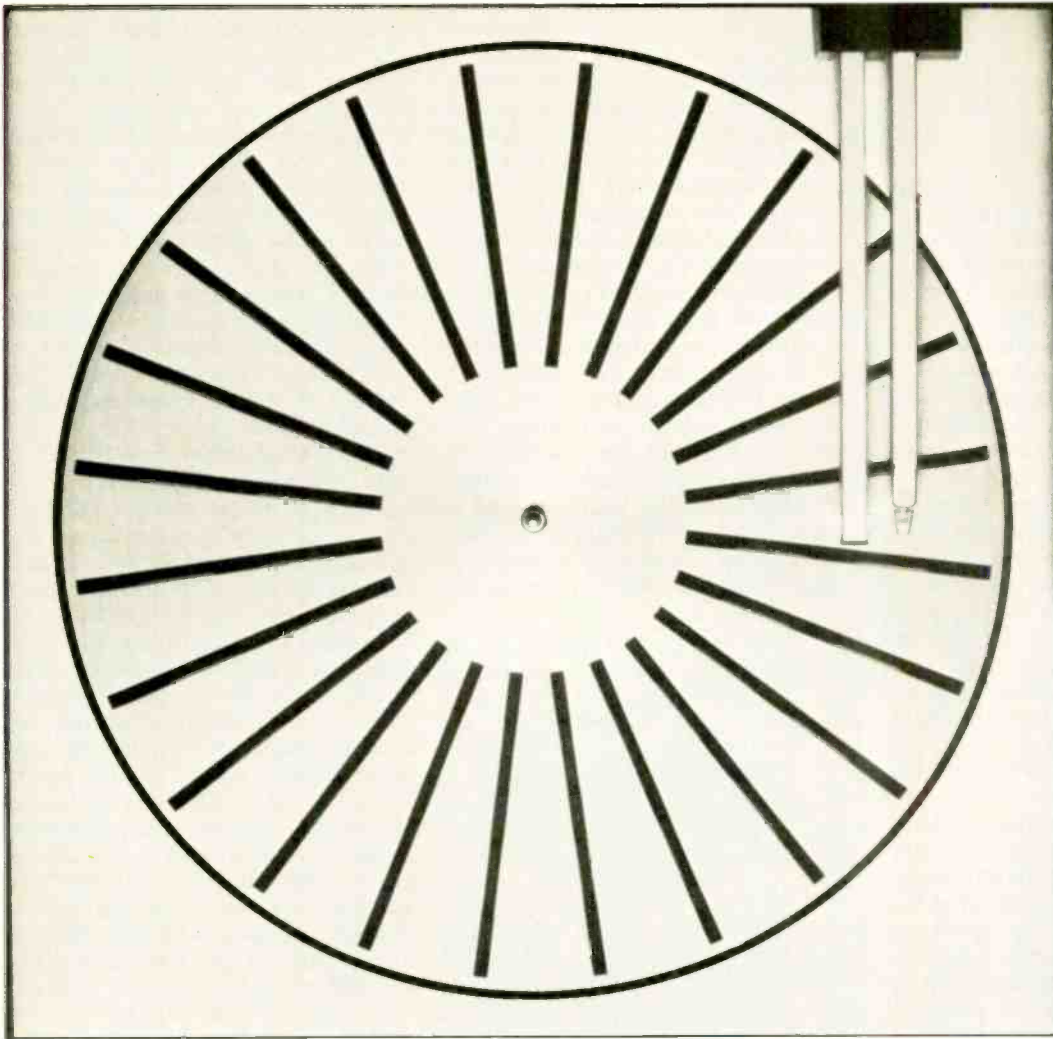
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Tangential-tracking turntables have been made by Bang & Olufsen for more than a decade. Shown here is a view of the Beogram 8000.

CHOOSING A TURNTABLE

By Alan Lofft

APEARANCES can be deceptive. What looks like a simple enough task—rotating a disc platter at a constant speed with a support system that allows a phono cartridge unrestricted movement in tracking the inwardly spiraling record groove—on close examination turns out to be fraught with considerable technical problems, many of them inherent in the analog system of sound storage devised by Edison and Berliner. And with the shadow of the digital Philips/Sony

Compact Disc looming on the horizon, discussion of the traditional turntable concerns—flutter, rumble, tone-arm geometry, and so forth—might seem oddly out of touch. After all, what relevance does talk of drive-system accuracy, lateral tracking error, or mechanical isolation have when the Compact Disc may relegate these subjects to the back shelf of audio history?

Inelegant or not, the grooved analog disc *is* still the world standard, and it will remain so for at least the next few



years. Industry pundits now envisage the transition from all-analog to all-digital record production as taking as long as the move from mono to stereo: perhaps ten years. Even if you decide to purchase a CD player in the near or distant future, you're still going to need an analog turntable to play all those treasured discs in your collection that—for economic, musical, or technical reasons—are unlikely ever to be reissued in the digital CD format.

So the old concerns of turntable buyers are still valid. And this year, technical innovation and competition for the audio dollar have combined to offer better performance and more refined (and useful) convenience features for less money than before. Two years ago, who would have believed that an automatic direct-drive turntable with tangential-tracking tone arm and microprocessor control would be available for only \$200?

But as good engineering reduces some of the old analog-disc vexations (rumble, for example) to (mostly) inaudible levels, other turntable parameters—effective mass of the tone arm, mechanical isolation, flutter, tone-arm geometry—take on greater practical significance. In addition to performance aspects, today's turntable buyer must also consider pivoted vs. tangential-tracking tone arms, direct vs. belt drive, "servo controlled" tone arms, and at least four levels of automation.

Turntable Drive Systems

Any turntable drive system must rotate the platter on which the disc sits at a specific, constant speed, free of any rapid speed irregularities (flutter), slower speed variations (wow), or long-term instabilities (drift). Vibrations and noise from the turntable's motor must not reach the platter, where they will be detected by the cartridge and reproduced as a low-frequency rumbling noise along with the music. Any of these problems, if sufficiently severe, will have unpleasant audible consequences on music reproduction.

Perhaps the simplest means of achieving all these goals is the *belt-drive* system. A motor attached to the turntable base, spinning at about 300 rpm, drives a relatively heavy platter by means of a flexible rubber belt or band. The rubber belt prevents most of the motor vibration from reaching the plat-

ter, and the momentum of the platter overcomes any small speed fluctuations caused by motor-speed irregularities or belt slippage. In the simplest models, the motor is an a.c. type whose speed is regulated by the a.c. line frequency (which is held very steady); hence the term "a.c. synchronous" is used to describe this type of turntable motor.

An outstanding virtue of synchronous belt-drive design is its simplicity. It can be found in inexpensive turntables from JVC, NAD, Marantz, Fisher, and others, as well as in moderate-to-expensive models from Europe (Thorens, Dual) and the United Kingdom (Linn, Mission, STD, Ariston, Systemdek, Michell). The difference between less costly and more expensive models is mainly a function of platter weight as well as sophistication of the suspension/vibration-isolation system and the tone arm.

Rather than relying on just the fly-



THIS MONTH'S COVER: The Pioneer PL-7 featured on the front cover of this issue is a fully automatic, direct-drive turntable with quartz-PLL speed control. It has a straight, statically balanced Polymer Graphite tone arm. Price: \$200.

wheel effect of a heavy platter to smooth out momentary speed fluctuations, many belt-drive models (Pioneer, Harman Kardon, Dual, Thorens, and Technics, for example) incorporate a method of speed regulation called *servo control*. This system compares the speed of the motor (or revolving platter) to an internally generated, fixed reference frequency (or voltage) and supplies instantaneous correction when any speed discrepancies are detected. Servo-controlled systems usually produce less flutter than a.c. synchronous drives, and they also allow for electronic, rather than mechanical, speed change as well as vernier adjustment of the playback speed (pitch control).

A further refinement of servo control is possible through the addition of a *phase-locked loop* (PLL), perhaps in conjunction with a quartz-crystal oscillator. These features do appear on belt-drive models, but very rarely; they are

mostly associated with *direct drive*, the drive system that virtually dominates the turntable market for models priced between \$150 and \$500. With direct drive, the platter rests directly on the shaft of a low-speed (33 $\frac{1}{3}$ - or 45-rpm) motor. This would seem to encourage the transfer of vibration directly to the platter, but the very slow rotation of the motor places most, but not necessarily all, of the rumble frequencies in the infrasonic region, below audibility. Since the platter and motor can be considered an integral unit, the servo control of a direct-drive turntable reacts very quickly to minute speed fluctuations, enabling direct-drive models, as a class, to achieve somewhat lower flutter figures than belt-drive systems.

Although many direct-drive and belt-drive turntables produce essentially inaudible amounts of rumble, the exact distribution of rumble frequencies differs from one model to another, and sometimes the rumble can reach audible levels at audible frequencies. Rather than trust the somewhat confusing state of rumble specifications and measurements, do an in-store test: while playing music, set the volume control to a level that is as loud as you're ever likely to want for listening, make sure the system's tone controls are set "flat," and then play the "silent grooves" between cuts on an LP through speakers with good bass response. (Do not play the lead-in groove for this evaluation since it is usually filled with built-in rumble.) All you should hear is the groove "swish"; if you hear any low-frequency rumbling, try another turntable. Use the same record for all the tests, since the built-in rumble from the pressing and record-cutting lathe can vary from one disc to another. (Variations in perceived rumble can also be caused by tone-arm/cartridge problems; see below.)

The Tone Arm

An ideal tone arm would suspend and maintain the phono cartridge in perfect alignment to the record groove, allowing the cartridge and stylus to follow the groove inward with no lateral resistance to its movement across the record. This utopian tone arm would also permit the cartridge to negotiate large record warps or other disc-surface ripples without causing violent oscillations of the cartridge/tone-arm combination and without disturbing the orientation of the stylus to the groove. In practice, these ideals are somewhat compromised, regardless of whether the arm moves in a straight line (called a linear-tracking or tangential-tracking arm) or describes an arc across the surface of

the disc (a pivoted arm), as shown in Figure 1. But with careful tone-arm design—and exacting accuracy in cartridge installation—either type of arm is capable of extremely accurate recovery of musical information from the record groove.

When a master disc is “cut,” the cutting head and stylus move on a straight, radial rail from the outside edge to the inner portion of the disc. Tangential-tracking tone arms essentially attempt to duplicate this movement with the playback cartridge and stylus. The approach, in theory at least, is supposed to create the least difference between the cutting- and playback-stylus alignments and hence the least amount of distortion in playback. Therein lies the appeal of the linear-tracking arm. But, with few exceptions, radial arms *do* deviate from perfect tangential alignment to the record groove. A record groove is not an equally spaced spiral; if it were, then it would be a simple matter to propel a tangential arm smoothly across the disc at a constant speed. Since the groove spacing varies, the arm’s horizontal speed must also vary. This is accomplished by letting the spiraling groove itself pull a linear-tracking arm slightly away from perfect tangency; the servo system controlling horizontal arm movements senses such deviations and uses them to vary the speed at which the arm moves across the disc.

The deviation from tangency required to get the arm in a linear-tracking turntable moving either inward or outward can typically be 0.5 degree.

The traditional pivoted tone arm, anchored at one end to a corner of the turntable, swings in an arc across the disc, producing a varying inherent degree of error in the angle of the cartridge to the groove. By offsetting the angle of the cartridge/headshell assembly relative to the arm shaft (or by using an S- or J-shaped arm) and by carefully choosing the angle of offset in relation to the arm’s length and position, the tracking-angle error (and any distortion due to that error) can be reduced to *zero* at two points on the disc. At all other points, the errors of a pivoted arm can be reduced to levels (typically 2 to 3 degrees) that are audibly insignificant and measure only slightly greater than those of a tangential-tracking tone arm.

All of this, however, assumes correct tone-arm design and perfect cartridge alignment in the tone arm, two things not always achieved in either type of tone arm. There are numerous examples of pivoted arms with incorrect configurations, and even the most meticulous audiophile is unlikely to mount a cartridge in a pivoted or tangential arm with an accuracy greater than ± 0.5 degree in angle or less than 1 millimeter in position. As Peter Mitchell, president

of the Boston Audio Society, has convincingly pointed out, these practical factors combine to cancel any theoretical superiority *due to tangency accuracy* of a linear-tracking tone arm over a pivoted one. An alignment-protractor accessory can help the buyer of a pivoted-arm turntable to achieve correct tone-arm geometry and to reduce tracking-angle error.

Technics’ introduction of “P-mount” plug-in cartridges for both its linear-tracking and pivoted-arm turntables effectively removes the possibility of alignment or positioning errors in cartridge installation. The P-mount system replaces the headshell and cartridge-mounting hardware with a simple receptacle that the cartridge plugs into, thus forming a positive, mechanical interlock between cartridge and tone arm. The system is being adopted by other manufacturers, and P-mount cartridges are now available from several of them, freeing the less nimble-fingered turntable buyer from the tedious and exacting task of cartridge installation as well as ensuring a high degree of alignment accuracy (assuming, of course, that the manufacturer has calculated the arm geometry correctly beforehand). Manufacturers are also beginning to pay attention to the problems of installation and alignment for conventional cartridges. Shure’s V15 Type V cartridge comes with its own

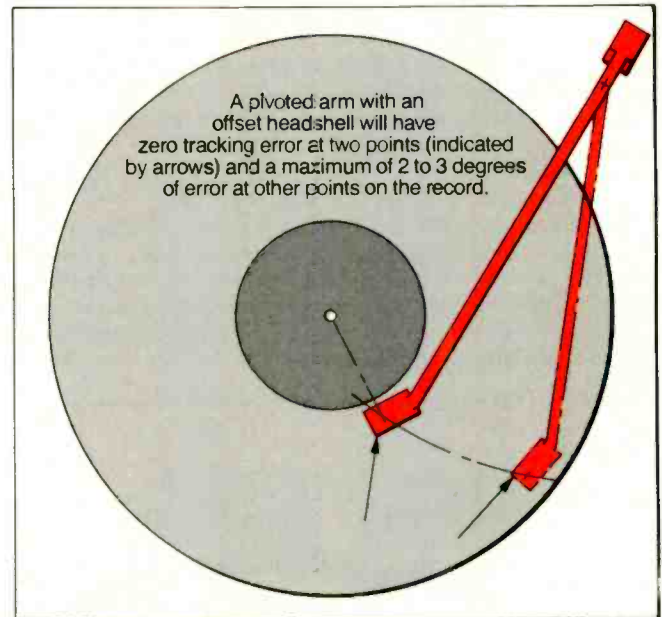
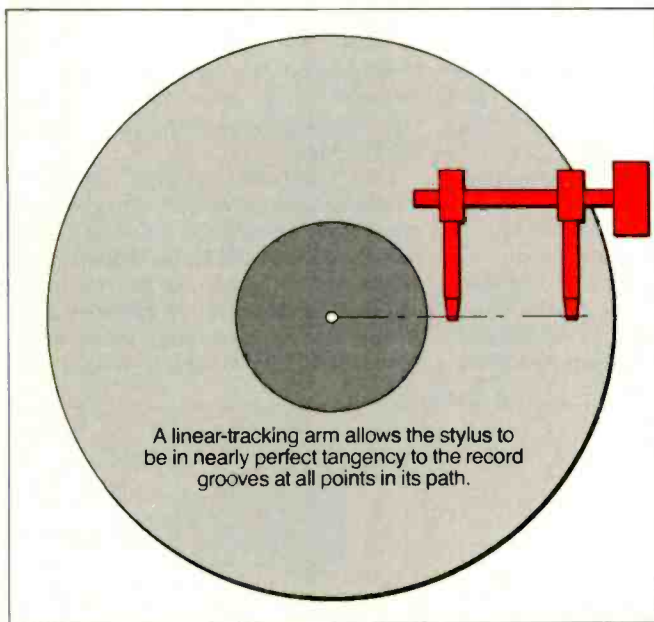


Figure 1. The theoretical advantage of a linear-tracking turntable (left), also called tangential-tracking or straight-line-tracking, over one with a conventional pivoted tone arm (right). A straight pivoted tone arm with an offset headshell (or an S- or J-shaped arm with no headshell offset) will hold the cartridge exactly tangent to the record groove at only two points. (The positions of these points vary according to the degree of offset; a straight arm whose headshell has no offset will be tangent at only one point.) At other points on the record, the cartridge may have a

tracking-angle error of up to 2 or 3 degrees. A linear-tracking arm’s headshell is theoretically tangent to the record groove at all points; in practice, the amount of tracking-angle error is dependent on the electromechanical accuracy of the servo-control system. It is usually 0.5 degree or less. A linear-tracking arm also requires no antiskating correction. However, a possible disadvantage is that linear-tracking machines are inherently more complicated mechanically than pivoted-arm turntables. Most use photo-optical arm-displacement sensors to control the servomotors.



special alignment tools, for example, and other cartridges come premounted in headshells.

One definite advantage that linear-tracking tone arms *do* have relates to *skating force*. Since the frictional drag of the record groove is always along the longitudinal axis of a tangential-tracking arm, the downward pressure of the stylus on both groove walls is identical, as it should be. In a pivoted arm, however, the geometry of the tone arm and the groove friction combine to create a force that tends to pull the stylus toward the center of the record (it "skates" inward), so that there is more pressure on the inner groove wall than on the outer one. If not compensated for, this pressure differential can produce uneven record wear and distortion due to mistracking (since the outer groove wall may be traced with too little tracking force). Most pivoted-arm turntables therefore have *antiskating* mechanisms that apply a compensating outward push to oppose the skating force. (The mechanism may be a spring, a hanging weight, or a magnetic-repulsion system.)

No antiskating system can ever be set perfectly, however, since the amount of antiskating force required at each moment varies with the level of groove modulation, the modulation frequencies, the distance of the cartridge from the center of the disc, the stylus shape, and the composition of the disc material. In contrast, a linear-tracking tone arm generates no skating force, so it requires no antiskating force. In this respect it is ideal, though superiority due to a banishment of skating force, by any means, is difficult to hear at best and is usually inaudible.

The friction of a tone arm's bearings (rather than their type—ball-race, knife-edge, etc.) should be considered in choosing a tone arm (or turntable), especially if a high-compliance premium cartridge is to be mounted in an integrated turntable's pivoted arm. The delicate stylus assembly must carry the combined mass of the cartridge and tone arm across the record; if there is excessive horizontal friction in the arm bearings, the outer groove wall will have to provide the necessary force to overcome it. As a result, tracking of complex, highly modulated passages may be degraded. The lower the vertical tracking force (VTF) the cartridge requires, the more important arm friction becomes. For medium-compliance, middle-line cartridges, a bearing friction (in milligrams) amounting to 5 per cent of the tracking force is acceptable, but for high-compliance, low-tracking-force cartridges, a bearing friction of 1 per cent of the recommended VTF is ideal. The lateral bearing friction of the best separate tone arms is typically in the range of 10 milligrams. Recently, a number of manufacturers have started providing arm-bearing friction specifications for their integrated turntables.

Finally, in making a choice between the pivoted or linear-tracking arm, buyers should be aware that linear-tracking models are inherently complex: a combination of servomotors, pulleys, worm gears, and/or rollers is employed to move the arm carrier along its guide rail. Pivoted arms, in contrast, are usually quite simple, and simplicity in a mechanical design generally implies high reliability.

Arm Mass and Resonance

When a weight suspended by a spring is disturbed, it "prefers" to bob up and down at a certain rate. Similarly, when stimulated by a record warp, the combined mass of a cartridge and tone arm likes to bounce up and down

on the springy stylus suspension at a certain rate. The rate of this bouncing—the tone-arm/cartridge resonance frequency—is determined by the springiness or *compliance* of the stylus suspension, the *effective mass* of the tone arm, and the weight of the cartridge body. (Effective mass is the relative massiveness at the headshell end of the arm, which matters more than the arm's total weight.)

Most record warps occur in the range of one to seven times per second—in other words, at 7 Hz or less. If the tone-arm/cartridge resonance frequency also falls in this range, a record warp will trigger a violent bobbing of the tone arm, resulting in cartridge mistracking, powerful infrasonic signals that can cause woofer distortion, and possibly even skipped grooves (see Figure 2). The vertical cartridge motion also moves the stylus forward and backward in a "scrubbing" motion. This produces a particularly annoying flutter modulation of the musical program, heard as a waver in the sound as the warp passes beneath the stylus. The bobbing action rapidly alters the vertical tracking force as well, producing too much force on the uphill side of the warp and far too little on the downhill side, a problem that is exacerbated by a massive tone arm. Changes in tracking force can result in mistracking and distortion over the warped portions of the record. The trick, then, is to keep the tone-arm/cartridge resonance frequency above the region of record warps (7 Hz and below), yet below the audible frequency range (starting at around 20 Hz); the range from 10 to 12 Hz is considered ideal.

The tone-arm/cartridge resonance frequency can be raised into the ideal range by reducing the compliance (springiness) of the stylus assembly, by reducing the weight of the cartridge body, or by reducing the effective mass of the tone arm (through more skeletal construction or lighter-weight ma-

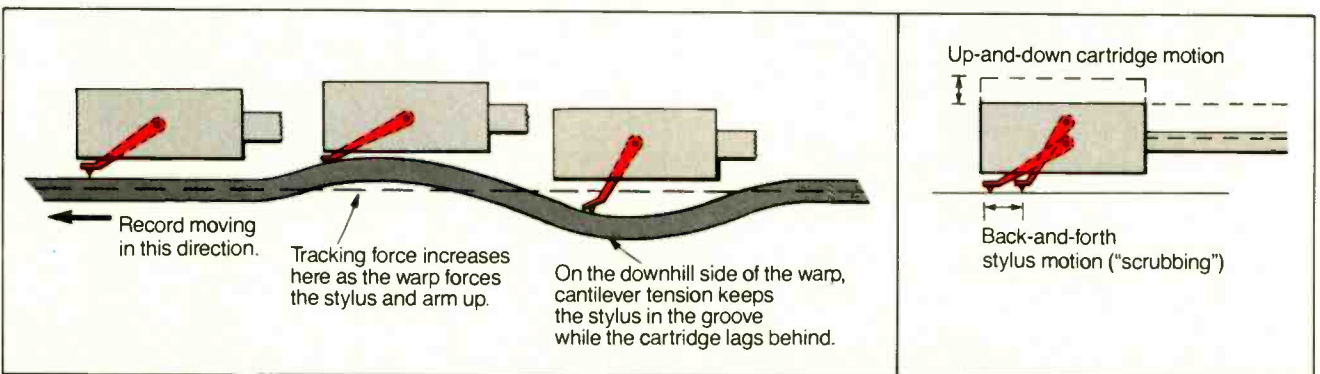


Figure 2. Tracking a warped record. If the vertical motion of the cartridge, headshell, and tone arm that is caused by a warp is not properly damped, an oscillation at the resonant frequency of the

combined system will set in. This oscillation causes variations in tracking force and cantilever angle. The resulting motion causes the stylus to change speed relative to the disc.

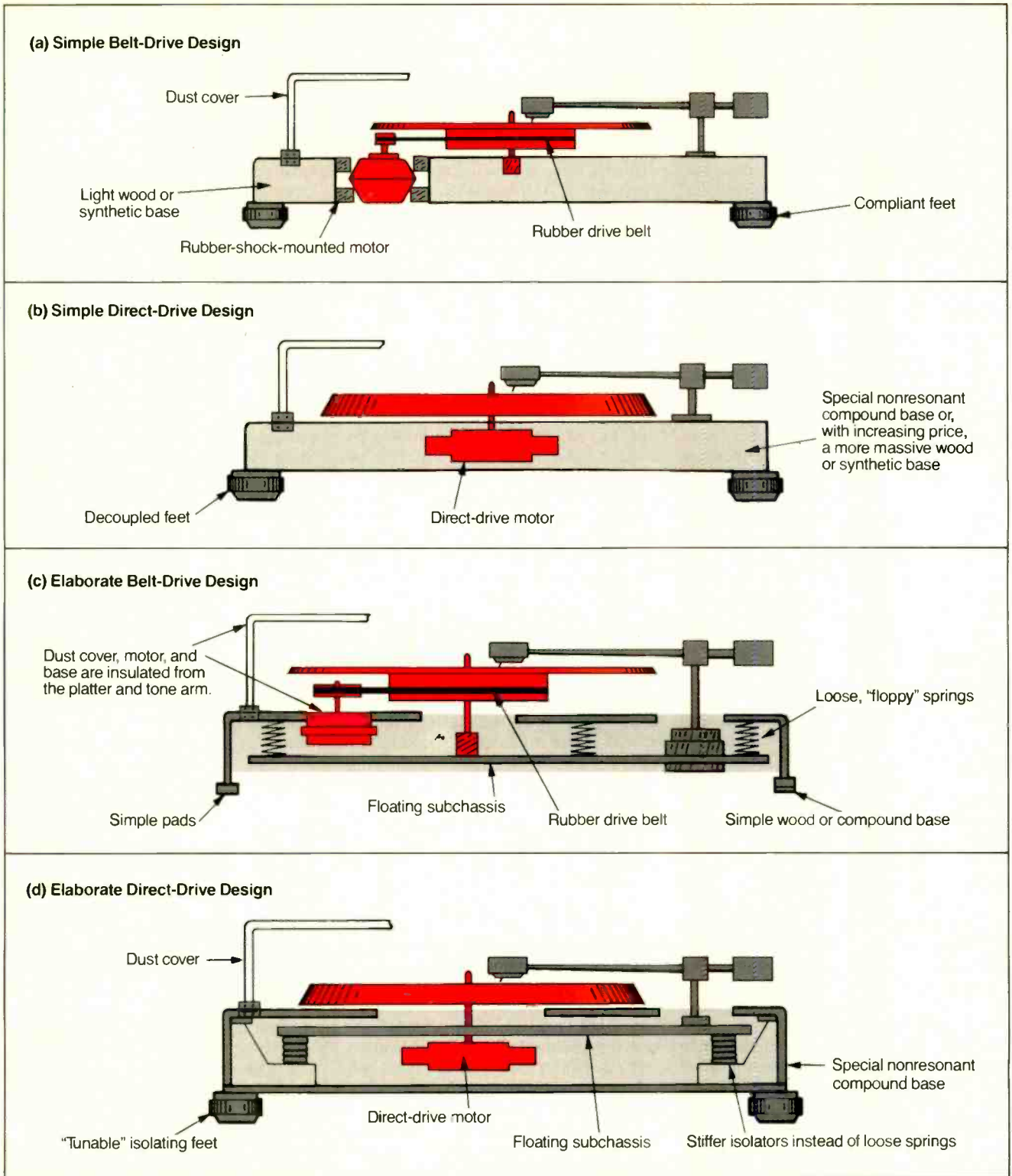


Figure 3. The four basic types of turntable drive and suspension systems (front views). While there may be other systems and

combinations of systems used in some units, these are the most common. Often execution is more important than design.

terials). Since a significant reduction of stylus compliance results in poor bass tracking ability, the other two routes are generally chosen. For example, several leading cartridge manufacturers have introduced models with greatly reduced overall weight. With its P-mount system, Technics has eliminated the

headshell and mounting hardware on its cartridges, thus lowering their mass; moreover, since the mass and compliance of the cartridges that can be used with a P-mount turntable are known in advance (the characteristics of P-mount cartridges are standardized whatever the manufacturer), Technics

claims to have optimized the resonance on all their P-mount turntables at 10 Hz. Combining the cartridge and headshell into a single plug-in unit (an approach taken by Audio-Technica, Ortofon, and ADC) will also lower the overall effective mass and raise tone-arm resonance. (Continued on next page)



By now it should be clear that perhaps the biggest advantage of most, but not all, tangential-tracking turntables is a much shorter, lighter, and therefore less massive tone arm. The arm tube on many linear-tracking models is typically half the length of a typical 8½- to 9-inch pivoted tone arm. Such short tone arms can easily keep the tone-arm/cartridge resonance in the ideal range. In pivoted-arm turntables, there is an increasing emphasis on reducing arm mass through spare, bare-bones construction and the use of new, light-but-rigid materials (carbon fiber, titanium, and the like), a trend evident in the integrated turntables from Onkyo, Pioneer, Harman Kardon, and others.

Ultra-low arm mass and lightweight construction may not be quite the panacea it is thought to be, however. Experiments conducted at Canada's National Research Council demonstrated that several ultra-low-mass arms displayed a high sensitivity to structural resonances excited by stylus vibrations in the groove. These resonances extended well into midrange frequencies; worse, loud music exacerbated the resonance peaks by as much as 30 dB! A more traditional arm of medium mass was largely insensitive to these effects. It would seem that specially rigid and light materials (such as the aforementioned carbon fiber) are more resistant to these structural resonances.

Not only should the arm/cartridge resonance fall at the proper frequency, but its strength should be reduced or damped, because an undamped arm/cartridge resonance can exaggerate turntable rumble, floor-conducted vibration, or low-frequency mechanical feedback from the speakers. A viscous-damped hinged brush attached to the cartridge absorbs much of the shock of record warps and lowers the amplitude of the arm/cartridge resonance.

Turntable manufacturers have also taken steps to reduce arm/cartridge resonances. Dual decouples part of the counterweight from its tone arm with a flexible material; this antiresonance filter vibrates in the region of the resonance, but out of phase, thereby canceling much of the resonance peak. A technically ingenious approach to lowering effective mass and controlling arm resonances can be seen in the "Servo-Tracer" or "Bio-Tracer" pivoted arms on some Denon, JVC, and Sony turntables. Servomotors within the arm

correct any unusual, rapid arm motions (such as those from record warps). These techniques can theoretically reduce a tone arm's effective mass to zero while suppressing resonances entirely.

Some manufacturers attempt to make an issue out of the shape of a pivoted tone arm. Though most pivoted arms nowadays use a straight arm shaft, an S- or J-shaped tone arm can work just as well and needn't be more massive. For example, by using titanium tubing and moving the headshell sockets close to the arm pivots, SME has achieved very low effective arm mass in its highly regarded Series III tone arms.

Suspensions and Vibration

A phono cartridge is an acutely sensitive but terribly indiscriminating vibration detector: it can't separate the musical vibrations from the record groove from other vibrations transmitted from the external environment, whether they are from footfalls on the floor, speaker cabinets shaking the turntable shelf, or high-volume sound energizing the plastic dust cover. A good turntable suspension will reduce these external vibrations (along with the turntable's motor noise) to audibly insignificant levels. If a suspension is inadequate, enough of these disturbances may reach the platter and tone arm to cause muddied or boomy bass, coloration of midrange sound, howling feedback, or groove jumping (with heavy footsteps). The wise turntable shopper should know beforehand where the turntable will be located as well as any eccentric physical characteristics of the listening room (old springy wooden floors, for example), because different types of suspensions (see Figure 3, page 49) react somewhat differently to particular installations.

The suspension in Figure 3(a) is typical of many belt-drive turntables. Rubber motor mounts and drive belts insulate the platter from motor vibration, and compliant "feet" on the base help damp out external shocks. The base may be made of light wood or a nonresonant synthetic compound. This type of suspension will yield adequate isolation when the turntable is located well away from the speakers. Note that there is no acoustic insulation between the dust cover and the turntable base (or the tone arm), so acoustic pickup at high playback volumes might be expected.

(Incidentally, you can improve the isolation of any simple turntable by placing it on a 1-inch-thick slab of particle board laid on top of a sheet of urethane foam of similar—or greater—thickness. Make sure that the turntable

is level and steady, however. Special accessory isolating feet are also available for placing either directly under the turntable or under the board; experiment for best results.)

Quite similar is the suspension in Figure 3(b), which is typical of inexpensive direct-drive turntables whether they have pivoted or tangential-tracking arms. Flexible feet are the principal means of isolation, but at higher price levels you will find a more massive wooden or synthetic slab as the base (Yamaha, Denon, Sansui, JVC, and other manufacturers take this approach in their top direct-drive models). Such bases often weigh about 25 pounds, double that of inexpensive models. Thanks to a basic law of physics—it takes a great deal more energy to set a large mass in motion than a small one—a turntable with a massive base along with decoupling feet can be placed fairly close to speakers played at high volume. The heavy base also resists excitation by dust-cover vibration.

The more elaborate belt-drive suspension in Figure 3(c) anchors the motor and dust cover to the base but suspends the platter and tone arm on a subchassis with loose, floppy springs. As long as this type of turntable is placed on a secure shelf or table, the suspension system provides excellent isolation from floor-conducted or acoustic vibrations. However, springy wooden floors or a shaky shelf can excite the floppy suspension, causing groove jumping. This type of jiggly suspension also takes some getting used to when cueing a record and can be quite unnerving to inexperienced users—a consideration if babysitters, family, or friends will be operating the turntable.

Typical of Technics, Pioneer, and Dual direct-drive models, the suspension in Figure 3(d) also has a floating subchassis but utilizes much stiffer isolating springs, a nonresonant-com-pound base, and compliant feet, which in some cases can be "tuned" to suppress a specific low-frequency vibration. This suspension may offer slightly less isolation than the previous type, Figure 3(c), but it is much less sensitive to instability from springy floors or a shaky shelf.

Where the machine's design permits, you can check the isolation characteristics of a turntable by placing the stylus in the record groove with the platter stationary and giving the shelf on which the turntable rests a sharp rap with your finger. The weaker the "thunk" you hear through the speakers (or the headphones), the better the turntable's rejection of external vibration.

A good record mat (see Figure 4) should, by supporting the grooved area

of the disc, suppress "microphonic" pickup by the disc of acoustic energy in the listening area. Record support by raised rubber ridges or pods is to be avoided, although record *clamps* may help as long as they aren't too heavy. "Sticky" rubber accessory mats have been found to be very effective in suppressing disc resonances, but they're a bit inconvenient: the adherence between the mat and disc usually necessitates peeling the mat off the record. A technically elegant, though costly, solution to the problem of disc/mat resonance is available in the accessory Audio-Technica Disc Stabilizer and either of two Luxman turntable models. These use an air pump to form a vacuum bond, lasting for the duration of play, that sucks the disc down tight against the platter.

Automation and Niceties

Perhaps a decade ago, buying a *record changer* (a turntable that automatically plays a stack of LP's) meant a serious compromise in performance. Well, that time is past; direct-drive and belt-drive changers from many manufacturers have virtually the same wow, flutter, and rumble specs as their less automated brethren. For the record collector who wishes to avoid the inconvenience of having to get up and change records at the end of a side (and it is inconvenient sometimes) but is not overly fastidious about record handling, the major consideration is whether the convenience outweighs the added complexity intrinsic to the operation of an automatic changer.

For most turntable buyers, however, the major decision will be choosing among single-play *automatic*, *semi-automatic*, and *manual* turntable models. A manual turntable requires the user to do everything: remove the arm from its rest, place the stylus on the record, and return the arm to its rest at the end of the side. Mechanical simplicity is a manual turntable's main virtue. With a little more mechanical and electrical complexity, a semi-automatic model of-

fers automatic shut-off and arm-return at the end of play, a pleasant convenience. (There are also in-between types that only lift the arm at the end of a disc; you have to return the arm to its rest manually.)

For those who find greater peace of mind in not having to manipulate the delicate cartridge and arm at all, an automatic clearly is the right choice. Buying an automatic often brings other niceties: some models have sensors built into the platter to detect the disc size or to prevent the turntable from operating unless a record is on the platter (a fine childproofing feature). Other automatics will repeat the same side over and over (handy at parties). Some of the least expensive tangential-tracking models have built-in muting to silence the initial impact of the stylus on the disc, a nice touch. In fact, buyers who choose a tangential-tracking model usually get pushbutton, servo-controlled cueing; you never need to touch the arm even when cueing manually.

Once automatic arm-control functions have been incorporated into a turntable, microprocessor selection of individual cuts can be added relatively easily. Some linear-tracking models can be programmed to play cuts in any order, repeating some and skipping others (haven't you always wanted to play Janis Joplin's *Pearl* without having to listen to *Mercedes Benz* one more time?). Programmability is even available on some pivoted-arm turntables.

Human engineering with respect to controls and features shouldn't be overlooked. Turntables with their controls mounted outside the dust cover are more convenient and offer fewer opportunities for dust to settle on your records. Check whether the dust-cover hinge operates smoothly and whether the cover will stay open when it should (it should, of course, be closed when you're playing a record). Try the cueing controls: does the stylus return to the same spot when it comes back down? Is the stylus-force gauge easy to read? Does the counterweight on the tone arm have a good friction clutch to retain the

correct balance setting? Do all the controls work smoothly, or does operating them set the suspension into a jiggly oscillation? If you like to play DJ and back-cue selected cuts, check the platter's start-up time. Some direct-drive models have plenty of torque and reach full speed in less than a revolution. Some belt-drive units with heavy platters often take from 4 to 7 seconds to stabilize at speed. A strobe-assisted, vernier adjustment of platter speed is useful to compensate for drag from a too-heavy record-cleaning brush or to tune the pitch of a disc to match that of a musical instrument for playing along.

For installations where space is at a premium, there are a number of alternative designs of considerable appeal. Sony, Aiwa, and Pioneer all have front-loading turntables with retracting drawers that extend at the touch of a button; some even have tangential-tracking tone arms. The front-loading format allows the turntable to be stacked with other components, but make sure that you can still see the disc to cue up a selection manually when the unit is stacked (programmable cueing mitigates the latter problem). The foot-wide turntables with tangential tone arms built into their covers are very compact, but they need to be placed in good light so that individual cuts can be seen through the covers for cueing. Mitsubishi's vertical-loading format seems ideally suited to shallow shelving but requires lots of vertical space. Both Kenwood and Sharp also have vertical-format models; the Sharp unit is even able to play both sides of a disc without turning it over (around?).

Clearly, the current crop of turntables offers an extraordinary range of features coupled with, by and large, impressive performance. But this makes choosing a particular model all the more difficult. Still, buyers should feel assured that in selecting a unit from any of the major manufacturers, they will be getting a turntable whose performance and specs (particularly with respect to rumble, wow and flutter, and tone-arm mass) are considerably better than those of most models of only a few years past. Five or six years ago it was almost impossible to find an integrated turntable with a low-mass tone arm; today there are many. Some audiophiles may not be able to find one model with *all* the features and the performance they want. For them, the answer may be *two* turntables: a modest automatic model for family and friends to use and an uncompromising manual turntable with separate tone arm for purist pursuits. This solution—at least for this writer—keeps everybody happy! □

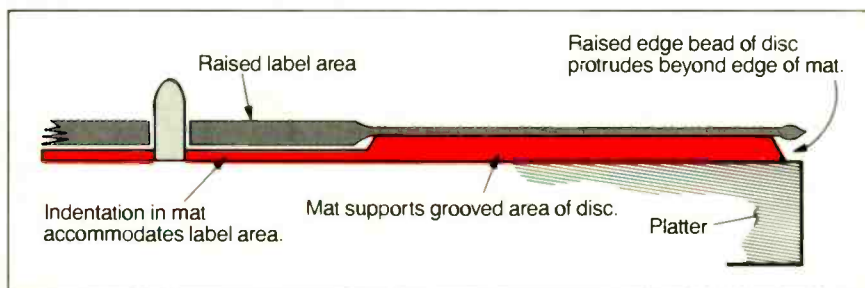
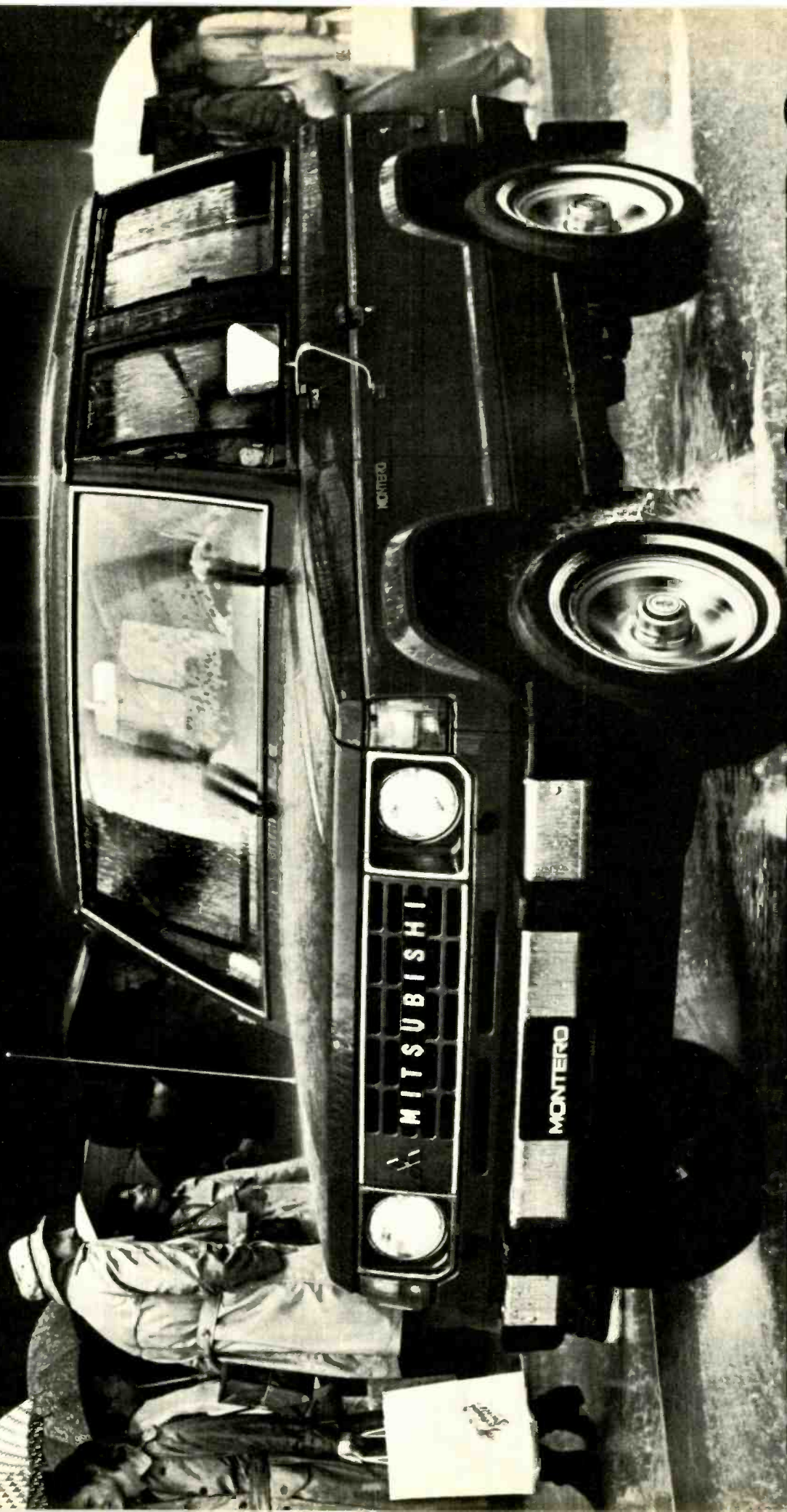


Figure 4. An ideal record mat. The model was derived from laboratory and listening tests performed by the Canadian National Research Council. Note how the groove area of the record is evenly supported by the mat at all points.

ABERCROMBIE & FITCH



MEET MITSUBISHI MONTERO,
THE URBAN GORILLA.

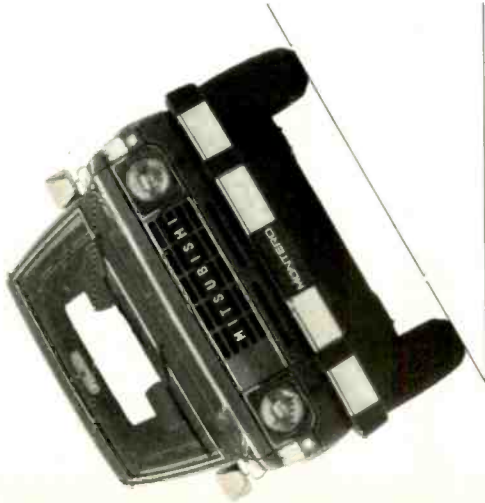
Behold: a rugged off-road 4-wheel drive beast that acts civilized on the road.

Shift our new Montero into 2-wheel drive and it cruises around town like a sporty car. It's roomy, seats four comfortably. And it's loaded with creature comforts.

But more about the beauty later. First, let's examine the beast.

WHERE DOES A GORILLA GO? JUST ABOUT ANYWHERE IT WANTS TO.

Mud, snow, hills or gullies. You name it, the Montero tames it.



In its 4-wheel drive mode, there's a low gear that will haul you up a hill. And a high gear for quick and nimble going in sticky snow or loose dirt.

Super low gearing provides Montero with super climbing ability. And its wide track, allows it to traverse steep terrain.

Town or country, this animal goes just about anywhere.

YOU NEED A GORILLA BECAUSE IT'S A JUNGLE OUT THERE.

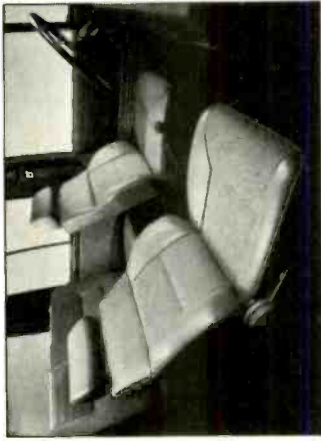
From steel top to solid box-type frame and protective steel skid plates, the Montero is well built, like a gorilla.

Gutsy 2.6 liter, 105 horsepower MCA-Jet engine is the biggest 4-cylinder power-plant we offer. So it won't back down in the backwoods.

Yet, it's smooth and quiet in the concrete jungles. Because unique Dual Engine Stabilizers reduce vibrations.

Beefy independent front suspension with torsion bars smooths out unbeaten paths. Or roads that have gone to potholes.

And the power-assisted front discs will stop a gorilla in its tracks.



GOT THINGS TO CARRY? GET A GORILLA.

Fold down the rear seat and the Montero becomes a beast of burden. Sporty front bucket seats recline, and the passenger seat tilts forward for easy rear seat access. Cargo tie-downs come standard, to secure everything you need to go on a

camping trip. Or haul everything back from a shopping spree.



EVERY GIRL NEEDS A GORILLA.

Although it manhandles most anything, the Montero is easily woman handled, thanks to variable assist power steering.

Easy to see out of. Thanks to a high top and tinted glass.

Easy to shift. Thanks to a sporty 5-speed manual over-drive transmission.

Easy to ride in. Thanks to a driver's seat that "floats" on a shock absorber.

And it's easy to look at. Thanks to a nifty two-tone paint job and 15-inch stylish spoke-type wheels with all terrain radial tires. And it's all standard. Thanks to Mitsubishi.



CIVILIZED INSTRUMENTATION.

ALL THESE STANDARD FEATURES MAKE IT QUITE AN ANIMAL.

Every gorilla comes loaded with standard features like: 2.6 liter, 105 horsepower MCA-Jet engine.

5-speed manual overdrive transmission.

Independent front suspension with torsion bars.

Variable assist power steering.

Manual free-wheeling hubs.

Protective skid plates.

Driver's suspension seat.

15" styled spoke-type wheels with all terrain radial tires.

4-passenger seating plus big cargo area.

Plus dozens more standard features for only \$9,229*.

YOU CAN EVEN BEEF UP A GORILLA.

We offer the Sport Option Group with limited slip differential, automatic free-wheeling hubs, headlamp washers, rear wiper/washer, accent stripe and an AM/FM/MPX cassette radio with four speakers. That's a lot of gorilla for only \$721* more. You might say you'll go ape over it.

For your nearest dealer, call (800) 447-4700.

*Manufacturer's suggested retail price. Actual prices set by dealers. Taxes, license, freight, options and other dealer charges extra. Prices may change without notice.

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ACHIEVE MITSUBISHI MONTERO. IT TAKES YOU WHERE YOU'VE NEVER BEEN BEFORE.

CHOOSING any hi-fi component solely from its performance specifications is always risky, but a turntable is surely one of the most difficult to assess from a mere listing of technical terms and numbers. There are few meaningful and universally accepted measurement standards for turntables, and one reason for this is the difficulty of correlating numerical turntable ratings with subjective effects on the listener.

The specifications for a typical record player can usually be divided into those dealing with the turntable and its drive motor, those dealing with the tone arm (if one is included), and such general specifications as dimensions, weight, and power requirements. To illustrate how to evaluate turntable specs, we will examine in detail the manufacturer's spec sheet for an actual turntable, the Hitachi HT-45. This spec sheet was chosen from a pile of brochures picked up at a local hi-fi dealer because it seemed the most "typical."

control circuits to establish and maintain motor speed. The speed of a belt-driven turntable, however, can be changed either electronically or by mechanically shifting the belt to a different-diameter pulley. There are no particular performance differences between the two methods. The maximum deviation in operation from the nominal speed values is often included in turntable specifications, though not in the case of the Hitachi unit. Speed-deviation values around 0.002 per cent are typical of quartz-crystal-controlled turntables, but for home use even 1 per cent is usually inaudible (this is a typical speed-error specification for a cassette deck, by the way). Considering that a speed error of 0.002 per cent would affect the playing time of a 1-hour program by less than 0.1 second, its importance to the home user is obviously slight.

6 A vernier speed adjustment may be desirable for users who require precise pitch control. When most turntables were

of less-audible frequency components and to accentuate that of the more-audible frequencies in the final, single-valued rumble rating—expressed as a number of decibels below a reference level, making "higher" ratings preferable. Sometimes, as in the present example, rumble is specified as a signal-to-noise ratio (S/N or SNR). The two are identical except for their algebraic signs: S/N's are positive values and rumble ratings negative ones.

Throughout much of the world, the German DIN standards have been adopted for acoustic measurements, and most turntable rumble ratings, like those of the Hitachi HT-45, are expressed as "DIN-B" weighted values. Apart from its widespread use, the DIN-B rumble weighting has little to recommend it, since it virtually discards most of the actual rumble frequencies and thus produces unrealistically good numbers. DIN-B rumble specifications are frequently around -75 dB. We prefer to use the Audible Rumble Loudness Level (ARLL) weighting proposed some years ago by CBS Laboratories. It is more realistic than DIN-B but also results in less impressive figures. We find that most good turntables measure around -60 dB with ARLL weighting, with a few as good as -65 dB.

A turntable whose rumble is largely at infrasonic frequencies, and thus not directly audible, can still degrade the reproduced sound by overdriving an amplifier output stage or driving a woofer cone beyond its linear limits—particularly when the amplifier's response extends down to d.c. (0 Hz), or nearly so, or if the speakers are ported or vented types. We find that most turntables have an unweighted rumble level of about -30 dB, with the best reaching -40 dB and only a few as poor as -25 dB. Some manufacturers' specifications include DIN-A as well as DIN-B rumble ratings. The DIN-A standard is close to an unweighted measurement, although we have seen few turntables with published DIN-A rumble ratings as poor as our unweighted test measurements.

Turntables: How to Evaluate the Specs

By Julian D. Hirsch

1 The type of drive system used to turn a record is often described with more specifications than most people either require or can understand. Sometimes the technical description is brief and even understandable by the lay user; Hitachi's simple statement that the turntable uses a two-speed d.c. servo-controlled direct-drive motor should suffice for even the most concerned audiophile. The precision with which a turntable is manufactured is more important than its specific drive method.

2 The platter construction is less significant today than in previous years. When steel platters were used in some turntables, there was always a possibility of magnetic attraction to certain cartridges having a strong external magnetic field, thus increasing the vertical tracking force. The universal use today of nonmagnetic platter materials makes this a moot point.

3 Information about motor type is partly redundant with the specification of the drive type and, in any case, means little to the lay user.

4 The operating speed(s) is of obvious concern to any buyer whose record collection includes 45- or 78-rpm discs. Although 33 $\frac{1}{3}$ rpm is universal and 45 rpm nearly so, few new turntables today can play 78's.

5 The speed-change system specification is essentially redundant for direct-drive turntables, all of which use electronic

driven by induction motors, the effect of line voltage on motor speed was a meaningful specification. Today's synchronous or servo-controlled motors are essentially unaffected by even the largest line-voltage shifts tolerated by the U.S. national power grid. For turntables having fixed speeds, the speed accuracy is sometimes given (it is usually far better than anyone will ever require in a home system).

7 The signal-to-noise ratio of a turntable is what we usually refer to as its "rumble." Rumble is the audible result of mechanical vibration from the motor or any other rotating part that causes a movement of the record relative to the cartridge stylus (or vice versa). That vibration usually occurs at low bass frequencies and produces an output signal from the cartridge whose sound suggests a low-pitched rumble or sometimes a hum.

A direct-drive motor operating at 33 $\frac{1}{3}$ rpm has a basic rumble frequency around 0.5 Hz, far below audibility or the ability of any speaker to reproduce. In most cases, however, the rumble covers a broad band of frequencies extending from the infrasonic range well into the mid-bass. Depending on its frequency distribution, it is possible for a given amount of rumble from a turntable to be totally inaudible, unacceptably high, or anywhere between those extremes. Therefore, various weighting systems for rumble measurements have been proposed and used. Weighting is a modification of the measurement to diminish the contribution

8 The wow-and-flutter specification refers to the audible result of fluctuations of turntable speed, which cause a low-frequency frequency modulation of the reproduced program. These fluctuations usually result from pulsations of the motor torque and are related to the specific motor design. Wow is a slow up-and-down variation in turntable speed. Severe wow is heard as a distinct sliding of the musical pitch. Flutter is a rapid variation in turntable speed. In the worst cases it is heard as a quivering, wavering, or "souring" of the musical pitch. The borderline between wow and flutter is vague, however, and they are usually specified and measured together.

Wow-and-flutter is measured by playing a test record carrying a steady 3,150-Hz signal (3,000 Hz in older test discs) and connecting the amplified cartridge output to a flutter meter, which is essentially an audio-frequency FM receiver with a meter that shows the modulation (in per cent) of the 3,150-Hz carrier frequency when it is played back. (For example, a 3,000-Hz tone with 1 per cent wow-and-flutter would

change frequency over a ± 30 -Hz range, from 2,930 to 3,030 Hz.)

Wow-and-flutter is also a weighted measurement, since different rates of change have different degrees of audibility. Human hearing is most sensitive to wow-and-flutter when the flutter shifts occur at about a 4-Hz rate, and the test standards adopted by international bodies such as CCIR in Europe, and by the IEEE in this country, use a weighting curve that peaks at 4 Hz and reduces the contribution to the final reading of higher and lower rates. Most Japanese turntables, however, carry JIS-weighted wow-and-flutter ratings, which yield lower (better) numbers than the others. One key difference between the JIS and the other systems is that it is a weighted-root-mean-square reading (usually abbreviated as wrms), whereas CCIR and IEEE readings are based on a quasi-peak measurement. The latter always produces less-attractive (higher) numbers, identifiable by a " \pm " prefix.

Much of the wow-and-flutter we measure is ascribable to test-record warps or eccentricities, and it is unusual for us to measure values as low as 0.06 per cent wrms or ± 0.08 per cent weighted peak. Some turntables carry lower ratings, such as the 0.025 per cent (wrms) of the Hitachi HT-45, which was presumably measured with specially made lacquer test discs whose flatness and concentricity were carefully controlled. Another common method with direct-drive turntables is to measure the wow-and-flutter within the motor's servo-control loop, which eliminates the need for a record, cartridge, or even tone arm. This can result in some impressively low readings, less than 0.01 per cent in some cases, that may be a valid indication of the turntable's performance but cannot be compared with readings made in the conventional manner. Such wow-and-flutter readings can sometimes be identified by the appearance of "FG" (frequency generator) in the specification.

9 The **tone arm** has the function of supporting the cartridge above the record, with the correct angular relationship to the radius of the disc, as the stylus traverses the spiral groove from the outer edge to the label area of the record. Most tone-arm specifications deal with dimensions and design features. Some of these factors do have a bearing on the potential performance of the pickup system, but others (such as the shape of the arm tube) are irrelevant.

All else being equal, a straight arm (like that used in the HT-45) can obviously have lower mass than a bent arm, since it has less material in its tube (a straight line is still the shortest distance between two points, the points in this case being the arm's horizontal pivot and the cartridge's stylus). The "static balance" in the Hitachi specs indicates that the arm is initially balanced with the cartridge installed and that the counterweight is then offset to give the desired tracking force. Some arms are described as having "dynamic balance," which implies the use of a spring to provide downward force while the arm remains balanced. No particular advantage or disadvantage can be attributed to either design.

10 The description of the Hitachi HT-45's **headshell** as a "plug-in type" suggests that it is not the old standard EIAJ pin-and-collar type shell. The photo confirms that it is a low-mass shell of the kind used on many recent record players.

11 The **tracking error** is usually stated in the form used by Hitachi, as " $\pm x$ degrees." A more meaningful specification would give the maximum error in degrees per inch (or centimeter) of radius, which has some relationship to the playback

3 grams. (Almost all super-lightweight cartridges are supplied with an additional weight to bring their total to more than 4 grams—mounting hardware adds a bit more.) These days, few cartridges weigh more than 9 grams, but one that did could not be used in this arm.

14 The **dimensions** of a record player, like those of any other component, are important if you want to make sure that the unit will fit in an allotted space. Turntable dimensions are usually given with the

HT-45

Specifications

Specifications	
1 Type:	2-speed, DC servo drive semi-automatic
2 Platter:	Aluminum alloy diecast
3 Motor:	310 mm outer diameter
4 Speed:	Brushless, coreless, slotless Unitorque motor
5 Speed Change System:	33-1/3 and 45 rpm
6 Speed Adjustment:	Electronic changeover system
7 Signal-to-Noise Ratio:	$\pm 3\%$ (33-1/3 rpm)
8 Wow and Flutter:	$\pm 4\%$ (45 rpm)
9 TONEARM	78 dB (DIN-B)
10 Type:	Static balance straight
11 Headshell:	Plug-in type
12 Tracking Error:	$\pm 2^\circ$
13 Adjustable Force Range:	0—3 g/turn of the balance weight; (direct readable in 0.1 g steps)
14 Acceptable Cartridge Weight:	4—9 g
15 CARTRIDGE	
Type:	Dual magnet (MT-35)
Output Voltage:	2.5 mV at 1 kHz
Channel Difference:	50 mm/sec
Channel Separation:	1 dB at 1 kHz
Tracking Force:	23 dB at 1 kHz
Stylus Tip:	2 g
GENERAL	0.6 mil (DS-ST35)
Dimensions (W x D x H):	435 x 365 x 110 mm
Weight:	(17-1/8" x 14-3/8" x 4-1/2")
	5 kg (11 lbs.)

distortion. The Hitachi rating corresponds to a "worst-case" error of 0.8 degrees per inch at a 2.5-inch playing radius (perfectly satisfactory performance).

12 The **adjustable force range** is actually not very important because it is almost always more than adequate to cover all required tracking forces.

13 The specification for **acceptable cartridge weight** is important, especially in view of the very lightweight cartridges now available from several manufacturers. In this case, the minimum weight of 4 grams means that the arm will not balance with a cartridge weighing less than

cover lowered. Be sure also to allow sufficient clearance above the turntable so that the cover can be raised fully.

15 The **weight** of a turntable is usually of minor importance except to indicate the overall solidity and massiveness of the unit (which has no necessary relationship to its sound qualities). The weight *can*, however, affect the isolation of the record-playing system from floor vibrations or even from the acoustic output of the speakers, and thus it does affect the clarity of the overall sound. Turntable isolation is a complex subject, and no specifications deal with it quantitatively (there are no standards whatever for measuring it). □

How to Judge a Record Without Playing It

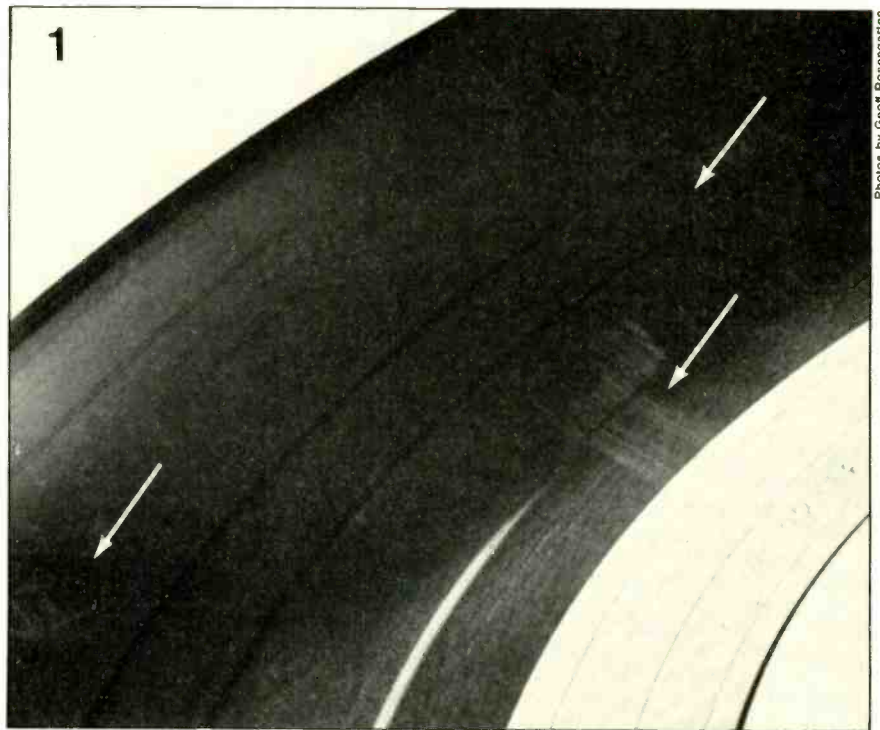
You can evaluate a pressing visually once you know what to look for and how it is likely to affect the sound

By David Ranada

EVERY serious record buyer should be able to tell something about the pressing quality of an analog disc from a visual inspection. Not only is such skill valuable when you're considering the purchase of used records, but some of the techniques can be applied when you're buying new discs. Of course, most new records are securely wrapped "for your protection," but records purchased by your friends are not, and a quick glance at a friend's copy will give a good indication of the types of faults you may find if you purchase the same album.

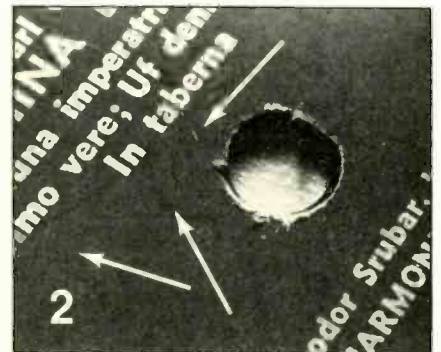
With the help of James Shelton, president of Europadisk (one of America's top disc-manufacturing operations), I've assembled a rogues' gallery of common visible disc defects, any of which would cause a pressing to be rejected at Europadisk. Almost all these defects indicate sloppiness in the pressing or disc-mastering processes. Many of the faults are difficult to see with the naked eye, and even harder to photograph, so I've provided some verbal and sonic descriptions too. When listening for the effects of the various faults, remember that their audibility varies tremendously with the type of music being played. I've heard some extensively scratched rock and disco pressings that sounded just fine because the low-level ticks produced by the scratches were masked by the music.

Shrink wrap. Know your shrink wrap. Low-cost shrink-wrapping machines are used by many record dealers to reseal used and/or possibly defective pressings. The type of plastic used in these machines dif-



fers in texture and thickness from most shrink wrap used by major disc manufacturers. Familiarity with "authentic" shrink wrap will help you detect resealed discs. Also be suspicious of shrink wrap applied over notches or holes cut in an album jacket. Such holes merely indicate that a disc is a cutout or overstock, not that it is defective. They are cut *after* the authentic plastic wrapping is applied, so there should be holes in the wrapping too.

Cleanliness. Cleanliness is next to godliness when it comes to disc care and noise levels. When you take a record out of its



Photos by Geoff Rosengarten

inner sleeve for the first time, check whether it brings along its own supply of dust and debris (it shouldn't) from the inner sleeve, the pressing and packaging environment, or previous handling. The machines that trim off excess vinyl after the pressing cycle may leave slivers of vinyl attached to the edge of a disc; such slivers can become detached only to be caught in the inner sleeve or on the disc surface. Remove these slivers promptly, for if they are caught between the sleeve and the disc when the disc is replaced in the inner sleeve, they may abrade the disc surface. (This is why Europadisk's James Shelton prefers tight shrink wrap for packaging new discs. The loose wrappers used for many audiophile releases encourage the jacket, inner sleeve, and disc to slip and slide against each other during handling, increasing the chance of damage from gritty debris.)

Scratches. It's obvious that a brand-new pressing should not show any scratches. But not all visible scratches (on a used disc, say) will be audible. The audibility of a scratch depends on its severity (depth), on exactly where the stylus traces the groove, and on how loud the music is when the scratch passes. Don't think that every tick and pop you hear is caused by a scratch. Scratches are responsible for ticks and pops that repeat with every revolution of the disc. Molded-in defects (such as dimples and blisters) produce less high-frequency noise and are heard more as thumps. Random ticks and pops stem from poor-quality vinyl or from dust and debris.

Fingerprints and scuffing. Grimy and greasy fingerprints collect dust. Naturally, they should not be present on a new pressing (or a used one either if it has been properly handled). Sometimes what look like

fingerprints are not actually made by unsheathed fingers but by gloved hands handling a disc made from master discs that have not been "dehorned." The master-disc cutting process throws up little ridges, called "horns," beside the newly cut groove. Because these are outside the groove, they shouldn't have any audible effect on the music. If they are not removed early in the mastering process, however, they can create problems in making a low-noise disc stamper. Horns molded in vinyl are easily abraded (by a gloved finger, for instance), leaving scuff marks on the disc surface (Photo 1). The disc *may* become noisier in these spots. You can tell whether your disc's masters were dehorned by rubbing your fingertip (shielded by a soft cloth glove or piece of paper) across the surface of the disc. A dehorned disc will not scuff.

The label. See if the correct label is on each side of the disc. You'd be surprised how often it isn't. Playing the disc is not necessary to check this out; just see if the matrix number scratched or engraved in the disc's lead-out (spin-out) area matches the number on the label.

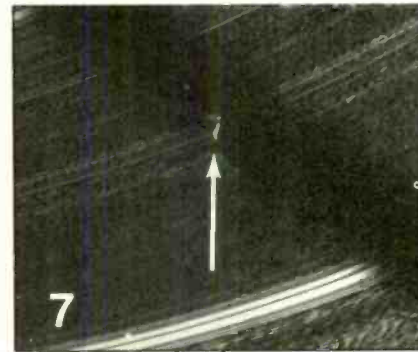
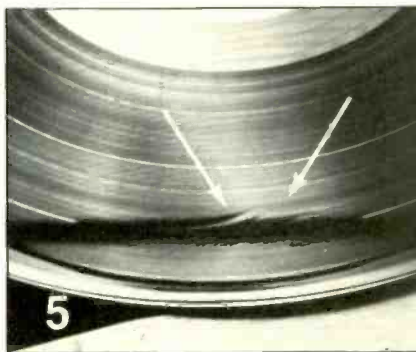
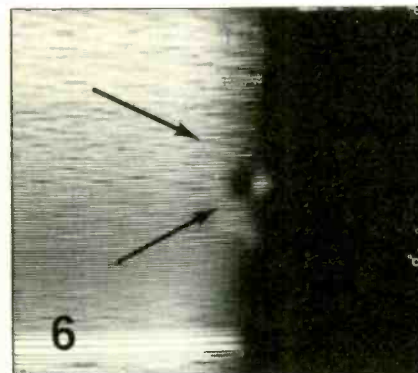
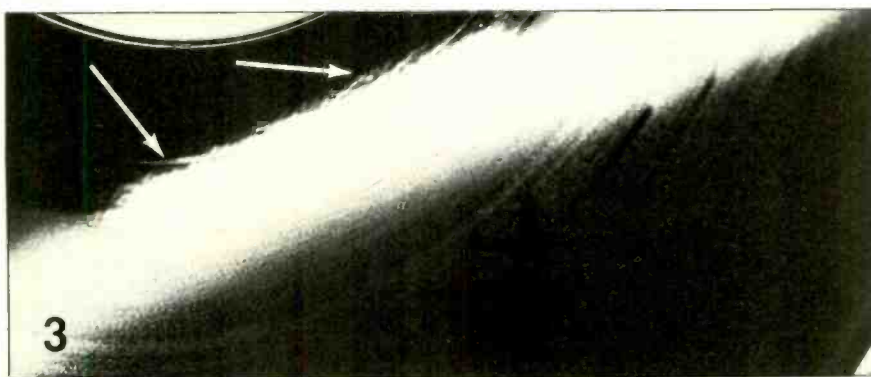
The condition of the disc label can also indicate the quality of the pressing. It's surprisingly easy for pressing machines to slip out of alignment, the audible result of which is an off-center disc with a once-per-revolution wow. Among the necessary alignments are those that center the label; thus, an off-center label may indicate a misaligned press and an off-center pressing. A very off-center label might even extend over the locked groove at the end of a side.

Besides being centered, a label should be flat. Sometimes moisture in the label paper is not fully removed when the label is applied, leading to a bubbly label when the disc is pressed. The vapor released by the

hot pressing process has to go somewhere, and it can easily end up between the stamper and the vinyl—*voilà*, more noise.

Center hole. Beware of center holes that aren't perfect circles. An elongated center hole indicates an eccentric disc and points to a too-short cooling period in the pressing cycle or sloppy alignment of the pressing machine. Debris around the center hole (from the vinyl or the label) can interfere with changer operation and with disc placement on a manual turntable. On used records, tracks around the center hole—made by a turntable spindle as the disc's previous owner(s) searched for the hole by feel—can give some indication as to how often the disc has been played (Photo 2). A used disc with an extensive trail network around its hole has probably been played too often to risk purchase.

Orange peel. The lead-out or spin-out area on a disc (the surface between the last modulated groove and the locked groove at the inside of a disc) can be used as a sensitive indicator of pressing quality. Ideally, this area looks *absolutely flat* and mirror-smooth. The most common and easily found fault is descriptively named "orange peel." It appears as an orange-peel-like texture of the spin-out area and is heard as noise in the low to midrange frequencies (Photo 3). The orange-peel effect comes from insufficient polishing of the back of the thin metal disc stampers. The somewhat rough surface of the back of the stamper is transferred—by the pressure of the disc-making process—to the front of the stamper and thereby to the surface of the pressing. Circular texturing in the spin-out area concentric with the disc center occurs when the finish of the mold faces (to which the stampers are cemented) is transferred to the disc. ▶



Sleeve and disc-cleaner damage. Also examine the lead-out area for traces left by the inner sleeve or by a liquid record cleaner. These look like water spots on the disc surface (Photo 4). Those caused by plastic inner sleeves stem from chemical reactions between the vinyl compound and the plastic of the sleeve. Water marks left by a record cleaner indicate that not all of the fluid was removed during cleaning, leaving it to dry in place. Regardless of origin, pressings with any such marks should be avoided since they are apt to be noisy.

Damaged stampers. Thin disc stampers are very fragile. Any damage they suffer will be transferred with high fidelity to the disc surface, where it can usually be heard as a low-frequency noise. Look for anything on the disc surface that makes it appear dented or folded (Photo 5).

Dimples. Small indentations in the record surface are usually caused by foreign matter caught between the mold faces and the rear of the stampers. The trapped material causes the stamper to bulge out slightly, thus creating a corresponding small pit on the disc surface (Photo 6). Dimples are heard as repetitive low-frequency thumps and are quite common.

Blisters. The topological inverse of dimples, blisters (or "bubbles") are usually the result of foreign matter caught in the vinyl. They indicate a pressing that may be noisy throughout, not just when the blister passes (Photo 7). The particles can come from bits of old record labels (if reground vinyl from surplus pressings is used) or insufficiently mixed and melted pieces of reused vinyl. Blisters usually sound like dimples but can contain greater high-frequency energy and may sometimes sound more like ticks than thumps.

Non-fill or un-fill. Non-fill, as its name implies, results from insufficient filling of

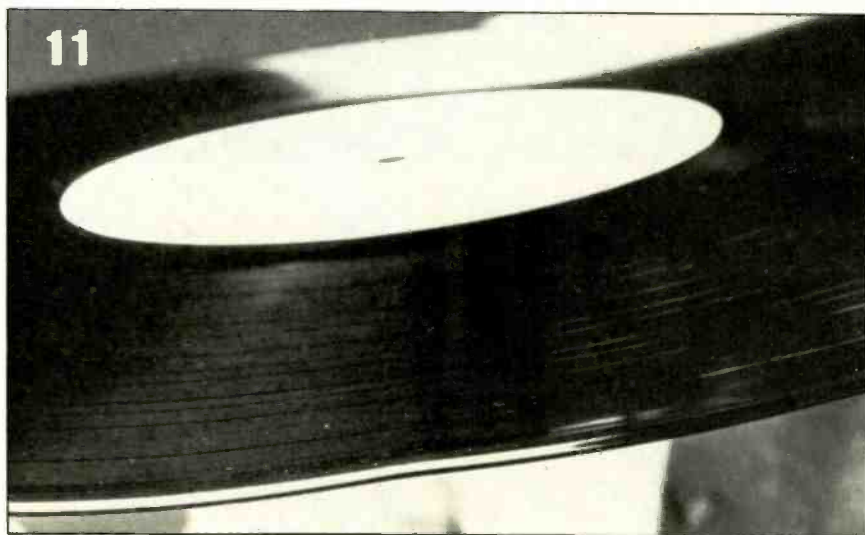
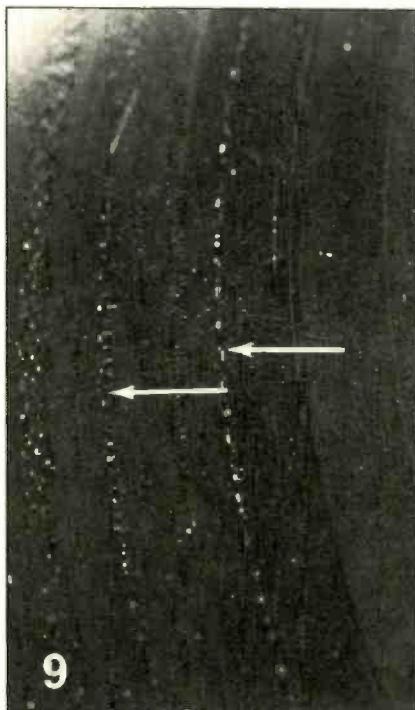
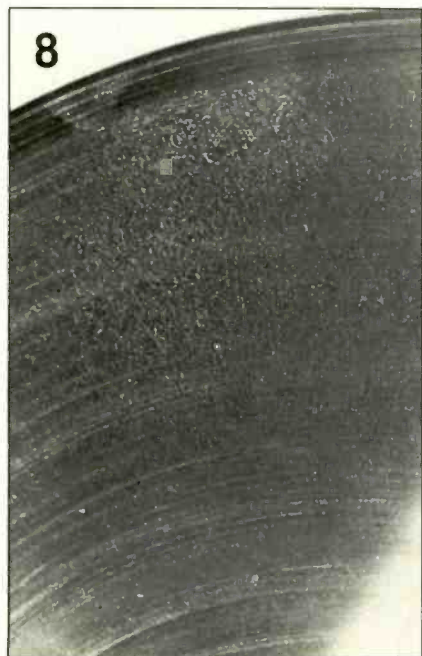
the stamper by the vinyl during the pressing operation, leaving an area of the finished pressing where the grooves are not completely formed. The effect sounds like a once-per-revolution series of closely spaced ticks, predominantly on the right channel for the first few minutes of the disc. It looks like a mottled greyish discoloration of the disc surface, usually within half an inch of the outer edge (Photo 8). Europadisk's Shelton says that non-fill is common on disco records, but the high overall modulation levels usually mask the added noise.

Stitching. Also called "release scuffing," stitching is heard as a ripping sound in the left channel one or two revolutions before a loud passage. It looks like a series of reflective stitches sewn along the groove path (Photo 9). Stitching can appear anywhere on the disc and can cover a wide area. It is caused by the hot, still-plastic, freshly pressed disc coming into contact again with

the just-separated stamper. The louder portions of the music appear on the stamper as higher and wider ridges (on the disc as wider and deeper grooves), and if these ridges come into contact with a just-molded disc, they can deform the groove. Stitching occurs because of misaligned machinery and/or overly short pressing cycles.

Warpage. A very common problem, warpage comes in three varieties. *Dish warping*, in which the disc assumes a dish or mound-like appearance (depending on which side is up), is caused by improper cooling of the disc during the pressing process. A little dishing is not objectionable, though turntable mats vary in their degrees of tolerance for dished discs because of differences in mat cross-sections.

Saddle warping (Photo 10) is also a pressing-plant defect. It can be caused by insertion of the pressing in its jacket before it is cool enough. A saddle warp is much



more difficult for a cartridge to track than a dish warp.

Perhaps the *most* difficult warps to track are *edge-pinch* warps (Photo 11), which are rapid and violent undulations of the outside edge of the disc. They used to be caused by pressing-machine operators who handled the discs before they had sufficiently cooled. Modern automated presses can cause pinch warps during disc trimming. Check for all types of warps by holding the disc *on edge* to eliminate the disc-distorting effects of gravity.

Groove guard. The raised rim of a disc is called the groove guard. Together with the raised label portion, it is meant to keep disc surfaces from rubbing together when they are stacked (as in a record changer). The groove guard is also a good source of low-frequency noise, since the stamper for the disc actually has to be deformed to make this ridge. The profile of a groove guard should not extend into the recording area (righthand disc in Photo 12), and the profile should not be very steep if the opening roar of the disc is to be minimized.

Stains. Discolorations of the disc surface can derive not only from badly mixed re-ground vinyl (always an indication of high-

er noise levels) but also from a reaction of the chemically active nickel stampers with compounds in the vinyl. The reaction products can build up on the stamper and produce a once-per-revolution "swish" sound.

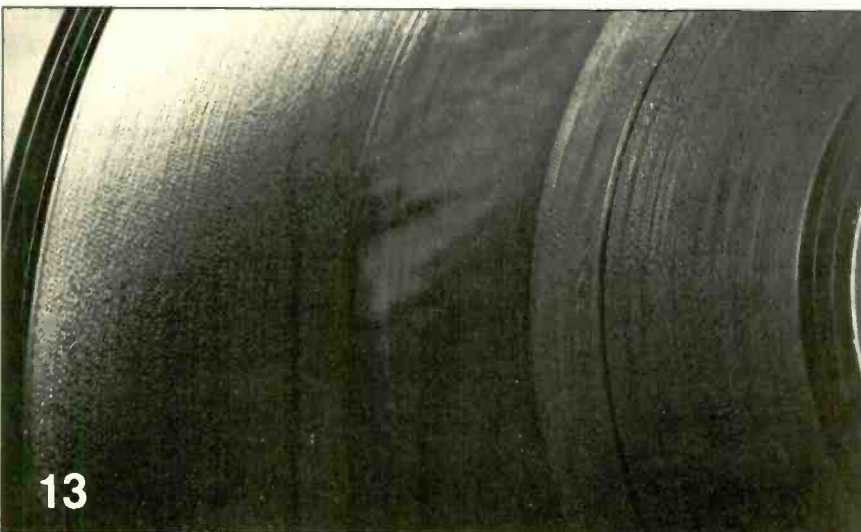
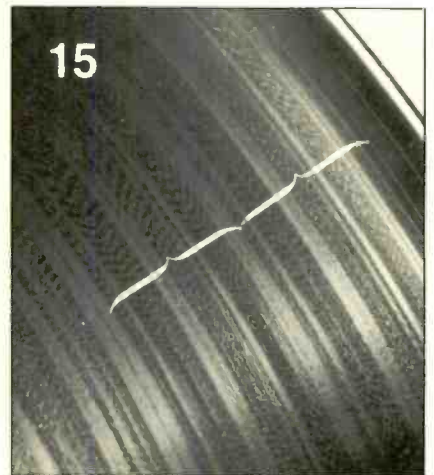
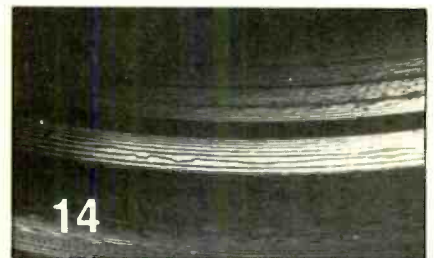
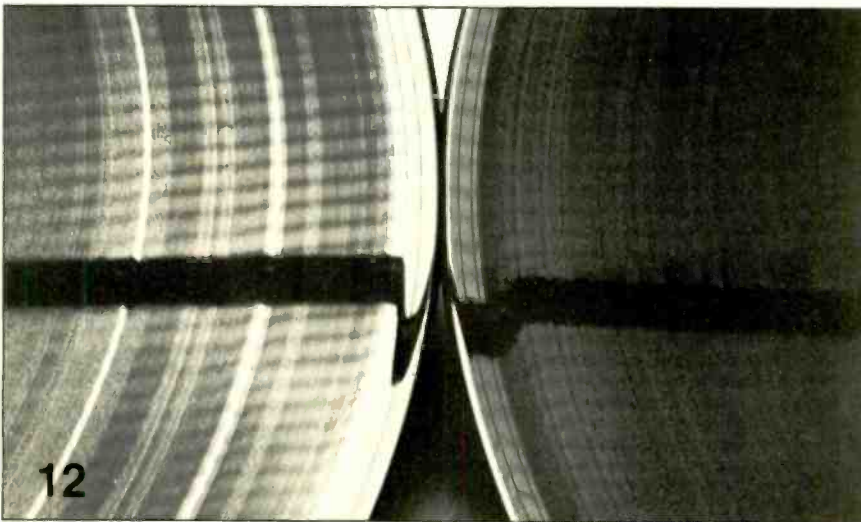
Audio quality. The disc-surface defects discussed above relate to pressing quality. Although pressing quality affects the ultimate sound quality through its influence on background noise, the most significant factors in a disc's sound quality are the master tape and the way it has been transferred (or cut) onto the master lacquer disc. Because the cutting engineer greatly influences the appearance of the grooves on a disc, conclusions drawn from a visual examination are not as clear cut when it comes to audio quality. All the buyer can look at is the width and spacing of the grooves. But these can reveal much.

The record's dynamic range can be gauged by the variation in the reflectivity of the disc surface. Low-level passages result in closely spaced, narrow grooves that appear darker. High-level passages produce more widely spaced and wider grooves, and the disc will look lighter in loud passages. A disc with a wide dynamic range will show a considerable difference between the darkest and lightest portions of its surface. Of

course, this also depends on the dynamic range of the music itself. Classical music tends to have the greatest dynamic variations and popular dance music such as disco the least.

A record's degree of stereo separation can sometimes be gauged by the variations in width of the grooves. Stereo sound is encoded as vertical modulation of the groove, and as the groove becomes more or less deep its width also changes. A mono record looks quite different from a stereo disc because the groove width is constant.

Inner-groove distortion can be estimated by seeing how close the groove is cut to the label. The closer it is cut, the more distortion there is likely to be, especially if the music is loud near the end of the side. If the same piece of music is cut at the same level on two different discs but one disc's groove approaches within half an inch of the label and the other's ends about an inch away, the latter disc (the one that doesn't look



filled up) will be easier to track and have less distortion.

As a test of these principles, take a look at two very different disc surfaces (Photos 13 and 14). One disc is of high-level rock music; the other is Telarc's digital recording of the *1812* Overture (complete with cannon shot). Which is which should be obvious.

Musical performance. With classical recordings you can get a general idea of the tempo taken for a piece by comparing timings for various performances of the same work. The disc surface can also reveal a few musical details. For instance, the repetition of the pattern of light and dark bands in Sir Georg Solti's recording of Beethoven's *Eroica* Symphony (London CS 7049, Photo 15) shows that the rarely heard first-movement exposition repeat is taken. □

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Stereo Review's Selection of Recordings of Special Merit

State-of-the-Art Sound For Bernard Haitink's Illuminating Reading of Shostakovich's Fifth

BERNARD HAITINK's new London digital recording of Shostakovich's Fifth Symphony is the first in his cycle of that composer's symphonies to be made with the Amsterdam Concertgebouw Orchestra. The acoustical qualities of the venerable Concertgebouw hall add something special in the way of tonal warmth for the strings and brilliance for the brass, as well as the kind of spatial ambience this music needs.

More important than the quality of the recording, however, is that Haitink, unlike most non-Soviet interpreters, has

chosen to treat the Fifth Symphony as something other than a display vehicle for a virtuoso orchestra. Impending tragic conflict is very much evident in his reading of the opening passages, and at the end of the first movement the icy tones of the glockenspiel verge on the spooky. The second movement assumes a mood of menacing sarcasm instead of being treated as the usual Mahleresque *jeu d'esprit*. As in almost all performances of the Fifth, the slow movement is the high point. The build-up toward the first climax is long, slow,

Conductor Bernard Haitink



and rock steady, and the coda after the final climax has a chilling, almost disembodied character similar to pages of the Sibelius Fourth Symphony.

The finale remains the hardest part of this work to bring off, chiefly because the seemingly monumental coda, with its solemn fanfare built on a major-mode variant of the first four notes of the opening, simply does not grow organically out of what came before. The ferociously militant opening pages of the movement virtually play themselves, but when the lyrical interlude arrives, the problem is to keep it from sounding banal or cloying. Haitink gets top honors for his reading, which is remarkably convincing.

In the music that works up to the final fanfare of the coda, the dotted woodwind figuration is similar to that used in *Boris Godunov* prior to the "spontaneous demonstration" of the people in the opera's opening scene. This brings up Shostakovich's own comment about the Fifth, which is quoted by London's annotator, Timothy Day, and, more fully, by Solomon Volkov in the controversial and emotionally harrowing book *Testimony—The Memoirs of Dmitri Shostakovich* (Harper and Row, 1979): "I think it is clear to everyone what happens in the Fifth. The rejoicing is forced, created under threat, as in *Boris Godunov*. It's as if someone were beating you with a stick and saying, 'Your business is rejoicing, your business is rejoicing,' and you rise shaky, and go marching off, muttering, 'Our business is rejoicing, our business is rejoicing.'"

Soviet tradition calls for an ultra-solenn treatment of the finale of the Fifth, and in his recording of it with the Leningrad Philharmonic Yevgeny Mravinsky takes almost four minutes to traverse the coda. At the other extreme, Leonard Bernstein, apparently taking his cue from Koussevitzky's Boston Symphony performances in the 1940's, plays it in a brisk two and a quarter minutes. I find neither of these versions as satisfying as Haitink's, which, at three minutes, ten seconds, is just five seconds faster than the early 1970's Melodiya/Angel recording by the composer's son, Maxim.

Overall, Haitink's performance here strikes me as one of the most illuminating versions of the Fifth on records. The only other recording of this symphony that I find comparable with Haitink's is the one by Maxim Shostakovich (now

available on Quintessence), but the new one enjoys two distinct advantages over its predecessor: the Concertgebouw Orchestra is far superior to the USSR Symphony, and the state-of-the-art digital sonics are truly splendid.

—David Hall

SHOSTAKOVICH: *Symphony No. 5, Op. 47.* Amsterdam Concertgebouw Orchestra, Bernard Haitink cond. LONDON ● LDR 71051 \$12.98, © LDR5 71051 \$12.98.

"Love Over and Over": More Shenanigans from The Glorious McGarrigles

THERE'S no one else in pop music quite as wonderful or unorthodox as the Canadian sisters Kate and Anna McGarrigle, and their new album, "Love Over and Over," shows them at their most eccentric and eclectic. It's glorious, but it can drive a critic to despair trying to describe it. Like their previous Warner Bros. albums, this one is a startling pastiche of styles, from folk to classical, from spiritual to secular, from Old World to New, from Tin Pan Alley to the Brill Building. They even come close sometimes to getting all of that into one song through their choices in lyrics, vocal line, and instrumentation (slipping a squeeze box in between a piano and an electric guitar, for one example).

The very first cut here, *Move Over*

Moon, is a hybrid of pop, bebop, doo-wop, and Andrews Sisters swing. The next, Anna's *Sun, Son (Shining on the Water)*, opens with a brief, souped-up snippet of *The Star-Spangled Banner* before breaking into a pseudo-Calypso beat. An even better example of the McGarrigles' unique shenanigans is *Midnight Flight* at the end of side two. Kate begins it with a melody that sounds like a bastardization of Jacques Brel, *St. James Infirmary*, and her sister's own *Heart Like a Wheel*. Just as you get settled into it, she modulates from a minor key to a major and back, and before the song's five minutes and forty seconds are up, she's had you in and out of everything from traditional blues to cool jazz to supper-club music. She resolves it melodically at the end, but you're not sure if you've just heard a dirge or a celebration. Then it dawns on you that the woman in the song—who's leaving her lover—has the same ambivalence: "And this moment doesn't come easy or often/So I'll take advantage and be on my way."

"Where do they get these things?" I used to ask myself about the McGarrigles. At first I thought they must isolate themselves up there in Montreal, refuse to listen to music of any kind, and simply create from instinct. But then I realized the answer is just the opposite. They get them from everywhere and everything: from the folk instruments their parents kept around the house, from their classical training as children, from their early adulation of the Weavers, from the various folk groups they formed with and without their sister Jane (who co-produced "Love Over and



Kate (left) and
Anna McGarrigle



Performed by
the Vienna
Philharmonic,
conducted by
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Over" with Kate and Anna, sings backup on one cut, and plays piano on another), and from Kate's 1971 tour with cellist/singer Roma Baran.

"We write from the intellect, but it starts off in the emotions," Kate once said in these pages, and perhaps that explains why so many of the McGarrigles' songs seem like moody little theater pieces. Then, too, they "like to write rock and roll," as they sing on the title cut, "but it doesn't always hang together." So instead we get slow, intimate songs of romance (*I Cried for Us*), detached, dark-humor word portraits of strange characters (*Star Cab Company*), witty, cockeyed observations of life and love (*Move Over Moon*, *Love Over and Over*), and magical tapestries woven out of the most ordinary and mundane events (*On My Way to Town*, *The Work Song*). Surprisingly, just about everything here works, except perhaps their French adaptation of Bob Seger's *You'll Accompany Me*.

Much has been written about the "simplicity" of the McGarrigles' songs, but musically they aren't nearly as simple as they might sound—just try transcribing some of this stuff! Many of the McGarrigles' songs sound uncomplicated because Kate and Anna have deliberately opted for a simple production. And on the new album they move back toward the less commercial, almost all-acoustic instrumentation that Joe Boyd used in producing their first album, as opposed to David Nichtern's heavier touch on "Pronto Monto," the last one before "Love Over and Over."

I think it's only fair to say, however, that the McGarrigles really aren't for everybody. To some, their sweet and chirpy voices will always sound hopelessly amateurish and their songs seem appallingly homemade. To me, those qualities are all to the advantage of such pieces as *The Work Song* (which Maria Muldaur covered in 1973), as fine and effective at capturing the Old South as Robbie Robertson's *The Night They Drove Old Dixie Down*. As Kate herself sings in *The Work Song*: "Label it garbage/Label it art/You couldn't call it soul/You had to call it heart." Heart it is, and mind and music too. As far as I'm concerned, "Love Over and Over" is an aural delight, a private recital for the lucky ones who care to attend.

—Alanna Nash

KATE AND ANNA MCGARRIGLE: *Love Over and Over*. Kate McGarrigle (vocals, piano, fiddle, guitar, accordion); Anna McGarrigle (vocals, piano, accordion); Gerry Conway (drums, percussion); Andrew Cowan, Alun Davies, Mark Knopfler (guitars); Pat Donaldson (bass); Kenny Pearson (piano, organ); Chaim Tannenbaum (banjo, mandolin, saxophone); other musicians. *Move Over Moon*; *Sun, Son (Shining on the Water)*; *I Cried for Us*; *Love Over and Over*; *Star Cab Company*; *Tu Vas M'Accompagner*; *On My Way to Town*; *Jesus Lifeline*; *The Work Song*; *St. Valentine's Day 1978*; *Midnight Flight*. POLYDOR 422-810 042-1 Y-1 \$8.98.

John McLaughlin's Eclectic, Electric "Music Spoken Here"

JOHN MCLAUGHLIN'S association with the French jazz musicians who have played on his last two albums continues to be a fertile one. His new "Music Spoken Here" further explores and enlarges the acoustic/electric synthesis he used on "Belo Horizonte," although where the earlier album emphasized the acoustic side of the synthesis, "Music" stresses the electric.

McLaughlin's work with his present group is developing along a path strikingly similar to Weather Report's in its electronic tonal landscapes, in its powerful rhythmic drive and structural complexity, and in its concept of musical space and how to fill it. *Honky Tonk Haven*, for example, with its ringing Zawinulish Prophet 5 keyboard backdrop, swirling cymbals, and thun-

derclap percussion, could have come from any of Weather Report's last four or five albums, and McLaughlin's darting, funky guitar solo suggests one of Jaco Pastorius's nimble bass lines. In *Blues for L.W.*, an ostinato phrase in the synthesizer explodes at random intervals, splintering the soft interplay of organ and acoustic guitar, just as Zawinul is apt to pop in and out of the flow of a song such as *Scarlet Woman*.

Evidence here of a rich fertilization by current jazz ideas isn't limited to Weather Report, however. *Brise de Coeur*, a duet for guitar and piano, pays homage to Keith Jarrett, and McLaughlin's own eclectic guitar style boasts influences from rock to raga, flamenco to funk. As with all of McLaughlin's work, technical virtuosity is a given. It's hard to imagine any human being playing so many *right* notes, so purely, as McLaughlin does on the acoustic guitar, harder still to believe that lines so difficult are being doubled on keyboard, as is the case on *Aspan*.

Unlike many jazz performers, John McLaughlin has always preferred to work within a set group. Both the Mahavishnu Orchestra and Shakti staked out and cultivated significant new ground, and McLaughlin's current ensemble appears to be doing the same. Here's hoping they continue playing together for a long time. —Mark Peel

JOHN MCLAUGHLIN: *Music Spoken Here*. John McLaughlin (acoustic and electric guitars); Katia Labèque (Synclavier, piano); François Couturier (organ, synthesizer, piano); Jean-Paul Celea (acoustic bass); Tommy Campbell (drums). *Aspan*; *Blues for L.W.*; *The Translators*; *Honky Tonk Haven*; *Viene Clareando*; *David*; *Negative Ions*; *Brise de Coeur*; *Lôro*. WARNER BROS. 23723-1 \$8.98, © 23723-4 \$8.98.



Andy Freiberg/Retna Ltd



Juilliard Quartet: Robert Mann, Earl Carlyss, Joel Krosnick, and Samuel Rhodes

The Juilliard Quartet's Third Bartók Set Ranks Among the Very Finest

THERE have been a dozen integral recordings of the six Bartók quartets released in this country alone since Columbia issued the first in 1950. That one was by the original Juilliard String Quartet—consisting of Robert Mann, Robert Koff, Raphael Hillyer, and Arthur Winograd—and among its successors was a 1963 stereo version by the Juilliard with Isidore Cohen and Claus Adam replacing Koff and Winograd, respectively. The recent Bartók centennial and the ascendancy of digital recording technology have combined to stimulate today's Juilliard Quartet—Earl Carlyss, Samuel Rhodes, and Joel Krosnick are now the colleagues of first violinist Robert Mann—to tackle these six masterpieces again. Sonically the results are very fine, and musically the set compares well with the finest of those by such current competitors as the Tokyo, Hungarian, and Lindsay Quartets.

The 1963 Juilliard recording, which is still available, showed a somewhat more flexible approach to the music than did the group's generally fierce and youthful 1950 readings while retaining a sinewy texture and the slashing rhythmic attacks. Further interpretive changes in this newest series of performances seem essentially minor. The two early quartets are played with great tonal richness but also with great attention to their linear elements. As might be expected, the real excitement comes with the mature works, beginning with

the taut, compressed Quartet No. 3 and working up to the full amalgamation of the ethnic and the universal in the Quartets Nos. 4, 5, and 6. Indeed, I feel about these last three works the way I do about the Brahms symphonies: my favorite is the last one I listened to.

It is in these latter works too, with their amazing variety of color, that the advantages of digital mastering become most evident. The tremendous reduction in background noise level, together with the virtually noiseless CBS pressings, has resulted in a dynamic range that makes possible a true pianissimo as well as effective capture of subtle timbral effects, most strikingly in the three middle movements of Quartet No. 4 (which for the present happens to be my favorite). The sonic ambience is richer and airier in the new Juilliard recording than in either of the two earlier versions. In only a few small respects do I find that the 1963 performances have an edge—a more emphatically conclusive ending to Quartet No. 5 and a more generally effective communication of the elegiac tone of Quartet No. 6.

I note that the new CBS package has retained James Goodfriend's excellent commentary and analysis from the earlier stereo issue (including the typo that has Bartók making posthumous [1956] revisions to the First Quartet). Newly added is a rather opaquely worded essay by Milton Babbitt on the structural aspects of the six quartets; it's fine for specialists, but it will be hard going for the ordinary listener. —David Hall

BARTÓK: String Quartets Nos. 1-6. Juilliard Quartet. CBS ● 13M 37857, © 13T 37857, no list price.

Best of the Month

Recent selections
you might have missed

POPULAR

- **Captain Beefheart & the Magic Band:** *Ice Cream for Crow.* VIRGIN ARE 38274. "...the most brilliant expression of Beefheart's strange muse since 'Trout Mask Replica.'" (January)
- **Donald Fagen:** *The Nightfly.* WARNER BROS. 23696-1. "...nostalgia, surprises, and an irresistible beat." (March)
- **Michael Jackson:** *Thriller.* EPIC QE 38112. "Lives up to its title." (April)
- **Little Steven and the Disciples of Soul:** *Men Without Women.* EMI AMERICA ST-17086. "...genre music never sounded so good." (March)
- **Liz Meyer:** *Once a Day.* ADELPHI AD 2009. "From toe-tappin' joy to faded love in an album of classic country music." (April)
- **Dianne Reeves:** *Welcome to My Love.* PALO ALTO PA 8026. "An impressively varied debut solo album..." (January)
- **The Roches:** *Keep On Doing.* WARNER BROS. 23725-1. "The Roches are... so far beyond borrowing that they've forgotten how." (February)
- **Utopia.** NETWORK 60183-1. "A nearly perfect set of well-made pop songs." (February)

CLASSICAL

- **J. S. Bach:** *Goldberg Variations.* CBS IM 37779. "Glenn Gould's legacy... the most stimulating and entertaining account of this remarkable work yet recorded..." (January)
- **Beethoven:** *Piano Sonatas Nos. 4 and 11.* CBS M 36695. "Murray Perahia's first Beethoven recording is uncommonly convincing." (April)
- **Cesti:** *Oronhea.* HARMONIA MUNDI HM 1100/02. "Early Venetian opera returns to life in a fabulous performance..." (April)
- **Mozart:** *Le Nozze di Figaro.* LONDON LDR 74001. "No other recorded Figaro can match the combined strength of the five principals in this one..." (January)
- **Mozart:** *Piano Concertos Nos. 12 and 20.* DEUTSCHE GRAMMOPHON 2532 053. *Piano Concertos Nos. 15 and 21.* PHILIPS 6514 148. "Exceptionally appealing performances by Rudolf Serkin and Alfred Brendel..." (February)
- **Purcell:** *The Fairy Queen.* DG ARCHIVE 2742 001. "...a peak in the performance of English Baroque music." (March)
- **Reich:** *Tehillim (Psalms).* ECM-1-1215. "A rare and really joyful listening experience." (February)
- **Schumann:** *Symphony No. 3 ("Rhenish"); Manfred Overture.* DEUTSCHE GRAMMOPHON 2532 040. "...magical and richly satisfying..." (March)

Classical Music

News Briefs



Courtesy Metropolitan Museum of Art

EVERYBODY knows that angels are musical. For one thing, they are usually depicted playing harps. But the angel whose portrait is a highlight of the exhibit of art treasures from the Vatican now touring this country is shown playing a lute. He was painted by Melozzo da Forlì in the fifteenth century.

In show business the term "angel" refers to someone who provides financial backing for a play or similar enterprise. Texaco, for example, is the "angel" behind the radio and TV broadcasts from the Metropolitan Opera, and Exxon is the "angel" behind the Great Performances series on public television.

Oil companies do not have a monopoly on angelhood or angelism. Philip Morris Incorporated is sponsoring the exhibit officially titled "The Vatican Collections: The Papacy and Art" with a grant of \$3 million to the Metropolitan Museum of Art in New York, where the show is on view un-

til June 12. It will be at the Art Institute of Chicago from July 23 to October 16 and at the Fine Arts Museum of San Francisco from November 19 to February 19, 1984.

The English firm that manufactures du Maurier cigarettes has played angel to a number of recording projects, including the first digitally recorded set of all the Beethoven symphonies. The latest du Maurier project is a series of digital recordings of the Tchaikovsky ballets *The Nutcracker*, *Sleeping Beauty*, and *Swan Lake* conducted by John Lanchbery.

Dame Margot Fonteyn has endorsed this series. She said, "It is a particular joy to hear this splendid du Maurier Record Collection, conducted by John Lanchbery with his unique sensitivity to the light and dark sides of the music—the highlights and the tragic moments. He leads a wonderful orchestra in the Philharmonia, and the digital process gives the recording a purity of

sound one could not find anywhere else." The label on which the Tchaikovsky ballet series was released in the United States is, of course, Angel Records. W.L.

GOOD news to anyone short of the \$1,900 it takes to buy the *New Groves Dictionary of Music and Musicians* is the launching of a spin-off series of individual biographies drawn from it, beginning with Haydn, Handel, Mozart, and Schubert. Each book includes the complete list of the composer's works and bibliography appended to the individual entries in the dictionary. In this series, published by W. W. Norton, the hardcover editions are \$12.95, the paperbacks \$7.95. □

THE Best Classical Album of 1982, as chosen by members of the National Academy of Recording Arts and Sciences and announced at the Academy's 25th annual Grammy Awards ceremonies, was Glenn Gould's CBS Masterworks recording of Bach's *Goldberg Variations*. The same recording, released only a month before the pianist's death last October, was also voted Best Classical Performance by an Instrumental Soloist. RCA's recording of the Mahler Seventh Symphony by James Levine and the Chicago Symphony received a Grammy as Best Orchestral Recording. Both were picked as 1982 Records of the Year by the editors of STEREO REVIEW. . . . Other Grammys went to the Philips recording of Wagner's *Ring* cycle conducted by Pierre Boulez, the Berlioz *Damnation of Faust* conducted by Sir Georg Solti for London, and the Brahms Clarinet Sonatas played by Richard Stoltzman on RCA.

Levine and the Chicago Symphony were also honored for their Mahler Seventh by the Gustav Mahler Society of

Los Angeles, which gave them its Best Mahler Recording of 1982 award.

The "other" French prize-giver for outstanding recordings (after the Académie du Disque Français, reported on here last month) is the Académie Charles Cros, which passed out its awards in March. Top honors, the Prix du Président de la République, went to the Deutsche Grammophon coupling of Berlioz's *Les Nuits d'Été* and *La Mort de Cléopâtre*, sung by Kiri Te Kanawa and Jessye Norman, respectively, under Daniel Barenboim, and the Philips recording of Mahler's *Das Lied von der Erde* led by Sir Colin Davis, with Norman and Jon Vickers. □

THE Wolf Foundation, which has previously cited outstanding achievement in the sciences and medicine, has announced its first award in music. The \$100,000 prize will be shared by the pianist Vladimir Horowitz, the French composer Olivier Messiaen, and the Israeli composer and musicologist Josef Tal. . . . Two composers were included among the thirteen new members elected to the American Academy and Institute of Arts and Letters this year. They were Stephen Sondheim, whose work has been almost entirely in the commercial theater, and Betsy Jolas (born to American parents in Paris), who has served as Messiaen's assistant at the Paris Conservatory since 1971. Sondheim's scores for such shows as *Sweeney Todd* (RCA) are, of course, well known to American audiences and record buyers; Jolas is represented on records at the moment by only one work, her Third Quartet, on the CRI label. . . . The American pianist Van Cliburn was given the Albert Schweitzer Music Award in ceremonies at Carnegie Hall in April for

"helping human kind transcend its national boundaries and ideologies through a profound respect for musical excellence."

The British painter **David Hockney**, who has designed important productions for the Metropolitan and San Francisco Opera companies (the latter via Glyndebourne), has received the Hamburg Foundation's \$10,000 Shakespeare Prize for his contribution to the arts over the past twenty years. . . . Included in the New Year's honors list of Queen Elizabeth II was the conductor **John Pritchard**, who was knighted Sir John, and that jack of many trades, including opera production, **Jonathan Miller**, who was made a Commander of the British Empire. □

DIRECTOR Franco Zeffirelli's lavish new film version of Verdi's *La Traviata* stars tenor **Placido Domingo** and soprano **Teresa Stratas** (above right), with **James Levine** conducting the Metropolitan Opera Chorus and Or-



chestra. "If anyone can make opera accessible, it is Franco Zeffirelli," says Stratas. Zeffirelli, who is as much at home in movie studios as in opera houses, is careful to point out that this picture is "not just a

filmed opera." Critics have agreed. Declaring the picture a triumph, both vocally and histrionically, the *International Herald Tribune* said, "Musical drama and the true art of the cinema—moving pic-

tures—have been united with exquisite artistry." After a New York opening late in April, *La Traviata* is scheduled for national distribution, and a soundtrack recording on Elektra will follow. □

Disc and Tape Reviews

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

C. P. E. BACH: Trio Sonata in G Major. J. C. BACH: Trio Sonata in B-flat Major. GOLDBERG: Trio Sonata in C Major. Itzhak Perlman, Pinchas Zukerman (violins); Timothy Eddy (cello); Samuel Sanders (harpsichord). ANGEL ● DS-37815 \$12.98, © 4XS-37815 \$12.98.

Performance: **Warm**
Recording: **Fine**

The two trio sonatas here by J. S. Bach's sons are welcome additions to the catalog since they show this genre in its last phase, when elegance of melodic writing outshone contrapuntal interest. Johann Gottlieb Goldberg is more famous as the performer of the thirty variations by Bach *père* dedi-

cated to him, but his sonata here is a fine work written in the high Baroque style. Although Itzhak Perlman and Pinchas Zukerman approach the music in a thoroughly twentieth-century manner, they are such superb violinists, and so perfectly matched, that one can only admire their sensitive music making. S.L.

BARTÓK: String Quartets Nos. 1-6 (see Best of the Month, page 65)

RECORDING OF SPECIAL MERIT

BEETHOVEN: Piano Trio No. 6, in B-flat Major, Op. 97 ("Archduke"); Piano Trio No. 7, in B-flat Major (WoO. 39). Vladimir Ashkenazy (piano); Itzhak Perlman (violin); Lynn Harrell (cello). ANGEL ● DS-37818 \$12.98, © 4XS-37818 \$12.98.

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

Three superb soloists become an integrated ensemble to perform a sublime piece of chamber music. What more could you ask? Ashkenazy, Perlman, and Harrell achieve a perfect balance in their reading of the *Archduke*, which is spacious and warm in the first and third movements and spiced with just the right amount of earthiness in the scherzo and finale. The Trio No. 7 is a mi-

nor, but delightful, one-movement work that followed the great *Archduke* by only a year. Let's hope for the rest of the Beethoven piano trios from these artists. S.L.

BLOCH: String Quartet No. 1. Pro Arte Quartet. LAUREL LR-120 \$8.98.

Performance: **Intense**
Recording: **Shrill in spots**

A surprisingly wide range of music by Ernest Bloch is represented in the current Schwann catalog, ranging from scripture-inspired masterpieces such as *Schelomo* and the Sacred Service to more eclectic scores such as the Concerto Grosso No. 1, the two violin sonatas, and the *Sinfonia Breve*. Before this release, however, only Nos. 3 and 5 of his five string quartets had ever appeared in stereo disc format.

The First Quartet is something of a blockbuster, some fifty-six minutes long and consisting for the most part of highly charged music in a post-Franckian structural framework. The music itself, however, is more along the lines of middle-period Bartók, especially in the ferocious *Allegro frenetico* second movement. Among the loveliest things in the score is the slow movement, which evokes the Swiss homeland of the composer's youth.

The present performance of this huge

Explanation of symbols:

- Ⓢ = eight-track stereo cartridge
- ⓐ = stereo cassette
- = digital-master recording
- Ⓛ = direct-to-disc
- ⓧ = CX-encoded

Monophonic recordings are indicated by the symbol Ⓜ

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

Beethoven's Late Quartets From Two Fine Ensembles

*The Hollywood String Quartet:
left to right, Felix Slatkin, Paul Shure,
Alvin Dinkin, Eleanor Aller*



EMI/Angel Records

THE Amadeus Quartet, which celebrated its thirty-fifth anniversary last year, is not only one of the very few string quartets to perform uninterrupted for so long but also, I believe, the only one ever to exist for so many years with no change in personnel. It is, moreover, surely the most distinguished such ensemble to be formed in Britain. The Hollywood String Quartet, which was organized by Felix Slatkin in the same year as the Amadeus (1947), did have a personnel change or two in its regrettably much briefer history, but it was at least arguably the finest such group ever to have been formed in our own country.

Both the Amadeus and the Hollywood ensembles are represented in new releases of recordings of the late quartets of Beethoven, which must be the most awesome handful of related works in the entire chamber-music repertoire. In the case of the Amadeus, it is an anniversary remake on Deutsche Grammophon; in the case of the HSQ, it is a belated reissue on the EMI label (available here as an import), the second installment of HSQ revivals from this source. (The first set, "The Legendary Hollywood String Quartet," RLS 765, came out a year ago; its three discs offer works by Schubert, Brahms, Smetana, and Dvořák.)

Both of the Beethoven sets are enormously welcome, especially the HSQ's, which ought not to have been allowed to disappear in the first place. There was less of a need for the Amadeus set, perhaps, since that group's earlier one is quite decently recorded and is still in circulation (in a ten-disc DG "Bargain Box" of all the Beethoven quartets). But the remakes—which are not quite brand new, having been taped between 1978 and 1981—are in general more interesting than the earlier performances, good as those were (and are). The overall

intensity is a bit deeper now, most conspicuously in the somewhat broader tempos taken throughout the set—quite tellingly, I felt, in the slow movements of the grand-scaled Opp. 127, 130, 131, and 132. The scherzos in Opp. 127 and 135, I'm afraid, are less tidy here, and the *Grosse Fuge* had more character and more power in the earlier set, but the superbly played finale of Op. 135 and the profoundly affecting realizations of the big three—Opp. 130, 131, and 132—offset these lapses. When we hear such works performed as movingly as they are here, it seems churlish to complain about a misstep or two elsewhere in so large an undertaking. In any event, these performances of what may well be the three greatest works in the string-quartet literature are on that exalted level at which comparisons may serve to describe differences but not to measure superiority.

The sound on the Amadeus set is realistic, well balanced, and totally honest throughout the eight sides. Much the same may be said of the mono sound on the Hollywood String Quartet set, though these recordings go back more than a quarter of a century, to 1957. The sound is astoundingly rich and vivid for its time; one would hardly suspect the recordings' age or notice that they are not stereophonic. The performances, to be sure, make sonic considerations secondary, but the splendid sound quality does enhance their appeal. That appeal is considerable, based equally on profundity, vigor, and brilliance. For sheer articulation of the notes, the playing at times approaches the miraculous, and the more demanding Beethoven's music becomes, both spiritually and technically, the more splendidly the HSQ rises to meet its demands.

In general, the Amadeus performances, with those broader tempos, are more

gutsy—in Opp. 130, 131, and 132 in particular—while those by the younger Hollywood group, with their fleeter speeds, show more sweetness and regard for tonal beauty (the Op. 130 presto has incomparable lightness and grace). The HSQ's recordings of Op. 132 and the *Grosse Fuge* exhibit a spiritual power and dramatic tension rarely matched in other recordings of these works, and that of Op. 131 is not far behind. There is more to come in this series of HSQ reissues, I hope, and some of the repertoire could be very interesting, but there is nothing more worthy of preservation than this set of the late Beethoven quartets.

When the HSQ's Beethoven recordings were originally issued here by Capitol, the *Grosse Fuge* and Op. 135 each had a side to itself on the fifth disc in the set. Both of the new four-disc sets are laid out with Op. 135 filling out side two of Op. 127 and the *Grosse Fuge* on the same disc as Op. 130, for which work it was the original finale.

—Richard Freed

BEETHOVEN: *String Quartets: No. 12, in E-flat Major, Op. 127; No. 13, in B-flat Major, Op. 130; No. 14, in C-sharp Minor, Op. 131; No. 15, in A Minor, Op. 132; No. 16, in F Major, Op. 135; Grosse Fuge, Op. 133.* Amadeus Quartet. DEUTSCHE GRAMMOPHON 2740 265 four discs \$43.92.

BEETHOVEN: *String Quartets: No. 12, in E-flat Major, Op. 127; No. 13, in B-flat Major, Op. 130; No. 14, in C-sharp Minor, Op. 131; No. 15, in A Minor, Op. 132; No. 16, in F Major, Op. 135; Grosse Fuge, Op. 133.* Hollywood String Quartet. EMI © RLS 7707 four discs \$31.92 (from International Book and Record Distributors, 40-11 24th Street, Long Island City, N.Y. 11101).

work by the Pro Arte Quartet has great intensity and all the virtuosity required for its effective communication. I would have liked a slightly closer, less reverberant sonic envelope and more body in the lower register throughout much of the first movement. The scherzo, where low-register scoring plays a significantly larger role, sounds just fine, however. *D.H.*

BRAHMS: *Symphony No. 1, in C Minor, Op. 68.* Los Angeles Philharmonic Orchestra, Carlo Maria Giulini cond. DEUTSCHE GRAMMOPHON ● 2532 056 \$12.98, © 3302 056 \$12.98.

Performance: **Big-scaled**
Recording: **Full-bodied**

Carlo Maria Giulini's reading here of the Brahms First Symphony reflects more the grand-scaled Continental tradition epitomized by Furtwängler than the more volatile approach of his countryman Toscanini. Giulini and his players make nearly everything work magnificently, with particular attention paid to blendings and balances of timbres so as to allow the fullest appreciation of Brahms's orchestral colors. The slow movement, for me the high point, is set forth with a noble intensity. The introductory pages of the finale verge on the apocalyptic—most effectively so—and for the most part the body of the movement is splendidly done. My main complaint about the performance concerns the disconcertingly slow pace of the big tune in the finale.

Giulini elicits a very full tone from his string players, and praise is also due the solo horn player. The sound overall is full and rich, the miking fairly close up. *D.H.*

RECORDING OF SPECIAL MERIT

BRITTEN: *Canadian Carnival, Op. 19; Young Apollo, for Piano, String Quartet, and String Orchestra, Op. 16; Four French Songs; Scottish Ballad for Two Pianos and Orchestra, Op. 26.* Jill Gomez (soprano, in the songs); Peter Donohoe (piano, in *Young Apollo* and *Scottish Ballad*); Philip Fowke (piano, in *Scottish Ballad*); City of Birmingham Symphony Orchestra, Simon Rattle cond. ANGEL ● DS-37919 \$12.98, © 4ZS-37919 \$12.98.

Performance: **Fresh, fun**
Recording: **Beautiful**

BRITTEN: *Gloriana, Symphonic Suite; The Prince of the Pagodas, Prelude and Dances.* Bournemouth Symphony Orchestra, Uri Segal cond. ANGEL ● DS-37882 \$12.98, © 4ZS-37882 \$12.98.

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

Benjamin Britten was a relatively prolific composer, and he was, it seems, good and prolific right from the start. We're getting a lot of early Britten on records these days, and it is welcome.

The Four French Songs are certainly early (1928) and pretty good stuff for a fourteen-year-old. What is impressive is not so much the technical skill as the emotional depth of feeling suggested by these settings of Hugo and Verlaine. Eleven years later, at the ripe old age of twenty-five, Britten left war-torn Europe for North America, where he spent several years. The other three

pieces on the first record above are from Britten's American period.

The most American and the most impressive is the *Young Apollo*, which the composer inexplicably withdrew shortly after its première (1939). The music is lean, direct, imaginative; it has profile and color. *Canadian Carnival*, written in the same year, is similar in style and appeal, although, at twice the length, it is a bit less coherent and sustained. The *Scottish Ballad*, written a year or two later and slightly better known, is actually a somewhat more pompous and conventional piece. Still, everything here is fresh and fun to hear. It is also beautifully performed by an excellent group of soloists, a fine English orchestra, and a very good

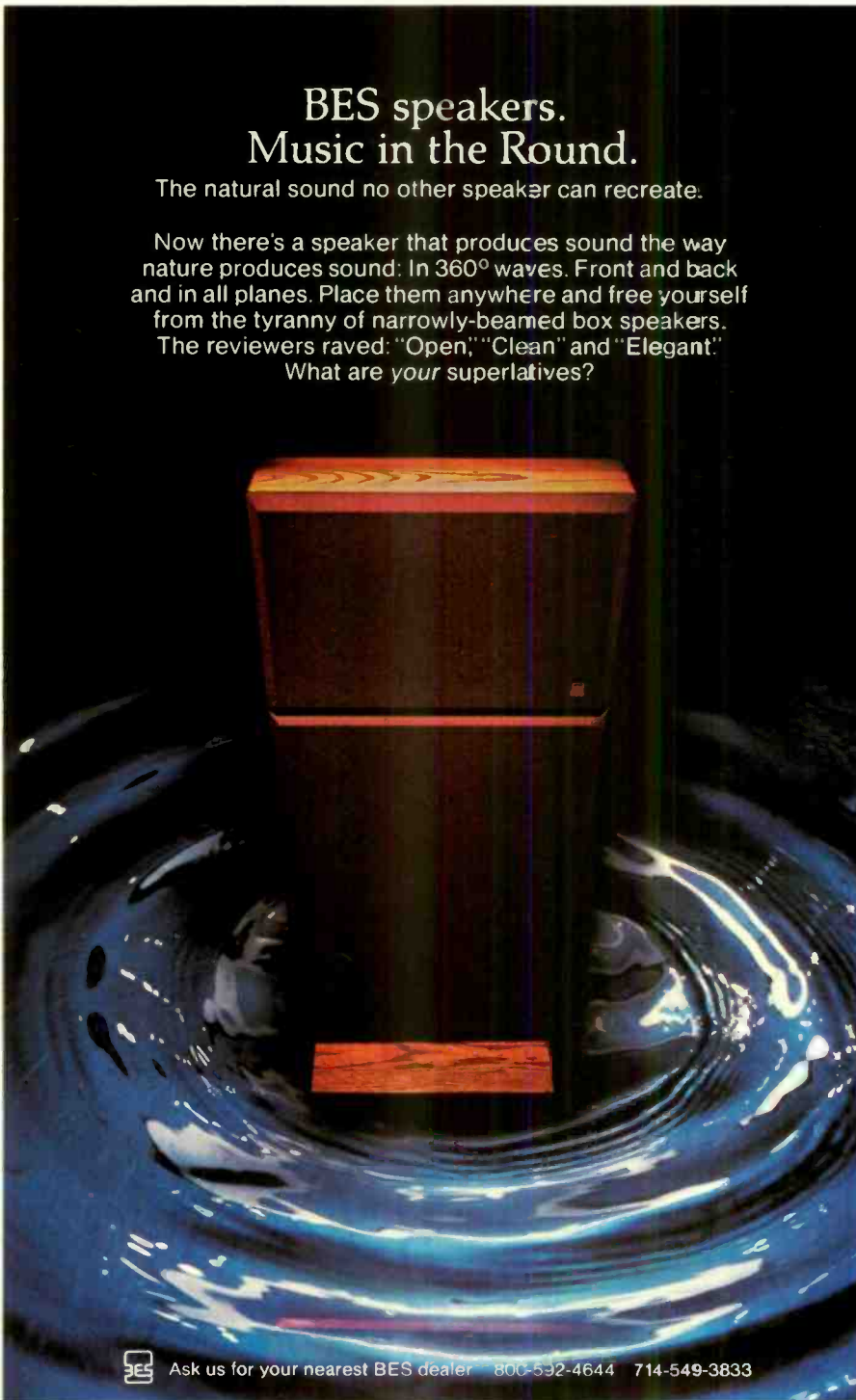
conductor, Simon Rattle. Beautiful digital recording too.

Another leading English orchestra performs the suites from two of Britten's least-successful large stage works, *Gloriana*, written for the coronation of Queen Elizabeth II, and *The Prince of the Pagodas*, a ballet written for John Cranko and the Royal Ballet. It is certainly nice to have some of this music in an accessible form, though Britten at his most official is not always Britten at his most original or most moving—there are a lot of fanfares on this record. It is the ballet score that commands the most attention. The suite is not by Britten but by Norman Del Mar, and it omits the Pagoda-land music, which is said to

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- 2004 • Ivan Davis Schumann: *Faschings-schwank aus Wien / Liszt: Norma Paraphrase*
- 2006 • David Bar-Illan Moskowski: *Piano Concerto* Recorded at 15 ips
- 2010 • Leonard Shure Schubert: *Piano Sonata in B Flat, Opus Posth., D. 960*
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show the influence of the Balinese gamelan. Even without it, there is enough here to make me want to hear the original score—and see the original ballet. Colorful stuff.

The performance and recording are, if not quite equal to that on the other disc, quite decent. An interesting feature is that the recording was supported by Harvey's of Bristol (the Cream Sherry people), apparently the Bournemouth Symphony's main sponsor since 1975. **E.S.**

RECORDING OF SPECIAL MERIT

BUXTEHUDE: Sonatas for Violin, Viola da Gamba, and Harpsichord: B-flat Major, Op. 1, No. 4; A Major, Op. 1, No. 3; G Minor, Op. 2, No. 3; E Major, Op. 2, No. 6. Boston Museum Trio (Daniel Stepner, violin; Laura Jeppeson, viola da gamba; John Gibbons, harpsichord). HARMONIA MUNDI HM B 1089 \$7.98.

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

This sampling of sonatas by Dietrich Buxtehude, the organist and church composer who led the way to Bach, comes as a pleasant surprise. Unlike their Corellian counterparts, these sonatas free the viola da gamba from its usual chore of continuo support and give it an active role in the contrapuntal texture. Harking back to the canzona tradition, the works have no set number of movements but, rather, a dramatic series of contrasting sections of tremendous variety. The music is both witty and passionate, with a strong melodic profile, rich harmonies, and masterful counterpoint.

The Boston Museum Trio eloquently proves the validity of reviving early instruments. The pure sound of the strings with its controlled decay gives Buxtehude's tightly worked melodies and intricate counterpoint great clarity and naturalness. Careful articulation enables the listener to follow each melodic thread as it pursues its course over the harmonic support of the harpsichord. In short, these are wonderful works, real discoveries, and the Boston Museum Trio presents them in the best possible light. **S.L.**

FRANCK: Symphony in D Minor. Bavarian Radio Symphony Orchestra, Kiril Kondrashin cond. PHILIPS 6514 119 \$12.98, 7337 119 \$12.98.

Performance: **Dramatic**
Recording: **Good location job**

FRANCK: Symphony in D Minor. Orchestre Philharmonique de Liège, Pierre Bartholomée cond. RICERCAR RIC 009 \$11.98 (from AudioSource, 1185 Chess Drive, Foster City, Calif. 94404).

Performance: **Solidly traditional**
Recording: **Clean**

It is a rare conductor who can bring the Franck Symphony in D Minor to its peak of affirmation for today's listeners. I heard Rafael Kubelik carry it off with the Boston Symphony in the Sixties, and others have done it justice on discs, but neither of the realizations under consideration here quite measure up. The late Kiril Kondrashin, recorded in public performance complete with coughs and concluding applause, seeks to infuse an extra element of drama into the

end movements, with a resultant loss of flow. He is at his best in the slow movement and imparts a fascinating Brahmsian flavor to the extended coda. Digital mastering or no, however, some of the solo balances seem a little off, the French horns (not always on pitch) being rather too prominent in the opening movement.

The Ricercar disc from AudioSource is of interest if only because it offers the symphony performed by the orchestra of Franck's home city of Liège, Belgium. Neither the Berlin Philharmonic nor the Chicago Symphony need fear for their laurels in terms of finesse and virtuosity, but Pierre Bartholomée offers a good traditional reading throughout. The winds are unusually prominent, with the solo English horn being very front-and-center in the allegretto middle movement. The room sound is clean and bright but rather highly colored. My review copy was warped, and side two was pressed off-center. **D.H.**

GOLDBERG: Trio Sonata in C Major (see C. P. E. BACH)

HOLST: The Lure; Dances from "The Morning of the Year"; The Mystic Trumpeter. Sheila Armstrong (soprano, in *The Mystic Trumpeter*); London Symphony Orchestra, David Atherton cond. LYRITA SRCS 128 \$13.98 (from International Book and Record Distributors, 40-11 24th Street, Long Island City, N.Y. 11101).

Performance: **Committed**
Recording: **Vivid**

People who know *The Planets* and a few other Holst pieces generally feel they have digested the composer's style and know what to listen for in his works. The newly recorded *The Mystic Trumpeter*, which goes back to 1904 and apparently has yet to see print in score, may throw such knowledgeable listeners a curve or two. That year, as the composer's daughter Imogen points out in her annotation to this Lyrita release, was "a turning-point" for Holst, then emerging from his Wagnerian thralldom but not yet active in the English folk-music revival. Walt Whitman was a popular source for English composers: Delius set some of Whitman's verses, and Vaughan Williams was setting others in his *A Sea Symphony* at the same time Holst produced *The Mystic Trumpeter*. Why the work has remained buried away for so long is hard to imagine; Imogen Holst advises that her father revised portions of it "in his search for what he called 'the musical idiom of the English language.'" It is no lost masterpiece, but it is definitely worth hearing, not least for the light it sheds on the formation of this intriguing composer's personal style.

No one would pretend that either of the purely orchestral pieces on the other side of the disc is a masterpiece either, but they too are eminently worth hearing. Composed in the 1920's, they exhibit plenty of the familiar Holst characteristics. *The Lure* was composed in 1921 to fit a ballet about moths and a flame; *The Morning of the Year*, a choral ballet, was written in 1926-1927. The music of both has been newly edited by Imogen Holst and Colin Matthews. (Matthews, who had a hand in the late Deryck Cooke's performing version of

Mahler's Tenth Symphony, also edited *The Mystic Trumpeter*.) The marvelous orchestral coloring clearly and unmistakably identifies the composer of *The Planets* and *The Perfect Fool*—and, indeed, there are actual motifs and rhythmic patterns that recall those works.

All three works recorded here receive really committed, expert performances. Sheila Armstrong handles her high-lying soprano part with apparent ease as well as conviction, and the orchestra under David Atherton seems to relish its assignment. The recording too is just about all one could ask—rich, well balanced, and vivid. *R.F.*

RECORDING OF SPECIAL MERIT

POULENC: *Gloria; Concerto for Organ, Strings, and Timpani.* Sylvia McNair (soprano, in *Gloria*); Michael Murry (organ); Atlanta Symphony Orchestra and Chorus, Robert Shaw cond. TELARC ◉ DG-10077 \$17.95.

Performance: **Lively**

Recording: **Superb**

Poulenc's music is either witty and a bit heartless or sincere and heartfelt. Sometimes, as in the Organ Concerto of 1939, it is both. The result is a small masterwork. The *Gloria*, like Poulenc's other later work, is simple and deeply felt. These works, which I used to disdain (or, at best, tolerate), seem more appealing all the time.

This recording of the Organ Concerto—played on a beautiful instrument in Atlanta and performed with panache by both soloist and orchestra—has spirit and freshness. Even the very backward-looking *Gloria* (of 1961!) does not seem so much nostalgic as regretful. Poulenc's voice is small and sweet, but it is distinct. Sylvia McNair's voice is big and beautiful. The choral singing is good, the orchestral work lively, and it is all very well recorded. The organ, in particular, leaps out in a most effective way, yet it is always, somehow, still in balance with the vivid orchestral sound. *E.S.*

RECORDING OF SPECIAL MERIT

RAMEAU: *Pygmalion.* John Elwes (tenor), Pygmalion; Mieke van der Sluis (soprano), Céphise; Françoise Vanhecke (soprano), Statue; Rachel Yakar (soprano), Amour; Chorus of the Royal Chapel; La Petite Bande, Gustav Leonhardt cond. PRO ARTE PAL-1082 \$9.98, © PAC-1082 \$9.98.

Performance: **Exquisite**

Recording: **Bright**

Pygmalion, the first of Rameau's eight one-act ballets, is probably the most accessible one to modern audiences. Once Céphise, Pygmalion's justifiably outraged wife, storms off stage, the action centers on bringing his statue to life, teaching it to dance, and singing the praises of victorious love. Rameau took the animation of the statue as emblematic of love's awakening in a young girl, and his music for it is some of his most luminous. The Graces' dancing lesson presents a series of delicious snippets of courtly dances until the statue is sufficiently instructed to move through the paces of an elegant sarabande. The populace rejoices, Pygmalion is celebrated with a

(Continued on page 74)

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Giulini's *Falstaff*: A Voyage of Discovery

MUCH has been made of conductor Carlo Maria Giulini's recent return to the opera house after an absence of fifteen years. His return to opera on records is also a fairly recent phenomenon. Verdi's *Rigoletto*, released by Deutsche Grammophon in 1980, and the digital version of Verdi's *Falstaff*, just released by DG, are the only full-length opera recordings Giulini has made in over ten years. More important, the new *Falstaff* is the first recording of a work from the operatic mainstream to be made in the United States in a decade. (The last previous one, a recording of Bizet's *Carmen* conducted by Leonard Bernstein, was, coincidentally, also a Deutsche Grammophon release.) But if it takes another decade for a recording as good as this to come along, it will have been worth the wait.

Falstaff has been a favorite of Giulini's for many years. It was the opera with which he made his British debut with the Glyndebourne Festival company in Edinburgh in 1955 and one that he conducted at Covent Garden in London until he withdrew from live performances of opera in 1967. Consequently, when all his requirements were met and he got ample rehearsal time for the cast of his choosing, along with an orchestra that he had himself honed to a fine edge, it was not surprising that he went back to *Falstaff* for this project.

As has been widely reported, the production on which this recording is based was a collaboration between the Los Angeles Philharmonic (which Giulini has served as music director since 1978), Covent Garden in

London, and the Teatro Communale in Florence. When the production was mounted in each of these cities, Giulini conducted substantially the same cast of singers but used the local house orchestra.

The new Deutsche Grammophon recording derives from the initial performances in Los Angeles last year. While it can be called a "live" recording, it is actually a meticulously edited mix-down of a number of performances plus a short fix-up session at the end. The last few hours in the studio were required because in some passages it was impossible to edit out the enthusiastic applause of the Los Angeles audiences.

Much of the freshness and spontaneity that come across in the recording can be traced to the fact that the forces involved had embarked on a voyage of discovery under Giulini's firm control. Ronald Eyre, a respected London stage director, was coming to opera for the first time, and so was the Los Angeles Philharmonic. Most of the cast, including Renato Bruson as Falstaff, were singing their roles for the first time; hence none of them had preconceived notions from earlier productions. Therefore, a sense of discovery grips the listener here as well, for Giulini reveals a great deal, not only in the clarity and finesse of the playing he elicits from the West Coast musicians but also in the vocal characterizations he draws from his principals.

Reviewing it in the opera house, some critics found this *Falstaff* too clinical and dispassionate. Referring to it as "Giulini's *Falstaff*," they complained that the con-

ductor had polished the life out of it. In London the *Financial Times* called it "a dull Falstaff, its sparkle dimmed, its effervescence flattened."

Listening to a recording, however, is quite different from experiencing a performance in the opera house, and what I got from this recording is certainly quite different from what I expected after having seen the production at Covent Garden last summer. For one thing, the orchestral playing on these discs and tapes is absolutely stunning. As good as the Covent Garden orchestra is, it is obvious that the Los Angeles Philharmonic is today in much better form.

But, more than that, a somewhat dour aspect that seemed to becloud the performance in the opera house is totally absent from the recording. The music is, of course, notable for its many ensembles, alight with gleaming high spirits and busy chatter, alternating with such impassioned monologues as Ford's jealous outburst in Act II and Falstaff's evocation of the joys and solaces of wine in Act III. All this moves forward with great gusto and grace. The momentum never flags, yet under Giulini's careful direction nothing is forced, and the wit, the swagger, the sudden flashes of temperament, the fine tracery of the fanciful are all there as needed. Throughout, DG's digital sound fairly glistens.

The men in the cast are perhaps a little stronger than the women. Bruson's portrayal of the title role might be described as a thinking man's Falstaff—more sensitive to irony, more rueful, mellow, and more autumnal in spirit than any other on records. His wonderful characterization is insightful and carefully shaped, and it is beautifully sung as well—really sung. Leo Nucci's Ford is resonant and full bodied, and Dalmacio Gonzalez is a suitably ardent Fenton.

Francis Egerton's Bardolfo and William Wilderman's Pistola are nicely realized, but Michael Sells's Dr. Cajus would have benefited from a bit more finish. Lucia Valentini-Terrani has great fun with the role of Mistress Quickly. Katia Ricciarelli is a radiant Alice, Brenda Boozer a stylish Meg, and Barbara Hendricks a pure delight as Nannetta.

Compare this recording with any other—Solti's, either of Karajan's, or even Bernstein's. For all their many strengths, I think there is no question that Giulini sets a standard in this *Falstaff* that none of them can challenge. —Christie Barter

VERDI: *Falstaff*. Renato Bruson (baritone), Sir John Falstaff; Leo Nucci (baritone), Ford; Katia Ricciarelli (soprano), Alice Ford; Barbara Hendricks (soprano), Nannetta; Brenda Boozer (mezzo-soprano), Meg Page; Lucia Valentini-Terrani (contralto), Mistress Quickly; Dalmacio Gonzalez (tenor), Fenton; Michael Sells (tenor), Dr. Cajus; Francis Egerton (tenor), Bardolfo; William Wilderman (bass), Pistola. Los Angeles Master Chorale; Los Angeles Philharmonic Orchestra, Carlo Maria Giulini cond. DEUTSCHE GRAMMOPHON ◉ 2741 020 three discs \$38.94, © 3382 020 \$38.94.

fiercely florid Italianate aria, and all join in the concluding dance sequence.

The music for *Pygmalion*—exquisitely sung by John Elwes—is difficult not only because of its extremely high tessitura but also because Rameau combined both the French and Italian vocal styles in his writing. Elwes nevertheless moves easily from the heavy ornamentation of the French style to the florid phrasing of the Italian. The women too are excellent. The secondary roles of Céphise and the Statue involve only the French style, and the Rachel Yakar, as *Amour*, must carry off her large part, like Elwes, in both national styles.

Rameau's orchestration is particularly sparse in this work, but, under the direction

of Gustav Leonhardt, *La Petite Bande* negotiates the ornate lines with delicate precision. The practice of taking all of the appoggiaturas quickly makes the music sound rather erratic sometimes, but one soon adjusts to this somewhat arbitrary approach. The subtle intricacies of the score could not possibly come across on modern instruments, and the players' early instruments and technical assurance serve Rameau's genius well. This year is the three hundredth anniversary of the great French composer's birth, and this exquisite recording commemorates it with appropriate style. S.L.

SAINT-SAËNS: Cello Concerto No. 1, in A Minor, Op. 33 (see SCHUMANN)

SCHUMANN: Cello Concerto in A Minor, Op. 129. SAINT-SAËNS: Cello Concerto No. 1, in A Minor, Op. 33. Lynn Harrell (cello); Cleveland Orchestra, Neville Marriner cond. LONDON O LDR 71068 \$12.98, © LDR 5 71068 \$12.98.

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

The most recent previous pairing of these two works listed in the current Schwann is that of Jacqueline Du Pré as soloist with her husband, Daniel Barenboim, conducting the New Philharmonia; it dates from 1969, so no one can complain of being inundated with duplications.

Lynn Harrell is certainly nimble-fingered enough for the Saint-Saëns, and his tone is big enough to stand out from Schumann's sometimes opaque orchestral textures with or without help from the engineers. In Neville Marriner he has a thoroughly sympathetic collaborator, and the Cleveland Orchestra, recorded in Cleveland's acoustically resplendent Masonic Temple, produces a musically potent setting. Harrell may sound a bit larger than life on his first entrance in the Schumann, but the orchestral sound, enhanced by London's digital mastering, is not at all reticent. Harrell's brilliantly executed cadenza in this work is his own. The Saint-Saëns concerto, as always, is a real charmer, and it is performed altogether brilliantly here. D.H.

SHOSTAKOVICH: Symphony No. 5, Op. 47 (see Best of the Month, page 61)

RECORDING OF SPECIAL MERIT

WAGNER: Lohengrin. René Kollo (tenor), Lohengrin; Anna Tomowa-Sintow (soprano), Elsa; Dunja Vejzovic (mezzo-soprano), Ortrud; Siegmund Nimsgern (baritone), Frederick of Telramund; Karl Ridderbusch (bass), King Henry; Robert Kerns (baritone), the King's Herald; others. Chorus of the Deutsche Oper; Berlin Philharmonic Orchestra, Herbert von Karajan cond. ANGEL SELX-3829 five discs \$50.90, © 4X5X-3829 \$50.90.

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

Heroic romance and grand flourishes are the essence of Wagner's *Lohengrin*, and both elements appeal to Herbert von Karajan's theatrical instincts. The drama he so vividly captures here commands our admiration, if not always our wholehearted approval. As has been the case with so many of Karajan's more recent opera recordings, the tempos here are at times extremely slow. The Bridal Chamber Scene has more ebb than flow, and the tenor hero is compelled to deliver his Grail Narrative as if each phrase were wrenched from his reluctant throat. But there are enough fine moments to compensate for such excesses: a Prelude of almost inhuman smoothness, beautifully executed transitions between scenes, a fabulously vivid handling of the closing ensemble of Act II. The climaxes are spectacular, and the superbly balanced, luxuriant orchestral tone is a consistent wonder.

While compliments are in order to EMI/Angel for assembling a cast of today's pre-eminent Wagnerians for this production, a

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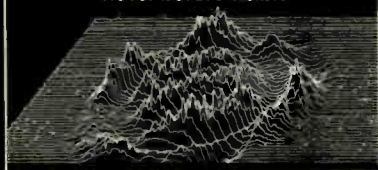
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doleful comment must again be made about how today's "best" falls short of the ideal. Only baritone Siegmund Nimsgern reaches that peak in this recording. Nimsgern properly portrays Telramund as a proud but somewhat stolid warrior who is at the mercy of forces beyond his comprehension. He pours out torrents of powerful sound, yet, for all his vehemence, we retain sympathy for the character.

Although no one else in the cast matches Nimsgern's achievement, dedication and involvement are in laudable supply. René Kollo once had the potential to develop into an ideal Lohengrin. He has the right lyric timbre for the music, and he still knows how to deliver the tender appeals to the Swan with an insinuating *mezza voce*. There is even a touch of poetry in his characterization, a quality rarely found in Wagnerian singers. What Kollo lacks is tonal amplitude and steadiness above the staff, and Karajan's deliberate tempos are not particularly helpful.

Conversely, the region above the staff is where Anna Tomowa-Sintow truly sparkles. Elsewhere her tone tends to be uneven and the pitch marginally flat, though her singing seldom loses its shimmering appeal. In terms of expressiveness, neither she nor Dunja Vejzovic make much of the text. Vejzovic handles the "Entweihte Götter!" outbreak impressively, but she lacks a truly menacing quality. Karl Ridderbusch copes bravely with the King's merciless tessitura, but to say that he triumphs over it would be an overstatement. Robert Kerns is acceptable in the Herald's almost equally demanding part.

The recorded sound is topnotch, though there are a few of the balance eccentricities (mainly inaudible choral pianissimos) that often show up in Karajan recordings. G.J.

COLLECTION

RECORDING OF SPECIAL MERIT

HUAPANGO. Moncayo: *Huapango. Revueltas: Sensemayá; Ocho x Radio. Chávez: Sinfonia India. Galindo: Sones de Mariachi.* Xalapa Symphony Orchestra, Luis Herrera de la Fuente cond. Vox CUM LAUDE ● D-VCL 9033 \$10.98, © D-VCS 9033 \$10.98.

Performance: **Splendid**
Recording: **Likewise**

It would be nice if one new collection of Mexican music did not include the *Sinfonia India*, *Sensemayá*, and Pablo Moncayo's *Huapango*. This is the third disc to appear in the last two years with all three of these titles, and there is yet another containing both the Chávez and *Sensemayá*. Nonetheless, this is a stunning release in every respect. I'm delighted to have Blas Galindo's ingratiating *Sones de Mariachi* back in the catalog, and Luis Herrera de la Fuente gives a much more persuasive account of both this piece and the Moncayo than he did with the Orquesta Sinfónica Nacional on Capitol some twenty-five years ago. There does not seem to be another recording of Revueltas's *Ocho x Radio* at present either, and this piece is also worth having. The digital recording captures the splendid sound of the Xalapa orchestra, and the Vox pressing is first-rate. R.F.

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News Briefs



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Is that Darth Vader emerging from his Ti-Fighter after pursuing Luke Skywalker across the darkest reaches of interstellar space? No, just Millennium Records' **Steve Rodway** posing with the Hexhedon PC-1, a high-end playback system seen on the cover of Rodway's new album, "Horizontal Hold." An RCA

exec discovered the \$35,000 unit in a Neiman-Marcus Christmas catalog and brought it to Rodway's attention; the artist (a synthesizer expert) naturally thought it a great prop, but I am sorry to report he did not get to keep it. Actually, I'm not sorry—after all, there are people starving in Detroit. S.S.

As you may have heard by now, Midwestern rock hero **John Cougar**, who sold more albums than any other rocker in 1982, is producing a comeback album for his longtime idol, Sixties blue-eyed-soul legend **Mitch Ryder**. This kind of fathers-and-sons debt paying is, of course, rapidly becoming a trend (in the manner of Bruce Springsteen and Gary U.S. Bonds or Tom Petty and Del Shannon), and I think it's a nice idea. But God only knows what the Cougar/Ryder LP will sound like, because now I hear that one of the tunes on the work-in-progress is a new song by irrepressible Sixties Space Cadet **Donovan** (he of *Sunshine Superman* and smoking bana-

nas). The ditty, entitled *Local Boy Chops Wood*, is said to be about the late Brian Jones, original guitarist of the Rolling Stones. S.S.

When President Ronald Reagan awarded the Medal of Freedom to a dozen outstanding citizens this year, those honored included such well-known overachievers as choreographer **George Balanchine**, architect **Buckminster Fuller**, minister **Billy Graham**, and former ambassador **Clare Booth Luce**. Also included was the beloved British-born cabaret singer **Mabel Mercer**.

Although Miss Mercer was the first recipient of STEREO REVIEW's Award of Merit in

1975 and later received an honorary doctorate from the Berklee College of Music in Boston, she is still not accustomed to such honors. At a dinner party held for her by friends at the Algonquin Hotel in New York she said, "When I answered the telephone and they said it was the White House, I thought it was a joke. And when they said I was to receive the Medal of Freedom, I thought, 'Freedom from what? I've never been a slave.' But it was lovely! They give one the medal in three sizes for different occasions, and at the luncheon I was seated next to the President himself."

At the presentation ceremonies President Reagan said of Miss Mercer (in part), "Her talent, her elegance, and her unique way with a lyric have gathered devoted followers all over the world. Her special style has influenced some of America's most fa-

mous performers, earning her the reputation of a singer's singer. Miss Mercer's career has spanned more than sixty years, and she continues to delight audiences and critics alike. With her incomparable talent, she has helped shape and enrich American music."

W.L.

GRACENOTES: According to **Graham Nash**, that long-promised Hollies reunion album (in the can for almost a year) will finally be out by the time you read this. Said Nash, "I think there will be a lot of people pleased with what the Hollies sound like in the Eighties." . . . Argentina has finally lifted the ban on English-language records it imposed after the outbreak of the Falklands War. The first album allowed into the Argentine marketplace? **Supertramp's** latest, "Famous Last Words." . . . After a decade-

Cabaret singer Mabel Mercer



Donald Smith Promotions

long flirtation with mysticism and fusion jazz, former cosmic cut-up and guitar hero **Carlos Santana** seems to be returning to his roots. His new album, being produced by r-&-b giant Jerry Wexler, features back-ups by the great Booker T. Jones, as well as Texas blues bashers the Fabulous Thunderbirds, who have (almost) New Wave credentials. . . . More legal troubles for the "Wicked" **Wilson Pickett**: the great soul singer pulled out of a series of English gigs recently (quarrels with his back-up band), and English promoter Harvey Goldsmith (the U.K. Bill Graham) is extremely miffed. . . . Ska revivalists the **English Beat** got a surprise visit from **Muhammed Ali**. It seems the Champ was interested in the group's deluxe tour bus, which he saw parked in front of their hotel, and jumped in for a look-see. The band was understandably thrilled, but there was no sale. . . . **Billy Joel**

Columbia Records



Carlos Santana: returning to his roots?

gave away the Baldwin grand used on his recent tour after the final show in New York City. The piano went to the winner of a random drawing for which 200,000 entry

blanks were distributed in area stores. . . . According to England's *Melody Maker* magazine, it is now possible to drop the following names "without sounding like a hip-

py": MC5, Bob Dylan, Morticia Adams, Neil Young, Sepina Scott, Velvet Underground, Mrs. Peel, the Clash, Phil Spector, and Harold Wilson. Boy, am I relieved! S.S.

Disc and Tape Reviews

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

RECORDING OF SPECIAL MERIT

ABBA: *The Singles—The First Ten Years*. ABBA (vocals and instrumentals). *Ring Ring; Waterloo; So Long; I Do, I Do, I Do, I Do, I Do; SOS; Mama Mia; Fernando; Dancing Queen; Money, Money, Money; Knowing Me, Knowing You; The Name of the Game; Take a Chance on Me*; and eleven others. ATLANTIC 80036-1 two discs \$11.98, © CS 80036-1 \$11.98, © TP 80036-1 \$11.98.

Performance: **Sublime, rldlculous**
Recording: **Lush**

This just may be the ultimate Greatest Hits album. Of course, I'm prejudiced, and I'll admit it: I find something irresistible (not to say hilarious) about a quartet of heavily accented middle-aged Swedes singing about teen heartbreak in transliterated English, especially when the musical backings are

lusher and more bombastic than Bruckner's Eighth Symphony. Phil Spector, and side two of "Abbey Road" combined. But that's ABBA for you, a group that consistently offers its audience cornball sentiments inflated to insane proportions and melodies you couldn't forget even if you wanted to.

This new double-disc album assembles the cream of ABBA's first ten years of hit-making plus two previously unreleased tracks. Is this stuff the manifestation of collective genius? The most representative kitsch of our recent past? A revealing slice of life from the belly of the Welfare State? Does it mean anything? Should it? No matter. I love every note here, and I'm not embarrassed to say so in print. S.S.

RAZZY BAILEY: *A Little More Razz*. Razy Bailey (vocals); vocal and instrumental accompaniment. *Love's Gonna Fall Here Tonight; Twenty Years Ago; A Quarter 'Til Three; Keep a Burnin' Love on Fire; Guess Who's Gonna Be a Dad; Poor Boy*; and five others. RCA AHL1-4423 \$8.98, © AHK1-4423 \$8.98, © AHS1-4423 \$8.98.

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

Razy Bailey is a forty-four-year-old Alabamian who's had an enormous amount of country airplay since giving up the Cracker-club circuit and moving to Nashville several years ago. While his live act proves him capable of handling just about anything, he's scored minor hits with such songs as *She Left Love All Over Me*, a soppy, senti-

mental piece of MOR flotsam; *Too Old to Play Cowboy*, an above-average sample of mainstream country; and *Ain't Got No Business Doin' Business Today*, a loose, growly r-&-b number that fooled a lot of people into thinking Bailey was black. He is an energetic performer who always works up an honest sweat, though RCA insists on dressing him in fake-satin shirts and posing him on plush Victorian furniture, with the result that he's become a sex symbol for housewives. But between the string-sweetened songs here about the joys of expectant fatherhood and 3 a.m. love are several fine chitlin-soaked, toe-jam ditties that give off a lot of steam. A.N.

BELLYMAY BROTHERS: *Strong Weakness*. Bellamy Brothers (vocals, acoustic guitar); vocal and instrumental accompaniment. *Strong Weakness; Doin' It the Hard Way; When I'm Away from You; I Love Her Mind; Almost Jamaica; Lazy Eyes*; and five others. ELEKTRA 60210-1 \$8.98, © 60210-4 \$8.98.

Performance: **Better**
Recording: **Excellent**

David and Howard Bellamy are two thoroughly pleasant fellas from West Central Florida who have enjoyed a good measure of success in the last few years with their country-pop novelty tunes, and nothing would please me more than to be able to recommend their music. Unfortunately, because we have such different ideas of what

(Continued on page 80)

Explanation of symbols:

- Ⓢ = eight-track stereo cartridge
- ⓐ = stereo cassette
- Ⓛ = digital-master recording
- Ⓧ = direct-to-disc
- ⓈⓁ = CX-encoded

Monophonic recordings are indicated by the symbol Ⓜ

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

Merle & Willie: Real Songs



Bobby Wood/Epic Records

IN the past few years, it seems as though Willie Nelson has recorded an album with every living singer in the free world. Of course, George Jones has also been doing that kind of thing, and last year, when he and Merle Haggard put out "A Taste of Yesterday's Wine," it looked as if Haggard was getting mixed up in it too. To those of us who really care about Haggard and Nelson, all this was somewhat distressing; more often than not in projects such as these, the novelty of the singers' getting together at all overshadows the music they make. The news, then, that Nelson and Haggard had teamed up to do an album was received by some with apprehension.

Well, despite the apparently casual way that "Poncho & Lefty" was put together ("We just sat around and thought up tunes," Nelson told me last summer), it is a real album made up of real songs, not just another schmaltzy LP of worn-out Forties tunes. That isn't to say that you won't be familiar with some of the material—there are a couple of old Bob Wills western-swing standards here, two of Nelson's own older songs, and, of course, the Townes Van Zandt title song. But I doubt you've ever heard these tunes quite like this before.

Part of the reason for that is the production. This may be the most laid-back album

I've ever heard (even Mickey Raphael is subdued!). The arrangements are light but not airy, the old veteran pickers know exactly when to play—and, more important, when *not* to play—and the instrumentation is lean, clean, and tasteful.

But the most important reason "Poncho & Lefty" is so strikingly handsome is the wistful, elegiac mood that runs through the entire album. Like the protagonists in the title song, Nelson and Haggard took to the road years ago, thinking it would keep them "free and clean." Now, looking back, the age and the hardness they picked up along the way find them yearning for the homelife and the clean-smelling sheets they sing of in *All the Soft Places to Fall* by Leona Williams (Mrs. Merle Haggard). The song gets a rather tongue-in-cheek treatment, but if you find it hard to believe that Willie Nelson has ever really been disappointed by anything in life, just listen to the closing track, his own *Opportunity to Cry*, a blues classic in the vein of *Night Life* that is the finest four minutes on vinyl I've heard in many a year.

Despite Haggard's top billing on the album cover, "Poncho & Lefty" is more Nelson's album than Haggard's. It was recorded at Willie's studio in Texas, uses more of Willie's usual studio pickers than

Merle's, and was made with the help of Willie's regular producer, Chips Moman. You may come away with the feeling that Willie sings more of the leads than Merle too, although I'm not sure that's true. Strangely enough, they hardly ever actually sing together; instead, they trade off stanzas or whole songs—partly, I suspect, because neither of them can really sing harmony, and because their voices don't complement each other's all that well.

But "Poncho & Lefty" is a decidedly deceptive album. The first couple of listenings you're liable to think it's lightweight trivia, and then, before you know it, you find yourself covered with goosebumps. It's partly sheer artistry, but it's also because you know that Merle and Willie have *been* there. They've made a seductive, moving album. Don't miss it. —Alanna Nash

MERLE HAGGARD AND WILLIE NELSON: *Poncho & Lefty*. Merle Haggard, Willie Nelson (vocals, guitars); instrumental accompaniment. *Poncho & Lefty; It's My Lazy Day; My Mary; Half a Man; Reasons to Quit; No Reason to Quit; Still Water Runs the Deepest; My Life's Been a Pleasure; All the Soft Places to Fall; Opportunity to Cry.* Epic FE 37958, © FET 37958, no list price.

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music should be, I can't do that. "I try to just keep it fun," David Bellamy told me recently. But somewhere along the way I got the impression that music should either make you feel something or make you do a little thinking. "Fun," as David Bellamy would put it, certainly counts as one criterion of good music, but I like a bit of content with my form, and such niceties as interesting lyrics go a long way with me too.

On "Strong Weakness," the best cut is *Number Two*, by the Bellamys' guitarist Randy Ferrell; it's heads above anything else they've ever recorded. Where the Bellamys do excel, however, is in putting shallow, suggestive lyrics to catchy melodies (check out the insulting *Redneck Girl* or the exceptionally banal *I Love Her Mind* here), in working out competent and attractive vocal and instrumental arrangements, and in co-producing (with Jimmy Bowen) a master that results in a sound so crisp and snappy as to put half the staff producers in Nashville to shame. *A.N.*

FULL SWING: *The Good Times Are Back.* Full Swing (vocals); instrumental accompaniment. *Dancing in the Dark; Trocadero Ballroom; The Right Idea; Tweedle Dee; Big Bucks; Serenade in Blue;* and five others. PLANET BXL1-4426 \$8.98, © BXX1-4426 \$8.98.

Performance: **Mostly dull**
Recording: **Cute**

Hot on the wedged heels of Manhattan Transfer comes Full Swing, a three-mem-

ber vocal group assembled by producer Richard Perry to give still another go-around to the "cute" idea of performing in the long-ago style of the Swing Era. Perry first got Charlotte Crossley (a former member of the Harlettes), Steve March (son of Mel Tormé), and Lorraine Feather (daughter of jazz critic Leonard Feather) together for an album called "Swing" a few years ago, and "The Good Times Are Back" is practically a duplicate effort. After a band or two, listening to it becomes an enervating experience.

Crossley and March carry out their assignments professionally enough, but it is Feather's extra-fancy snap and sparkle that give the album whatever glimmers of life it has. She shines brightest in a medley of the Schwartz/Dietz oldie *Dancing in the Dark* and her own *The Closer I Get to You*. This kid is going places, and the sooner she shakes the nostalgic dust of Full Swing from her boots, the better. *P.R.*

SAMMY HAGAR: *Three Lock Box.* Sammy Hagar (vocals, guitar); vocal and instrumental accompaniment. *Three Lock Box; Remote Love; Remember the Heroes; Your Love Is Driving Me Crazy; In the Room;* and five others. GEFEN GHS 2021 \$8.98, © M5 2021 \$8.98.

Performance: **An abuse of power**
Recording: **Ditto**

"Three-Lock Box" is hard-hitting heavy-metal, and Sammy Hagar can hit with the hardest. The tunes here stick pretty close to

the recipe studio-tested by bands like Foreigner and Journey: start with a steady, pounding beat, duplicate it in the bass, add whatever power chords, fast lead phrases, and sound effects come to mind, then mix at the loudest volume your equipment can produce. Naturally, a vocalist would have to scream to make himself heard over this kind of background, and Hagar does. The lyrics can be a problem. Like a lot of other hard rockers, Hagar feels he has to write clever words to entertain us. He needn't bother. No one thinks for a minute that love is anything like a radio wave or an antenna, and saying so (*Remote Love*) just sounds foolish. There are also songs about sex and forgotten war veterans, but at this volume, who can think about sex? Or anything, for that matter? It's the same old story: power corrupts, and this kind of power corrupts absolutely. *M.P.*

RECORDING OF SPECIAL MERIT

GARLAND JEFFREYS: *Guts for Love.* Garland Jeffreys (vocals, guitar); vocal and instrumental accompaniment. *Real Man; Surrender; Fidelity; Rebel Love; Dance Up; Guts for Love; Shout;* and four others. EPIC ARE 38190, © AET 38190, no list price.

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

I don't mean to disparage Garland Jeffreys' achievement on "Guts for Love," easily his best album since "Ghostwriter," when I say that my favorite moment on it is the abso-

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lutely perfect cover of the Junior Walker classic *What Does It Take (To Win Your Love)*. It's just that Jeffreys and David Sanborn on alto evoke the lyric soulfulness of that song about as well as it can be done.

The key to the album's success is discipline—perhaps a surprising thing to say about the work of an artist whose music is intensely personal and self-revelatory. But there's little here of the strident, unchecked emotion that was the undoing of Jeffreys' last release, the live "Rock and Roll Adult," nor is there any of that album's deliberately casual approach to performance, which seemed to pander to punk aesthetics. "Guts for Love" is an intelligently conceived, tightly arranged fusion of Motown, funk-rock, and reggae. From the imaginative, off-the-beat phrasing of the lead vocal and keyboards on *Fidelity* to the urgency of his ballad singing on *Surrender* and *Guts for Love* to the funky abandon of *Dance Up*, Jeffreys is in complete control. He seems finally to have learned how to channel his anger into serious music making. And, as *El Salvador* and others here demonstrate, this new artistic discipline has not come at the expense of the political and social themes that have always been important to him.

Garland Jeffreys was heavily hyped early in his career, and, perhaps inevitably, he came to disappoint a good many people. With "Guts for Love" he's finally beginning to deliver on his promise. *M.P.*

JOHN KAY AND STEPPENWOLF: *Wolftracks*. John Kay (vocals, guitar);

vocal and instrumental accompaniment. *Time: None of the Above; You; Every Man for Himself; Five Finger Discount*; and five others. NAUTILUS ● NR-53 \$16.50.

Performance: **Workmanlike**
Recording: **Excellent**

John Kay's snarling voice has aged nicely over the years, taking on a smoky, slightly quavering resonance. Being pretty much all that's left of the original Steppenwolf, he is, of course, miked at the very forefront of "Wolftracks," a digitally recorded Nautilus "superdisc." Listening to Kay, I prefer to recall the days when *Born to Be Wild* was on the lips of every biker than to consider the dreary succession of albums Steppenwolf made during the Seventies. "Wolftracks," unfortunately, recalls the latter. Clean engineering and noiseless pressing aren't enough to disguise the fact that these are not particularly interesting songs. *M.P.*

JERRY LEE LEWIS: *My Fingers Do the Talkin'*. Jerry Lee Lewis (vocals, keyboards); vocal and instrumental accompaniment. *She Sure Makes Leaving Look Easy; Why You Been Gone So Long; She Sings Amazing Grace; Better Not Look Down; Honky Tonk Rock and Roll Piano Man*; and five others. MCA MCA-5387 \$7.98, © MCAC-5387 \$7.98.

Performance: **Hard to tell**
Recording: **Chancey**

After a two-year break from recording, the Killer is back, this time with a new label

and a new producer, Ron Chancey. Chancey's done wonders for the Oak Ridge Boys, but with other artists, especially the great Brenda Lee, he doesn't seem to have the faintest idea of how to showcase what they do best.

Unfortunately, that holds true with Jerry Lee Lewis too. Chancey's got him so far back behind the instrumentation that you can't tell for sure just what is going on. Part of the time you can't even make out the lyrics, and you have to hunt for Lewis's piano flourishes, routine as they may be.

I'm not sure what Chancey had in mind with this album. It's a mixed bag of country schmaltz, boogie-woogie, and Nashville formula, but the chorines who turn up on half the cuts might have worked if Chancey had just used some loose, black voices instead of the Vegas-style doo-wop ones here. Lewis does catch fire with Fred Koller's *Circumstantial Evidence*, a bluesy little rocker that lets him strut his stuff and do some witty posturing, and *Better Not Look Down*, a delicious piece of Southern-fried funk that brings to mind Allen Toussaint or Dr. John or, especially, Leon Russell's *Shelter People* album and is replete with searing, Don Preston-like guitar fills. But other than those two tracks, there's really not much to gnaw on here. "My Fingers Do the Talkin'" won't add much to the Killer's legacy. *A.N.*

GWEN McCRAE: *On My Way*. Gwen McCrae (vocals); vocal and instrumental accompaniment. *Be For Real; Doin' It;*

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Make Believe; Hey World; and four others. ATLANTIC 80019-1 \$8.98, © CS 80019-1 \$8.98.

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

Gwen McCrae is a highly promising young singer. She has the voice as well as vitality and style. On a big, slow ballad, such as *Make Believe*, she can be moving, sexy, and vocally distinctive. When she's pushed into faster, disco-slanted material, as she is too often here, the results are much more ordinary. McCrae is the kind of artist who ought to be brought along slowly. She's got the goods; all she needs is the proper showcase to display them. **P.R.**

KATE AND ANNA McGARRIGLE: *Love Over and Over* (see Best of the Month, page 62)

THE MEMBERS: *Uprhythm, Downbeat.* The Members (vocals and instrumentals). *Working Girl; The Family; The Model; Chairman of the Board; Boys Like Us; Going West; Radiodub;* and three others. ARISTA AL 6605 \$6.98, © ACT 6605 \$6.98.

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

If the Specials were the zany side of what the British call Two-Tone, the Members are its dark, angry counterpart. "Uprhythm,

Downbeat" is rock/reggae stripped of any optimism or idealism by a tough, cynical, pragmatic intelligence. From the album's first ironic moments you're put on notice. *Working Girl* seems a cheery enough rave-up turning on a rousing, affirmative chorus: "Hey, I'm in love with a working girl." Nice, positive, dream-come-true stuff, right? Wrong. Listen to the lyrics, and you discover the guy is just sponging off her.

In the course of "Uprhythm, Downbeat," the Members trash capitalism (*Chairman of the Board*), the family, work (*We, the People*), romance (repeatedly)—just your basic Western social and cultural foundations. And they do it with raw, defiant conviction conveyed in blistering sax breaks, jagged guitar, gunshot percussion, and anarchic horn charts, all tied down to a punked-out reggae beat. And lead vocalist Nick Tesco's dark, grisly tone and aggressive phrasing are about as engaging and solicitous as a razor poised at your throat. It all adds up to a very uprhythm handling of some pretty downbeat ideas—music that works on your guts as it works over your mind. **M.P.**

THE MIGHTY DIAMONDS: *The Roots Is Here.* The Mighty Diamonds (vocals); instrumental accompaniment. *Everybody Has an Accent; Declaration of Rights; Pretty Woman; The Poor Man's Prayer; Heads of Government;* and five others. SHANACHIE 43009 \$8.98.

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

Although they have been one of Kingston's leading vocal ensembles for more than thirteen years, the Mighty Diamonds may find that their biggest current claim to fame is as the group responsible for *Pass the Kouchie*, the original version of the Musical Youth hit *Pass the Dutchie*. Their silky harmonies and soft, airy balladeering make them reggae's counterparts to such American soul groups as the Stylistics and the Chi-Lites. "The Roots Is Here" is a solid, if not particularly exciting, outing. There's nothing on it to match *Pass the Kouchie*, unfortunately, but the vocals are uniformly pleasant, seamless, and soothing, and the accompaniment (by Tuff Gong studio regulars Robbie Shakespeare, Sly Dunbar, and others) is crisp and neat. Mellow reggae may seem a contradiction in terms, but the Diamonds make it work. **M.P.**

MISSING PERSONS: *Spring Session M.* Missing Persons (vocals and instrumentals). *Noticeable One; Windows; It Ain't None of Your Business; Destination Unknown; Walking in L.A.; U.S. Drag;* and six others. CAPITOL ST-12228 \$8.98, © 4XS-12228 \$8.98.

Performance: **Commercial potential**
Recording: **Very good**

There's something about the music that comes out of L.A., whether it's the Eagles or X or Moon Zappa; it's all got a sunburst finish that says "Buy, buy, buy." Missing Persons makes calculated billboard rock—clean, energetic, and, no doubt, market-researched. Everything about this band screams "hot commercial property," from the studio-tight chops to the catalog of *au courant* sounds (the Sting-like bass, for in-

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stance) right down to the fashionable gender breakdown—four guys fronted by a tiny, huge-eyed, scarecrow blonde. And the production glistens like Sunset Strip neon bouncing off the fresh wax job on a passing Mercedes. Well, maybe I'm the kind of gull the music business is short on these days, but "Spring Session M" works on me.

This clean-edged, tuneful rock is propelled by drummer Terry Bozzio, for a short time a member of the Mothers of Invention, and lead guitarist Warren Cuccurullo, who finds more interesting ways to fill time than all the synthesizers in Burbank. The centerpiece is supposed to be lead singer Dale Bozzio, but her just-average voice depends too much on quirky mannerisms of phrasing to be truly fetching, and it's the outstanding accompaniment, intricate and upbeat, that winds up getting most of your attention. Of course, you'd expect hard-driving rock from a band led by a drummer (Bozzio wrote most of this material), but the lyrics are a bit better than the usual commercial cut-and-paste job too. It all goes to show that while great art (which this definitely isn't) doesn't spring from the law of supply and demand, good L.A. rock sometimes does. *M.P.*

MODERN ENGLISH: *I Melt with You.* Modern English (vocals and instrumentals). *I Melt with You; Life in the Gladhouse; Someone's Calling.* SIRE 9 29836-0 A 45-rpm \$4.98.

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

You'll probably play the title cut of this "maxi-single" once and then never again. Not that it's bad—it's actually pretty fair Mersey-beat—but to take up a whole side for a playing time of less than four minutes makes it hardly worth changing your turntable speed to 45 rpm. Side two, however, is more generous, logging in at nearly ten minutes, and more interesting. *Life in the Gladhouse* is a subversively hypnotic dub chant intoned over a rumbling tribal beat; its driving energy is contagious. *Someone's Calling* is a bit more conventional with its minimalist melody, chunking rhythm guitar, and synthesizer underpinning. Both tracks immediately go to work to rouse any suppressed primal urges you may have, and both continue to grow on you with repeated listening. *M.P.*

RIC OCASEK: *Beatitude.* Ric Ocasek (guitar, keyboards, vocals); vocal and instrumental accompaniment. *Jimmy Jimmy; Something to Grab For; Prove; I Can't Wait; Connect Up to Me;* and five others. GEFEN GHS 2022 \$8.98, © M5 2022 \$8.98.

Performance: **High-tech**
Recording: **Outstanding**

If I were one of Rick Ocasek's colleagues in the Cars, I think I'd be a little put off by "Beatitude." After all, a solo album that sounds just like one by the whole band somehow suggests that the other members are superfluous.

"Beatitude" is an impressive technological accomplishment, elaborately produced and flawlessly engineered. All of the tracks, both instrumental and vocal, positively scintillate. Although it's shot through with

danceable rhythms, "Beatitude" is definitely more solid-state than sensual—so much so that the human sound of Deric Dyer's saxophone on *Prove* hits you like the heat of an August afternoon. As usual, Ocasek's vaguely tragic vocals sound as though they're coming through a bad transatlantic phone connection. His smart, economical lyrics and catchy melodies are everywhere in evidence, so Cars fans will surely not be disappointed by this album. They may just wonder where the rest of the band fits in. *M.P.*

YOKO ONO: *It's Alright.* Yoko Ono (vocals); instrumental accompaniment. *My Man; Never Say Goodbye; Spec of Dust;*

Loneliness; Tomorrow May Never Come; It's Alright; and four others. POLYDOR PD-1-6364 \$8.98, © CT-1-6364 \$8.98.

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

All right, all right, I feel sorry for the poor woman—but I feel sorry for Jackie Onassis too, and if she made records I wouldn't take them seriously either. The music on Yoko Ono's new album, more conspicuously "pop" than anything she's done previously, has a certain fragile charm, I suppose, but let's face it: it's just nursery-rhyme doggerel gussied up to a fare thee well. *S.S.*

(Continued on next page)

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ELAINE PAIGE: *Sitting Pretty*. Elaine Paige (vocals); vocal and instrumental accompaniment. *Don't Walk Away Till I Touch You; Shining; Daybreak; Dancing Close; We're Home Again*; and five others. EMI NTS 221 \$9.98 (from International Book and Record Distributors, 40-11 24th Street, Long Island City, N.Y. 11101).

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

You may not know much about Elaine Paige now, but you will, you will. Besides having a hit single in *Don't Walk Away Till I Touch You*, a fairly standard ballad, Paige is being talked about for the role of Eva Peron in the film version of *Evita*. Granted, just about every actress or singer under the age of sixty has tried out for that role, or at least been mentioned as a possibility, but Paige *did* play *Evita* in the original London production. Of course, Hollywood tradition is *never* to cast the person who created a part on stage in the film version, so we'll have to see.

This recording, made in 1978, was splendiferously produced by Brian Wade, who also wrote six of the ten tracks. The big surprise is the sound of Paige's voice on records; it has a faintly babyish quality, something like Bernadette Peters when she is putting you on. It works well enough, particularly in a song like *Right Side of Morning*, a straight-on rock ballad that has been furnished with an equally baby-voiced chorus honking away in the background. It's good, lively stuff performed with a lot of spirit and musicianship, but somehow it doesn't fit my idea of the sinister Madame Peron. *P.R.*

POLYROCK: *Above the Fruited Plain*. Polyrock (vocals and instrumentals); instrumental accompaniment. *Working on My Love; Call of the Wild; Chains of Iron; Broken China; Indian Song*. PVC 6901 \$7.98.

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

Perhaps as a consequence of hard economic times, Polyrock was dropped by its old label, RCA. Happily, the group was rescued by the small independent PVC label. This short (less than twenty-four minutes *total*) but solid little record displays the interesting melodic and sure—if somewhat restrained—rhythmic instincts that have marked Polyrock as one of the more *musical* synth-pop bands. In fact, the record's best moments are in songs that have very little synthesizer: *Chains of Iron*, in which Billy Robertson's New Romantic phrasing, accompanied by descending scales in piano and marimba, is superimposed over galloping rhythm guitar and drums; and *Indian Song*, in which Cathy Oblasney's weird soprano drifts along on a cushion of churning rhythm-guitar chords. Though by no means extraordinary, Polyrock is electro-pop with solid musical values—and that is something, these days. *M.P.*

STAN ROGERS: *Between the Breaks*... *Live!* Stan Rogers (vocals, six- and twelve-string acoustic guitars); vocal and instrumental accompaniment. *The Witch of the Westmorland; Barrett's Privateers; First Christmas; The Mary Ellen Carter; The White Collar Holler*; and four others. Fo-

GARTY'S COVE MUSIC FCM 002 \$8.98 (plus \$1.50 postage and handling charge from Silo/Alcazar, Inc., P.O. Box 429, Waterbury, Vt. 05676).

Performance: **Spirited**
Recording: **Okay**

This is my first exposure to Stan Rogers, who has recorded four albums, but after listening to this one, I'd say he's one of the few "folk singers" around who really deserves that title. Based in Canada, Rogers is a hail-fellow-well-met who specializes in the kind of long, multi-versed, traditional songs that came to be known as the Childe Ballads. The surprise is that he writes a lot of the ballads he sings himself, using language and musical structures that make them sound like eighteenth-century originals. Rogers also has the kind of hearty baritone that suggests he is in the eighth generation of his family to do this sort of singing—or that he actually *is* an ancient balladeer who somehow got caught in a time warp. The accompaniment, on such airy instruments as the Northumbrian smallpipes and penny-whistle, do little to dispel that notion. "Between the Breaks" was recorded live in a Toronto club, and judging from the audience reaction, a good time was definitely had by all. *A.N.*

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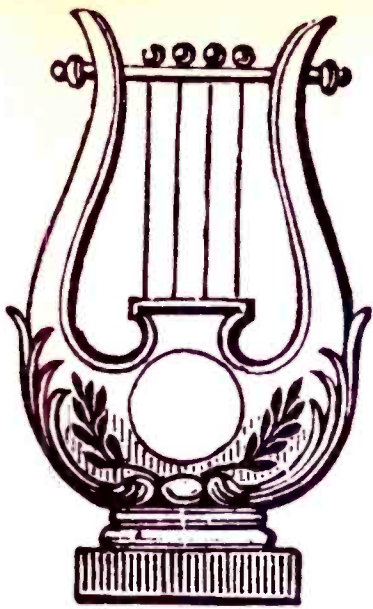
TODD RUNDGREN: *The Ever Popular Tortured Artist Effect*. Todd Rundgren (vocals and instrumentals). *Hideaway; Influenza; Bang the Drum All Day; Chant; There Goes Your Baybay*; and four others. BEARSVILLE 1-23732 \$8.98, © 4-23732 \$8.98.

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

Todd Rundgren's albums are always full of good or bad surprises; they are bad only when he becomes too serious. Fortunately, Rundgren's wit, which runs from the subtle to the berserk, dominates this new solo album, on which he plays all the instruments and sings all the vocals.

He's at his wittiest and most literate on *There Goes Your Baybay*. The title is a take-off on Cat Stevens's *Here Comes My Baby* (Stevens used to pronounce the last word as "bay-bay"), but Rundgren's lyrics are full of references to the current recession. The hero, juggling his capital, is shocked to find that his girl friend is leaving him; it's a wonderful vignette about the problem of staying in business and in love. Rundgren's sense of the bizarre is displayed on *Emperor of the Highway*, a diatribe against bad drivers sung in a mock-operatic voice. The satire is in a Gilbert and Sullivan mode, but the opening line of the melody borrows heavily from Lerner and Loewe's *Get Me to the Church on Time*.

Except for Steve Marriott and Ronnie Lane's Traffic-era *Tin Soldier*, the rest of the songs are all Rundgren's. *Don't Hurt Yourself, Hideaway, and Influenza* are ballads; the last two are whiz-kid exercises, but *Don't Hurt Yourself* seems to be autobiographical. *Bang the Drum All Day, Drive, and Chant* are a little self-indulgent, but they are entertaining nonetheless. Along with all the dazzle, an element of mockery animates this album. Rundgren is erratic,



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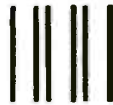
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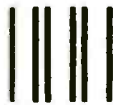
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to say the least, and when he makes the wrong choices he's awful, but when he's right there's no one else like him. He's right this time. J.V.

RECORDING OF SPECIAL MERIT

ROSALIE SORRELS: *Miscellaneous Abstract Record No. 1.* Rosalie Sorrels (vocals, guitar); instrumental accompaniment. *Ashes on the Sea; I'm Thinking Tonight of My Blue Eyes; Satisfied; The Cool Green Shores of Erin; If You Love Me; You've Got to Go to Sleep Alone; Foxy Devil;* and five others. GREEN LINNET SIF 1042 \$7.98.

Performance: **Infallible**
Recording: **Excellent, but . . .**

It's hard to fault Rosalie Sorrels for anything, and her stirring soprano, sensitive, romantic delivery, and considerable versatility are above reproach here as usual. On "Miscellaneous Abstract Record No. 1" Sorrels has chosen to present what she calls "my favorite songs to sing. . . . Each one brings back times, places and people I have cared for." When that means selections by Bruce "Utah" Phillips, Mississippi John Hurt, Patrick Sky, Malvina Reynolds, Hedy West, and Aunt Molly Jackson, as it does here, you have a heck of an album. But Sorrels has omitted the work of one of my favorite songwriters and poets, Rosalie herself, and a Rosalie Sorrels album without her own material is almost not a Rosalie Sorrels album at all! Still, she ought to be declared a National Treasure. Buyer beware, however: the left channel on side two of my copy fizzles out intermittently. A.N.

JOE STAMPLEY: *Backslidin'.* Joe Stampley (vocals); instrumental accompaniment. *Finding You; I'm Just Crazy Enough; Everything but the Lady; Poor Side of Town; It's Over; Southern Comfort;* and four others. EPIC FE 38364, © FET 38364, no list price.

Performance: **Uptown honk**
Recording: **Could be crisper**

From as far back as his rock-'n'-roll days with the Uniques, Joe Stampley has always had a winning way with a song. As affable and outgoing as a glad-handing politician, Stampley usually sounds as if he's really enjoying himself. But for all the energy and raw emotion he packs into those honkytonk and cheatin' songs he does so convincingly, Stampley says that twelve years into his career as a country singer he's still "the biggest unknown act in country music." I don't know that that's quite true, but I do know what he's getting at. He's very competent at what he does, has a steadfast following, and shows up on every back-bar jukebox in the South. That's about it, though, mostly because he's never had a big crossover hit.

I suspect Stampley's out to change all that, because "Backslidin'" turns away from his good-ol'-boy, fish-bait image for something a little more stylish. There's nary a cheatin' or drinkin' song here, and producer Ray Baker has some of Nashville's crack studio musicians ride a finer line between country and pop than usual with Stampley, treating him less like a hard-core country singer than a Southern pop singer, à la Johnny Rivers, whose *Poor Side of*

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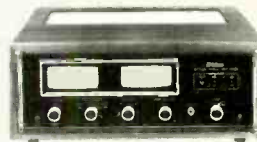
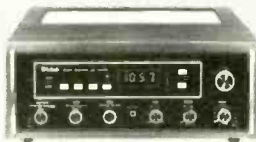


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Warner Bros. Records

The Philip Lynott Album: A Pop Masterpiece

PHILIP LYNOTT's new Warner Bros. album goes straight to the top of two of my lists: so far it's the year's most bizarre album and the year's biggest surprise. No one familiar with Lynott's work fronting

the British heavy-metal band Thin Lizzy could possibly have expected this kind of peculiar pop masterpiece. That's right, pop. Not rock. "The Philip Lynott Album" is a mad collision of styles—romantic ballads,

high-stepping barrelhouse rockers, New Wave, dub, Eurodisco, parody, you name it. And it works.

In the most nasal voice imaginable, Lynott sings over dubbed-in radio talk-show hosts (*Fatalistic Attitude*) or Bible-thumping evangelists (*Gino*), and he abruptly concludes an unapologetically sentimental love song, *Cathleen*, with "Now shut up and go to bed." He takes a sympathetic look at the small hurts in the day of an unhappy young schoolgirl (*Growing Up*), then segues into the arcade-game percussion and maniacal, pounding chorus of *Yellow Pearl* ("Attack, attack, attack, attack, / That's what we lack"). He does a devastating parody of Bob Dylan in *Ode to Liberty*—in which, backed by the languid, fluid guitar of Mark Knopfler, he calmly suggests that we should be spending more on nuclear arms. This is the most schizophrenic pop since Harry Nilsson. Needless to say, you'd be crazy to pass it up. —Mark Peel

PHILIP LYNOTT: *The Philip Lynott Album*. Philip Lynott (vocals, bass); vocal and instrumental accompaniment. *Fatalistic Attitude*; *The Man's a Fool*; *Old Town*; *Cathleen*; *Growing Up*; *Yellow Pearl*; *Together*; *Little Bit of Water*; *Ode to Liberty (The Protest Song)*; *Gino*; *Don't Talk About Me Baby*. WARNER BROS. 23745-1 \$8.98, © 23745-4 \$8.98.

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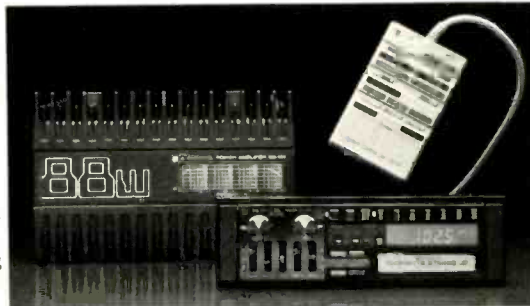
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CIRCLE NO. 12 ON READER SERVICE CARD

Town shows up at the very end of side one.

Actually, "Backslidin'" isn't that radical a departure, considering all the different types of songs Joe's recorded through the years. I do wish Baker had unplugged the Nashville String Machine in spots, but there's enough updated Sixties rock-'n'-roll here to keep it loose, and even something called *Everything but the Lady*, a pretty effective reading of male insecurities. *A.N.*

THOMPSON TWINS: *Side Kicks*. Thompson Twins (vocals and instrumentals); instrumental accompaniment. *Love on Your Side; Tears; Lies; We Are Detective; Love Lies Bleeding;* and five others. ARISTA AL 6607 \$6.98.

Performance: **Mannered**

Recording: **Good**

There is no more controversial style in popular music today than the technopop, a.k.a. synthpop a.k.a. electrobeat (no one can agree on a name for it), of such bands as Soft Cell, the Human League, Duran Duran, Yaz, and hundreds of others. It's "sophisticated" to some, "soulless" to others; it makes some people want to dance and it makes others wince.

The Thompson Twins are typical enough practitioners of synthesized pop, and their new album seems to exemplify the form in many ways, for better and worse. It features a heavy, eminently danceable disco beat, unfocused synthesizer fidgeting that ranges in tone from the cosmic to the flatulent, half sung, half intoned-through-the-nose lead

vocals and stagey, whispered call-and-response background vocals, an ad-jingle songwriting sensibility, and arbitrary conga breaks. In all honesty, this stuff is no more predictable or formulaic than, say, Delta blues. The problem for me is, the Thompsons just don't put any value on their own message. If they did, they wouldn't set lyrics like "my love lies bleeding" to such slight, mincing accompaniment. There may be a potent irony in putting a la-la-la-la chorus into the grim, Gary Numanesque *Kamikaze*, or it may be that the Thompson Twins can't decide whether they want to be serious or silly. In the end, this is music at war with itself. *M.P.*

RECORDING OF SPECIAL MERIT

DONNA WASHINGTON: *Just for You*. Donna Washington (vocals); vocal and instrumental accompaniment. *You Can't Hide from the Boogie; Where You Are Is Where I Wanna Be; I'm into You; Don't Be an Island; Do You Wanna, Huh?;* and three others. CAPITOL ST-12233 \$8.98, © 4XT-12233 \$8.98.

Performance: **Full-bodied**

Recording: **Good**

Although Donna Washington is no relation to the late Dinah Washington, she shares more than just the earlier singer's surname. Donna Washington has the same kind of affecting, full-bodied vocal lustiness that distinguished Dinah. Her uptempo numbers here are sharp and sassy, and on the more

intimate items she drives the lyrics home with intensity and finesse. Some of the credit should go to Chuck Jackson, who produced this set. He was a producer for Natalie Cole when her career was on the upswing, and a mighty fine job he did. He has showcased Donna Washington on this album with comparable care. A class act from background to center stage. *P.G.*

GROVER WASHINGTON, JR.: *The Best Is Yet to Come*. Grover Washington, Jr. (soprano and tenor saxophones, saxello); Ralph MacDonald (percussion); Eric Gale (guitar); Jon Faddis, Frank Wess, Alex Foster (horns); Patti LaBelle, Bobby McFerrin (vocals); other musicians. *Can You Dig It; The Best Is Yet to Come; More Than Meets the Eye; Things Are Getting Better;* and four others. ELEKTRA 60215-1 \$8.98, © 60215-4 \$8.98.

Performance: **Better than usual**

Recording: **Very good**

The easy-listening, jazz-flavored popular sounds of saxophonist Grover Washington, Jr., are often dismissed as little more than high-class Muzak. But he does come up with some delightful tunes.

On "The Best Is Yet to Come" he follows the pattern we have come to expect of him, laying his solo sax over conservatively tailored arrangements laced with the telltale rhythms of funk. But there are some interesting highlights here. The title selection features Patti LaBelle in an uncommonly subdued mood, teasing her way through a



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CIRCLE NO. 13 ON READER SERVICE CARD

melody that just seems to ooze into a cozy corner of the heart. Then, when she seems unable to contain herself any longer, she starts a long slide up toward a high note with Washington's horn in close pursuit. Arranged by its co-producers, Washington and Dexter Wansel, the song is sweet and right for LaBelle and all concerned. Another highlight is the vocal work of the formidably talented Bobby McFerrin on *Things Are Getting Better*. Otherwise this predominantly instrumental set is softly romantic and intimate. Easy listening, yes, but enormously appealing. P.G.

MARTI WEBB: *Won't Change Places.* Marti Webb (vocals); orchestra. *All I Am*;

Masquerade; Angry and Sore; I've Been in Love Too Long; Don't; I Guess I'll Miss the Man; and four others. POLYDOR 2442-186 \$13.98, © 3184 149 \$13.98 (from International Book and Record Distributors, 40-11 24th Street, Long Island City, N.Y. 11101).

Performance: **Show time!**
Recording: **Excellent**

Marti Webb has been appearing on the London stage since the early Sixties and until recently was starring in Andrew Lloyd Webber's West End hit *Song and Dance*. She has one of those big, belting theater voices that probably can be heard in the last row without amplification. On records, at

least on this record, she tends to overacting dramatically, and make a lot of grand musical gestures that come off as slightly hammy. At times she is very impressive, as in her performances here of *Don't Cry for Me, Argentina* from Lloyd Webber's *Evita* or Rod Argent's *Angry and Sore*, where she is strident and impassioned. But ten bands of high-tension, high-decibel, all-stops-out performing are about five too many for any recording artist. Even Streisand gives herself, and her listeners, a few quiet spots on her albums. The production on this one, however, is by Lloyd Webber himself and is up to his usual standard—an exceedingly high standard by anyone's measure. P.R.

MARGARET WHITING: *Come a Little Closer.* Margaret Whiting (vocals); instrumental accompaniment. *The Gentleman Is a Dope; Come a Little Closer; I Get a Kick Out of You; I'd Rather Leave While I'm in Love; Hard Hearted Hannah*; and eight others. AUDIOPHILE AP-173 \$7.98.

Performance: **Smoothly professional**
Recording: **Good**

This is a super-smooth outing by one of the great pros of the record industry, Margaret Whiting. Whiting's been around since the late Forties, but you'd never know it from the astonishingly fresh sound of her voice. She still displays the same wonderful intonation and diction that always made her singing—of anything—somewhat special. Her best track here is Peter Allen and Carole Bayer Sager's *I'd Rather Leave While I'm in Love*, in which she builds a strongly dramatic line. The only quibble I have is with the somewhat eccentric arrangements by Hubert Arnold. Sometimes they add interest to a classic such as *Hard Hearted Hannah*, but other times they can ruin one, as in an *I Get a Kick Out of You* that sounds disconcertingly melancholy. P.R.

ROBERT WINTERS AND FALL: *L-O-V-E.* Robert Winters (vocals, keyboards); Fall (vocals and instrumentals). *Lady; Dancin' Lady; I Love You Mom; Lock Me Up*; and four others. CASABLANCA NBLP 7275 \$8.98, © NBL5 7275 \$8.98.

Performance: **Clear reflections**
Recording: **Very good**

Robert Winters is a musical chameleon. He moves smoothly through a familiar repertoire and easily manages to assimilate the colors of the original versions. He seems to have an affinity for material by Allen Toussaint and Lionel Richie, but if he favors any one artist, it is Al Green, whom he imitates to perfection on the title tune. His keyboard playing is unexceptional, but the man can sing, he has surrounded himself with musicians, back-up singers, and arrangers of obvious talent, and, with one exception, he has picked pleasant tunes. The exception is a dreadful, drippingly sentimental bit of mother-worship called *I Love You Mom*. I would like to hear more from Winters, but I wish he would hire a producer with imagination and stop leaning so heavily on the past accomplishments and triumphs of his better-known colleagues. C.A.

NEIL YOUNG: *Trans.* Neil Young (vocals, guitars, synthesizers); instrumental accom-



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CIRCLE NO. 21 ON READER SERVICE CARD

paniment. *Little Thing Called Love*; *If You Got Love*; *Computer Age*; *We R in Control*; *Transformer Man*; *Computer Cowboy* (aka *Skycrusher*); and four others. GEFEN GHS 2018 \$8.98, © M5 2018 \$8.98.

Performance: **Electro-bozo**
Recording: **Good**

I don't know quite what to make of this, the first product of Neil Young's new fascination with certain electronic instruments more commonly associated with bands comprising young English art-school grads in Frankie Avalon hairdos and oversize coats. But, then again, one is not supposed to know what to make of it; it's Young's latest alienate-your-audience-effort, which is okay by me. Better to burn out than to fade away, I suppose.

What Young is saying here, if I read him right, is that the Computer Age (the title of one of the best songs here) is a *fait accompli*, that his various inexpensive synthesizers and Vocoders and drum machines and four-track tape decks are by now the contemporary equivalents of the acoustic guitar—folk instruments. It makes sense, actually, especially since most of the stuff here does strike a balance between the homespun and the machine-tooled, between the organic and the synthetic. My only problem is that a lot of it sounds like Fifties sci-fi kitsch. There *are* some terrific songs underneath the space-age packaging, and almost everything works at least as a novelty. And the concluding *Like an Inca*, done with more or less traditional instrumentation, is as genuinely moving and mysterious as anything Young has ever written.

I've said it before, and I'll say it again: Neil Young may be a bozo, but he's such a *great* bozo. S.S.

COLLECTIONS

DR. DEMENTO: *Demento's Mementos*. Dr. Demento with Barnes & Barnes: *Doctor of Dementia*. The Other Half: *Smut*. Showdown: *The Rodeo Song*. The Three Stooges: *The Alphabet Song*. Dickie Goodman: *Harry's Jockstrap*. Gary Muller: *My Name Is Not Merv Griffin*. Steve Lisenby: *Swedish Western*. Travesty Ltd.: *Rock and Roll Doctor*. And eight others. ECCENTRIC PVC 8912 \$8.98 (from Jem Records, P.O. Box 362, South Plainfield, N.J. 07080).

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

Dr. Demento, the syndicated Los Angeles radio-show host and collector of screwball ditties, here presents his third treasury of recorded musical warts. Some of them are genuinely funny, nearly all of them are splendidly vulgar, and only a few of them are merely juvenile. Of the sixteen selections I laughed most and loudest at *Swedish Western* (a Polish joke in a Scandinavian setting), *Rock and Roll Doctor* (a phone-in talk show for junkies), and *My Wife Left Town with a Banana* (...). Two other items here are historically interesting. Dickie Goodman, who has had a long career with novelty hits (*Flying Saucer*, *Mr. Jaws*), is represented by *Harry's Jockstrap*, from a 1963 album. The Three Stooges first sang *The Alphabet Song* in a 1938 short; the version here is from around 1959, during the Stooges' comeback period.

I recommend "Demento's Mementos" for times when you've had it with everything and everybody. J.V.

THE KIDS FROM "FAME": *Songs*. Erica Gimpel: *Be Your Own Hero*; *Bet Your Life It's Me*. Debbie Allen: *Body Language*; *Dancing Endlessly*. Gene Anthony Ray: *Lay Back and Be Cool*; *Mannequin*. And five others. RCA AFL1-4525 \$8.98, © AFK1-4525 \$8.98.

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

Fame is a TV series (derived from the movie of the same name) about students at New York's High School of Performing

Arts. This is the second album it has spawned. The tone is set by Erica Gimpel's solo numbers, *Be Your Own Hero* and *Bet Your Life It's Me*. These are supposed to be rousers loaded with brash charm, but they have about the same effect as your neighbor's eight-year-old daughter essaying *I've Gotta Be Me* at the church talent contest. The other cast members croon, preen, and prowl through dubious ditties that are meant to be fetching and aren't. The instrumentals, including Lori Singer's cello and Lee Curreri's keyboards, are professional and peppy, but everyone concerned sounds a bit too precious. J.V.

(Continued on next page)

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JAZZ



RECORDING OF SPECIAL MERIT

JACKIE CAIN AND ROY KRAL: *A Stephen Sondheim Collection*. Jackie Cain (vocals); Roy Kral (vocals, piano); Paul Johnson (vibraphone); Dean Johnson (bass); Steve Bagby (drums). *Barcelona; Love Is in the Air; I Remember; I Do Like You; Send In the Clowns*; and nine others. FINESSE FW 38324 \$8.98, © FWT 38324 \$8.98.

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

Recorded in performance at Michael's Pub, a New York restaurant/night club that features some of the best impromptu jam sessions in jazz, this album is a complete and civilized delight. In it Jackie Cain and Roy Kral run through fourteen songs from the Stephen Sondheim catalog. Not only are these real *Sondheim* performances—acerbic, intelligent, and moodily lyrical—they are exemplary exercises in the art of popular singing.

The rarest beauty here is a performance of *Anyone Can Whistle*, the title song from a show that was decades ahead of its time when it appeared on Broadway in the early Sixties. The most interesting discovery is the theme song Sondheim wrote for the French film *Stavisky*. The production, by Ken Glancy, is as graceful and literate as the music and the performers. A joy. *P.R.*

JUDY CARMICHAEL: *Two-Handed Stride*. Judy Carmichael (piano); Marshall Royal (alto saxophone); Freddie Greene (guitar); Red Callender (bass); Harold Jones (drums). *Christopher Columbus; Viper's Drag; Ja-Da; Honeysuckle Rose; Ain't Misbehavin'*; and three others. PROGRESSIVE PRO 7065 \$8.98, © C 7065 \$8.98.

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

Stride piano played by a woman? Sure—especially if she's as good as Judy Carmichael. Carmichael's interest in stride began at age twenty when she heard records by James P. Johnson, his protégé Fats Waller, and Waller's sometime pupil Count Basie. Captivated by the music, she learned from their records, and here she plays with grace and gusto on a sparkling stride album of her own.

Among Carmichael's admirers are guitarist Freddie Greene and drummer Harold Jones, both Basie alumni, who join her on "Two-Handed Stride" along with bassist Red Callender and alto saxophonist Mar-

shall Royal. The selections are from the Waller repertoire. *Viper's Drag* and *Handful of Keys* are Carmichael showpieces, but the lead on *Ja-Da* is given to Royal. Both of them play with a Waller-like sense of humor. Royal is the perfect complementary lead; his phrasing reminds me of that overlooked sax master Frankie Trumbauer. As proof of Carmichael's appeal, I cite the testimony of a fifteen-year-old young man devoted to television, mayhem, and Elvis who loudly protested my playing "that old stuff." By the time he had listened to the album all the way through, though, he nodded sagely and declared, "That's good." I celebrated his developing taste by increasing his allowance. *J.V.*

RECORDING OF SPECIAL MERIT

RICKY FORD: *Interpretations*. Ricky Ford (tenor saxophone); Wallace Roney (trumpet); Robert Watson (alto saxophone); John Hicks (piano); Walter Booker (bass); Jimmy Cobb (drums). *Moon Mist; Dexter; Lady A; Bostonova*; and three others. MUSE MR 5275 \$9.98.

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

There are no gimmicks on this new quartet/sextet album from tenor saxophonist Ricky Ford. No one strokes the piano strings with a bottle of Rothschild's finest, the only electronic buttons pushed are the ones on engineer Rudy Van Gelder's recording equipment, and there is no trace of an imported

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aspiring warbler. This record simply offers plenty of good music. On second thought, make that *superb* music of the tried and true kind. Ricky Ford, better than ever, is joined by a first-class rhythm section and, on three selections, two young horn players from the current Art Blakey Jazz Messengers group. Blakey has an extraordinary track record as discoverer of fresh, vital talent, and these young men, trumpeter Wallace Roney and alto saxophonist Robert Watson, virtually soar here. In sum, "Interpretations" is a remarkable, driving, right-on-target album that features musicians of two generations making music that will appeal to jazz enthusiasts of any generation.

C.A.

RECORDING OF SPECIAL MERIT

BENNY GOODMAN: *Seven Come Eleven.* Benny Goodman (clarinet); Bucky Pizzarelli, George Benson (guitar); Hank Jones, John Bunch (piano); Milt Hinton, Ron Carter, Slam Stewart (bass); Grady Tate (drums); Joe Venuti (violin); Urbie Green, Al Grey (trombone); Peter Appleyard (vibraphone). *Alone Together; I Cover the Waterfront; Seven Come Eleven; Limehouse Blues; Slipped Disc; And the Angels Sing;* and five others. COLUMBIA FC 38265, © FCT 38265, no list price.

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

Here are eleven tracks recorded in 1975 but only recently approved for release by Benny

Goodman. He and his all-star crew (not everyone listed above plays on every cut; there were four recording sessions using varying personnel) are in exceptionally fine and mellow form in this program of standards. There are no surprises—unless you are still surprised by the youthful vitality of Goodman's attacks on the material and his fervid solos—but then who would want surprises from an artist who created his own sure style so many years ago? Special treat: a performance of *Limehouse Blues* that radiates virtuosity and musicianship. P.R.

RECORDING OF SPECIAL MERIT

LEE KONITZ AND WARNE MARSH. Lee Konitz (alto saxophone); Warne Marsh (tenor saxophone); Billy Bauer (guitar); Sal Mosca, Ronnie Ball (piano); Oscar Pettiford (bass); Kenny Clarke (drums). *Background Music; Donna Lee; I Can't Get Started; Don't Squawk;* and four others. ATLANTIC/JAZZLORE © 90050-1 \$8.98.

Performance: **Enduring**
Recording: **Very good mono**

This reissue of a 1955 album (originally Atlantic 1217) features the top graduates of the Lennie Tristano school of cool, stream-of-consciousness jazz. That alone makes it noteworthy, but there is also a marvelous rhythmic element here in the work of Oscar Pettiford and Kenny Clarke, who would eventually take up residence in Europe and help shape the direction of Continental jazz.

At the time of the album's original release, many jazz fans still found it difficult to accept the frosty currents of the Tristano sound, but when Ornette Coleman hit the scene with *his* concept of jazz four years later, what once seemed too cool suddenly seemed warmer, even downright traditional. If there is now such a thing as a Tristano tradition, this Lee Konitz/Warne Marsh album captures the very core of it. You certainly don't have to be adventurous to appreciate the sophistication and beauty of this music. C.A.

RECORDING OF SPECIAL MERIT

SUSAN LA MARCHE: *Vamp 'Til Ready.* Susan La Marche (vocals); Waldo's Gutbucket Syncopators (instrumentals). *That's What I Call Sweet Music; Minnie the Moocher's Wedding Day; My Daddy Rocks Me; I Got It, but It Don't Do Me No Good; I Got What It Takes (But It Breaks My Heart to Give It Away); Sweet Man;* and five others. STOMP OFF S.O.S. 1032 \$8.98 (from Stomp Off Records, 549 Fairview Terrace, York, Pa. 17403).

Performance: **Catchy**
Recording: **Excellent**

If you are turned on by the early camping of Cab Calloway, the cute harmonizing of the Boswell Sisters, and the hot, firm rhythms of Armstrong's Hot Five, you will be pleased to find elements of all three in an album called "Vamp 'Til Ready." It is a delightful medley of past moods captured by

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Susan La Marche, who obviously feels the Twenties spirit as strongly as Waldo's Gutbucket Syncopators do.

I guess what I like most about this album is its originality. Sure, it contains the aforementioned familiar ingredients, but La Marche and Terry Waldo's band never resort to note-for-note re-creation. Thus *I Got What It Takes* bears little resemblance to the famous Bessie Smith rendition of that song, and I guarantee you have never heard anyone perform *Blues My Naughty Sweetie Gives to Me* or *Minnie the Moocher's Wedding Day* quite like this. La Marche's voice can cut through a roomful of loudmouths when she wants it to, but she can also sing with a cat's purr, and in any mode her approach is strictly her own. Waldo's men are equally versatile; I defy anyone to sit still as they romp through such numbers as *Wa Wa Wa* and *Sweet Man*. C.A.

JOHN McLAUGHLIN: *Music Spoken Here* (see Best of the Month, page 64)

RECORDING OF SPECIAL MERIT

ROSE MURPHY. Rose Murphy (vocals, piano). *Mandy Is Two*; *Time on My Hands*; *I Can't Give You Anything but Love*; *Cochette*; *Jim*; and seven others. AUDIOPHILE © AP-70 \$8.98.

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

"Way back when, in the late Forties, Rose "Chee-Chee" Murphy was a funny and ex-

pertly manipulative performer. (She can still break up the joint today, as she does in her performances at the Cookery in New York City.) On this disc of her old recordings, she sounds like a cross between a lascivious Butterfly McQueen, especially in her great hit *I Can't Give You Anything but Love*, and Blossom Dearie on speed. Her sly delivery, rollicking piano, and solid musicianship are all very much in evidence. She never overplays, just keeps on jabbing it to you when you least expect it. And, like all good actresses, she knows when enough is enough. Lots of fun. P.R.

PHAROAH SANDERS: *Live*. Pharoah Sanders (tenor saxophone, vocals); John Hicks (piano); Walter Booker (bass); Idris Muhammad (drums). *You've Got to Have Freedom*; *Easy to Remember*; *Blues for Santa Cruz*; *Pharomba*. THERESA TR 116 \$8.98 (from Theresa Records, P.O. Box 1267, El Cerrito, Calif. 94530).

Performance: **Pleasant surprise**
Recording: **Good remotes**

Tenor saxophonist Pharoah Sanders has never been a favorite of mine. In fact, I have heard him take his instrument through some of the most unmusical passages this side of a skidding automobile. On "Live," recorded during two California club dates (presumably last year), there is no evidence that Sanders has cleaned up his tone, but he somehow sounds a lot more agreeable. This is, with one exception, a good exercise in jazz improvisation and ensemble playing, a

rousing, rhythmic celebration of creativity. The track that breaks the spell is *Easy to Remember*, a not so memorable display of Sanders's inability to caress a ballad. It is unfortunate that the superb quality of the opening track, *You've Got to Have Freedom*, could not have been sustained, but the album cooks throughout the second side.

Sanders is not in Dexter Gordon's league, but he has spirit and guts, and now even his crudest utterings capture the essence of the jazz tradition. The rest of the quartet—John Hicks, Walter Booker, and Idris Muhammad—propel the proceedings superbly, and when Sanders lends a vocal to their efforts it fairly drips with vintage dew. C.A.

RECORDING OF SPECIAL MERIT

BOB WILBER AND THE BECHET LEGACY: *On the Road*. Bob Wilber (clarinet, soprano saxophone); Glenn Zottola (trumpet); Mike Peters (guitar, banjo); Mark Shane (piano); Len Skeat (bass); Butch Miles (drums); Joanne Horton (vocals). *Lady Be Good*; *Georgia Cabin*; *What a Dream*; *I Keep Calling Your Name*; *Polka Dot Stomp*; *Egyptian Fantasy*; *Love for Sale*; and five others. BODESWELL BW 105 \$8.98 (from Bodeswell Records, P.O. Box 624, Brewster, Mass. 02631).

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

Beautifully recorded in England, this latest session by Bob Wilber and his group, the (Continued on page 98)

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Elena Carminali/Soul Note Records

Jaki Byard

AMONG pianist Jaki Byard's many assets is his scope. Byard clearly refuses to restrict himself to any particular genre or period, and his performances tend to become keyboard explorations that transport the listener across the many stylistic borders of jazz—and, indeed, beyond its outer limits. I have never felt cheated when listening to Byard play, for I cannot recall ever hearing a routine performance from him. Most players experience moments of ennui when they lapse into some well-worn groove while the creative process is temporarily frozen; some hide these stoppages with the skill of master illusionists, but if Byard has ever tried to pass a copy off as an original, it was not within *my* hearing range. He appears to be so filled with curiosity and ideas that well-beaten paths simply do not fit into his itinerary.

Not that Byard avoids familiar material. On the contrary, no tune seems to be beyond his reach, as witness the varied fare on "To Them—To Us," his two-year-old Soul Note solo album recently imported from Italy by PolyGram. On it he breezes through as eclectic a program as you will

ever find: a couple of Ellington standards; *Ode to Billy Joe*, the 1967 Bobbie Gentry hit; a Stevie Wonder tune, *Send One Your Love*; the old New Orleans Rhythm Kings standard *Tin Roof Blues*; Chuck Mangione's dreadful *Land of Make Believe*; and three very characteristic pieces of Byard's own. Actually, it is all very original because Byard so shapes the tunes that even songs you hate become performances you love. You will recognize the familiar melodies and flashes of influences (such as Art Tatum), but mostly you will recognize that here is a very talented, highly original musician/composer who deserves much more exposure than he is getting. It is sadly significant that this album of American music comes to us from Europe.

—Chris Albertson

JAKI BYARD: *To Them—To Us*. Jaki Byard (piano). *Ode to Billy Joe*; *Tin Roof Blues*; *Solitude*; *Send One Your Love*; *Bl + Wh = 88*; *To Them—To Us*; *Land of Make Believe*; *Caravan*; *Excerpts from Trumpet Concerto*. SOUL NOTE SN 1025 \$9.98.

Bechet Legacy, evokes the spirit of Wilber's mentor, the great Sidney Bechet, in a program that is alternately frisky and moody but always exciting.

Wilber is not a Bechet imitator; he has his own ideas, but a certain amount of influence is evident. That's all to the good, since Wilber's intent is to acquaint new audiences with Bechet's musical thinking, and most of the group's repertoire is taken from Bechet's prolific output. There's no doubt that Bechet was extraordinarily gifted as a musician and as a composer. Wilber's success in displaying Bechet's talents is so marked that I found myself somewhat less satisfied by the five numbers here *not* by

Bechet, even the surefire material by George Gershwin and Cole Porter.

The knockouts on this session are *I Keep Calling Your Name* and *Egyptian Fantasy*, the former a sensitive ballad and the latter a mini-concerto. Joanne "Pug" Horton, who produced, contributes smooth vocals on *Ghost of the Blues* and *Santa Claus Blues* despite the turgid and sappy Twenties lyrics, for which Bechet was not responsible. The group has an agile, enthusiastic, and flexible rhythm section that springboards the solo flights by Wilber and the sensational young trumpeter Glenn Zottola, who plays in an exuberant, Louis Armstrong style. Sidney would be proud.

J.V.

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