How to Choose a Cassette Deck
How to Make Better Tape Recordings
How to Evaluate Frequency Response

Equipment Test Reports
- Revox B710 MkII Cassette Deck
- IMF Professional Monitor Speaker System
- Harman Kardon CD91 Cassette Deck
- AudioSource EQ-One Graphic Equalizer/Analyzer
- Dynavector DV10X Type 3 Phono Cartridge

Disc Specials:
- Donald Fagen
- Steve Van Zandt
- Arthur Blythe
- Johnny Cash
- Thelonious Monk
- Casino Lights
- Mozart's Requiem
- Purcell's Fairy Queen
- Rossini's Mose
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Now you can enjoy deep, tight bass response that goes the full distance. An 8" long-throw woofer and 10" passive radiator combine to deliver well-defined bass response you can "feel" as well as hear down to a solid 50 Hz. Our high-compliance 2" tweeter with acoustic lens produces a broad dispersion pattern and improves stereo imaging. Ferrofluid cooling increases power handling and helps provide exceptional high-frequency smoothness. A level control lets you adjust the tweeter output to suit your taste. We finished the enclosure in genuine walnut veneer (not plastic or vinyl), so it looks as great as it sounds.

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"The T-110's are a knockout—no wonder The Shack sells more speakers than anybody."
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Digital Slowdown, Undriven Drivers, A.C. Overload

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Against the Grain, Track Compatibility, Muted Highs, Signal Peaks

CAR STEREO: ROAD AND LAB TESTS
Bluempunkt CR-3001H

TECHNICAL TALK
Upgrading Your Stereo System—Part I

EQUIPMENT TEST REPORTS
Hirsch-Houck Laboratories test results on the Revox B710 MkII cassette deck,
IMF Professional Monitor speaker system, Harman Kardon CD91 cassette deck,
AudioSource EQ-One graphic equalizer/analyizer, and Dynavector DV10X

HOW TO CHOOSE A CASSETTE DECK
Deciding which features you really need

FREQUENCY RESPONSE
How to evaluate the specifications

HOW TO MAKE A GOOD CASSETTE RECORDING
A few simple rules for getting the best out of your equipment

THE BASIC REPERTOIRE
Recommended recordings of the orchestral essentials

BEST RECORDINGS OF THE MONTH
Schumann: Symphony No. 3 ("Rhenish")
Donald Fagen: "The Nightfly"

CLASSICAL MUSIC
Mozart: Requiem; Other Sacred Works
Rameau: Anaéron

POPULAR MUSIC
Arthur Blythe Quintet: "Elaborations"
"The Adventures of Johnny Cash"
Thelonious Monk

Music

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Buff Stuff from TDK.

You, the audiophile, are the toughest critic we know when it comes to sound performance. You're very selective in deciding the perfect equipment for your recording and listening needs.

And you're just as selective in choosing your recording tape. TDK knows that. So we developed a line of high performance audio cassettes that meet your critical requirements.

We call it the TDK Professional Reference Series.

You're probably using TDK SA-X high bias cassettes now because of their superior performance characteristics. In addition, TDK has developed normal bias AD-X which uses TDK's famous Avilyn particle formulation and delivers a wider dynamic range with far less distortion than ever before. Plus, TDK's unique metal bias MA-R cassette which features high-energy performance in a one-of-a-kind unibody die-cast metal frame.

The TDK Professional Reference Series...it'll sound impressive to your ears. So share the pleasure with your friends; they'll appreciate it.
CES NEWS FLASH: As we went to press, the Winter Consumer Electronics Show was just closing its doors....The Beta format VCR manufacturers, Aiwa, Sanyo, Marantz, NEC, Sony, Teknika, Toshiba, Sears, and Zenith, introduced Beta hi-fi with an 80-dB S/N and flat frequency response....Also, Nakamichi and Pioneer joined the Beta group.... Carver is developing an add-on car stereo noise-reduction box based on the TX-11 tuner....Jensen demonstrated an audio-video receiver with a decoder that extracts four channels from a Dolby surround-sound movie track....The full CES wrap-up will be in our next issue.

WAGNER ON THE TUBE. Texaco's Live from the Met series on PBS continues this month with Tannhäuser on March 28 at 8 p.m. The title role will be sung by Richard Cassilly. Others in the cast include Eva Marton, Bernd Weikl, Tatiana Troyanos, and John Macurdy. James Levine will conduct. Stereo simulcast will be available in some cities. Check local stations.

PRICE CUTS on records and tapes continue, one of the most sweeping being the $2 knock-down on over 1,000 titles in the Warner/Elektra/Atlantic catalog. The new list price for these LP's and cassettes, all in release for a year or more, is $6.98, down from $8.98....Even more drastic is the $2 cut on all product by WEA's Australian subsidiary to combat the "cancer" of home taping....The classical Arabesque label has dropped the price on both its analog and digital LP's to $7.98.

AM STEREO UPDATE: Sansui is introducing a car stereo, Model ST-7, that receives and processes all four types of AM stereo broadcasts. It should be available before June. No price has been set....National Semiconductor will supply integrated circuits that decode Magnavox AM stereo broadcasts to fourteen electronics manufacturers in Hong Kong, Taiwan, and South Korea. Most of these companies produce radios that are sold as "house brands" in this country. Products will be on the shelves by early summer. At present, only WOWO in Fort Wayne, Indiana, is broadcasting using the Magnavox system....Jensen has announced its preference, after testing all the AM stereo systems, for the one developed by the Harris Corporation.

COUGAR TRACKS: The tally is in, and the best-selling album of 1982 was John Cougar's "American Fool" on Riva/PolyGram. The album's sales of 2.5 million beat out its nearest competitor, Asia's debut LP on the Geffen label, by 500,000 copies.

VIDEO GAMES FOR AUDIOPHILES. Future Pac-Man addicts may know the end is near when they can hear the monsters breathing down their necks. A company called Ultravision has developed a video game with a built-in two-speaker sound system that "enhances special effects such as reverberation, time delay, and echo." Frequency response, stereo separation, signal-to-noise ratio, and similar specifications have not been revealed.

TECH NOTES: Stereo TV has suffered a setback. One of the three contenders, Telesonics, has questioned the testing procedures used by the Electronics Industries Association. The EIA is now revising the tests and hopes to finish testing by midsummer. There is concern in the industry that the FCC will not wait for the EIA to recommend a stereo TV system and will make a "free-market" decision similar to last year's AM stereo ruling, which allowed any system that didn't affect standard broadcasts....Harman International, the parent company of JBL, has bought Infinity Systems. The two loudspeaker companies will retain their separate design, engineering, and management organizations....French electronics giant Thomson-Brandt (Dual, Nordmende, and Saba) is negotiating to buy a controlling interest in Grundig A.G. of West Germany. Thomson officials, it is reported, have said the combination would be able to compete successfully with the Japanese consumer electronics companies.
I n 1879 the French composer Emmanuel Chabrier went to Munich with friends to attend a performance of Wagner's Tristan und Isolde. It was Chabrier's first Tristan, and when the music began he started to cry so noisily that one of his companions asked whether he was sick. Chabrier replied that he was quite well and said, "It's just that I've had to wait ten years to hear that A in the cellos."

Back then Wagner's influence on Parisian artistic circles was so strong that French cultural chauvinists feared for the survival of pure French music. After the era of Debussy and Ravel, it's hard to understand how French intellectuals of the 1880's got so worked up about Wagner. The electronic means of reproducing music have given us easy access to all of them. There are five stereo recordings of Tristan und Isolde now available, and another from Philips is among the Wagnerian releases scheduled for this year.

For me the greatest event in the tenth anniversary season of Exxon's Great Performances series on PBS is the telecast now being shown of Wagner's monumental four-opera cycle The Ring of the Nibelung. This performance of the Ring, taped at the Bayreuth Festival, was shown in England last fall in ten weekly installments. According to our London Editor, Henry Pleasants, its success was due at least in part to the impression made by "M". Are executives at PBS and Exxon afraid that American culture is too fragile to sustain the impact of a complete Ring in one week?

The French no longer worry about Wagnerian imperialism, but the current French minister of culture, Jack Lang, has called for resistance to cultural influences from the United States and the bombardment of images from the audio/visual industry. He's probably worried about video games and the fallout from such movies as E.T., the Extra-Terrestrial or Star Wars and The Empire Strikes Back.

John Williams, who composed the scores for those movies, once told me that if Wagner were alive today he'd be a film composer. And come to think of it, there are certain mythic similarities between the Ring and the Star Wars cycle of movies.

If Lang is really worked up about the impact on French cultural life of the audio/video software generated by such movies as Star Wars, I would remind him that this year the same industry will bring the music of Wagner to more people than could have heard it during his lifetime. Also, the TV Ring we are seeing was produced by one Frenchman, Patrice Chereau, and conducted by another, Pierre Boulez. If French artists can control all of Wagner's gods and monsters, in time they may surely manage to subdue Luke Skywalker and Darth Vader.

But watch out! The audio/video industry will get a big boost on May 27 when Revenge of the Jedi has its world premiere. It's the third film in the Star Wars cycle, and we've all had to wait three years for that.
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We call it Audio + Video™. And it is home entertainment so extraordinary, so amazing, it will send shivers up your spine.

That's because Jensen Audio + Video is like nothing you've seen or heard before. You don't just sit and watch it...you experience it.

It begins with the heart of the system, the AVS-1500™ receiver. This single component combines a 133 channel, cable-ready video tuner. An AM/FM tuner. And a high power integrated amplifier. The AVS-1500 lets you do some truly amazing things. For example, with the press of a single button, you can control the audio and video elements of a stereo simulcast. And you can do it from across the room. Because the audio and video functions can be operated by wireless remote control.

Jensen Audio + Video also brings high fidelity sound to your favorite television programs and movies. Imagine the sound track from JAWS® with the same impact in your living room that it had in the theater.

Then there is the high resolution 25” video monitor. The color and clarity of its picture will make movies seem so real, you can almost smell the popcorn.

Since Jensen Audio + Video is a component system, you needn't buy it all at once. Start with the receiver and specially engineered video speakers. Use them with your current audio components and color television. Add the video monitor next. Or perhaps the stereo video recorder. Whatever suits your needs and your budget.

To really understand what we mean by “goose bumps,” you'll have to visit your Jensen Audio + Video retailer for a demonstration. See it. Feel it. Experience it.

For the location of the retailer nearest you, call us toll free at (800) 323-0707. In Illinois, call (312) 671-5680.

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Jensen introduces

goose bumps.
INTRODUCING THE SONY COMPACT DISC PLAYER.

The inventor of digital audio processing is pleased to raise the curtain on the CDP-101. Hailed by the discriminating ears at High Fidelity as "the most fundamental change in audio technology in more than eighty years."

There are compelling reasons for such applause.

The CDP-101, based on the world's first compact disc system co-developed by Sony and Philips of Holland, offers concert-hall freedom from distortion, wow, flutter, and other sonic gremlins. Plus an awesome dynamic range exceeding 90dB. To bring you the full beauty of Mahler or the Moody Blues as never before.

This highest of fidelity remains faithful, too. Because the digital discs are read by laser beam, there's none of the physical wear inevitable with tape or vinyl. While the CDP-101 ingeniously ignores scratches, dust, and fingerprints.

Equally ingenious, an infrared remote control even lets you select tracks without budging from your armchair. Yet for all its sophistication, the CDP-101 is thoroughly compatible with whatever sound system you now own.

We suggest you hear the CDP-101 soon. For a sound you can't believe, from the audio innovator you assuredly can.

SONY
THE ONE AND ONLY
Letters

Car Stereo

- I was glad to see the January feature comparing car stereos and hope to see more in the future. An important issue that was missed, however, was warranty protection. I would certainly choose a unit with a one- or two-year warranty over one with only ninety days, especially in view of the hourly rate for electronics repairs. I have yet to figure out why manufacturers can produce so-called "car receivers" that carry price tags like those of home receivers and yet give only ninety days to a year of warranty coverage—unless, of course, they're aware of just how much punishment their products can take, and for how long.

Richard D. Anderson
Dade City, Fla.

Jon Anderson

- Mark Peel's December review of Jon Anderson's "Animation" very predictably downgraded Anderson's voice, but the choice of words made my adrenalin flow. "Nails on a blackboard" more aptly describes such alleged singers as the vocalists in such bands as AC/DC, Rush, or Van Halen. It should have been applied to the trashy album that Mr. Peel reviewed in the same issue. I hope some day Mr. Peel wakes up and accepts Jon Anderson's crystal-clear vocal tone and exceptional range as a breath of fresh air among the current crop of undertalented commercial rockers.

Moreover, it doesn't require much familiarity with Anderson's songwriting to realize that Surrender, which Mr. Peel called "nails on a blackboard," is a considerable-au-
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Jon Anderson
Dade City, Fla.

Tape Tax Again

- I am seething at the January letter by Joseph A. Anicello regarding the proposed tax on blank tapes. Every record company seems to try to cheapen its product while shouting hosannas about its superiority. Only a very few, mostly foreign, put out quality records today. When I get a new record, the first thing I do (after cleaning it thoroughly, along with my stylus) is to zap it with a Zerostat and then dub it onto a cassette on the first playing. That way, from then on I can get all the frequencies I'm entitled to!

This may be another case in which whoever has the most money to support the politicians' campaigns will win, but we might defeat the tape-tax bill if we holler loud enough and strong enough. If they do put a tax on tape, the only recourse I see is to go to the black market or take up another hobby.

Edward J. Ludes
Mission Viejo, Calif.

SINatra's Credits

- I appreciated Peter Reilly's January review of the Tommy Dorsey/Frank Sinatra sessions recently rereleased on RCA, but I must advise Mr. Reilly to file under the "never quite believe everything anyone says in liner notes" category the bit about the

Letters
The genius of a music loving physicist was turned loose and the result is an elegant technology that substantially reduces the massive bulk, weight, and cost of high power audio amplifiers. Conventional amplifier power supplies are very costly and inefficient because they produce a constant high voltage level at all times—irrespective of the demands of the everchanging audio signal—even when there's no audio in the circuit at all!

In sharp contrast the M-400a's power supply is signal responsive and highly efficient. It produces exactly and only the power the amplifier section needs from moment to moment to carry the signal with complete accuracy and fidelity.

Once the crudeness of conventional power supplies was overcome, a wholly uncompromised signal path was designed: Fully complementary topology from input to output; the latest, fastest, highest current transistors; direct coupling; linear metalized film capacitors; precision laser trimmed resistors; vapor-deposited 24 Karat gold connectors; and finally, an output inductor whose corner frequency is almost a quarter of a megahertz.

Audition the Carver M-400a and hear the difference: transparency, openness, detail. Without the clipping, distortion, and constraint of lesser amplifiers. With Carver the pure sound of music can be, very affordably, yours.
Presenting High Bias II and the Ultimate Tape Guarantee.

Memorex presents High Bias II, a tape so extraordinary, we’re going to guarantee it forever.

We’ll guarantee life-like sound.

Extraordinarily flat frequency response at zero dB recording levels, combined with remarkably low noise levels, means music is captured live. Then Permapass™, our unique oxide-bonding process, locks each oxide particle—each musical detail—onto the tape. So music stays live. Not just the 1st play. Or the 1000th. But forever.

We’ll guarantee the cassette.

We’ve engineered every facet of our transport mechanism to protect the tape. Our waved-wafer improves tape wind. Silicone-treated rollers insure precise alignment and smooth, safe tape movement. To protect the tape and mechanism, we’ve surrounded them with a remarkable, cassette housing made rigid and strong by a mold design unique to Memorex.

We’ll guarantee them forever.

If you ever become dissatisfied with Memorex High Bias II, for any reason, simply mail the tape back and we’ll replace it free.
Come to where the flavor is.

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


Kings: 16 mg "tar," 1.0 mg nicotine
100's: 16 mg "tar,"
1.1 mg nicotine sv. per cigarette, FTC Report Dec.'81
Phase Linear Turntable
Has Graphite Tone Arm

Phase Linear's 8000A turntable features a polymer-graphite tangential-tracking tone arm driven by a direct-induction linear motor. Tracking error is sensed by an opto-electronic detector, and the tone arm is driven so that the error is corrected. The 12¼-inch platter is driven directly by a quartz-locked-PLL-controlled motor, whose Stable Hanging Rotor is said to eliminate "platter wobble." A double isolation suspension system minimizes acoustic feedback and susceptibility to vibration. All controls (power, 33/45, disc diameter, repeat, horizontal cueing, tone-arm lift, and start/stop) are accessible with the unit's dust cover closed.

Wow-and-flutter is given as less than 0.013 per cent (wrms); signal-to-noise ratio is greater than 78 dB (DIN-B). Speed deviation is less than 0.002 per cent, while speed drift is less than 0.00008 per cent per hour at 33⅓ rpm. The turntable reaches full speed in 0.6 seconds. Tone-arm length is 7½ inches. Headshell weight is 10.5 grams. The range of usable cartridge weights extends from 4 to 14.5 grams. The 8000A measures 19½ x 6 x 17½ inches and weighs 26½ pounds. Price: $650.

Circle 120 on reader service card

LofTech's All-in-One Audio Test Instrument

The LofTech TS-1 multipurpose audio test incorporates a sine-wave oscillator, a decibel meter, and a frequency counter in a single compact unit. A comprehensive instruction booklet included with the TS-1 shows how to use the unit for level calibration and adjustment of mixers and tape recorders, how to measure frequency response of recorders and other stereo components, and how to verify proper operating levels in an audio signal chain. Other capabilities covered in the manual include measuring impedance, troubleshooting loudspeakers, determining loudspeaker resonance frequencies, setting recorder bias and equalization, and measuring signal-to-noise ratios.

The sine-wave oscillator can be tuned from 15 to 30,000 Hz with an output-level accuracy of ±0.25 dB from 20 to 20,000 Hz. Distortion of the sine wave is 0.3 per cent maximum. Oscillator output level is adjustable between –70 and +18 dBV (0 dB = 0.775 volt). Output impedance is 50 ohms, unbalanced.

The decibel meter reads out in whole decibels on a numerical LED display over a range of –50 to +24 dBV. Meter accuracy is ±1 dB from 20 to 20,000 Hz. The 0-dB reference level can be changed from –10 to +8 dBV with a rear-panel control. The frequency-counter section, which measures frequencies from 1 Hz to 99.99 kHz, reads the output of the oscillator or an external frequency input. Frequency resolution is 1 Hz from 1 to 9,999 Hz and 10 Hz from 10 to 99.99 kHz; accuracy is ±1 count. Frequency-meter input level can be from –40 to +24 dBV.

All connections of the LofTech TS-1 are with ¼-inch two-conductor phone jacks. The test set measures 8 x 2½ x 6¼ inches and has a power requirement of 115 to 120 volts a.c. Price: $299. For the nearest dealer write Phoenix Audio Laboratory, Dept. SR, 91 Elm Street, Manchester, Conn. 06040.

Circle 121 on reader service card

(Continued next page)
Adcom Improves the GFA-1 Power Amplifier

- Adcom has introduced the GFA-1A stereo power amplifier as an improved version of its GFA-1. A sophisticated new fail-safe protection system assures safe operation under the most demanding conditions. The heart of the system is a real-time analog computer that continuously monitors circuit temperature, current, and voltage. Automatic shutdown results if a fault condition is detected. An integral two-speed fan cools the output transistors to maintain safe operation at high power levels. Peak-indicator lights alert the user to near-overload conditions. Like the GFA-1, the GFA-1A delivers 200 watts per channel into 8-ohms loads with less than 0.05 per cent total harmonic distortion from 20 to 20,000 Hz. Also like its predecessor, the GFA-1A employs a “balanced-bridge” output configuration. Price: $450.

Circle 123 on reader service card

JBL’s High-Performance Compact Loudspeaker

- As the most compact three-way model in JBL’s L Series of loudspeakers, the L86 shares the same midrange transducer and much of the technology of larger models in the series. The 1-inch dome radiator in the tweeter is driven by a 1-inch copper voice coil. The 5-inch midrange cone driver is said to handle program peaks with minimum distortion. The 8-inch bass driver utilizes a symmetrical-field magnetic structure for reduced second-harmonic distortion. The woofer cone is coated with Aquaplus, a special chemical that damps spurious cone resonances. The vertical arrangement of the drivers is said to assure a stable, centered image during playback. The enclosure is cut from 3/4-inch compressed wood and veneered in American black walnut. The brown cloth grille is removable.

Nominal impedance of the L86 is 8 ohms. Crossover frequencies are 800 and 3,700 Hz. Sensitivity is 88 dB sound-pressure level at 1 meter with a 1-watt input. Dimensions are 213/4 x 13 x 10 inches. Price: $295 each.

Circle 124 on reader service card

Sony Personal Tape Player Works As Car Stereo Unit

- Sony’s XRM-10 Music Shuttle is an in-dash AM/FM stereo receiver with a removable cassette player that becomes a separate personal portable tape player with headphones. The system is said to combine the security of removable car stereo with the flexibility of alternating car and portable use. The player alone weighs 11/4 pounds.

A touch of a button releases the cassette-player module from the in-dash receiver. A supplied battery pack, headphones, and carrying case convert the player into a portable stereo unit. The radio portion of the receiver will continue to function after the cassette module is removed. Each major component of the Music Shuttle can be purchased separately so that users can install extra receivers in a second car or other vehicle and shuttle the cassette module between them.

The receiver portion of the XRM-10 has four speaker outputs with built-in fader control and a system-EQ switch to tailor the response for a car. The tape player is a “metal-capable” unit with auto-reverse. The servo-controlled motor and flywheel assembly are said to minimize audible wow and flutter.

Tape-player specifications include a frequency response of 40 to 12,000 Hz ± 6 dB. Signal-to-noise ratio is 57 dB. Wow-and-flutter is 0.12 percent wrms. The tuner section’s 50-dB-quieting sensitivity is 20 dB. Capture ratio is 3 dB. Signal-to-noise ratio in stereo is 60 dB. The amplifier section is rated at 4 watts per channel into 4-ohm loads from 180 to 10,000 Hz with no more than 1.0 per cent total harmonic distortion. Maximum output power is 6 watts per channel. System EQ is +6 dB at 100 Hz and +3 dB at 10,000 Hz. Price: $379.95.

Circle 125 on reader service card

Supex’s High-Output Moving-Coil Cartridge

- According to Supex, the limitation of high-output moving-coil cartridges has traditionally been that the additional coil and armature material necessary to boost output compromised rise time and tracking ability. With the SDX-2000, Supex has used a unique coil-winding configuration together with high-energy samarium-cobalt magnets to increase cartridge output without increasing moving mass.

The SDX-2000’s boron-pipe cantilever is almost as rigid as one of diamond but has lower mass. The stylus is a line-contact grain-oriented diamond. Frequency response is given as 10 to 30,000 Hz ± 2 dB. Output voltage is 1.75 millivolts with a 3.54-cm/sec groove velocity; channel balance is ±0.5 dB at 1,000 Hz. Cartridge impedance is 78 ohms; recommended load resistance is 47,000 ohms. Compliance is given as 11 X 10^-6 cm/dyne. Recommended tracking force is 1.8 grams. Price: $500.

Circle 126 on reader service card

dbx Expander Has “Impact Restoration”

- The dbx 4BX remote-control dynamic-range expander incorporates an “impact restoration” circuit. The circuit was developed to bring greater impact to the audio signal, increasing the “punch” and immediacy of musical attacks by restoring the transients that are clipped, dulled, or muted during recording or broadcasting.

Offering up to 20 dB of dynamic-range expansion, the 4BX has separate expansion bands for high, middle, and low frequencies. A handheld remote wireless “Logicon” allows the user to set volume, expansion impact restoration, and transition levels. Vertical multisegment LED displays...
During the last fifteen years, we've made a lot of improvements on our Advent speakers. 137 to be exact. We've redesigned woofers and tweeters. Crossover networks and phase plates. Cabinets and mounting hardware. Even screws. But there's one thing we haven't changed. That's the value. The ability of an Advent speaker to out-perform many speakers that cost more. How? By making changes that sound good not just look good. While other speaker companies have spent their time adding all manner of dials, knobs and wild grilles, we've quietly gone about the business of perfecting the two-way speaker.

For example, our newest change is the Advent "Direct Report" tweeter. It is a parabolic rather than hemispheric design. And the special phase plate for the tweeter has been tapered to improve dispersion. Stereo Review liked it as much as we did. They said, "We cannot recall ever having measured a front-radiating dome tweeter whose dispersion equaled that of the new Advent design."

We think you'll agree with Stereo Review. The new tweeter is indeed exceptional. The change substantially improved the sound quality. But it hasn't substantially changed the price. You see, value has always been a part of the Advent legend. And that's something we haven't changed... never will.

For the location of the Advent dealer nearest you, call toll free 800-323-1566. (In Illinois call 800-942-0502.)
show the settings while four horizontal LED's indicate the amount of expansion taking place. A lighting control adjusts LED brightness. The rack-mountable device measures 3½ x 17½ x 12¼ inches. An optional wood side-panel kit will be available.

Maximum expansion ratio for each band is 1:5:1. Impact-restoration gain is 0 to +12 dB. Transition levels may be set between 30 and 300 millivolts. Frequency response at 1:1 expansion is 20 to 20,000 Hz ± 0.5 dB. Total harmonic distortion is less than 0.1 per cent; intermodulation distortion is at most 0.15 per cent. Overall dynamic range is 106 dB. Input impedance is 1 megohm; output impedance is 200 ohms. Price: "under $1,000."

Circle 127 on reader service card

R. G. Dynamics' TV-Sound Processor

☐ The R. G. Dynamics VC-1 Videoconic Stereo Phasor connects to most television sets and nearly all video recorders and processes the sound in three ways. A dynamic-range expander offers up to 15 dB of expansion to "restore and deliver the depth, fullness, impact and clarity" of the original production sound. A stereo-synthesis circuit provides two different stereo-synthesis functions. Three noise/hiss filter networks allow the user to adjust the noise reduction for any video source's characteristics. Distortion is no more than 0.12 per cent. TV-headphone input impedance is 1 kilohm; VCR-audio input impedance is 30 kilohms. Dimensions are 8½ x 8½ x 2½ inches. Price: $199. For more information call 800-323-3665 (in northeast Illinois call 312-673-7003). R. G. Dynamics, Dept. SR, 6440 North Ridgeway Avenue, Lincolnwood, Ill. 60645.

Circle 128 on reader service card

Cervin-Vega Speaker Is "Digital-Ready"

☐ Cervin-Vega's D-4 three-way floor-standing speaker system is said to meet the requirements of a digital playback system, including high phase accuracy, very low distortion, wide frequency response, rapid transient response, wide dynamic range, high efficiency, and high power-handling capability. The D-4 has a 10-inch high-out-put woofer in a cast-aluminum frame that crosses over at 700 Hz to a 6-inch midrange. This crosses over at 3,500 Hz to a 1-inch-voice-coil horn driver. Mid- and high-frequency level controls are provided as well as a high-frequency protective circuit breaker. The enclosure is a vented, direct-radiating design. The vinyl covering is available in either simulated oak or walnut pattern. Chocolate-brown grilles are provided with the oak cabinets, black grilles with the walnut. A pedestal base comes with each speaker.

Usable frequency response is given as 27 to 20,000 Hz. Minimum recommended amplifier power is 5 watts; maximum is 100 watts rms. The 6-ohm speaker will develop a 92-dB sound-pressure level at 1 meter with a 1-watt input. Maximum output is 112 dB SPL at 1 meter when driven at full power. Dimensions are 33½ x 14 x 10¼ inches. Price: $700 per pair.

Circle 129 on reader service card

Loran Improves Two Tape Formulations

☐ Loran has improved its High Bias Type I and Normal Bias Type I cassette tapes. Both tapes still come in Lexan cassette shells for stability and durability through a wide range of operating temperatures (-60 to +250 degrees F.). The new High Bias Type I1 has an increased maximum output level for greater headroom and increased output level at 10 kHz for a brighter high-end response. The new Normal Bias Type I also has a slightly elevated high-frequency response and improved high-frequency headroom. Loran says the 55.8-dB signal-to-noise ratio of its Normal Bias Type I "is the highest of any type-I tape on the market." The price of a C-90 tape of either type is $7.95.

Circle 130 on reader service card

Seven New Speakers From Infinity Systems

☐ Infinity Systems' new, lower-priced speakers all use polypropylene low-frequency drivers, and six of the seven models also use EMIT samarium-cobalt, etched-planar-diaphragm tweeters. The Infinity Reference Standard Models 5, IIIA, 6, and 4 (left to right in photo) all use a new polypropylene-dome midrange driver. The dome is driven around its entire periphery so that the voice coil can more accurately control diaphragm movement. This "PolyDome" driver is claimed to have very low distortion or coloration and very broad dispersion characteristics. "Diffraction distortion" from the build-up of out-of-phase diffracted sound waves on the front and sides of speaker cabinets is said to be reduced by the curved edges of the Reference Standard enclosures. Nominal impedance of the four speakers is given as "4 to 8 ohms."

The largest model, the Reference Standard IIIA, uses two 10-inch polypropylene woofers, a PolyDome midrange, and an EMIT tweeter. Frequency response is given as 35 to 32,000 Hz ± 3 dB. Recommended amplifier power is 50 to 200 watts per channel. Crossover frequencies are 600 and 4,000 Hz. Dimensions are 48 x 18 x 7½ inches. Price: $1,170 each. Other models in the line are the smaller RS7, RS8, and RS9, which range in price from $199 to $98.

Circle 131 on reader service card

Linn's Moderate-Priced Separate Tone Arm

☐ The Linn Basik LVX arm incorporates some of the features of the more expensive Linn Ittok arm. Like the Ittok, the LVX is a rigid, straight-tube arm with a massive main-pillar/horizontal-bearing assembly
If you're familiar with Maxell UD-XL tapes you probably find it hard to believe that any tape could give you higher performance.

But hearing is believing. And while we can't play our newest tape for you right here on this page, we can replay the comments of Audio Video Magazine.

"Those who thought it was impossible to improve on Maxell's UD-XL II were mistaken. The 1981 tape of the year award goes to Maxell XL II-S."

How does high bias XL II-S and our normal bias equivalent XL I-S give you such high performance? By engineering smaller and more uniformly shaped epitaxial oxide particles we were able to pack more into a given area of tape. Resulting in a higher maximum output level, improved signal-to-noise ratio and better frequency response.

To keep the particles from rubbing off on your recording heads Maxell XL-S also has an improved binder system. And to eliminate tape deformation, XL-S comes with our unique Quin-Lok Clamp/Hub Assembly to hold the leader firmly in place.

Of course, Maxell XL II-S and XL I-S carry a little higher price tag than lesser cassettes.

We think you'll find it a small price to pay for higher performance.
New Products

and close-tolerance, temperature-stable vertical bearings. The LVX departs from Littok design in that it has an all-black finish and a detachable headshell. To insure a rigid connection between the headshell and the arm tube, a C-shaped clamp is locked securely around the headshell by tightening an Allen set screw.

Effective length of the arm is 230 millimeters (mm); overall length is 284 mm; overhang is 18 mm. Necessary clearance behind the arm is 55 mm. Friction is given as less than 20 milligrams. The LVX accepts cartridges weighing from 2 to 10 grams with stylus forces of 0 to 3 grams. The arm comes with a medium-compliance, elliptical-stylus cartridge that tracks at 1.7 grams. Price: $199. Audiophile Systems Ltd., Dept. SR, 6842 Hawthorn Park Drive, Indianapolis, Ind. 46220.

Circle 132 on reader service card

Weather-Resistant Becker Car Speaker

The RCS 462 Radian-C-Series Poly Cone car speaker from Becker Electronics Products is available for $3 (refundable with first order) from Fiesta Arts, Inc., Dept. SR, Greenvale, N.Y. 11548.

Circle 133 on reader service card

Audio-Technica's Personal, Portable Record Player

Named “Mister Disc,” Audio-Technica’s AT770 personal, portable phono playback system contains turntable, tone arm, cartridge, headphone jack, and volume control in a package just over 11 inches long, 4 inches wide, and 2 1/2 inches high (folded for travel) weighing 2 1/2 pounds.

The unit comes with a dual-magnet phonograph cartridge with diamond stylus that plays standard LP’s and 45’s. It is powered by three self-contained C cells or by the optional AT652a a.c. adaptor. Although designed for headphone listening through a supplied pair of collapsible headphones, the unit has a standard headphone jack for use with other headphones as well as line-out jacks for playing a disc through any standard component system.

The turntable portion of the player (which supports a disc only at the label area) has a “platter” driven through a belt by a d.c. motor. A supplied rubber chuck doubles as an LP disc stabilizer and a spindle adapter for 45’s. A carrying pouch is also supplied. Price: $169.95.

Circle 136 on reader service card

Constant-Directivity Electro-Voice Speaker

Electro-Voice’s CD Series Types 35 and 35i speaker systems are designed to have controlled directionality. A “Direktor” assembly in front of the 1 1/2-inch dome midrange driver controls its output so that it matches the spatial coverage of the 12-inch woofer at the 1,500-Hz crossover frequency. A similar assembly is in front of the 1-inch Kevlar-diaphragm tweeter. Thus virtually every frequency is directed into a defined and sufficiently wide volume. This controlled spatial coverage, it is claimed, largely eliminates diffraction effects and optimizes the speaker interaction with the listening room.

Axial frequency response under anechoic, half-space conditions is said to be “essentially flat from 40 to 30,000 Hz.” The acoustic coverage zone is held to 100 degrees by selection of the woofer size, crossover frequencies, and “Direktor” geometries. System sensitivity is 92 dB sound-pressure level with a 1-watt input at 1 meter. Minimum impedance is 3 ohms (nominally 6 ohms). Dimensions are 21 1/4 x 12 3/4 x 10 1/2 inches.

The Type 35 is finished in an oak veneer; the Type 35i (shown) is finished in walnut. The speakers are essentially identical except that the Type 35i has a removable grille and an Automatic Power Sentinel driver-protection device. Both the Power Sentinel and the built-in speaker equalization controls are concealed behind the 35i’s roll-down antique-brass control cover.

Prices: Type 35, $650; Type 35i, $750.

Circle 135 on reader service card

Fiesta Arts Imports
Ricordi Opera Posters

Originally prepared for La Scala and painted in oil in the first decades of this century, eleven Art Nouveau posters announce such operas as Madama Butterfly, Tosca, Manon Lescaut, Turandot, Parsifal, La Bohème, and Adriana Lecouvreur. The posters measure 19 1/2 x 27 1/2 inches and are printed from archival stone matrices on heavy coated stock. Also available are other opera and popular-theater posters from the same era. Price: $10 each (plus 75¢ postage when ordered direct). A color brochure is available for $3 (refundable with first order) from Fiesta Arts, Inc., Dept. SR, Greenvale, N.Y. 11548.

Circle 134 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.
Introducing Inside-Out™ MS 100 headphones from Sennheiser.
If you thought you couldn't get the kind of lifelike musical reproduction
from your portable that you get from the finest home equipment,
prepare to think differently.

Most people who know audio know that Sennheiser's Open-Aire®
design delivers sound that clearly surpasses even the most expensive home
loudspeakers. It's unequalled in wide linear response, in transient ability, in
ultra lightweight comfort.

Now comes the breakthrough.

For the first time you can have headphones rugged and reliable
enough to bring you that same performance not only at home, but outdoors as well.

All thanks to the advanced electroacoustic technology that made
Sennheiser a legend among recording studio technicians, astronauts,
and audiophiles alike.

Of course, you'd expect Inside-Out headphones to cost more. But once
you go to your Sennheiser dealer and
put them on, you'll be so fascinated
you won't want to take them off.
Inside or out.
Audio Q. and A.

By Larry Klein

Technical Director Klein checks out the open-reel tape decks in the Sato Musen showroom in Tokyo

Digital Slowdown?

Q: Just when I thought the new digitally mastered analog records would overtax my speakers and woefully inadequate power amp, I am told by a dealer that they will also cause excessive drag on my ancient (five-year-old) turntable. How so?

K. HIGGINS Humboldt, Ariz.

A: Long before the advent of digitally mastered discs, I heard claims that some turntables slow down when playing loud musical material. The theory is that the increased groove-to-stylus friction brought on by extreme or rapid groove-wall excursions causes enough drag to slow down the turntable platter. It seems to me that it would be easy enough to test such a theory by using a calibrated disc with known test tones of increasing amplitudes, checking for frequency shift in the tones (because of turntable speed change) as they get louder.

Considering the torque and inertial forces operating on the turntable platter versus the intermittent rise in frictional drag between the groove and the stylus tip, I find it quite unlikely that an audible effect could occur with any modern turntable in good condition. In my view, your five-year-old turntable would rate as modern, although I don’t know its condition.

Incidentally, a tone-arm/cartridge combination whose resonant frequency is both too high (over 13 Hz or so) and poorly damped might at times sound as though the turntable is slowing down. What actually occurs is a large physical “vibration” or oscillation in the tone arm that modulates the sound in a way that is misinterpreted as a turntable speed irregularity.

Undriven Drivers

Q: When a speaker is surrounded by other speakers, as in the typical hi-fi showroom arrangement, does its sound when it is playing cause the drivers and tuned enclosures of the other speakers to resonate audibly? Wouldn’t this effectively invalidate all side-by-side speaker comparisons? Also, is this why it is difficult to determine which speakers in a showroom setup are playing without walking right up to each one?

SCOTT ORSHAN Somerville, N.J.

A: I’m sure that there is some measurable effect from the stacks of unconnected speakers in a showroom. Theoretically, the acoustic-suspension systems would function as Helmholtz absorbers at their system resonances, and the ported systems would react similarly, but at their vent resonance. In either case, the absorption resonances would be very low in frequency and right in the area where standing-wave room effects are also likely to be prevalent. The result—if there is any audible effect at all—could be a slight suck-out at the basic resonant frequencies of the speaker systems, which might just serve to reduce the standing-wave effects. But, given the very large “normal” bass-response irregularities found in most rooms—including dealer demo rooms—I very much doubt that even the most golden of ears could really hear a significant negative (or positive) effect resulting from the presence of a dozen or more undriven speakers.

In regard to the difficulty in picking out which showroom speakers are playing, I would charge that up to psychoacoustics rather than resonating drivers. When only two systems are in a room, visual cues play a large role in determining the apparent sonic sources. If you doubt that the visual element can have that much effect on sonic localization, try listening to a TV set with headphones. Even though the TV may be across the room and the sound delivered directly to your ears, the sound seems to come from the area of the TV screen. When there are several sets of speakers in a room, visual cues are no longer any help, and the ear is sufficiently confused by normal reflections from room surfaces that it is unable to single out the playing systems. (If my theory is correct, one should have no trouble determining which of several systems is playing in an anechoic chamber because the confusing wall reflections won’t occur.)

I understand that some devout audio freaks advocate removing not only undriven speakers from the listening room but also...
It's like night and day. Crashing cymbals, the depth of a string bass, more trumpets or more voice. Now they'll all come bursting forth from your stereo with the push of a button.

You'll make your music so vibrant that it will virtually knock your socks off when you use this professional quality stereo Sound Detonator equalizer.

It has a frequency response from 5hz to 100,000hz ±1db. And, it's made and backed by a 2 year limited warranty by BSR, the ADC equalizer people. Our $79 close-out price is just a fraction of its true retail value.

CAN YOUR STEREO SOUND BETTER?

Incredibly better. Equalizers are very different from conventional bass and treble controls.

Bass controls turn up the entire low end as well as the low mid-range making the sound muddy and heavy. With an equalizer, you simply pick the exact frequencies you want to enhance.

You can boost the low bass at 60hz and/or 150hz, and the mid-bass at 400hz to animate specific areas of the musical spectrum.

And, best of all when you boost the part of the bass you like, you don't disturb the mid-range frequencies and make your favorite singer sound like he has a sore throat.

The high frequencies really determine the clarity and brilliance of your music. You can boost the high mid-range at 2400hz, or the high end at 6000hz and 15,000hz. So, you can bring crashing cymbals to life at 15,000hz while at the same time you cut tape hiss or annoying record scratches at 6000hz.

You can also boost or cut specific midrange frequency areas to add or subtract vocal, trumpets, guitars or whatever instrument ranges you prefer.

THERE'S MORE

You can push a button and transfer all the equalization power to the input of your tape deck. So, if you have a cassette deck in your car, or a personal stereo that you wear, now you can pre-equalize your cassettes as you record them with no cables to switch.

Now you can get all the dramatically enhanced sound wherever you are. This is an especially great feature for bass starved portables and high-end starved car stereos to make them come alive.

EASY HOOK UP

Use your tape monitor circuit, but don't lose it. Just plug the equalizer into the tape 'in' and 'out' jacks on your receiver. We even supply the cables.

As you listen to your records, FM stereo or 'aux', any time you push the tape monitor switch on your receiver you'll hear your music jump to life.

For your tape deck, simply plug it into the tape 'in' and 'out' jacks on the equalizer exactly as it was plugged into your receiver.

The output from your receiver is always fed direct to your tape deck for recording and with the touch of a button, you can choose to send equalized or nonequalized signal to your recorder.

When you want to listen to your tape deck, just push the tape monitor switch on the equalizer and your tape deck will work exactly as it did before. Except, that now you can choose to listen to it with or without enhancing equalization.

You won't be listening to any distortion or hum. The Sound Detonator has a 95db signal to noise ratio and total harmonic distortion of only 0.018%.

Once you've set your equalizer controls, switch it in and out of the system. Then you'll hear such an explosive improvement in sound you'll think you've just added thousands of dollars of new speakers and equipment.

No one would believe that a $159 component let alone one at our $79 close-out price could do so much.

WHY A CLOSE-OUT

BSR is a very large company. Somebody decided to market equalizers under both their ADC subsidiary and the BSR names. Well, we never thought it was a very practical idea. And, now they seem to agree.

From now on you'll only see ADC equalizers. But, because they didn't know what to do with these that were labeled BSR, we got them for a song.

So, you can go to any HiFi store and buy an ADC equalizer made by the parent company BSR, or you can get this super BSR equalizer while our limited supply lasts for only $79.

Yes, if you want to know more about BSR, they also own DBX, the noise reduction company and if you're familiar with the X10 remote control system for your home, that's BSR too.

THE FINAL FACTS

There are 14 slide controls each with a bright LED to clearly show its position. Each control will add or subtract up to 12db. (That's a 24db range!)

There are separate sound detonation slide controls for each channel at 60hz, 150hz, 400hz, 1000hz, 2400hz, 6000hz, and 15,000hz.

There's an LED VU meter to show the relative channel output levels of the left, right and average of both. Plus there's a meter level control. It's 16-9/16" wide, 7-1/2" deep, and 3-9/16" tall.

PUT LIFE INTO YOUR MUSIC

RISK FREE

Prepare for a shock the first time you switch in this equalizer. Instruments you never knew were in your music will emerge and bring a lifelike sound that will envelop you and revolutionize your concept of your home stereo.

Hook this BSR into your system and really give it a workout. If you aren't 100% satisfied for any reason, simply return it to DAK within 30 days in its original box for a courteous refund.

To order your Sound Detonator BSR EQ-2 Stereo Frequency Equalizer risk free with your credit card, simply call the DAK toll free hotline or send your check for only $79 plus $6 for postage and handling. Order Number 9420. CA residents please add 6% sales tax.

Wake up the sound in your stereo. Your sound will explode with life as you detonate each frequency band with new musical life.

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10845 Vanowen St., N. Hollywood CA 91605
The Hafler equalizer, model DH-160, is a frequency shaping control unit which, in many cases, can improve the sound of a high quality audio system. It permits correction of deficiencies in loudspeaker and room acoustics as well as reduction of aberrations in the recording process. It is of a quality level which matches the finest audiophile sonic requirements. Your authorized Hafler dealer can demonstrate the DH-160 for you and can supply it in either kit or assembled form.

Write to us for comprehensive data on the DH-160. If you enclose $1.00 with your inquiry, we will send you a DH-160 construction and application manual (normally $3.00) so you can see how easy and enjoyable the economical kit building option can be. We will also include a compilation of test reports and reviews on other Hafler products.

A.C. Overload

Q. In my system there are a receiver, two turntables, a mixer, five tape decks, an equalizer, and two types of noise-reduction components. I connect some of the a.c. cords to a power strip with six outlets and some to the receiver outlets. My question is: am I risking an a.c.-line overload problem even if the outlet strip has a circuit breaker? And why hasn't STEREO REVIEW had articles about the problem of possible overload when powering many components simultaneously?

B. We haven't run articles about that problem because there really isn't any. Different components have different current demands, and if you check the rear panels of your equipment you'll find their specific a.c. current ratings given in watts or amperes at 120 volts. [To convert amperes to watts multiply by 120 (volts); to reverse the process divide by 120.] A fast check of some equipment in our offices turned up preamps rated between 15 and 20 watts, turntables at 18 and 21 watts, and a digital-disc (CD) player with all its built-in electronics at 25 watts. A large multiband equalizer was also rated at 25 watts. A pair of expensive two-motor cassette players were 55 and 60 watts, and a videodisc player was rated at 85 watts. It's clear that if all the equipment mentioned were operating simultaneously, the load on the a.c. line would still be less than that of, say, a two-slice toaster.

The only audio components that are likely to consume very large amounts of current are power amplifiers—or the power-amplifier sections of integrated amplifiers and receivers. And, in general, the harder you drive them, the more current they use. A 200-watt-per-channel amplifier with both channels driven to full output with test signals is likely to consume more than 1,200 watts, but under normal music-playing conditions 100 watts or less would be typical.

The bottom line on all this is that a.c. overload is not likely unless you are running two or three high-powered amplifiers at very loud levels (for sound reinforcement or disco use). Incidentally, when I had a 200-watt-per-channel quad system set up, I switched the power amplifiers on and off using a separate relay activated by connection to the preamp's a.c. convenience outlets. This avoided damaging the preamp's on-off switch with high-current turn-on surges.

Because the number of questions we receive each month is greater than we can reply to individually, only those letters selected for use in this column can be answered. Sorry!
Kasuga What?

It records! In stereo! And, it plays both cassettes and FM stereo.

You're at a concert. While you stand in line waiting to get in, you're listening to a 'preview' of the artist on cassette. As the concert starts, just pop in a blank cassette. And, you'll have your own personal recording in full stereo of the actual concert you attended. It'll be complete with all the little personal comments and happenings that make each concert special. Note: It may be illegal to record some live events.

But, if you're not into recording live events, consider your next airplane trip. While the rest of the passengers sit bored in their seats waiting for the 'exciting' movie to start, your mind will be soaring a million miles away as you listen to your favorite music. If you get a million dollar idea or if you just want to dictate some letters, pop in a blank cassette and you'll be dictating in real style.

Of course you'll be dictating in stereo, (compatible with all monaural transcription machines). You'll have one button record, pause, and cue and review. You'll even have a tape counter to keep track of the exact position of your thoughts, or during musical play, the location of specific songs on the tape.

And, speaking of music, that's what this stereo recorder/player is all about. Most better personal stereos have a high/low tone switch and some even have a normal/metal switch. Both are tone controls. This machine has both, for multiple level tone control. Of course you have 2 headphone jacks, which is really neat because you're going to get 2 pairs of headphones with this personal stereo. So, read on.

But first you ought to know what a Kasuga is. It's a company in Japan, where this recorder is made. You've probably never heard of Kasuga, but then you're probably not Japanese.

We at DAK have sold over 40,000 personal stereos and we look at literally dozens of different machines. Even if Kasuga isn't a brand name you are likely to know, it's a substantial company in Japan. In the unlikely event that service should be required, there is a local service by mail facility.

WHAT SOUND

The sound is easily equal to a several thousand dollar home stereo system. Yet, the Kasuga Recorder is only 6/" by 3/" by 1 1/". It comes in a hard protective leatherette case that attaches on your belt or with an adjustable strap. So, whether you are into long walks, sitting in airplanes or washing your car, you can now hear better sound than when you are sitting in front of your home stereo.

ENGINEERED FOR STRESS

Most fine stereo equipment is designed to be lovingly placed on a shelf and never moved. Obviously this isn't a practical way to listen when you're walking your dog, skiing or commuting to work. The Kasuga recorder incorporates a special tape movement system with a unique stabilizing mechanism that tends to keep your music stable even when you're not. (Caution: Absolutely no personal stereo is perfectly stable, but the Kasuga is excellent).

It is operated by 4 standard AA batteries, (not included), has an LED operation indicator, and it shuts itself 100% off at the end of a cassette. There is a single volume control and separate balance control just like on a home stereo.

SUPERB FM STEREO

The Kasuga has a built-in FM stereo tuner that really locks in on your FM stations. It uses the headphone cord as its antenna so that when you're on the move, your FM stereo stations won't be.

Stereo /mono switching is automatic, or you can take control with a switch. You can record direct from the FM by simply putting in a blank cassette and pushing record. The level control is automatic. And, if you want to record from other outside sources like other tape decks or tuners, there's an 'aux' input as well.

TWO PAIR OF STEREOPHONES

The most important single element to the great sound produced by any personal stereo is the Samarium Cobalt headphones. Well, Kasuga makes absolutely superb-cassette decks, but frankly we didn't like their headphones.

At our expense, so it's free to you, we are adding our own fabulous pair of Samarium Cobalt stereophones. With a frequency response of 20hz to 20,000hz and sound levels up to 100db, you'll experience a mind blowing sound extravaganza with these headphones and the Kasuga that is second to none.

So, you'll get one fabulous set of headphones and one we think is only so so.

TRY THE KASUGA RISK FREE

Take your Kasuga wherever you go. Listen to absolutely incredible sound from cassettes or FM. Then make your own great recordings from the built-in stereo mikes, the FM tuner or any outside 'aux' source.

If you aren't 100% satisfied for any reason, simply return it and the free second set of phones in their original boxes within 30 days for a courteous refund.

To order your Kasuga Recorder/Player complete with 2 sets of stereophones risk free with your credit card, call the DAK toll free hotline or send your check for only $89 plus $3.50 for postage and handling Order No. 9455.

Now you can have (or make) vibrant beautiful music wherever you are with this new super high quality recorder and player from Kasuga.

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If busy, after hours, on weekends or in CA CALL TOLL-FREE... 1-800-228-1234
10845 Vanowen St., N. Hollywood CA 91605
Against the Grain

Q. In your review of an open-reel deck some time ago you commented that at the 3/4 ips speed there was a very slight "graininess" to the sound. This suggests the analogy of a coarse-screen photograph (as in a newspaper) compared with a high-quality original print. Can you explain this phenomenon more fully? Is there a specification for it? Can it be amplified or exaggerated by copying a tape?

JACK AYRES
Jermyn, Pa.

A. Your reference to the grain in a photograph was, indeed, precisely the analogy I had hoped to provoke. What we are talking about is a combination of two principal qualities, only one of which has so far been put in the form of a specification.

In an ideal world, the tape in an analog open-reel system would flow perfectly smoothly across the tape heads and would itself have absolutely unvarying physical and magnetic properties. None of these conditions can be met in the real world, of course. "Wow" and "flutter"—for which we have specifications, the DIN peak-weighted measurement being, to my mind, the more useful—characterize every recorder transport mechanism, imposing some periodic (repeating) and some quasi-random speed variations on the tape motion. Even recorders that are nominally identical have slightly different combinations of mechanical imperfections that influence the sound of recordings made on them. (It was by a painstaking analysis of the wow/flutter spectrums of a number of supposedly identical recorders that experts were able to identify the specific machine that made the famous eighteen-minute gap that made the famous eighteen-minute gap in the Watergate tape.) When the speed fluctuations occur at a low repetition rate they are heard as "wow," a term derived from the sound of a record with an off-center hole. When the variations occur too rapidly to be perceived as distinct pitch changes they are called "flutter," and these contribute to what I have called "graininess." And if you look at any set of recorder specifications you will find that at slow tape speeds there tends to be more wow and flutter than at higher ones.

The other component in the grainy sound picture also has a name—modulation noise—but no specification. It comes from the tape itself, which is neither physically nor magnetically homogeneous. A slightly rough coating causes intermittent tape/head contact, and a less-than-perfect dispersion of less-than-perfect particles causes magnetic inhomogeneities. Modulation noise differs from plain "tape hiss" in that its intensity seems to vary with the strength of the signal being recorded, and it has been described as causing a sound "behind" the desired sound.

If you want to hear "graininess" in its most virulent form, all you have to do is to record and play back a purely steady tone of about 3 kHz. On even the finest professional analog recorders the wavering and graininess will be unmistakable.

Track Compatibility

Q. I have a regular four-track home stereo, co open-reel deck, and a friend of mine recently bought a used four-channel open-reel recorder. Can I record tapes on my machine that he can play on his, and vice versa? Should he record on channels 1 and 2, then turn the tape over and record on channels 3 and 4?

DANIEL F. ROBIDOUX
Naasupo Lamad, Italy

A. Yes, you can exchange tapes with your friend, but to avoid disappointing mistakes you must learn how the tracks on your two decks are laid out. Both of you have quarter-track machines—that is, you can record four different audio signals on a standard 1/4-inch-wide tape. In your case, when you have recorded two tracks (a left and right-channel stereo pair) on side one of the tape, you turn it over and do the same for side two. Your friend’s deck gives him a choice: he can do just as you do by recording and playing back only one pair of tracks at a time in each direction, or, if he has a quadraphonic system, he can record all four tracks in the same direction, so that in playback one pair will feed his front speakers and the other pair the rear ones. If you were to play a quad tape on your deck, you’d hear only two of the four tracks in one direction, and when you turned the tape to play "side two" you would hear the other two tracks backwards!

It is standard practice for the edge tracks of a quarter-track recorder—tracks 1 and 4—to be used for the left stereo channel. In the forward direction your deck will record on tracks 1 (left) and 3 (right). When you turn the tape over the other edge of the tape (track 4) is now where track 1 was previously, and the same with tracks 2 and 3. Just have your friend use the front two channels only (tracks 1 and 3), as he should for anything but true quadraphonic material, and turn the tape over at the end of side one, just as you do, and you won’t have a problem.

Cure for Muted Highs

Q. I record on my "chrome equivalent"* cassettes using high bias and 70-microsecond equalization, but they sound better played back with normal bias, 120-microsecond equalization, and the Dolby switch on. Is this hurting anything?

MIKE KIRKPATRICK
Des Moines, Iowa

A. If it sounds better, do it! You can’t hurt either the tapes or your deck by playback with the "wrong" equalization. What you’re doing when you play a 70-microsecond tape in the 120-microsecond position is basically equivalent to turning up your amplifier’s treble control by 4 or 5 dB. That raises the level of tape hiss, but evidently, with Dolby, it doesn’t raise it sufficiently to annoy you. If you record a high-bias (70-microsecond equalization) tape with normal bias (120-microsecond equalization) you will get severe distortion and much-exaggerated treble response. Bias settings alone have no effect during playback since there is no bias used in that process.

Controlling Signal Peaks

Q. My old cassette deck had one important tant feature that no one seems to offer any more: a switchable peak limiter. Properly used, it acted as an automatic level control, evening out the overall volume when I dubbed selections from different sources. While I can do a reasonable job by ear (I am sightless), why isn’t a peak limiter even an option on today’s decks? Does anyone offer it as an accessory device?

TANDY WAY
Tampa, Fla.

A. Signal processors of this kind are simple enough to be economically feasible to build into a cassette deck tend both to produce high distortion and to constrain the dynamic range of music. While intended originally as a dictation medium, the cassette format has finally achieved status as a high-fidelity medium, and manufacturers naturally don’t want to compromise its image or performance as such.

There are, however, a number of more sophisticated outboard automatic level controllers available, generally in the $200 to $500 range (check the "Sound Processor" section of our 1983 Tape Recording & Buying Guide), and perhaps one of these will serve your purpose.
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CIRCLE NO. 10 ON READER SERVICE CARD
Car Stereo

By Christopher Greenleaf and Julian D. Hirsch

Blaupunkt CR-3001H

With this issue STEREO REVIEW begins a regular series of road and lab tests of car stereo equipment. Christopher Greenleaf will report on the units' performance in use, and Julian Hirsch will report on their bench-test measurements.

The Blaupunkt CR-3001H is an AM/FM tuner, cassette player, preamplifier, and digital clock all in one in-dash unit. It is designed to be used with a separate power amplifier. (For our road test—see below—we used a Blaupunkt BPA-41S four-channel amp rated at 15 watts per channel.)

The digital-synthesis tuner has six FM and six AM presets, automatic station scanning (stations are sampled for 5 seconds each after the right-hand knob is pushed; a second push on the same knob stops scanning), a local/distant switch (the bottom left button on the center panel), a mono/stereo switch (bottom right button on center panel), and Dolby-FM decoding (top left button on center panel).

The auto-reverse tape player features Dolby-B (same button as for Dolby FM), 70- and 120-microsecond equalization, sendust heads, locking fast-forward and reverse, and automatic tape eject when the car's ignition is shut off. The preamplifier section includes separate bass and treble controls (the outer ring tabs on the main knobs), left-right balance (pull and turn the left knob), front-rear fader (pull and turn right knob), and on/off/volume (left-hand knob). The balance and fader controls lack center detents. Pushing the left knob switches the time display to frequency in the radio mode or ejects the cassette in the tape mode. Simply turning the right knob changes stations in the radio mode, and pushing it reverses the tape. A remote-control button with a 6-foot cable can be clipped to the steering wheel. It keys either radio-seek or tape-reverse.

The front panel is well lit and easy to read. The little symbols do take a bit of getting used to, and you could wipe out a few telephone poles trying to reason them out. The functions are, however, very easy to memorize. The helpful, well-written operator's manual includes installation instructions. A 3-foot output cable on the back of the unit connects directly into any matching Blaupunkt amplifier by a seven-pin DIN plug. A phono-plug adaptor is also included for use with other manufacturers' amplifiers. Also on the back of the unit is an automatic-antenna lead and a second power lead intended to bypass the ignition for the clock, tuner memories, and automatic tape-eject mechanism. Price: $519.95.

Laboratory Measurements

Since the CR-3001H uses a separate amplifier, we were able to make most of our measurements at the line-level outputs with an adaptor fitted with standard phono jacks. The tuner distortion was relatively high by the standards applied to home receivers but still below the level of audibility (which is about 4 to 6 per cent with most program material). The radio's frequency response (which included the effects of its tone controls as well as the FM de-emphasis) was very good for a car stereo. The stereo separation, unlike that of most tuners we have measured, improved steadily with increasing frequency to a very good 38 dB at 10,000 Hz.

- FM Mono Usable Sensitivity (75-ohm input): 20 dBf (3 µV)
- Mono 50-dB Quieting Sensitivity (75-ohm input): 23 dBf (4 µV)
- Stereo 50-dB Quieting Sensitivity (75-ohm input): 30 dBf (10 µV)
- Tuner Signal-to-Noise Ratio: mono, 65 dB; stereo, 64 dB
- Tuner Distortion at 65 dBf: mono, 2.4 per cent; stereo, 1.5 per cent
- FM Frequency Response: +0, -1.5 dB from 100 to 15,000 Hz; -3 dB at 30 Hz
- Stereo Separation at 100, 1,000, and 10,000 Hz: 20, 24, and 38 dB
- Capture Ratio at 45 dBf: 7 dB
- Selectivity: alternate-channel, 66 dB; adjacent-channel, 9 dB
- AM Rejection at 65 dBf: 45 dB
- Image Rejection: 46 dB
- AM Frequency Response: -6 dB at 80 and 3,000 Hz
- Tape Playback Frequency Response (standard BASF test tapes, -3 dB limits): 120 µsec, 70 to 11,500 Hz; 70 µsec, 70 to 12,000 Hz
- Tape Signal-to-Noise Ratio (referred to 250 mW/m): unweighted, 53 dB; weighted (CCIR/ARM) with Dolby, 62 dB
- Flutter: weighted rms (JIS), 0.1 per cent; unweighted, 0.05 per cent
- Tape Speed Accuracy: 1 per cent fast
- Fast Rewind Time for C-60 Cassette: 64 seconds
- Tone Control Range: +12.5, -11 dB at 100 Hz; +6, -9.5 dB at 10,000 Hz

Although the capture ratio seems to represent poor performance, it should not become a problem unless you find yourself equidistant between two equally powerful stations on the same frequency. The alternate- and adjacent-channel selectivity were both good, especially the latter. The image rejection would be considered marginal in a home receiver, but the operating conditions of an automobile receiver should make this a less critical consideration (most FM image responses are from low-flying aircraft in the vicinity of an airport). The local/distant switch reduces the tuner sensitivity by about 30 dB in its local position. The tape-deck frequency response was good, but...
Road Test

My Volvo and I took the CR3001 H for several rides over a Brooklyn and Manhattan test route that offers considerable challenges to both tuners and tape transports. The tape mechanism was only slightly fazed by driving over ancient granite-block streets at moderate speeds and otherwise showed few signs of difficulty even from potholes. All the tape functions worked as they should and were easy to control by feel alone. The fast-wind modes could be canceled by lightly pushing the button for the opposite direction or by tapping the program-reverse (or remote) button. The loud pop that occurred each time I used the program-reverse was affected by the volume setting and became very annoying at times, especially in quiet music passages, but otherwise the tape player was a genuine pleasure to use.

The FM tuner was generally quiet and clear without attaining the ultimate in those respects. With Dolby-encoded broadcasts I found the noise reduction quite noticeable, and the accompanying slight equalization change improved the sound even more. Multipath noise tended to be loud and hashy, but the overall FM performance with both local and distant stations was essentially very good. Very strong signal sources needed the local sensitivity setting to sound clean. AM and FM alike seem to be well shielded against external pulse interference and unwanted electronic garbage, which made listening to the excellent AM tuner especially satisfying. Sometimes it was difficult to get the memory access to work properly with very powerful signals, but this was remedied by changing the local/distant setting. In both the tape and tuner modes, pressing some of the preset buttons caused a momentary high-pitched buzz in the right channel.

With the power amp we used for the tests, the unit put out clean and very clear transients and authoritative bass. Maximum volume produced physical pain. At normal levels there was very realistic sound both in percussive music and in passages with deep bass energy. The bass and treble controls were adequate, but I sorely missed a loudness button. The only control that could have worked better was the fader, which changes the balance from front to rear too quickly to be easily adjusted while driving. These two small quibbles aside, the CR3001 H was a flexible, musical, and very enjoyable passenger—one I'd gladly invite for a ride again.

—C.G.

Here's a compact rower for people who want to get a full-body workout at home—but who don't live in gymnasium-sized rooms.

Sit down on the padded seat, put your feet on the non-skid rests, set the tension you want with a simple turn of a knob, and row away. It's tremendously satisfying exercise—as you tone up your stomach, hips, thighs and arms. Strengthen your heart and lungs. Increase your endurance. Build your muscles. Get rid of nervous tension. And when you're through, stand the machine up on its end in a corner or closet. Measures only L55" x W15" x H11" and weighs just 27 lbs.

Welded, all-steel tubular body has variable-tension hydraulic cylinder, chromed stroking bar and free-turning vinyl hand grips. You achieve full body movement without strain or friction. 90 day warranty. Plus 30 day home trial with full refund if not completely satisfied. Rowing is a great all-around fitness program. And here's the machine that delivers it all—in one compact package.

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Upgrading Your Stereo System—Part I

RECENTLY, at a concert intermission, I overheard one man asking another whether he should replace his fourteen-year-old, vacuum-tube stereo receiver, and, if so, with what? Much the same question is often asked of me, and probably of most people with any close connection to the hi-fi world. Obviously, if something no longer works, it should be repaired or replaced. Which of those routes to take is, unfortunately, not always so obvious. People tend to develop a strong attachment to a piece of hardware that has given good service over the years and are reluctant to replace it even if it no longer meets its original performance standards. On the other hand, repairing older components can be very expensive, if it is possible at all. Most tube devices fall into the expensive-to-fix category, and, as a general rule, I would not recommend trying to keep a vacuum-tube component operating after it begins to become unreliable. In any case, if a system doesn’t (or never did) sound as good as you want it to, the cause should be determined and the necessary changes made.

Behind most of the “should I replace it?” inquiries that come to me, however, I sense a vague feeling of discontent rather than a specific complaint, an ill-defined feeling that the system should sound better somehow, even though all the knobs and buttons seem to function. Perhaps this is the result of hearing a newer and better system at the home of a friend, at a dealer’s showroom, or at an audio show, or it may simply arise from reading advertisements or reviews of the latest wonders of audio technology.

While a total replacement of an old stereo system can often yield dramatic results, it may be unnecessarily costly, especially if only one component is substandard. On the other hand, simply changing one arbitrarily selected component may fail to produce the hoped-for sonic rejuvenation. Following a logical procedure to isolate the weakest part of an old or ailing system can help you realize the greatest possible improvement in sound per dollar spent.

In general, modern solid-state components do not deteriorate with age in the same way the earlier vacuum-tube models did. The greatest enemy of all electronic components is heat, which shortens the life of practically everything—capacitors, resistors, insulation, etc.—that goes into a tuner, amplifier, or receiver. Tube equipment generally runs hot because of the numerous power-wasting vacuum tubes usually squeezed into a small space with barely adequate ventilation for cooling. Transistors typically operate with much less power (heat) dissipation than tubes performing similar functions. Moreover, transistors do not require the heating filaments intrinsic to the operation of a tube, which typically add a couple of watts per tube to the total power requirements of the system. Except for the output stages of a power amplifier, most transistorized stereo components run only slightly warm at their hottest, and even power transistors rarely become hot except under sustained bench-test conditions. The reduced overall heat dissipation in solid-state components lowers internal temperatures and considerably lengthens life.

This does not mean that a transistorized component is necessarily trouble-free. A defective part or connection can occur in any product. However, most of them are detected in the manufacturer’s final checkout or “burn-in” procedures, and most defective parts that escape detection in those stages will fail early in the life of the product (preferably within the warranty period). If a modern hi-fi product survives its first few months of service, it is likely to continue operating without significant deterioration for many years.

It is almost axiomatic, however, that a product being considered for replacement is not completely up to date, and most will be perhaps five to ten years old. Many older components were never designed to meet today’s high standards of performance and probably have internal trim or alignment adjustments that are no longer needed in current designs. For example, few, if any, new tuners and receivers today have i.f. transformers or multiplex decoders requiring critical alignment settings, which can (and do) change with time. The coils have been replaced with ceramic filters and the multiplex decoders with integrated circuits. These solid-state parts making up today’s hi-fi components need little or no maintenance or calibration after manufacture.

Despite the impressive advances in electronic technology in recent years, the mechanical portions of an audio system are still its “weak links,” the ones most likely to wear out or at least to limit overall sound quality. These include record-playing components (turntable, tone arm, and car-
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tridge), tape decks, and loudspeakers. Although a speaker is among the most durable and long-lived of components (I have never had one fail or even deteriorate significantly in normal service over a period of more than twenty-five years), most of the really important audible improvements in sound reproduction have resulted from advances in speaker design. A given speaker system, therefore, will probably be rendered obsolete by new technology before it “wears out” from normal use, though it is certainly possible to damage a speaker by overdriving it or other careless usage.

The first step in deciding whether some or all of one’s system is due for replacement is to consider whether its sound is displeasing, or at least unsatisfying. Without a frame of reference this may be difficult, so a visit to a good audio showroom or to the home of a friend who has a good modern system is a logical beginning. If you have some favorite records with which you are thoroughly familiar, take them along. (Do not expect them to sound the same elsewhere as they do in your home—for better or worse, they should sound different in every location.)

During this process, you will probably be exposed to some of the newer “demo” records so popular at audio shows and among hard-core audiophiles, and their sonic splendor may convince you that your system is hopelessly obsolete. But unless these records include your favorite types of musical fare, don’t be unduly swayed by what you hear. Many of them can make the least pretentious music system sound better than it has any right to sound! Play records that represent your normal listening tastes. The differences between hi-fi systems are less spectacular with more mundane program material, yet this may be what you will ordinarily be playing. It seems sensible to me to choose a system that makes the most of what you want to hear. Incidentally, I am assuming that your interest in high fidelity is primarily in musical enjoyment, rather than investigating the most subtle sonic qualities of different audio components. If the latter is the case, I am afraid that a logical approach to system selection is invalid (although the final choice in both cases will presumably still be made on the basis of what sounds best to you).

Let us assume that you have heard a system that makes your favorite records sound better in some way than your old system. No doubt every part of that system is different from the corresponding part of your own. Probably most of the audible differences can be ascribed to the speakers and the room in which they are heard. It is risky to compare speakers that differ widely in size, price, or basic construction (a $1,000 floor-standing speaker is unlikely to sound like an older $100 “bookshelf” model).

Therefore, after your initial listening sessions, consider your budget and try to audition mainly speakers falling within your price range (unless you enjoy being frustrated). It is often possible to find less expensive speakers, perhaps from the same manufacturer, whose sound coloration (or lack of it) is similar to that of a higher-priced model that you like.

If your speaker auditioning is done in an audio showroom, you cannot assume that a speaker that appeals to you there will continue to do so in your home (or that one whose sound you detest will still be objectionable at home). It is best, then, to try out a pair at home—if you can find a cooperative dealer who will allow returns for credit. A very few speakers have unusually low sensitivity and require higher input power for a given listening volume, but most speakers are enough alike in this respect that sensitivity can be ignored as a selection criterion.

Speaker impedance should be considered, since it falls much below 4 ohms at any frequency some amplifiers may not be able to function properly. Here the manufacturer’s specifications can be used as a guide, augmented by test reports, such as those in STEREO REVIEW, that state the actual minimum measured impedance throughout the audio range. In my experience almost any amplifier will operate correctly into the load presented by one pair of almost any model speakers; the problems (if any) arise when one attempts to drive two pairs of similar speakers in parallel.

Perhaps simply replacing your venerable speakers, which may have been “state of the art” performers in their day, will give your system the sound you expect of it (or what you fondly remember it to have been in days past). If so, you are fortunate indeed, although I would still advise examining your other components for signs of senility. We will continue that process next month.

**Equipment Test Reports**

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

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LIKE many other cassette decks, the Revox B710 MkII is a three-head model with both Dolby-B and Dolby-C noise-reduction systems. It is unlike other cassette decks in its appearance and operating features, however, and its performance is essentially at the highest levels that have yet been achieved in the cassette medium.

(Continued on page 34)
1948 The living room was dark, the neighbors crowded around the couch, no one made a sound, and you turned on the black-and-white box. Suddenly, there weren't enough adjectives to describe it. Amazing! Unbelievable! Incredible! We were looking at something called television, and we were seeing magic.

COLOR MADE TV BETTER. THEN SONY* MADE BETTER COLOR.

New technology soon gave TV a bright new dimension: color. Suddenly, the sky was blue... the grass was green... and the experience was more vivid.

In 1968, Sony engineered another major development: Trinitron, the Emmy Award-winning, one-gun, one-lens system that brought color to life. And the difference was remarkable. Trinitron revolutionized color TV and set a new standard for the industry.

INTRODUCING PROFEEL, THE ONLY COMPONENT TELEVISION THAT'S A TRINITRON!

If the first miracle was putting it all together, the second miracle was taking it all apart. Now Sony has transformed television into a series of individual components. These extraordinary components are designed to give you a far better picture and sound than any single unit can.

And what makes Sony so superior to every other component television is the unique Trinitron system. Because of Trinitron, Profeel will give you a picture of breathtaking clarity, color, and detail. But Profeel is more than just a new TV set—it's an entirely new TV system.
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THIS NEW TV MAKES OTHER NEW TVs LOOK OLD.

The giant 25" diagonal monitor (measured diagonally) has a much higher resolution than conventional television. So you get a picture so good it can be compared with a professional broadcast.

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The Access Tuner™ is Profeel's control center. With it, you can adjust volume, tone, and balance. Or you can switch instantly among five different video and audio inputs like direct VHF/UHF/Cable TV reception, or your VCR, videodisc player, and home computer. The 10-key infrared Express Commander™ gives you complete remote-control convenience from anywhere in the room.

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Profeel is ready to receive future program sources like stereo TV, subscription television, information sources like teletext and videotex, and direct-broadcast satellite transmission. So why buy a new television when you can buy the first really new television.

FROM

THE ONE AND ONLY

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CIRCLE NO. 47 ON READER SERVICE CARD
The B710 is a large, rugged, and relatively heavy machine. A rigid die-cast frame supports the tape-transport mechanism, which uses no fewer than four direct-drive motors. Its dual tape-drive capstans are driven by individual Hall-effect, Hall-effect, Hall-effect, Hall-effect, Hall-effect drives, locked to a common quartz-crystal reference oscillator. The tape hubs are driven by individual d.c. motors with tachometer feedback control. The B710 has no belts or clutches, all tape motions being handled directly by the drive motors under control of a microprocessor. Even the head assembly (which contains a configuration of three Sendust heads that permits monitoring from the tape while recording) is moved into place by a solenoid, and the motion is smoothed by pneumatic damping.

The microprocessor also controls the B710 Mk II's non-volatile control memories, tape counter, and digital clock. The built-in timing facilities of the deck not only allow unattended recording or playback, starting and stopping at preset times, but permit the tape playback to be stopped and started at any desired settings of the tape index counter, so that the full length of the tape on the transport side may be repeated indefinitely. The index counter is a large four-digit, seven-segment LED numerical display. The same digits show the time in the clock mode, which can be selected at any time by a front-panel button and is available continuously while the machine is turned on.

The cassette snaps into an open well on the front panel and cannot be removed unless the tape is stopped. The cassette opening has a removable (and easily misplaced) plastic cover. To the left of the cassette opening is a square momentary-contact button. All internal switching is done by FET's close to the affected circuits, so that the control buttons handle only low-level d.c. voltages.

The buttons are for pause, fast-forward and reverse-play, stop, and record. The system permits the transport to be switched from any mode to any other without damage to tape or mechanism. To enter the record mode, both record and play buttons must be pressed simultaneously, but "flying start" recordings can be made while in play by pressing record and tapping the play button. The use of the record mode is shown by a red light on the right side of the digital display window. The pause control works as expected when recording, but it is inoperative during playback. The stop control can be used instead during playback, even for stopping reels in motion, since the tape transport starts almost instantly and without an audible transient.

Similar buttons to the left of the numerical display are marked MODE, RUNUP, and ZERO. The MODE button switches between clock and index displays, ZERO resets the index reading to 0000, and RUNUP is used when setting index readings for repetitive playback or for changing the clock or timer settings. Toggle switches along the lower part of the panel control power, tape or source monitor, and Dolby noise reduction. Control knobs set the noise reduction, and another selects either the Dolby-B or Dolby-C system.

On the right side of the panel, opposite the time/index display, are the level "meters." They consist of four parallel twenty-four-element rows of red LED's corresponding to program levels from -30 to +8 dB (0 dB being at the Dolby reference level of 200 nWb/m). The LED's respond virtually instantaneously to level increases, but the response decays over a period of about 2 seconds. Their readings do not include the effect of recording equalization.

Two sets of concentric knobs below the meters (for left and right channels) adjust recording levels for the line and microphone inputs (which can be mixed). Standard 6 1/2-inch phone jacks below the knobs are used for the left and right microphone inputs (plugging a microphone into the left jack feeds its signal to both channels for mono recording) and for a pair of stereo headphones. The headphone output is designed for driving medium-impedance (200-1000-ohm) phones, and a small knob next to the jack adjusts the headphone volume level.

A brushed-aluminum strip across the top of the panel hinges down to reveal a number of less-often-used controls. Four small buttons marked SET, START, STOP, and CLEAR are used to set the index points for automatic start and stop operation of the machine and to enter the clock time. A three-position timer-mode slide switch sets the machine for unattended playback or recording under the control of its own clock. Four small buttons at the right of the group set up the equalization and bias for various types of tape. Three are marked for IEC Type I (standard ferric oxide), Type II (chromium dioxide or chrome equivalent), and Type IV (metal) tapes, respectively. The fourth button (AUTO) can be used with most recent cassettes having notches on the rear edge for automatic setting of the bias and equalization. Manual selection must be used with older cassettes that lack these notches. A slide switch inserts a 19-kHz filter in the signal path for recording from FM tuners with inadequate suppression of the pilot carrier signal (which could interfere with the operation of the Dolby circuits).

On the rear apron of the Revox B710 Mk II are phono jacks for the line inputs and outputs, with screwdriver adjustments for setting the playback output levels (normally used at maximum settings). When the B710 is used with a Revox B739 or B710 receiver, the two can be connected via DIN sockets on the recorder, permitting remote switching of one by the other. The Revox B710 Mk II is about 17 7/8 inches wide, 13 1/2 inches deep, and 6 inches high. It weighs 23 pounds. Price: $1,995.

Laboratory Measurements. We measured the record-playback frequency response of the Revox B710 Mk II with a number of different types of tape (including samples of the IEC Type-I and Type-II reference standards) to determine if any were particularly suitable or unsuitable for use with this machine. For the most part, the response curves were so nearly alike that we would consider all the tapes equally compatible with the B710. The similarity of the curves also suggests to us that most current tapes conform so closely to IEC standards that user-adjustable tape bias or equalization, either manual or automatic, is a much less important feature for a top-of-the-line cassette deck now than it was only a couple of years ago.

We selected BASF Professional I Super as our Type I (ferric) tape, since it appeared to be closest to the IEC Type I in its response. For Type II (chrome) we chose TDK SA-X. The B710 is not designed to use Type III (ferichrome) tape. For a Type IV (metal) tape we chose TDK MA, which we understand is essentially the standard IEC Type IV tape.

The playback response of the machine was measured (for both 70- and 120-microsecond characteristics) with the appropriate BASF IEC standard test tapes. Both tapes gave similar results, with a response flat within ±1 dB from 80 to 12,000 Hz, rising to +3 or +4 dB at 18,000 Hz and to +2 dB at 31.5 Hz.

The 0-VU marking on the deck's front panel corresponded to the Dolby reference level as claimed. The overall record-playback response was essentially the same with all of the selected test tapes at a -20 dB recording level. It was typically flat within...
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approximately ±1 dB from 35 to 20,000 Hz, rolling off to about −5 dB at 20 Hz. The "head bumps" in the low-frequency playback response were very small. At a 0-dB recording level, the playback output was −6 dB at 11,800 Hz, 0 dB for BASF Professional I, 15,500 Hz with TDK SA-X (Type II), and 18,000 Hz with TDK MA tape.

The "tracking" of the Dolby encode and decode circuits was measured at recording levels from 0 to −40 dB (using Type II tape, which was marginally flat in its response than the others). For the Dolby-B system, the change in overall response when the system was switched on did not exceed 1 dB at any level over the full frequency range except between 15,000 and 20,000 Hz, where there was a 1.5- to 2-dB change at −30 dB. With Dolby-C, the tracking error was about the same up to 10,000 Hz, with a change of 1.5 dB between 10,000 and 20,000 Hz at most levels. All these response changes are inaudible in normal use with music as program material.

However, a striking benefit of Dolby-C could be seen in the 0-dB record-playback response curve made with the noise reduction on. The high-frequency relative saturation, above 10,000 Hz, was virtually eliminated, resulting in the astonishing 0-dB response of +1.1 to −1.5 dB from 32 to 20,000 Hz. This is a relatively unpublicized feature of Dolby-C, which employs a "spectral skewing" circuit to attenuate frequencies in the 10,000- to 20,000-Hz octave during recording and boost them in playback. The process greatly reduces high-frequency tape-saturation and trade-off to low-level noise in the uppermost octave, the trade-off of noise reduction for headroom is highly beneficial.

The required input signal for a reference-level recording (at 400 Hz) was 62 millivolts (mV) for the ferric and chrome-equivalent tapes and 70 mV for metal tape. In each case, the maximum playback output from a 0-dB recording level was 0.81 volt. The third-harmonic playback distortion from the reference signal was 0.5 percent for ferric and 1 percent for chrome-equivalent metal tapes. At 10 dB below reference level, the respective playback distortions were 0.13, 0.1, and 0.2 percent. To obtain a playback distortion of 3 percent, the recording level for the tapes was +5 dB for ferric, +4 dB for chrome-equivalent, and +5.5 dB for metal. The A-weighted signal-to-noise ratio (S/N) without noise reduction was approximately 55.5 dB for all three tapes. With Dolby-B and CCIR/ARM weighting, the S/N readings improved to 64.8, 67, and 66.3 dB. With Dolby-C, they were 75.2, 74.5, and 74.8 dB, respectively.

The microphone input's sensitivity was 0.3 mV, and it overloaded at 37 mV. The noise level through the microphone input increased by 17.5 dB over the line-input noise level at maximum microphone gain, but only by 3 dB with a center setting of the mike-gain control. Although we did not measure the headphone output, its adequacy can be inferred from the fact that the acoustic output of 600-ohm phones could be heard throughout the room even at partial volume settings.

The tape speed was 0.3 percent fast. Flutter was ±0.06 percent weighted peak (DIN) and 0.043 percent weighted rms (JIS). The predominant flutter rates were 8 and 35 Hz. In fast-forward and rewind modes, the B710 MKII handled a C-60 cassette in only 47 seconds. In spite of this exceptionally fast tape handling (or, more likely, because of it), the tape was stopped with unusual gentleness, slowing down perceptibly in the final seconds of the process to avoid undue stress on either tape or leader. The meters were accurate and as readable as their calibration intervals allowed.

Comment. The statement that we could find no significant flaw in the Revox B710 MKII should not be interpreted as meaning that it is perfect, but merely that it is so surpassingly well designed and constructed that even an occasional operating idiosyncrasy was easy to ignore. It should hardly be necessary to point out that a machine that can record almost any program likely to be connected to its inputs with absolutely audible degradation of signal quality. True, with interstation FM tuner hiss recorded at levels close to 0 dB, we could hear (barely) a minute change in the spectral balance when the playback was compared with the incoming signal. Not a very serious flaw, to be sure. Dubbing some wide-dynamic-range CX-decoded records we found (as expected) that Dolby-B noise reduction left an audible residue of hiss on the tape during quiet passages. However, the quiet background with Dolby-C was so nearly equal to the CX residual noise level, and the tape hiss could be heard only on a critical source/tape comparison at a very high volume level.

The mechanical operation of this machine was a joy to experience. Instead of the usual "clunk" of solenoid operation, pressing any of the control buttons produced only a subdued and muffled click that never became obtrusive. The recorder is actually easy to use after one has carefully studied the manual (a well written, trilingual, spiral-bound book with numerous illustrations and a complete functional block diagram of the recorder). A little practice may be needed to master the techniques of setting the clock and using the programmed or timed-repeat modes, but for normal use the machine is as simple as any we have seen.

The Revox B710 MKII is a superlative machine by any standard that can be used to judge a cassette deck. The only nit we can pick about its design is the absence of a switched a.c. outlet. The accurate and convenient built-in clock/timer worked well, but it cannot switch on an associated tuner or receiver for unattended recording. As it is now designed only the fortunate owner of a Revox receiver can fully utilize this capability of the recorder.

—Julian D. Hirsch

Circle 140 on reader service card

(Continued on page 39)
Introducing the world's best premium audio cassette, Fuji FR Metal, with performance that will simply redefine your expectations. By delivering premium-quality recordings, highlighted by the widest dynamic range available from any audiocassette.

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IMF Professional Monitor Speaker System

The IMF Professional Monitor is a floor-standing four-way speaker system measuring about 41 3/4 inches high, 18 inches wide, and 15 3/4 inches deep on its stand, which raises the bottom of the cabinet about 4 inches from the floor. The particle-board cabinet is veneered in genuine walnut, with a removable dark-brown plastic-foam grille. The fully finished front baffle board presents an attractive appearance even with the grille removed. Each speaker weighs about 87 pounds, including its black-finished stand.

A one-eighth-wavelength tapered acoustic transmission line loads the rear of the Monitor's oblong woofer, coupling to the room through two rectangular ports at the bottom of the front panel. The woofer cone, measuring about 12 x 8 1/4 inches, is located at the top of the front panel. The internal baffle structure also stiffens the cabinet walls.

The woofer cone, made of a rigid styrene-and-fiberglass material, is about 1 inch thick at the center and tapers to 1/4 inch at its rim. The woofer crosses over at 350 Hz to a 3 1/2-inch midrange cone driver located near the top of the speaker panel. The midrange driver is also transmission-line loaded. Its closed-end transmission line extends straight to the rear of the speaker and is filled with sound-absorbing material. The cone of this driver is made of a polymer material resembling the Bextrene used on some other high-quality British speakers.

The next crossover point, at 3,000 Hz, is to a 1 3/4-inch tweeter whose voice coil is damped by ferrofluid. This driver is located just below the midrange speaker. Directly below it is a ferrofluid-damped "super tweeter," about 1/2 inch in diameter, which operates above 13,000 Hz. The levels from the four drivers are matched in the design of the speaker, but a three-position switch in the rear, between the input connectors, provides what IMF calls "perspective control." It slightly raises or lowers the entire mid-band response relative to its "flat" center setting to shift the apparent sound source slightly forward or backward.

The drivers are placed asymmetrically on the front of the speaker, with the three higher-frequency drivers clustered closely and to the side of the woofer. The left- and right-channel speakers are designed as mirror-image pairs, with the woofer meant to be located toward the outside of the listening area. This configuration, combined with a crossover system designed to produce a phase-coherent system output, is said by the manufacturer to give the Professional Monitor outstanding imaging qualities and overall transparency.

The system's spec sheet indicates that its frequency response is 19 Hz to 40 kHz (no tolerance is given), that it develops a sound-pressure level of 82 dB at 1 meter when driven by 1 watt, and that its nominal impedance is 8 ohms. It is recommended for use with amplifiers rated to deliver at least 40 watts per channel. Price: $2,580 per pair, including stands.

### Laboratory Measurements

IMF supplied us with anechoic-chamber frequency-response curves run on our test samples of the Professional Monitor speakers. The quasi-anechoic measurements made with our IQS FFT analyzer agreed in their key features with the IMF data. We found the extended high-frequency response of this speaker very impressive. Using the 60-kHz maximum sampling rate of our analysis system, we could measure the speaker's output up to 30 kHz. Most speakers have little or no output above the audio range, but the IMF's tiny super tweeter maintained its output with only a 6-dB overall variation from 12 to 30 kHz.

Within the audio band, the Professional Monitor's axial frequency-response variation measured at a 1-meter distance was only 6 dB overall from 250 Hz to 23 kHz (the approximate measurement limits using the FFT analyzer's normal 46.5-kHz sampling frequency). Removing the grille had a minuscule effect, barely detectable above 27 kHz, on the high-frequency response. The response 45 degrees off the speaker...
axis changed only above 13,000 Hz, with about a 6-dB loss at 20,000 Hz. The woofer response was measured with close microphone spacing, separately at the cone and the transmission-line ports, and the two curves were combined to form a total bass response curve. This showed a total variation of only 2.5 dB from 37 to 280 Hz, with the crossover network rolling off the response at the high end and the low-frequency output decreasing smoothly to about −9 dB (relative to the average woofer level) at 20 Hz.

The room response at middle and high frequencies was measured some 12 feet from the speakers using a swept waveform tone sine-wave signal. Correcting it for known room absorption (above 10,000 Hz) and splicing it to the woofer curve produced our composite system-response curve. This had the usual minor irregularities, most of which are due to room effects or speaker placement. The output over the entire range handled by the tweeter (3,000 to 13,000 Hz) was about 3 dB below the rest of the speaker’s response at lower and higher frequencies. The overall variation of ±3 dB (relative to the midrange output) from 32 to 20,000 Hz attests to the fine performance of this system. This response curve is an approximation of the speaker’s total acoustic power output over most of the audio band, and its close similarity to the exceptional bandwidth it exhibited in our quasi-anechoic measurements implies a very well dispersed output in the forward hemisphere (the normal listening area for this speaker system).

The “perspective control” had a very small effect, shifting the level between about 300 and 11,000 Hz by only ±1 dB relative to the “flat” middle setting of the switch. As might be expected, the subjective effect of each was quite subtle, but at least there was no possibility of degrading the performance designed into the Professional Monitor by any misuse of its own adjustments. The system impedance, which averaged about 8 ohms over most of the audio band, reached a minimum of about 5 ohms at 600 and 2,500 Hz and a maximum of 32 ohms at 40 Hz. The measured sensitivity at 1 meter was considerably better than rated, with an output of 89 dB for a drive signal of 2.83 volts of band-limited pink noise.

One of the major advantages claimed for transmission-line-loaded woofers is an extended low-bass response with very low distortion and freedom from coloration. The IMF Professional Monitor demonstrated these qualities most impressively. With a 1-watt input (based on an 8-ohm impedance), the distortion was less than 0.5 per cent from 100 to 50 Hz and between 35 and 25 Hz; it reached a maximum of 1 per cent at 40 and 22 Hz and 2 per cent at 20 Hz. At a 10-watt drive level, the distortion was less than 1 per cent from 100 to 70 Hz, 2 to 2.5 per cent from 60 to 32 Hz, and about 8.5 per cent at 20 Hz.

Comment. The sound of the IMF Professional Monitor speakers was distinctly different from that of most of the other top-quality speakers we had on hand or have used in the same room. Our initial impression was of smoothness and transparency, and we had little or no sense that we were hearing a sound originating from the visually prominent speakers at the front of the room. The highs had a tendency toward brightness, but this was obviously due to the flatness of the system’s output over a range extending at least an octave higher than most of its competitors. It would be fair to describe the mid- and high-frequency sound of the Monitor as sharply defined and smooth but not in the least overbearing.

Listening to the low end of these speakers provided an ongoing experience of sonic discovery. The total absence of a middle- or upper-bass peak eliminated the “chesty” or “tubby” coloration that mars the sound of male voices reproduced by most loudspeakers. They sounded like people talking rather than like hollow resonators being excited by the voices (which is what most speakers really are under similar conditions). Combined with this flatness was perhaps the most palatable bass we have experienced in some time. It could be felt through the skin, rather than just heard. (Too often the “bass” one hears from a speaker consists only of the distortion harmonics of a bass fundamental that it cannot radiate at an audible level.)

In short, we found the IMF Professional Monitors to be among the most exciting, natural, and downright listenable speakers to have come our way in many a year. Anyone who has come to the reluctant conclusion that ordinary speakers (even very good ones) sound nothing like a live performance owes it to himself to hear these speakers properly demonstrated. They have a disturbing tendency to sound too good to be speakers!

—Julian D. Hirsch

Harman Kardon CD91 Cassette Deck

Modestly priced cassette decks have tended in recent years to compete largely on the basis of their features—"bells and whistles," in industry jargon. The Harman Kardon CD91 is a notable exception to this general design trend. Here the manufacturer has decided to forgo all but such essential features as Dolby-B noise reduction in order to use the same tape head and transport mechanism found in some of the company's more costly models. The result is a two-head, single-motor cassette deck whose superior performance belies its budget price.

The Harman Kardon CD91 uses a Sendust record/playback head, and its single capstan is belt-driven by a d.c. servomotor that also powers the reels. Cassettes are inserted, tape openings downward, into slides behind the lightly damped cassette-well door. Rear illumination and a transparent strip on the door permit viewing the approximate amount of tape remaining, though
Since the very beginning, there's been an enormous gap between the feeling of being at a concert and the feeling of its reproduction. Stereo could give you great sound, but the picture was missing. TV could give you the picture, but with sound never worth listening to.

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GOOD YEAR
QUALITY AND INNOVATION
the cassette label areas are not visible. The door can be removed easily for routine cleaning and demagnetizing.

Transport operation is solenoid-controlled via transistor logic that permits rapid pushbutton switching from one mode to another. Even from rewind to record without using the stop button. The record and pause buttons have tiny LED indicators, but in line with its "no frills" design the CD91 has no record-mute button to insert silent spaces between selections, nor is there any memory or timer rewind or memory play. Three pushbuttons set the proper record bias and equalization for ferric,

CrO₂-type, and metal tapes. No microphone circuits are included, though it is possible, of course, to connect the outputs of an external microphone mixer in place of the regular line-level inputs. Recording levels are set by a single large control along with a smaller channel-balance knob. There is no playback-level control, so this function must be handled by your amplifier. Pushbuttons are used to switch the Dolby-B noise-reduction system and an FM-multiplex filter in or out; an LED lights when the Dolby system is in use. Recording levels, shown by tiny needle-readings on twelve-element LED displays, are calibrated from -20 to +8 dB, with 0 dB corresponding to Dolby level. A three-digit mechanical counter and reset button are provided, along with the custom-ary front-panel headphone jack. The rear panel of the CD91 contains only the line-in and line-out phono jacks, and there is no provision for timer activation. Overall, the unit measures 17¾ inches wide, 4½ inches high, and 13½ inches deep, and it weighs a little over 13 pounds. Price: $250.

- Laboratory Measurements. Our sample of the CD91 came supplied with the cassette used to set up the deck—Maxell UD XL-1 (ferric), TDK SA (chrome-equiva-

lent), and TDK MA (metal)—so we used these for our measurements. Other premium formulations from TDK, Maxell, Sony, BASF gave comparable results, consistent with their own slight characteristic differences. Playback response was checked with BASF's IEC standard calibrated tapes. As the playback graph shows, response was remarkably flat throughout the 31.5- to 18,000-Hz test-tape range. Indeed, the same was true of overall record-playback response, which was within 1 dB of ideal from 40 to 20,000 Hz and within +0, -3 dB from 20 to 20,000 Hz when measured at the conventional -20-dB level. At a 0-dB recording level all three tapes showed the usual high-frequency tape saturation, with response down by 5 dB at 10,000 Hz (SA and UD XL-1) and at 12,500 Hz (MA).

At a 0-dB recording level the third-harmonic distortion of a 400-Hz tone measured 1 per cent with Maxell UD XL-1, 1.45 per cent with TDK SA, and 0.75 per cent with TDK MA. To reach the 3 per cent distortion point used for signal-to-noise measurements required raising the input-level differentials by 3.5, 2.5, and 5.5 dB, respectively. Referred to the 3 per cent distortion point, un-weighted signal-to-noise ratios without Dolby-B processing measured 49.8 dB (ferric), 53 dB (CrO₂-equivalent), and 56 dB (metal). Adding Dolby-B and CCIR/ARM weighting increased the S/N's to 61.5, 64.8, and 66.8 dB, respectively. These values are close to the best that can be obtained with state-of-the-art tapes and Dolby-B.

Wow-and-flutter, checked with a Teac MTT-111 test tape, measured 0.04 per cent w rms and 0.06 per cent with the DIN peak-weighted standard, which is very good, though not exceptional, performance. The Dolby calibration was exact, and Dolby-B tracking error—the difference in low-level frequency response with and without the Dolby system—was within ±1 dB throughout the frequency range. The multiplex filter affected high-frequency response above 15 kHz and provided 32 dB attenuation at the 19-kHz FM-stereo subcarrier frequency. The input sensitivity of the CD91 was 0.061 volt (61 mV), and its output at 0 dB measured 0.48 volt (480 mV). Fast-forward and rewind times for a C-60 cassette measured 88 seconds, which is about average.

- Comment. The CD91 did an extremely good job of playing back top-quality prerecorded cassettes from InSync and Mobile Fidelity. Although its two-head design precluded direct A-B comparison while recording, it did a more than capable job of dubbing from discs and other tapes. The frequency response was outstanding, though on material with a wide dynamic range some background hiss was audible with the ferric Maxell UD XL-1. With TDK SA (chrome-type) and MA (metal) the added background noise (intrinsici in all analog...
The same Dynamic Servo Tracer tonearm technology found on our $6,200. DP-100M...
Cutting Lathe Motor AC Direct Drive Turntable.

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Microprocessor-controlled Fully Automatic AC Direct Drive Turntable.

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Instead of gimmicks, the Denon DP-100M uses the same cutting lathe motor that creates disc masters. Its Dynamic Servo Tracer system, working in concert with a Denon high-precision, ultra-low mass tonearm effectively suppresses resonances while providing the proper camping for the widest variety of cartridges.

The same Dynamic Servo Tracer system is incorporated on the DP-52F, making it one of the most effective playback systems ever developed for warped and hard-to-trace records. Damping, anti-skating and tonearm lift/locate are all applied through microprocessor-controlled non-contact electronics. Its AC Servo motor employs the same drive principle and magnetic speed control found on Denon's DP-100M.

The DP-11F introduces Denon design technology to a new price category. It features magnetic speed detection, a Flat-Twin Direct Drive motor and the same Microprocessor-controlled Dynamic Servo Tracer tonearm system found at the very top of our line.

Design Integrity. Denon's products share more than name alone.
The AudioSource EQ-One is suitable for rack mounting. It has an edge-slotted panel 19 inches wide by 5 1/2 inches high (fitted with handles), and it is 8 1/4 inches deep behind the panel. It weighs only 8 4 pounds. The EQ-One is finished entirely in black, with white markings. The spectrum-analyzer display is at the left of the panel, most of the rest of the panel being devoted to two identical sets of vertical-slider equalizer controls. There are ten controls for each channel with center frequencies of 31.5, 63, 125, 250, and 500 Hz and 1, 2, 4, 8, and 16 kHz. Each control is center-detented, with a calibrated range of ±12 dB, and the panel markings identify them as being in the bass, middle, and treble ranges.

Pushbuttons below the left-channel equalizer sliders control the spectrum analyzer, connecting it to display either the left- or right-channel programs or the (mono) microphone input at the bottom center of the panel. Two other buttons control the response time of the display LED's; one selects either a fast decay or a slow decay for better visual averaging of the spectrum readout, and another (PAUSE) freezes the display while it is being pressed. Another button converts the 31.5-Hz column of LED's to read the total signal level (as in a sound-level meter) instead of the content of the lowest octave.

Next to the microphone jack is a small knob that adjusts the gain of the spectrum analyzer to provide a center-scale display over a wide range of signal levels. Buttons beneath the right-channel equalizer sliders control the equalizer section, which can be inserted into the signal path or bypassed for instant comparisons. Another button supplies an equalized signal to the tape-recorder jacks, in the rear of the EQ-One, which otherwise receive an unequalized signal.

The tape-monitor button replaces the one on the amplifier to which the EQ-One is connected. An infrasonic filter rolls off the response at 18 dB per octave below 20 Hz when its button is pressed. The remaining button in this group replaces the audio program with pink noise. The red power button is at the lower left corner of the panel.

The rear apron of the EQ-One contains only the phono-jack inputs and outputs that... (Continued on page 50)
“If your car is this well equipped, you won’t want to go home again.”

Rich Warren, Chicago Magazine

This Delco-GM/Bose speaker module incorporates new technology that for the first time matches sound to the acoustics of a specific model automobile. So you can hear sound with clarity and realism rarely heard in even very fine home music systems.

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Join the first team. Reach for Winston.
connect to the amplifier and the tape-recorder inputs and outputs. The microphone supplied with the EQ-One is a slim, tubular omnidirectional electret unit that is powered from the EQ-One when it is plugged in (no other type of microphone should be plugged into the front-panel jack). It has an integral 19-foot connecting cable fitted with a molded plug. Price: $400. AudioSource is located at 1185 Chess Drive, Foster City, Calif. 94404.

Laboratory Measurements. The frequency-response characteristics of the EQ-One equalizer corresponded closely to its specifications, with a maximum control range of about 14 dB of boost or cut in each octave and a ruler-flat response with the controls centered. The infrasonic filter raised the output by 0.5 dB in the 30- to 40-Hz range and dropped it sharply to -3 dB at 21 Hz (our measurements stopped at 20 Hz). The 1,000-Hz distortion of the equalizer (with controls centered) was 0.0003 per cent at 1 volt, increasing to 0.0014 per cent at 5 volts. It was a little higher at 20 Hz, 0.0013 to 0.0016 per cent over the same range. At 15,000 Hz, the distortion was 0.0045 per cent at 1 volt and 0.09 per cent at 5 volts output. All these distortion levels are negligible.

The center frequencies of the spectrum analyzer closely matched those of the equalizer. The transition between the different levels on the analyzer readout was not instantaneous, so that often two adjacent lights were lit simultaneously. The "calibration" of the steps, therefore, was only approximate. For example, with the green indicator lights as the zero reference, lighting the 4-dB light in either direction from center could require a level change of somewhere between 1 and 4.5 dB, and the 16-dB lights needed either 9.5 or +12 dB to turn on.

In an instrument such as this, however, accurate calibration is less important than a stable zero reference, since the adjustments are made to produce readings of "zero" at all frequencies. The EQ-One met that requirement easily. The maximum input sensitivity of the analyzer (for a 0-dB reading) was 30 millivolts (mV) on the 4-dB-per-step range and 80 on the 2-dB-per-step range. The pink-noise output, rated at 100 mV, measured 105, and its spectrum closely approximated that of ideal pink noise from 20 to 20,000 Hz.

The gain of the AudioSource EQ-One was exactly unity (as rated). Its unweighted noise was 0.44 (67 dBV), and with A-weighting it was below our measurement limit of 100 microvolts (80 dBV). The output clipped at 6.8 volts when driving a standard IHF load of 10,000 ohms in parallel with 1,000 picofarads (the maximum rated input or output level is 5 volts).

Comment. We have used a number of equalizers, some with built-in spectrum analyzers, whose function was similar to that of the AudioSource EQ-One. In general, they have all done their primary job well, although we have not always been completely satisfied with the audible results. It is well recognized that a "flat" response in a room, at some distance from the speakers, is likely to sound too bright to most people and that some modification at high frequencies may be necessary.

For some reason, we found little need for that action with the AudioSource EQ-One. It was easy to use, and in a matter of a few minutes we had equalized our system for a reasonably uniform response at the listening position. True, the sound was a little bright, but it was not as overbearing as we had expected. In fact, it was highly listenable in its equalized form, with no further modification required.

Switching the EQ-One into the system usually produced a distinct improvement, and after a short period of listening to the equalized system we began to find the unequalized sound rather dull and flat. This would seem to be a reasonable criterion for success with a device such as this, since in the past we have welcomed the return to unequalized sound.

Looking at the rather extreme settings of the controls that were needed to flatten response, we could only wonder at the tolerance of human hearing for wide frequency-response fluctuations. Of course, these can be considered as "normal," being a part of our lifelong listening experience in closed rooms that support a multitude of standing-wave patterns.

At any rate, the AudioSource EQ-One does a first-rate job, at a reasonable price, of equalizing loudspeaker-room response. Furthermore, watching the spectrum-analyzer display gives one a better appreciation of how rarely we really encounter strong program energy at the frequency extremes, even with considerable equalization.

—Julian D. Hirsch

Circle 143 on reader service card

(Continued on page 52)
DIAHANN CARROLL, singer and actress.

"The quality of Smirnoff is something to sing about. Its value calls for encores."

"I put all my energy into delivering a song. Because the quality of a performance is very important to me. Quality is important in the vodka I choose, too. It's Smirnoff® vodka. No other vodka is filtered for purity and clarity the Smirnoff way. Yet it costs only a little more to have Smirnoff than regular vodkas. That's value. "I admire quality. And I appreciate value. And that's why Smirnoff hits just the right note with me."

There's vodka, and then there's Smirnoff.

REMEMBER SPECIAL OCCASIONS BY SENDING A GIFT OF SMIRNOFF ANYWHERE IN THE CONTINENTAL U.S. CALL TOLL FREE 1-800-528-6148.
For some time, the least expensive Dynavector cartridge has been the Model DV10X, whose performance has been upgraded over the years and which is now in its "Type 3" version. All Dynavector cartridges use the moving-coil principle and have fixed styli that cannot be replaced by users. Several of them, including the DV10X Type 3, have an output high enough to drive the phono input of any amplifier without use of an external step-up transformer or head amplifier.

According to Dynavector, the new Type 3 incorporates many of the design features of the company's more expensive cartridges, such as the "Karat" units with diamond or ruby cantilevers. Like the previous 10X models, the Type 3 has a tapered tubular aluminum cantilever, but the 0.6-mil spherical diamond stylus of the earlier models has been superseded by an elliptical stylus. Also, the cantilever has been shortened, compared to that of the Type 2, from 7 to 6.5 millimeters. This is said to provide a more accurate and undistorted transmission of the signal from the stylus to the generating coils.

The DV10X Type 3 is rated to deliver 2.5 millivolts at a groove velocity of 5 cm per second. This high output level is made possible by a special manufacturing process in which several hundred turns of extremely fine wire are wound on each of the tiny generating coils in the cartridge. The wire used is 95 per cent silver and 5 per cent copper. Silver-plated stainless steel stranded wire is used for the suspension, supplying temperature-independent damping as well as positioning the cantilever system.

Also contributing to the high output of the DV10X Type 3 is the use of a samarium-cobalt magnet (replacing the cobalt magnet of the Type 2). The magnet is claimed to be not only considerably more powerful than the previous magnet but also much more stable with time. The body of the Dynavector DV10X Type 3, like that of its predecessors, is molded of transparent red plastic. Like the bodies of the Karat models, it is reinforced with a glass-fiber mixture. In addition, the weight of the Type 3 has been reduced substantially from that of the Type 2, from 9.5 to 4.6 grams.

The Dynavector DV10X Type 3 is rated to track at 1.7 ± 0.2 grams. Its recommended load is the standard 47,000 ohms. Although the preliminary press release on the cartridge lists the recommended load capacitance as 30 picofarads, its response and overall performance are virtually independent of the full range of preamp input resistances and capacitances likely to be encountered in a home music system. The rated frequency response is 20 to 20,000 Hz ± 2 dB, with channel separation of 20 dB at 1,000 Hz.

The suggested retail price of the Dynavector DV10X Type 3 is $150. Stylus service or replacement (actually a replacement of the entire cartridge) is $82.50.

Laboratory Measurements. The Dynavector DV10X Type 3 had a frequency-response variation of 2.5 dB (overall) from 40 to 20,000 Hz on the CBS STR 100 test record. The response curve sloped downward above 500 Hz to a broad minimum in the 5,000- to 15,000-Hz range, rising to equal its maximum mid-frequency level at 20,000 Hz. Since the individual response curve on the test sample (supplied to us by Dynavector) was not available, we used 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 IM test record used. The actual distortion figure measured is not as important as the maximum velocity tracked before a sudden increase in distortion occurs.
Subscribing to Stereo Review makes sense. Whether you're shopping for your first stereo system, upgrading your present one, looking for maintenance tips or trying to sort through the hundreds of new recordings released every month, Stereo Review has answers you can rely on.

Our world-famous Equipment Test Reports help you select new audio equipment. Explanations of features, laboratory test results and comments from our expert technicians make it easy for you to select components for a great audio system.

If you already have a terrific sound system, Stereo Review can help you care for it and upgrade it. With hints on getting four-channel sound from your stereo discs...how to care for your tape deck's heads...how to handle records to preserve them...and much more.

Stereo Review also helps you select the music to play over your sound system. We cover every category of recording on disc or tape, to help you steer away from uninspired performances or mediocre recordings.

Stereo Review. When you subscribe you'll join the group of people who enjoy music on their own terms—and truly know what to buy.

Use the coupon to subscribe—and save 50%!

Here is the car stereo that does just about everything. Mini-Wizard from TEN Car Audio.

For starters, its digital electronic tuner lets you pinpoint radio stations with uncanny accuracy, while the TEN exclusive internal circuits capture them clearly.

You can pre-set your ten favorite stations and recall them with a push of a soft-touch button. Can't make up your mind on what you'd like to hear? Just push the search tuning button to listen to the next station. And if you really can't decide, scan tuning lets you sample five seconds of a radio station. All of this, thanks to its memory.

Microprocessor memory technology, developed by Fusetu Ltd. The world's second largest producer of computers. Now, for those of you who enjoy tapes, the Mini-Wizard leaves little to be desired. Among its outstanding features is an automatic program selector that lets you skip songs, and an auto-repeat system that gives your favorite tune up to five execrations.

For optimum tape performance, there are two TEN exclusive features: an anti-tile mechanism that keeps tapes from rocking, no matter where you're rolling, and a Hall Effect end-of-tape sensor that prevents them from being eaten.

With its five-band graphic equalizer and four-way fade, you can adjust sound for maximum enjoyment, plus loads of power with its 88 watt amplifier. And the optional remote control puts magic right at your fingertips.

Of course we could go on about all the amazing things that our Mini-Wizard does, but we prefer that you try it yourself. You'll soon agree that its possibilities are indeed endless.

The best sound on wheels.

FEATURES AND SPECIFICATIONS:

- 88 watt total output power
- Digital electronic tuner with 10 station preset, automatic search and scan tuning, preset program tuning
- Microprocessor FM micro Banker LED digital quartz clock
- 5-band graphic equalizer with a way fade control
- Automatic program selector and automatic system
- Hall Effect end-of-tape sensing
- Analog Volume Dependent Input (AVDI) equalizer
- 88 Watts total output power
- 10 Watt RMIR per channel
- Maximum Line Input: 0.8 V peak
- Frequency Response: 20 Hz to 20 kHz
- Dolby** noise reduction
- MP3 amplifier
- AM-FM Tuner
- Color Blue LED display
- Microprocessor memory technology
- Fuses: 6 Amp
- Dimensions: 17.4 x 6.7 x 6.7 inches
- Weight: 14 pounds
- Canada Inc.
- 2001 Pacific Gateway
- Ontario, Canada
- Manufactured by Fuzue TEC Ltd
- TEN Car Audio

CIRCLE NO. 12 ON READER SERVICE CARD

© 1983, Fuzue Ten Corp of America
**Order Toll Free**
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**In New York Call**
(212) 32-8000

**This Month's Super Specials!**

**Audio**

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**Send for Our Free 240 Page Audio/Video Catalog**

**COLECOVISION**

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**Free Giant Record Catalog**

For Your Free 12-page Record Tape Catalog, Filled with Over 10,000 Different Listings! Most Popular Artists & Titles in Stock. Price List Price List Price. 9.95 9.95 9.95 9.95

**BlANK CASSETTES**

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**CUT ALONG DOTTED LINE**

**Cutting and Branching Price**

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**Cut Along Dotted Line**

**Check Off Desired Merchandise & Include This AD With Order.**

**How to Order by Mail:** For Prompt and Courteous shipment, use attached order form. Please send Money Order, Certified Check, Cashier's Check, MasterCard, VISA. Include Card Type, Issue Number, Name, Address, Signature, and attach to order. Do Not Send CASH. Personal and Business Checks Must Clear Our Bank Before Processing. $25.00 Minimum Order. **Handling and Insurance Charge of 5% of Total Order with a $3.95 Minimum (Canadian Orders and Shipping with 5% or a 17% minimum charge). For shipments by air, please double these charges. Sorry, NO C.O.D.'s.** New York State Residents please add 4.25% Sales Tax. All Merchandise Shipped Barn, Factory Pressed and 100% Guaranteed.

<table>
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<th>Name</th>
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<td>60620</td>
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**Dealers Inquiries**

Call (800) 221-3191
1) The high performance Samarium Cobalt Cartridges that Stanton is famous for. 981HZS, 980HZS, 881S, 880S

Its patented moving stylus system features the exclusive Stereohedron Diamond mounted in an ultra-low mass Samarium Cobalt armature (0.2 mg) that enables the 981HZS to track at the highest levels found in the newest high tech records used in all kinds of professional applications around the world.

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2) The revolutionary low impedance Samarium Cobalt Concept —“a step beyond the moving coil” 981LZS, 980LZS, 885LZS, 785LZE

A moving magnet cartridge that because of its unique design works directly into the moving coil input of most receivers and integrated amplifiers and provides extended frequency response well beyond 50kHz. It offers the best features of the moving coil with the technical soundness of the Stanton Samarium Cobalt design concept.

Send for Comprehensive literature

From now on, no matter what type of cartridge you need...you can use

1) The high performance Samarium Cobalt Cartridges that Stanton is famous for. 981HZS, 980HZS, 881S, 880S

Its patented moving stylus system features the exclusive Stereohedron Diamond mounted in an ultra-low mass Samarium Cobalt armature (0.2 mg) that enables the 981HZS to track at the highest levels found in the newest high tech records used in all kinds of professional applications around the world.

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Send for Comprehensive literature

Going on Record

By Christie Barter

Music Editor Barter (left) joins Editor-in-Chief Livingstone (right) in presenting our 1983 Certificate of Merit (and original Hirschfeld caricature) to conductor Eugene Ormandy.

NOTES ON THE CASSETTE

Ten years ago the Sony Corporation ruffled a lot of record-industry feathers in London by running a consumer ad with a headline explaining just one of the uses of the cassette deck. "Let's you do delightful things," it read, "like recording other people's records." Today such a line would not get any further than a copywriter's wastebasket; if it did, industry feather would fly. Its message certainly does not need repeating in these piratical days.

As it is, few of today's potential buyers need much convincing about the advantages of cassette decks—they are the hottest-selling components in the audio retail marketplace. In addition, the Sony Walkman and its many personal portable offspring have enjoyed an exponential growth in sales over the past year or two, far surpassing the once ubiquitous "ghetto blaster."

So it should come as no surprise that the prerecorded cassette itself, which in 1981 was selling at roughly half the rate of the LP record, is now outselling the LP in sales by the end of 1982. In fact, this past summer, when record manufacturers were bemoaning the dramatic decline in LP sales, it was rarely noted that prerecorded cassette sales had reportedly picked up to such an extent that the actual drop in dollar volume of all recordings from 1980 to 1981 was only about 1 per cent! While all the figures for 1982 are still not in, it's a fair bet that any decline in LP sales last year was actually offset to a significant degree by increased cassette sales.

It has taken almost twenty years for the cassette to come into its own. The LP and the 45 superseded the 78 pretty quickly in the early Fifties, and stereo took only a few years to drive out mono in the Sixties. But the cassette, though it never developed any cachet as a quality item, was soon replaced in automobiles by the cassette, and the audiophile soon discovered the cassette as the equal or near equal of the LP record in quality and its superior in terms of extended playing time, portability, and ease of handling. The record business thus entered upon a new era, which is now.

Something has been lost, however, or may be. I confess I am an unconstructed lover of anything circular and flat, up to twelve inches across, with a hole in the middle. It needn't be black; the silvery Compact Disc will do just fine—even though it, like the cassette, is less easily rendered unplayable than the vinyl disc. A real record needs tender loving care and is therefore a "collectible" in a way the cassette is not. Moreover, LP packaging has traditionally offered unique opportunities to the graphic designer. The album cover has become a recognized art medium. In order to suit the cassette format it must be reduced by as much as 80 per cent.

And what do you do about liner notes and librettos? How can the little cassette compete with the often attractive presentations in LP packages? Some record companies are including notes with their classical cassettes, but generally what you get is a sheet of rather poor-grade paper folded over upon itself so many times that it looks like one of those mash notes you secretly passed under the desk in junior high. One exception is the handsome new multication box from CBS Masterworks, which encloses a perfectly readable libretto, reduced by roughly a quarter in size and folded over once. Otherwise what manufacturers should do, of course, is what they once did with open-reel tape—that is, to enclose a postcard that the buyer can return for a full set of notes, a libretto, or whatever.

Certainly no one would argue that the cassette is replacing the LP, which will continue to play an important part in our musical lives. But the cassette has arrived and is here to stay.
Phone Thrustor

It’s lightning fast. It speaks real rotary and real Touch Tone®. Plus, it’s got an elephant’s brain (with battery back-up) that remembers up to 24 numbers. And now you can install it just about anywhere.

Push button phones aren’t new, nor are automated dialers. But, the Phone Thrustor combines the best of both into a powerful new tool that will save you time and money.

And, with Phone Companies making you buy or rent your old dumb phones anyway, why not skip their monthly service charges and get the latest in sound quality, modern good looks and automated features for your home or office.

NEAR AND FAR

Whether you call across the street or around the world you’ll find that this phone puts you in complete command. First the sound. A high quality condenser microphone just like you’d find in a good tape recorder lets the person you’re talking to hear you loud and clear.

And, you’ll hear them like never before. Instead of the old diaphragm ‘thing’ that’s been in phones for the last 20 years, you get a mylar® HiFi speaker just like you’ll find in the best stereo headphones for real Hi Fidelity telephone conversations.

THE BEST PART

But the nicest part of all are the push buttons. Once you’ve started using buttons you’ll hate dialing the old way. The Phone Thrustor has a switch right above the keyboard that lets you select real rotary pulse (P) if you currently have rotary dial phones or true Touch Tone® (T) if you already have push button phones.

So, with the Phone Thrustor you’ll have a perfect match to your personal phone line today or in the future. And you’ll always have the ease of push buttons.

The switchable pulse and tone are especially nice if you live in a rotary dial area but would like to save big dollars on your long distance calls by using the super discount services like MCI and Sprint. You can dial in on pulse, then switch to Tone.

PROTECTED MEMORY

The Phone Thrustor will dial all your normal calls automatically in about 1 second by using its automated up to 24 number memory. You can program it to dial your family, your office, or your friends. You can also program it to give the complicated Sprint and MCI codes so you don’t have to memorize and dial them each time.

In addition you’ll use the memory in the future, for more services like automatically paying bills and banking.

And, don’t worry about forgetting. The phone itself is totally powered by your phone line, and needs no additional power. The memory is protected for over a year by two easily replaceable calculator type batteries. And, you can move it from room to room, or between your home and office without losing the memory.

LOADED

The Phone hangs up automatically whenever you set it down. Or, with the included wall adaptor, and extra-long 11 coiled cord, it becomes a convenient wall phone that reaches just about anywhere. The Phone Thrustor has instant save-a-number. If you get a busy line, just push the (S) button. Then you can call as many other phone numbers as you like before pushing (R) to retry the busy number.

The Phone Thrustor has an electronic mute button. Touch it once and a red LED lights to show that it’s activated. Touch the button again and you’re back on line.

This phone is built more like a fine piece of stereo equipment than a phone. And, it carries a full one year limited warranty from Code-A-Phone. It’s a phone you can trust and name you can trust.

INSTALL ANYWHERE BONUS

In the United States there are really only three types of phone connections: modular phone jacks, four prong phone jacks, and hard wired.

If you already have the modular phone jacks, just plug the Phone Thrustor into any unused jack. But, don’t worry if all your jacks are used, because we give you a free duplex adaptor plug that turns one of your jacks into two jacks.

YOUR CHOICE FREE

Don’t be left out of the Phone revolution. Now you can plug in any of the new modems with modular phone plugs just about anywhere with one of the bonus adaptors below when you buy the Phone Thrustor automated telephone.

Modular Phone Plug if you already have modular phone plugs you can plug in the Phone Thrustor and start dialing. But, don’t worry about filling up your plugs, because the adaptor pictured to the right turns one of your plugs into two. So, now you can plug in an answering machine or a cordless phone into the same jack as the phone.

Four Prong Plugs - If you’ve got 4 prong plugs, no problem. Just plug this handy adaptor into one of them and it will instantly convert it into a new modular phone jack.

No Jacks At All - If your house is still ‘hard wired’ (excuse the pun) you don’t have to be left out. Most of the country uses the same 4 color coded wires to hook up phones. There is a red, black, a green and a yellow wire. All you do is unscrew your current box and match your four wires to our identically colored wires. It’s best to check with your phone company, but just about anyone can do it in less than 5 minutes with just a screwdriver. There’s no soldering, no thinking. Just match the colors, tighten the screws, and start dialing.

TRY THE PHONE THRUSTOR RISK FREE

Wait till you feel and hear the quality of this phone. Its space age styling and beautiful chocolate brown color are a great addition to any room. There’s even a place for a 24 name directory of names and numbers on the back of the phone.

And wait till you try dialing a number automatically in about one second. If you aren’t 100% satisfied for any reason, just return it in its original box within 30 days to DAK for a courteous refund.

To order your Code-A-Phone 24 memory switchable Pulse and Tone, Phone Thrustor risk free with your credit card, call toll free or send your check for just $58.50 plus $2.50 for postage and handling to DAK. CA res add 6% tax.

How to order? If you have modular jacks use Order No. 9611. For 4 prong jacks use Order No. 9612. And if you have no jacks now use Order No. 9613. We’ll include the correct bonus connecting jack free.

DAK INDUSTRIES INCORPORATED

TOLL-FREE 1-800-423-2636

If busy, after hours, on weekends or in CA CALL TOLL-FREE ...1-800-228-1234

10845 Vanowen St., N. Hollywood CA 91605
The Basic Repertoire
By Richard Freed

When he was reviewing concerts for the New York Herald Tribune in the 1940's, the composer Virgil Thomson wrote that the backbone of the orchestral repertoire in the United States was made up of "fifty pieces" that were played over and over again. One effect of the LP record on American musical life has been the great expansion of our musical tastes and knowledge and the lengthening of that list of indispensable classical compositions. The symphonic works that our critics regard as essential on orchestral programs and in record collections now number close to two hundred.

For some years critic Richard Freed, a contributing editor of Stereo Review, has listened to all the available recordings of those essential works and has selected the versions he considered the best. We have published his choices in a pamphlet, which we updated annually to serve as a buyer's guide for our readers. Beginning this month we will now publish in Stereo Review Freed's choices of the best current recordings of the Basic Repertoire at the rate of about fifteen compositions a month. We hope it will be useful to you in building and maintaining a record collection worthy of your hi-fi equipment. For those who want the list in pamphlet form, the most recent updating (1982) is available; send $1 (check or money order) and a stamped (40¢) self-addressed No. 10 envelope to Basic Repertoire, Box 506, Murray Hill, New York, N.Y. 10156.

All the selections are two-channel analog stereo discs unless otherwise indicated by one of our usual symbols: I for a digitally mastered recording, C for a stereo cassette, and, in a few instances, M for a monophonic recording.

BACH: Brandenburg Concertos. The digital recording by Nikolaus Harnoncourt and the Concertus Musicus Wien (Telefunken 6 35620, I 435620) is more stimulating than their earlier set, and the new entry by the Linde Consort (Angel DSB-3930, 1 4X2S-3930) may be even more fetching; both are outstanding sonically. There is every bit as much musical pleasure, though, in the less costly sets conducted by Karl Ristenpart (Nonesuch HH-73006, C NS-73006) and Helmut Wieschermann (Arabesque 8088-2, I 9088-2).

BACH: Suites for Orchestra. Every phrase exudes life in the performances by Trevor Pinnock and the English Concert; though tempos in some individual movements may take some digesting (Archiv 2723 072, I 3310 175). Milan Muncinger's Ars Rediviva of Prague is more overtly robust and warmhearted (Supraphon 1 10 1361/2). Scholarship, vitality, and fine sound are effectively combined in the earlier of Neville Marriner's two sets (Argo ZRG 687/8, KZRC 687/8).

BARBER: Adagio for Strings. Possibly the most frequently performed American work in the international repertoire, and surely one of the most beloved, the Adagio is especially well served in the stunning recording by the Saint Louis Symphony strings under Leonard Slatkin (Telarc DG-10059). The late Thomas Schippers was similarly persuasive in his expansive reading, which is part of an attractive and economical Barber package (Odyssey Y 33230, 1 YT 33230).

BARTÓK: Concerto for Orchestra. Until RCA gets around to a half-speed remastering of the Fritz Reiner/Chicago Symphony recording, its current incarnation is still first choice and especially attractive at the Gold Seal price (AGLI-2909). Sir Georg Solti's latest version with the Chicagoans is impressive sonically (London LDR 71036, 1 LDR5 71036), as are the Eugene Ormandy version (RCA ARC-4308, C AREI-4308) and the half-speed remastering of the insightful performance by Pierre Boulez (CBS HM 42132, I HMT 42132). Rafael Kubelik's remake (DG 2530 479) and the vivid Lorin Maazel recording (DG 2531 269, I 3301 269) are superb too.

BARTÓK: Violin Concerto No. 2. The most persuasive accounts of this work are still those by Henryk Szeryng, with Bernard Haitink conducting (Philips 6500 021), and by Itzhak Perlman with André Previn (Angel S-37014, 1 4XS-37014).

BARTÓK: Music for Strings, Percussion, and Celesta. Almost equally appealing are the fiery Leonard Bernstein reading (CBS MS 6956), the chilling Boulez (CBS MS 7206), the intense Ozawa (DG 2530 887, I 3300 887), and the idiomatic Reiner RCA AGLI-4087, I AGKI-4087). The fine Stanislaw Skrowaczewski performance has a stunning account oversite of the Bartók Divertimento for Strings (Vox Lumire VCL 9012, 1 VCS 9012).

BEETHOVEN: Piano Concerto No. 1, in C Major. The large-scale and very live performance by Arturo Benedetti Michelangeli and Carlo Maria Giulini is quite in a class by itself (DG 2531 302, I 3301 302). If applause on a record bothers you, consider the poised and expressive Vladimir Ashkenazy/Georg Solti performance (London CS 6853, 1 CSS 6853), the unique flair shown by Alfred Brendel with Bernard Haitink (in Philips set 6767 002), or the straightforward elegance of the budget-priced Solomon/Menges version (Seraphim S-60016).

BEETHOVEN: Piano Concerto No. 2, in B-flat Major. Ashkenazy and Solti fuse grace and exuberance (London CS 6854, I CSS 6854), Brendel and Haitink dazzle with spirit and wit (Philips 9500 471, I 7300 628), and Rudolf Serkin's buoyant performance with Ormandy is also outstanding (CBS MS 6839).

BEETHOVEN: Piano Concerto No. 3, in C Minor. Maurizio Pollini, with the late Karl Böhm conducting, is both brilliant and profound (DG 2531 057, I 3301 057). Ivan Moravec, with Václav Neumann, balances those qualities with a warmer heart (Pro Arts AL-1016, 1 PAC-1016). Ashkenazy/Solti (London CS 6855) and Brendel/Haitink (in Philips set 6767 002) also leave little unsaid in this work.

BEETHOVEN: Piano Concerto No. 4, in G Major. Rudolf Serkin's new recording with Seiji Ozawa has personal authority and commitment (Telarc DG-10064). Also outstanding are the thoughtful and provocative realization by Charles Rosen, with Wyn Morris conducting (Peters International PLE-110), the somewhat cooler Pollini/Böhm (DG 2530 791, I 3301 791), the lofty Brendel/Haitink (Philips 9500 254, 1 7300 600), and the expressive Ashkenazy/Solti (London CS 6856, I CSS 6856).

BEETHOVEN: Piano Concerto No. 5, in E-flat Major ("Emporer"). Seiji Ozawa and all versions of his best-known work by Arturo Benedetti Michelangeli and Ozawa are at their best in the best-sounding Emperor (Telarc DG-10065), and so are Pollini and Böhm in their recording (DG 2531 194, I 3301 194). Ashkenazy and Solti uphold the high standards of their cycle (London CS 6857, I CSS 6857). Robert Casadesus and Hans Rosbaud offer the outstanding budget version (Odyssey 32 16 0326), and the sterling Walter Gieseking/Bruno Walter disc is of more than historical interest (Turnabout THS-6501).

BEETHOVEN: Violin Concerto in D Major. Itzhak Perlman, with Giulini, blends warmth and vigor in a strong bid for top honors (Angel DS-37471, I 4Z2S-3747). Anne-Sophie Mutter and Herbert von Karajan are expansive and profound in their performance (DG 2531 250, I 3301 250). Similarly distinguished, with somewhat more thrust, are the Nathan Milstein/Erich Leinsdorf recording (Angel RL-32030, I 4RL-32030), Arthur Grumiaux with Alceo Galliera (Philips Festivo 6570 051, I 7310 051), and Josef Suk's recording with Sir Adrian Boult ( Vanguard Everman SRV-353SD).
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AKAI flies in the face of convention.

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HOW TO
What Features Do You Really Need?
By Craig Stark
Three heads or two? Dolby or dbx? What about Dolby-C? Or Dolby HX? How useful are bias-optimization controls? Whether you’re seeking better performance than your old deck can provide or looking into cassette recording for the first time, answering these and similar questions before you start shopping will help you find the deck whose combination of features best meets your individual requirements.

The extent to which individual requirements genuinely differ is important, for as the cassette medium has matured even some of the most “obvious” answers of the past have become considerably less certain. The oldest controversy of them all, between two-head and three-head recorders, will illustrate the point.

**Tape Heads**

Tape heads, which induce a varying magnetic signal pattern on the tape during recording and which detect that pattern and turn it into an electrical signal during playback, are probably the most critical recorder components. Basically, a head is an electromagnet with a microscopically small gap between its pole pieces at the point where the head contacts the tape. The exact width of the head gap is extremely crucial. For relatively loss-free playback of a recorded frequency as high as 20,000 Hz at the cassette’s normal 1/2 ips tape speed, the gap width should be less than one micrometer (µm), or 39.37 millionths of an inch. For recording, however, a gap width of three to five times as great is generally required to ensure the best signal-to-noise ratio. A deck that uses the same head for recording and playback must compromise—a gap of 1.3 µm is typical in today’s better two-head machines. That means a playback loss at 20 kHz of about 6.5 dB, which must be made up by a corresponding treble boost in the playback electronics. Treble boost during playback, however, amplifies tape hiss along with the attenuated high-frequency signals.

On the other hand, if your interest in high-frequency response doesn’t go much over 15 kHz—the limit for stereo FM broadcasts—the playback loss from the 1.3-µm head will be a more easily managed 3.4 dB, and some of the manufacturing savings from using a single record/playback head can be used in making an electronically quieter playback amplifier. Besides, in a three-head deck even the slightest discrepancy in azimuth alignment (the perpendicularity of the head gap to the tape edge) between the record and playback heads can very easily cause a 3-dB loss at 15 kHz (and much more at 20 kHz). This can even happen when separate record and playback heads are placed together in the same physical case, for as the deck ages the case itself can slip out of alignment.

Thus, unless extremely high-quality heads are used, meticulous care is taken to align them (and keep them aligned), and very wide frequency response is demanded—all of which translates into much higher cost—even the theoretical advantages of a three-head design may not be realized. Here, however, another, more personal consideration enters in. How important is it to you to be able to compare the signal going into your tape deck with a near-instantaneous playback of the recorded result? Only a three-head design permits such “monitoring off the tape,” which is the ultimate quality control for tape recording. To me, this feature is a necessity, but,
since the great majority of cassette decks sold are of the two-head variety, my priorities must not be the same as most people's. Whether you pick a two- or a three-head model, head design is of paramount importance, yet only a few manufacturers provide enough information about their decks' heads to give the consumer a reasonable basis for choice. In terms of materials, it's generally agreed that heads made of Sendust alloys or ferrites are three to five times as wear-resistant as permalloy-based heads. It's easy to understand how tape can wear down a head—it acts like a very fine-grain sandpaper—but except with very expensive decks this problem is easily overemphasized. Nakamichi, an acknowledged leader in cassette-head design, uses a crystal-permalloy material because it has some superior magnetic properties, and the company's heads are nevertheless rated to last for 10,000 hours of use!

**Noise Reduction**

After the choice between a two-head or three-head model, the next major choice concerns the deck's noise-reduction system(s). It is a fact of cassette life that the signal-to-noise ratio that can be achieved without some sort of noise reduction—approximately 50 dB (unweighted)—is unacceptable for most hi-fi recordings. (True, if you restrict your taping to highly compressed FM broadcasts of rock, the music may never get soft enough for you to hear residual tape hiss even without a noise-reduction system, but highly compressed sound is itself not high fidelity.) For years the Dolby-B noise-reduction system (or JVC's compatible ANRS) has been a standard feature of nearly every good cassette deck, and almost all prerecorded cassettes are Dolby-B encoded. The Dolby-B system provides 8 to 10 dB of noise reduction, principally in the frequency range where the ear is most sensitive to residual hiss (above 1 kHz). This amount of noise reduction does not render *all* hiss inaudible, however, and as recordings with much wider dynamic range (the spread between the loudest and softest sounds) have become available, the limits of Dolby-B have become more apparent. At present the weighted signal-to-noise ratios of high-quality decks with Dolby-B are typically in the 65- to 68-dB range, and for serious music listeners this is not quite enough.

The Dolby Corporation now offers a more powerful system, Dolby-C, which provides 20 dB of noise reduction instead of 10 dB, and you can expect to find this on many of the newer cassette decks. In (over) simplified terms, Dolby-C is essentially two Dolby-B systems working back to back, extending the range of frequencies treated down to approximately 200 Hz. Dolby-C also offers a potential improvement in high-level high-frequency response by reducing the treble boost during recording. With Dolby-B, this boost sometimes drives tapes beyond their saturation limit. A deck equipped with Dolby-C will always have a switch position for Dolby-B, so that recordings you've already made or purchased can be played back properly. Because the Dolby-C system involves twice as much processing, the ability to capture a dynamic range greater than 90 dB, which is positively awesome and can be rivaled only by digital recording. Since dbx is not compatible with the Dolby systems, however, recorders that offer it also provide at least Dolby-B decoding for playback of previously recorded material. If you need more noise reduction than Dolby-C (for dubbing Compact Discs or direct-to-disc or digitally mastered LP's, for example), dbx is clearly the answer. But remember that the compatibility problem works both ways: tapes you record with dbx can be played back only on a dbx-equipped deck (or with an external dbx processor). Some car systems and personal portables have dbx decoders, although this is far from common.

Some Dolby-equipped decks may also offer another feature unrelated to noise reduction although often confused with it. The original version of this feature is known as Dolby HX (which stands for "headroom extension"), but some refinements made by Bang and Olufsen, with Dolby's cooperation, are incorporated in the current version, Dolby HX-Pro. It is currently available in not only B&O's decks but some from NAD and Harman Kardon as well. What the HX-Pro (and HX) system does is to vary the amount of effective bias used during recordings so as to maximize the high-frequency storage capacity of the tape. By lowering the recorder-supplied bias when high-level high frequencies are prominent, the tape can hold more treble before reaching saturation. HX recordings can be played back on any tape deck, whether or not it has the HX feature for recording, and the degree of improvement in the high-frequency range very closely approximates the difference that metal tape provides over chrome or ferric tape formulations.

**Bias Adjustments**

We have long been aware that differences between tape brands of the same nominal type (ferric, chrome, ferrichrome, or metal) can create slight differences in frequency response. These differences can effectively be eliminated by "optimizing" the recording bias for each cassette. Attempts to make such fine tuning a user-adjustable control have been relatively unsuccessful, since to do the job properly calls for instruments (specifically, a high- and mid-frequency audio generator and a sensitive meter) that can only be built into rather expensive decks. Nevertheless, manufacturers have incorporated a bias-adjust control into many decks in which the only test instrument is the listener's ear—even in some two-head
It was spawned by Sony. And, it’s an entirely new technology. No more cheap paper speakers and heavy magnets. Sound is reproduced with such clarity and power that it will send shivers up and down your spine.

Sony’s MDR-3 headphones sell for up to $50 and they’ve been worth it. Last year DAK introduced our own unbranded $5 version of the headphone that we felt was very close to Sony’s.

But, now we’ve gone strictly legit. The headphones we are giving you now, still for only $5, are the fabulous Mura Red Set Ills. You’ll find them in most quality HiFi shops around the country competing with Sony’s.

We’ve been selling them for $29. Why not check your local HiFi store’s price.

Then, we challenge you to compare the Mura Red Set Ills high quality sound to Sony’s. But, there are two things you ought to know.

 Thing one. If you don’t like the Mura headphones better than Sony’s, not only can you return them and get your money back, but we’ll also give you a free gift for your trouble.

 Thing two. We are losing our shirts on these headphones. If you buy top name TDK and Maxell bias cassettes, you probably pay $3.50 to $4.50 each for a 90 minute cassette.

The extension cord lets you roam up to 12 ft.

Plus, you get an 8 foot extension cable (a $4 value) that ends in a standard 1/4" phono plug to fit your home stereo.

And Mura Red Set Ills phones are backed by a full 2 year manufacturer’s limited warranty for your protection.

THE CATCH

 Thing one. If you don’t like the Mura headphones better than Sony’s, not only can you return them and get your money back, but we’ll also give you a free gift for your trouble.

 Thing two. We are losing our shirts on these headphones. If you buy top name TDK and Maxell bias cassettes, you probably pay $3.50 to $4.50 each for a 90 minute cassette.

The mylar diaphragms are much more accurate than paper and have a drastically improved dynamic range. The result is a headphone that weighs less than 2 ounces and yet produces 20-20,000hz sounds better than a theater sized loud speaker system.

Sony fathered the technology for these headphones and obviously has no connection to DAK or Mura, but the technological heritage will become vividly apparent when you compare the sound of these marvelous headphones.

ADOPTED--NOW OF ROYAL BLOOD

Now instead of an unbranded offspring, you get a pure blooded thoroughbred.

Mura’s mylar diaphragms actually consist of a dome shaped inner tweeter plus a stiffened outer cone low frequency piston for awesome bass.

Even Mura’s cable is impressive. It’s made of special anoxic copper wire to reduce high frequency signal attenuation. The first 4 feet are terminated in a mini plug to fit all pocket stereos.

We challenge you to compare the frequency response, dynamic range and signal to noise ratio of our new Gold Label MLX to Maxell UDXL or TDK SA. If they win, we’ll not only give you back your money, we’ll give you a free gift for your trouble. And, DAK’s come with a deluxe hard plastic box, index insert card and a limited 1 year warranty.

WHY, YOU MAY BE ASKING?

You’re very valuable to us in the form of future business. Over 160,000 customers have responded to bonuses like this. We find most of you keep buying once you’ve tried our cassettes and our prices; and that’s a gamble worth taking.

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DAK manufactures a cassette with no problems and great sound. We’ve been hot on the heels of the frequency responses of Maxell and TDK. The tape we made last year had a great frequency response up to 14,000hz.

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Be prepared for a sonic explosion in sound when you try both the Mura Red Set Ills and our new MLX90 cassettes.

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Not recognized by law as a lawful offspring. The technology is new. Up until the Sony featherweight headphones were introduced, most headphones were simply uncomfortable miniature speaker systems that you wore on your ears.

The Sony breakthrough was made possible by changing the cheap paper speaker cones to mylar diaphragms, and by using the powerful rare earth magnet Samarium to move the diaphragms.

The mylar diaphragms are much more accurate than paper and have a drastically improved dynamic range. The result is a headphone that weighs less than 2 ounces and yet produces 20-20,000hz sounds better than a theater sized loud speaker system.

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Be prepared for a sonic explosion in sound when you try both the Mura Red Set Ills and our new MLX90 cassettes.
"Literally a new dimension in the sound"
"Polk "reinvents" the loudspeaker"

Stereo Review

"Polk "reinvents" the loudspeaker"

High Fidelity

"Astounding... Mind Boggling... Flabbergasting..."  

The Critics Agree!

Stereo Review raved: "Hirsch Houk Lab's tests of the Polk SDA-1 speaker show that it does indeed add a new dimension to stereo sound... completely without any undesirable side effects... it borders on the spectacular... the result is always better than would be achieved by conventional speakers... quite literally a new dimension in the sound... beautifully balanced... the speakers sound superb."

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All 7 Polk Monitor systems share many of the sonic qualities and design features of the award winning SDA-1. Every Polk loudspeaker offers superb sound and superior value; quite simply the best sound for the money available on the market. One is the perfect choice to fill all your needs.

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decks that preclude instant comparison of the signal before and after adjustment. Built-in microprocessors, increasingly common in home cassette decks, allow bias to be fine-tuned automatically, making the process both quick and easy. Such convenience costs more, of course. Frankly, unless you buy either a deck with a built-in microprocessor or one with three heads and built-in or external test instruments—or unless the manufacturer supplies a listing of the proper settings for different tape brands—I would advise ignoring bias adjustments entirely.

Transports and Drives

Tape-transport mechanics provide another set of basic features to choose among. Decks are available with one, two, three, and even four motors, with single or dual capstans, and with a host of automated functions. All else being equal, a dual-capstan drive (also known as a "closed-loop" drive) is preferable to a single-capstan model, for it effectively isolates the important section of the tape—the part passing across the heads—from any disturbances induced by the supply reel. In theory, if you build a closed-loop transport properly you should be able to eliminate the need for the cassette pressure pad, but to date only one manufacturer, Nakamichi, has that good a dual-capstan drive, and some good single-capstan models have no more wow and flutter than their dual-capstan counterparts. Dual-capstan drives almost always use a separate motor for driving the reels, however, which generally leads to faster rewind and fast-forward times, and dual-capstan drives are naturally adapted for auto-reverse functions if this feature is important to you. Most auto-reversing decks record in only one direction, but a few will record bidirectionally.

While most transports today use solenoids to release the reel brakes and operate the tape gate mechanism (a great improvement over the mechanical "piano key" controls of yore), the most advanced transports use a servomotor for these tasks. This refinement eliminates both the noise and the shock induced by solenoid action and is certainly worthwhile in the "no-compromise" decks that employ it.

Record-Level Meters

The pseudo-VU meters that once were used for setting recording levels have now all but universally given place to peak-reading fluorescent or LED displays. These not only eliminate needle overshoot or undershoot but also read the peak rather than the average value of the signal, and it's the peaks, not the averages, that cause distortion. At the same time, however, these displays show only discrete values, not the continuous range that can be conveyed by a meter. In terms of potential accuracy, then, look at the number of segments in each channel's display (twelve segments are usual, sixteen are better) as well as the intervals (in decibels) between segments. Some displays are deceptive in this respect, since what may look like three distinct segments is only one electronically. You can test this by slowly increasing the input level and checking how many indicator lights turn on at once.

Counters and Timers

Electronic control has also all but eliminated mechanical tape counters on top-of-the-line cassette decks, replacing them with digital readouts. The most useful of these actually display the time remaining on the cassette side. Even if these time indicators are not quartz-crystal accurate, they are certainly a great advance on arbitrary counter readings. Microprocessor control has also increased the number of available transport "memory" functions. Decks are now available that not only permit automatic rewind to (or, alternatively, replay from) a "counter 0" location, some also permit marking a second memory location within the tape itself. And several permit fast winding past a specified number of selections (separated by blank spaces), sometimes with brief pauses to sample the cuts passed over. To me this kind of automation is hardly worth its cost, but then I don't usually record a lot of short selections on the same tape. And while timer-activated recording can be useful to avoid missing something that's broadcast while you are out, I don't find much appeal in timer-started playback since I wake up to a radio.

Finally, if you intend to do any recording with microphones, it would be well to check whether your prospective deck has microphone-preamplifier circuits. Several companies have eliminated the microphone input stages entirely on some models, so you may have to buy an active mixer in order to record live music or speech.

By the time you've studied the merits of all these features, deciding what you need or want and what you don't, there will undoubtedly be several new ones on the latest decks in the showrooms. Remember, however, that every additional "convenience" feature will cost you, either directly or in terms of what the manufacturer may sacrifice in performance to keep the total price down, so choose with care.
Among the many numerical specifications that are used to describe the performance of audio equipment, "frequency response" is the one that is usually cited first and is cited most often. Sometimes it is naively regarded as the criterion of high-quality sound reproduction. A manufacturer may advertise proudly that his loudspeaker has a "frequency response of 30 to 15,000 hertz" even if its response at 30 Hz is a distorted croak and its response at 15,000 Hz is too weak to hear. But a mere statement of any component's frequency-response limits is not sufficient to describe that component's "sound." Frequency response is a more complex subject than many realize; it encompasses frequency-response limits and deviations from "flat" response, including the magnitude of those deviations and where they fall in the audible spectrum.

While some audiophiles speculate about the value of reproducing sounds at frequencies that are higher (ultrasonic) or lower (infrasonic) than human beings can hear, a reasonable goal for a high-fidelity audio system is to reproduce the entire spectrum of frequencies normally audible. This range is often stated as extending from a low of 20 Hz to a high of 20,000 Hz. But frequencies up around 20,000 Hz are of interest mainly to children; high-frequency hearing tends to decline with increasing age, and most adults hear little above 15,000 Hz. Frequencies this high are "heard" not as distinct pitches but only as vague sensations of sound. The "whistle" from a TV set is about 15,700 Hz. At the low end, you can feel sound-pressure waves at frequencies well below 20 Hz (with your skin, rather than your ears, as the detector), but the lowest frequency that appears with any regularity in music recordings is the 32-Hz low C of a large pipe organ or a double bass. As a practical matter, therefore, a frequency range extending from 30 to 15,000 Hz will usually be more than adequate for lifelike reproduction of most non-electronic musical sounds.

To be a useful indicator of quality, a frequency-response specification must also indicate how accurately the device reproduces the audio signal fed to it. Musical (and most other) sounds consist of "fundamental" tones at relatively low frequencies plus "overtones" at higher frequencies, and it is the relative strength of the overtones that defines the characteristic tonal quality of each musical sound—causing, for example, an oboe to sound different from a clarinet playing the same note. (Fundamentals are what printed music notates. Overtones come "free" with each instrument.) In order to reproduce musical sound faithfully, every audio component must not only reproduce all the audible tones but must also preserve the relative strength of the fundamentals and the overtones. Thus, one of the most important questions you can ask about an audio component is whether it alters these tonal relationships by strengthening some frequencies and weakening and by how much.

This can best be answered by a graphic plot showing the response of the device frequency by frequency. A constant-level signal is fed into the component or system, its frequency is gradually varied (usually from about 20 Hz at the low end to 20,000 Hz at the high end), and the output level at each frequency is measured and plotted in a continuous trace. By looking at the resulting line you can see which frequencies the system is exaggerating or weakening and by how much.

Of course, some devices are not supposed to have a uniform, or "flat," response. A phono-preamplifier circuit, for example, must incorporate a bass boost and treble cut (+17 dB at 50 Hz and -17 dB at 15,000 Hz) in order to compensate for the equal but opposite RIAA equalization used in making disc recordings. Accordingly, the accuracy of a preamplifier is measured by determining the difference between its actual response and the desired RIAA curve. If its electrical response is up only +16 dB at 50 Hz, then it has a frequency-response error of -1 dB at that frequency.

The information in a frequency-response graph is often summarized by a statement in the form, "x Hz to y kHz ± z dB," which means that the useful response of the product extends from x Hz at the low end to y kHz at the high end, with no response error in between exceeding ±z decibels. If the range is wide and the tolerance is narrow, "20 Hz to 20 kHz ± 0.05 dB," say, that's all you need to know; such a response covers the entire span of human hearing, and the departures from perfect re-
response are too slight to be audible. But if the frequency range is narrower and/or the tolerance is wider, then an actual graph of the frequency response is much more useful than a summary spec. The summary doesn't tell you how much of the audible frequency range is affected by the specified errors, and that is what determines how audibly significant the departures from ideal response will be. If you look at a frequency-response graph, you can readily see what frequencies—and how broad a range of frequencies—will be affected by response errors.

Consider, for example, the response curves shown in the accompanying graph. The solid line plots a response that is perfectly flat from 20 Hz to 10 kHz and then rolls off, being down 3 dB at 15 kHz; this would be summarized on a specification sheet as "20 Hz to 15 kHz +0,-3 dB." The dashed line is for a response flat up to 1,000 Hz but depressed by 3 dB for all frequencies above 2,000 Hz; this too could be summarized on a specification sheet as "20 Hz to 15 kHz +0,-3 dB." These curves, by the way, are not arbitrary examples. The solid line shows the response of an excellent FM tuner, the steep 15-kHz rolloff being produced by its stereo pilot-tone filter. The dashed line represents a defective or badly designed tuner with an incorrect capacitor in its de-emphasis circuit. By inspecting the response graphs you can predict how these products will sound, assuming that their distortion and noise characteristics are the same.

The first tuner (solid line) is perfectly accurate over the entire audible range below 10 kHz; therefore, all musical fundamentals, and nearly all overtones, will be correctly reproduced with no perceptible alteration of timbre. The rolloff above 10 kHz will affect the reproduced sound only during those moments when the music actually contains significant energy at those high frequencies—from cymbals, tinkling bells, or crisp percussive transients, sounds that are absent from much music and that occur only briefly in music that contains them. Listening experiments have confirmed that most listeners, most of the time, cannot detect the operation of a 15-kHz filter having the effect shown by the solid line in the graph. (Of course, if your record collection consists mainly of concertos for cymbals and bells, you might find this response inadequate—assuming that your own hearing extends to these high frequencies.)

But in the second tuner (dashed line), the response is weak over much of the frequency range, more than three octaves (an octave is a range of frequencies with the higher limit being twice the lower, for example, from 440 to 880 Hz). The great majority of musical sounds include audible overtones that fall into this frequency range and will, therefore, be affected by this frequency-response error. The perceived timbre of the sound will be changed, not just occasionally or during brief, high-frequency transients, but constantly. Since all of the higher overtones will be weakened while the fundamentals and low overtones will be reproduced at full strength, such a response characteristic will cause the sound to be perceived as "warm" and "mellow" or, alternatively, as "veiled" and "dull," depending on whether a given listener likes it that way. If the overtones were being boosted by 3 dB rather than weakened, the sound would be described as "bright" and "clear" by listeners who like it that way, "cold" and "thin" by those who don't. As a rule, the broader the frequency range that is affected by a response error, the easier the error is to hear. A 5-dB peak or dip in response may have relatively little audible effect if it spans only a very narrow frequency range (less than an octave), especially if it is confined to the highest or lowest audio frequencies, where there is seldom any musical energy that would be affected by the error and where the ear is less sensitive in the first place. But even a very small departure from flat frequency response, as little as 0.5 dB or less, can be heard as a subtle brightening or dulling of the sound if it spans a large portion of the audible spectrum (an octave or more), especially in the critical 100- to 8,000-Hz region.

Thus, if one FM tuner sounds bright and clear while another sounds a bit dull when tuned to the same station, the cause is unlikely to be that one has flatter response at 15 kHz and above; rather, most likely there is a small difference in their de-emphasis circuits that causes a boost or cut of 1 dB or less across the entire treble range (above 2,000 Hz), which is where the de-emphasis takes effect. Similarly, if a cassette deck produces dull-sounding tapes, it's usually not because the recorder's response rolls off above 15 kHz instead of extending to 20 kHz. Distinctly dull sound usually reflects a weakening of highs across a broad treble range, and in cassette recorders it usually means that the recorder is over-biased for the tape being used, that the Dolby noise-reduction circuit is miscalibrated for the tape being used, that the recording level was set too high the tape became saturated (overloaded) at high frequencies, or that the heads are dirty or grossly out of alignment. If one loudspeaker is perceived as having more powerful bass than another, it doesn't necessarily mean that the "good" speaker has flat response down to 20 Hz while the "inferior" one stops at 40 Hz; a sensation of solid bass power usually results from elevated output in the 40- to 100-Hz region. In conclusion, when you are examining frequency-response graphs and specifications, the best index of musical realism is not how far the response extends into the infrasonic and ultrasonic regions. What really counts is how accurate or "flat" the response is in the frequency range from 50 to 10,000 Hz, where most of the energy in musical sound is concentrated.
Nothing Halfway About It.


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7 mg "tar," 0.5 mg nicotine av. per cigarette, FTC Report Dec'81
The cigarette that changed two million minds. The one that rewrote the book on cigarette-making.

The MERIT cigarette. Made by actually boosting the taste you get out of smoking. Boosting taste to equal leading cigarettes having up to twice the tar.

MERIT. The ‘Enriched Flavor’ cigarette. There’s nothing halfway about it.
The new Technics cassette decks with dbx.
They don't just reduce tape noise. They eliminate it.

There is a new line of Technics cassette decks so technologically advanced they are capable of reproducing music with virtually no audible tape noise. None.

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The Technics RS-M255X goes even further. Wide range (−40 to +18 db), three-color FL meters handle the dynamic range dbx gives you. An electronic tape counter doubles as a remaining time indicator to show how much time is left on your cassette. Bias and EQ levels are automatically selected for any tape formulation. Microprocessor feather-touch controls give you fast, easy, mode switching. And Technics RS-M255X gives you the stability and accuracy of a two-motor drive system.

Audition all of the sophisticated Technics cassette decks with dbx. Including the very affordable RS-M228X.

Why settle for tape noise reduction when you can have tape noise elimination? From Technics.

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How to Make a Good Tape Recording

By David Ranada

Making an accurate recording of a disc, a radio broadcast, another tape, or live music isn't difficult. Many home recordists fret unnecessarily over this process, which can, after a little experimentation and practice, become second nature. (On the other hand, home recordists should be concerned over the questionable ethics of recording copyrighted material in order to avoid buying the original.)

The steps outlined below take you through all the procedures needed to make a cassette dub. Lest they sound too much like "Stereo Review's Guide to Excruciatingly Correct Cassette Recording," keep in mind that they are just suggestions, that experimentation is the rule. Feel free to adapt the procedures to your situation or to reject them altogether. In making a recording, you can rarely damage anything by any reasonable experiment you might try. After all, a tape that turns out badly can always be erased and used again.

(Continued next page)
1 Clean the tape deck. Dirty tape heads can cause a loss of high frequencies and subsequent noise-reduction-system mistracking. Capspins, pinch-rollers, and tape guides gummed up with tape-coating particles can create audible wow and flutter and, in very dirty conditions, can even damage the tape itself (by scoring or creating the oxide surface). Cleaning a tape deck is so simple that it can be done before making any crucial recording. There are many deck-cleaning products available which can help in this basic first step. You can even use the old-fashioned alcohol (91 per cent isopropanol) and swab method presented in "How to Clean a Tape Deck" (November 1982).

2 Select a tape, one appropriate for the music and the recorder. The simplest way to choose a suitable tape is to follow the tape-deck manufacturer's recommendations or to use the same tape types he uses in setting up and calibrating the deck in the first place. STEREO REVIEW's tape-recorder test reports list those tapes that were found to give good performance with each machine tested.

If these initial guidelines are not available for your recorder, there's still no need to worry. A top-of-the-line ferric, chrome or high-bias, or metal tape from one name-brand manufacturer is usually very close in performance characteristics to a similar tape from another manufacturer, close enough to give essentially equivalent audible performance. If you find a tape that sounds marginally better on your machine, stay with it. The main practical differences may lie only in the prices.

As to which category from which to choose a tape (ferric, chrome or high-bias, or metal), the selection depends primarily on the characteristics of the deck, the music to be recorded, and its source (tape, disc, mikes, etc.). Metal tape is necessary for most live music recording or for taping prerecorded material with substantial (high-level) high-frequency content. You might get by with a less expensive grade of tape for live recording by using a deck with the Dolby HX headroom-expansion system (see Step 4).

Advertising claims to the contrary, there is often little audible benefit to using a chrome or chrome-equivalent tape over a top-of-the-line ferric tape provided your tape deck is set up for optimum performance with each type of tape (see next section). If you are using a wide-dynamic-range noise-reduction system (Dolby-C or dbx), the differences in tape-noise levels are lessened in importance. And if you are recording a limited-dynamic-range source, the distinctions between tapes become even less important.

A good way to shop for tapes is to buy a sample of each of the types you are considering. Make test recordings of various types of music and choose the tape that gives the most accurate reproduction of the source, the one that changes the sound quality the least. Typical changes you can expect on a tape are increased hiss levels, a slight rolloff of high frequencies (or a boost if the tape is under-biased), and a slight loss of "clarity" (from wow and flutter, distortion, and/or modulation noise). Choose the tape that suffers the least from these problems in your machine.

3 Match the deck to the tape. You cannot expect to get accurate cassette dubs unless the deck is matched to the magnetic requirements of the tape in use. Among the degradations resulting from a mismatch are higher distortion, high noise levels, rolled-off or boosted high-frequency response, and improper output levels. The last three problems can cause mistracking of a noise-reduction system, thus further worsening the sound quality.

Luckily, matching a recorder to a tape is relatively easy nowadays: just switch the bias and equalization controls on your deck's front panel to match the settings recommended by the deck manufacturer for the type of tape in use. (This assumes the manufacturer has correctly calibrated the settings. Otherwise, lab instrumentation is necessary for proper machine setup.) Some recorders have automatic, computer-controlled tape-matching functions while still others contain built-in test oscillators. If you have them, use them!

There are tricks you can use in playback to "distort" the sound quality to taste. For instance, playing back a chrome/metal tape with the ferric equalization settings or playing a Dolby-B encoded tape without Dolby-B decoding will produce an artificially elevated high end, which may be desirable during playback in an automobile. Comparable tricks, though possible, are not a good idea while recording, however. If nothing else, they will make the tape you record sonically incompatible with other tape decks.

4 Select the noise reduction. Some program material, such as spoken word records or highly compressed rock music, may not need any noise reduction. In fact, recording without noise reduction produces a tape that is "compatible" with all cassette decks of any vintage. In general, however, cassette recordings made without a noise-reduction system are unacceptably hissy.

If you intend to make recordings that are also playable on a car stereo, on a "personal" cassette player, or on any other deck having no noise-reduction system, the system to use on your home deck is Dolby-B (or JVC's essentially equivalent ANRS). When played back without decoding, Dolby-B-encoded tapes have a boosted high-frequency response. This can be acceptably tamed, though not correctly decoded, by turning down the treble.

Dolby-C-encoded tapes produce much the same effect when played back on Dolby-B-only decks. Tapes encoded by the dbx system cannot be acceptably played back on other than dbx-equipped recorders or decks with attached dbx decoders. For faithful recordings of wide-range material (audio-philic records, digital-audio discs, live music), a suitable wide-range noise-reduction system—Dolby-C or dbx—is almost mandatory.

Dolby HX is not a noise-reduction system but a means of increasing the level of high frequencies that can be recorded on a cassette tape. It is a record-only process and does not require decoding; HX-processed tapes can be played back on any machine. The system could, in theory, be used in conjunction with any or no noise-reduction system. Practically, however, Dolby HX seems to be available only on decks containing Dolby-B or Dolby-C noise reduction and operates only when the Dolby noise reduction is turned on also. The extra high-frequency headroom Dolby HX provides may let you get by
How could a cassette deck with two heads be so hard to get?

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

It more than meets the ultimate tape deck challenge.

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

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

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

It more than meets the needs of the audio perfectionist.

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

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

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

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

*CIRCLE NO 7 ON READER SERVICE CARD
The purpose of a turntable is to remain quiet. It should contribute no noise or vibration to the sounds picked up by the cartridge.

That's why our new T-Series turntables all use belt drive. The belt drive provides acoustic isolation from motor vibrations. It literally separates the motor from the platter and spindle. This avoids the noise problems inherent in direct drive, where the motor is connected directly to the platter.

A belt design, of course, requires more careful engineering to achieve a constant platter speed. But we considered it well worth the effort.

In fact, we went to great lengths to make the T-Series among the finest turntables you can buy. Doing so required using massive platters; wooden bases that provide isolation from room vibrations; as well as disc stabilizers and vibration-absorbent platter mats.* We also used low-mass tone arms to handle warped records, and capacitance trim to electrically match your cartridge and receiver.

And even though Harman Kardon's new T-Series delivers features found only on the world's most expensive turntables, we haven't made ours expensive. Harman Kardon turntables start at less than $200. You can see them at quality audio retailers. But you certainly won't be able to hear them.

*Available on T40 and T60 models.

For your nearest dealer, call 1-800-528-6050, ext. 870, or write Harman Kardon, 240 Crossways Park West, Woodbury, NY 11797-2057. In Canada, Gould Marketing, Quebec.
with a less expensive grade of tape. From metal you may be able to move down to a chrome or high-bias formulation, or from a top-of-the-line ferric down to a middle-of-the-line ferric, depending on the music. I’d recommend the constant use of Dolby HX on all recorders equipped with it.

5 Set levels. This is the trickiest step in all types of audio recording and one which is best performed after some experimentation with each recorder/tape/music combination. As a first approximation, follow the deck manufacturer’s recommendations as to where the peaks of the signal should read on the deck’s meters. The recommended maximum level may vary with the type of tape used. Generally, I’d recommend setting as high a level as possible which does not result in either distortion or a perceived dulling of the high frequencies (due to tape saturation).

For lower noise in playback, it’s perfectly okay to run recording levels higher than the recommended settings if there are no audible drawbacks. Experiment to see just how high you can get the levels with each different combination of tape and machine. Write down the highest allowable meter reading. Very short, very high peaks may sometimes “go into the red” with no ill effects on machine or tape. Print-through problems, however, are exacerbated with very high recording levels.

Try not to change recording levels while making a dub; it’s just bad form unless absolutely necessary. Party tapes of dance music assembled from different LP’s, for instance, may require some level adjustment between selections. Not only do dancers not like widely varying playback levels, but every disc-cutting engineer has his own idea about what constitutes a good disc-cutting level. If you must change too-low levels drastically, boost them during a pause in the music (between cuts or movements). If the levels are slightly too high, it’s okay to rescue the recording by slowly turning down the record-level controls on the recorder so that the meters indicate peaks at your experimentally determined maximum recording level.

Many stations broadcasting classical music hit peak modulation levels only rarely. Many rock stations, however, hit maximum legal levels quite often by using heavy compression of the music. Even if you tape only classical music, use a heavily compressed rock broadcast to determine where to set recording levels, then tune to the classical stations with your levels preset.

Although it is considered bad practice, many FM stations broadcast monophonic recordings without switching off the stereo pilot signal that activates a receiver’s or tuner’s stereo decoding circuit and front-panel stereo-FM light. If you are dubbing a mono recording being broadcast in “stereo,” switch your receiver or tuner into mono. You can gain more than 20 dB in signal-to-noise ratio. Playing the tape back in mono will also reduce the apparent noise levels by several decibels. This also applies to mono disc dubs.

If you know for sure that your tuner has good suppression of the 19-kHz stereo multiplex pilot signal, you can safely turn off the multiplex filter in your tape deck (if possible) when recording FM broadcasts. The two multiplex filters working in series could reduce the deck’s record-playback response at 15 kHz by several decibels.

Unfortunately, reliable information on stereo-pilot rejection is usually available only in test reports on specific components, such as those published in STEREO REVIEW. The best solution is to experiment.

Discs. Setting levels with stylus-in-a-groove recordings is simple once you learn how to tell loud portions of a disc from soft portions. The “texture” of the surface of a stereo disc is “rougher” during loud passages. These passages also “sparkle” more when held up to a light. Soft signals on a disc appear smoother and darker under a light (see photo below). Play the loud portions and set your levels accordingly.

**Showing not the rings of Saturn but the surface of a stereo LP, this photograph indicates how the varying loudness of the music changes the appearance of the disc surface.**

Unless the only loud portions of a record are at the start of the sides, try to find loud passages about halfway into the disc. This keeps beginning-of-the-disc infrasonic rumble from influencing the readings on the meters. By the time a stylus reaches the innermost grooves of a disc, the cutting process has already slightly rolled off the high frequencies and possibly slightly compressed the signal. Unless the loudest portions of the disc are known to be in the inner grooves, try not to use them as level-setting guides. (Infrasonic rumble, by the way, can cause extraordinarily high levels of infrasonic signals to be fed into a tape deck. If you are getting distortion in your dubs that seems to be synchronized with the passage of a small warp under the stylus, you might need to in-
stall an infrasonic filter between the amplifier and the tape deck.)

When disc-cutting engineers cut discs they usually try to set a constant overall level between disc sides and between discs in multiple-record sets. This obviates changing the playback volume at every side change. It also means that there is only one optimum recording level for the two sides of a disc or for all sides of a multidisc album. To avoid what could be annoying changes of level, try to find the single loudest passage and use it to set the recording level for the entire tape.

For recorded tapes. Because tapes have definite overload (saturation) limits, the comments about FM recording above generally also apply to the copying of prerecorded tapes. High-speed-duplicated cassettes tend to be recorded at too-high levels, so you might want to reduce the recording level on any dubs you make of them.

Live music. Recording live music is simple if you can record a rehearsal or run-through. Even one loud chord can be enough. If not, then as a first try (with classical music, and with microphones placed 3 to 15 feet from the performers) set the level of applause that greets the musicians at 5 to 10 dB below the maximum acceptable recording level. For rock music, the first few notes will generally tell you whether your levels are set correctly.

6 Use all your deck's features. You paid for them, so you might as well take full advantage of their capabilities. The most useful feature in a cassette deck is probably the PAUSE control. It can be used to good advantage in making a recording with lower perceived noise levels.

Steady noise (such as hiss, record noise, or rumble) is more easily perceived when it comes and goes and when the transitions between noise and no noise are rapid. Many people don't realize that simply recording on a blank or bulk-erased tape raises the tape's background-noise level even when there is no signal recorded. This noise is called bias noise and is an inherent part of analog magnetic recordings. The objective when making a dub is to introduce as few changes in background noise level as possible while making the necessary changes smoothly and slowly.

From these considerations comes the following procedure for dubbing a disc:

a. Fully rewind the tape to the leader.

b. Place the deck in RECORD, with the RECORD-LEVEL controls turned down.

c. Let the tape roll for about 10 seconds to skip over the leader and to leave some blank tape at the end in case the leader should break.

d. Place the deck in PAUSE.

e. Place the stylus on the disc a few turns before the music starts (either in the lead-in groove or at the end of the band before the one you want to record). Make sure the stylus has settled into the groove.

f. Release the deck from PAUSE.

gh. Bring the RECORD-LEVEL controls up to their appointed settings fairly slowly. Make sure you get there before the music starts, however.

h. If, when the music ends, you are going to record some more (the other side, perhaps), do not fade down the record level. Just wait an appropriate period, with the stylus still on the disc, and then put the recorder back in PAUSE.

i. Cue up the next selection or side to be recorded.

j. Release the deck from PAUSE. This procedure creates a constant level of disc and tape background noise between the two selections.

A RECORD MUTE switch, which puts a "blank" segment on the tape, can also be useful in making a "low noise" dub of a disc. After Step d above, turn up the RECORD-LEVEL controls to their preset positions. Activate RECORD MUTE during Steps c and f; skip Step g. As close as possible to the start of the music release the RECORD MUTE. This will take some practice so as not to cut off the initial sound. It also works best with music that starts loudly.

An AUTOMATIC PROGRAM SEARCH feature on a deck allows you to fit one recording to fit into a cassette recordings that might, on first calculation, seem too long. It may be possible, for instance, to start the cassette with the end of the album. The first side of the album will thus start midway through the first side of the cassette with the rest of the music "wrapping around" the second side. The auto-search lets you start playback at the true beginning of the program without tedious searching or tape-counter watching.

A TIMER-RECORD feature allows you to make unattended recordings of broadcasts (remember that levels can be set for FM dubs beforehand). Unfortunately, unless you have a quick-reverse bidirectional-recording deck, the recording time is limited by the length of one side of a cassette, making a timer feature useless for recording whole operas or rock concerts.

7 Document the recording. If you do a lot of dubbing, it's best to write down what you are recording while you are recording it. (Properly set levels will never need watching while the recording is in progress.)

If you don't mind the vocal interruptions it might be a good idea to record the intro or "out-tro" of a piece being broadcast. This gives an on-the-tape record of what the piece is, who the performers are, possibly the record number, and, if you are good at recognizing announcers' voices, what station it was broadcast over.

Protect your recordings by punching out the protection tab in the cassette shell as soon as you have finished recording the appropriate side of the tape. Doing this, in fact, is more important than sticking a label on. You can always put a piece of adhesive tape over the holes if you want to erase and re-record on the tape.

8 Use accessories. Many "outboard" accessories connected between the amplifier and the deck can improve the sound or convenience of making tape copies. Compressors (which can compress or expand an audio signal's dynamic range) may help make a poorly recorded tape of a conversation, speech, or telephone call more intelligible when used in "compress" mode. Dance tapes sometimes benefit from a slight compression. Equalizers can tame some of the shrill high frequencies sometimes found on discs. If your deck's inherent noise level is low enough and it doesn't already contain a wide-range noise-reduction system, Dolby-C and dbx processors are available as accessories. An inexpensive mixer will enable you to make DJ-quality party-music tapes. An inexpensive mixer will enable you to make DJ-quality party-music tapes. An inexpensive mixer will enable you to make DJ-quality party-music tapes. An inexpensive mixer will enable you to make DJ-quality party-music tapes.
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A Magical and Richly Satisfying New Account of Schumann's *Rhenish Symphony*

While I nearly always have the highest admiration for Carlo Maria Giulini's thoughtful and imaginative orchestral leadership, I often have reservations about his recorded interpretations. Not so with his new reading of Schumann's *Rhenish Symphony* for Deutsche Grammophon. Paired with a most eloquent performance of the *Manfred* Overture, it is the most magical and richly satisfying realization of the work to appear on records since the famous Bruno Walter/New York Philharmonic recording in 1941 (still available on Odyssey Y 35222).

The symphony's opening movement is notable here for its organic flow and an exquisite but not overstressed delin-

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creation of the inner voices. Some of the rhythmic articulation is unusual, but the effect is rather to pique the listener's imagination than to upset the sense of pulse. The orchestral sound throughout is magnificently full yet transparent—unusual in Schumann performances. And when the horns make their great entry to announce the climax of the movement, it is with near-Mahlerian grandeur.

The genial Ländler movement comes off with fine "swing," and the song-without-words third movement is tenderness itself. In the two finale movements, Giulini and his Los Angeles Philharmonic orchestra capture to the full the solemn grandeur of the first and the sun-drenched joyousness of the second.

This is by far the most satisfying recording I have heard from Giulini in Los Angeles. Besides the powerful orchestral presence, there is enough room to provide the feeling of space that this music needs in its big moments. All told, the disc is a most commendable achievement that leaves me wondering if Giulini plans to record the other Schumann symphonies. If they all turn out as well as the Rhenish, it should be a very rewarding series. —David Hall

Donald Fagen's Solo: "The Nightfly" Combines Nostalgia, Surprises, and An Irresistible Beat

DONALD FAGEN's new solo album (without Steely Dan's Walter Becker), "The Nightfly," is a sentimental journey. Well, maybe not so sentimental—more like a slow ride back through adolescence, a reminiscence about growing up in the suburbs listening to Dave Brubeck. "Nightfly" refines even further the riff-based jazz sound Steely Dan has used since "Aja," mixing a subliminal disco beat with languid cocktail-lounge swing. Layers of synthesizer push along the relaxed vamping of organ, saxophone, and guitar, with Fagen's distinctively nasal vocals like a swizzle stick churning a Manhattan. It's not rock, but the beat is irresistible—the kind that gets the old man up on the dance floor with mom at the Harvest Moon Ball even before he's plastered.

I'll resist the temptation to call this record "brilliantly evocative," because I don't think many people remember the Fifties and Sixties quite the way Fagen does. Sure, we all know about Tuesday Weld and the Drifters, the March of Science, shopping centers, going steady, and high school graduation day. But how many of us used fallout shelters as a great place to score? Or talked about the "New Frontier" as a sexual come on? Or fled Cuba just as they ran up the red flag? When Fagen fills his girl's head with dreams, they're not of love and marriage but of driving all night to Mexico City.

Yet "The Nightfly" isn't at all the kind of ironic, cynical album you'd expect from the lead singer of rock's most aloof, sardonic group. In fact, it's practically romantic. Songs such as New Frontier and I.G.Y. capture the optimism of the period as much as they do its self-delusion and naïveté. Maxine and Ruby Baby recall what it was like to be all hopped up and too young to do anything about it—or young enough to believe that love really is all that matters. And The Nightfly reaches one of the loneliest corners of the night, the DJ on the graveyard shift, spinning jazz and answering the phone ("You say there's a race of men in the trees... /I wait all night for calls like these"). Alone at 4 a.m. with his coffee, his Chesterfields, and his memories, he muses on love lost. And leave it to Fagen to create a sharp visual image of even the most ordinary detail, in this case the station-break jingle: "An independent station, WJAZ... /From the foot of Mt. Belzoni." The nostalgic ride "Nightfly" takes us on is filled with surprises like this. Slide over, Tuesday. I'll drive. —Mark Peel

Donald Fagen. portrait of the artist as a late-night DJ
The Fairy Queen

Henry Purcell's score for The Fairy Queen—an extraordinarily elaborate masque based on an adaptation of Shakespeare's A Midsummer Night's Dream—is among his finest works, and the new Archive recording directed by John Eliot Gardiner allows us to savor its glories to the full. The Fairy Queen has been recorded before, once by Anthony Lewis with a stellar vocal cast (including Jennifer Vyvyan, Elsie Morrison, and Peter Pears) on L'Oiseau-Lyre, and once by the Deller Consort on Vanguard. While parts of the former reading will never be surpassed, it is unevenly paced; the latter is vigorous and dramatic but less profound. The new recording surpasses them both in every respect.

Gardiner and Peter Holman have together restored the score to its original form, and Gardiner guides his performers through Purcell's complex music with a stylistically firm hand. He has, of course, the advantages of the most recent research on seventeenth-century performance practices, of singers who are well versed in that period's style, of a production appropriately scaled to the music, and of an orchestra made up of skilled musicians who are experienced in playing authentic instruments. And, not least, there is the advantage of the digital recording. The overall result is stunning.

The singers are all strong; they sing lightly and naturally, revealing Purcell's genius for portraying the meaning of individual words through musical figuration. Jennifer Smith is superb in her portrayal of Night and eloquent in the moving "Plainte." Eiddwen Harrhy lends supple poise to the Epithalamium, and Judith Nelson re-creates the utter charm of "Ye gentle Spirits of the Air." Timothy Penrose is a welcome young countertenor; his saucy coyness as Mopsa is hilarious. Both tenors are excellent, and David Thomas carries off the role of the Drunken Poet with lusty swagger.

The chorus is remarkable for the clarity of its counterpoint, its massed brilliance in the Mask of the Seasons, and its hushed mystery in the Night scene. The orchestral playing is strong, and the early instruments bring out the wit and charm of Purcell's dances in a manner that modern instruments could not possibly do. When fortified by trumpets and drums, the orchestral sound is magnificent.

The real hero here is John Eliot Gardiner. His tempos and strong sense of rhythm keep the music sounding vital at every moment, and his command of phrasing and articulation bring clarity to Purcell's detailed inner parts. This album represents a peak in the performance of English Baroque music.

-Stoddard Lincoln

PURCELL: The Fairy Queen. Eiddwen Harrhy, Jennifer Smith, Judith Nelson, Elisabeth Priday (sopranos); Timothy Penrose, Ashley Stafford (countertenors); Wynford Evans, Martyn Hill (tenors); Stephen Varcoe, David Thomas (basses); Monteverdi Choir; English Baroque Soloists, John Eliot Gardiner cond. DEUTSCHE GRAMMOPHON ARCHIVE 0 2742 001 three discs $32.94.

"Men Without Women": Little Steven and the Disciples of Soul

If you've heard anything from the passionate new album "Men Without Women," you may be wondering about the performers, Little Steven and the Disciples of Soul. Well, "Little Steven" is the latest nom de disque of Miami Steve Van Zandt of the E Street Band, and the Disciples of Soul are a group of rock and r--b veterans—including Dino Danelli and Felix Cavaliere of the late and much-lamented Young Rascals—most of whom are connected with Bruce Springsteen's Asbury Park Mafia. So much for pedigree. What matters is that this is one hell of a band.

That shouldn't be a surprise. After all, as a producer and writer for Southside Johnny, Ronnie Spector, and Gary U.S. Bonds, leader Van Zandt has already staked a fair claim to being the
Miami Steve ("Little Steven") Van Zandt

last true keeper of the r- & b flame, and "Men Without Women" confirms it. This kid has got soul galore.

Stylistically the album offers somewhat familiar stuff: Motown and Stax/Volt influences filtered through a bar-band sensibility into what is by now an identifiable Jersey Sound. But, unlike most other current efforts in the idiom, Van Zandt's sounds thoroughly alive. A blazing, undeniable conviction shines through every note, every phrase. What in other hands would be at best homage is here passionately felt, personal expression. Van Zandt is not a great singer technically, but he has a choked nasal intensity that gets to you the way Keith Richards does. (Actually, a lot of "Men Without Women" reminds me of the great late-night blues playing one hears on Stones bootlegs.) The songs themselves are brilliant, with glorious melodies, irresistible hooks, and lyrics that are compassionate and often wise. There are at least three or four instant classics here; the rest are never less than captivating. In short, genre music never sounded so good.

Listening to "Men Without Women" brought back a memory from a hot summer night more years ago than I care to remember. I had gone to see the Asbury Jukes on the final stop of their first tour, but an exhausted Southside Johnny had lost his voice. Van Zandt filled in for him at the last moment, and he was transcendent, singing and playing as if his life depended on it. I left the show floating five feet off the ground, convinced I had just heard the most beautiful music of my life. Sure, I've had moments like that at concerts since, but this album gave me the most sustained shot of that feeling I've had in far too long. There may be better records before the public at the moment, but certainly none so grand sounding and real. Don't miss it. —Steve Sines

LITTLE STEVEN AND THE DISCIPLES OF SOUL: Men Without Women. Little Steven and the Disciples of Soul (vocals and instrumentals); other musicians. Lyin' in a Bed of Fire; Inside of Me; Until the Good Is Gone; Men Without Women; Under the Gun; Save Me; Princess of Little Italy; Angel Eyes; Forever; I've Been Waiting. EMI AMERICA ST-17086 $8.98. © 4XT-17086 $8.98.

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)
- Aretha Franklin: Jump to It. AMSTA AL 9602. "Glamour and magic from the Queen of Soul." (December)
- King Crimson: Beat. WARNER BROS. EG 1-23692. "An unbeatable combination of poetic words and strong, rhythmic music." (November)
- The Roches: Keep On Doing. WARNER BROS. 23725-1. "The Roches are...so far beyond borrowing that they've forgotten how." (February)
- Marty Stuart: Busy Bee Cafe. SUGAR HILL SH-3726. "An all-acoustic, all-star album with aesthetic heft." (December)
- 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)
- Berlioz: La Damnation de Faust. LONDON LDR-73007. "An exceptional digital recording of Berlioz's most satisfying work." (December)
- Ives: Violin/Plano Sonatas. MUSICMASTERS MM 20056/57. "A superb new set...from authoritative performers of Ives's music." (November)
- Reich: Tehillim (Psalms). ECM-1-1215. "A rare and really joyful listening experience." (February)
- Thomson: Four Saints in Three Acts. NONESUCH 79305-1. "A beautifully performed and...stunningly engineered digital recording of the complete opera..." (December)
Classical Music

News Briefs

Lloyd with the Monte Carlo Philharmonic Orchestra conducted by Armin Jordan. Released in Europe on the Erato label, the five-disc recording has been brought out here by RCA.

Recent books on music include Oliver Daniel's Stokowski: A Counterpoint of View (Dodd, Mead, $24.95), a lengthy biography of that showman of the podium, conductor Leopold Stokowski. Its 1,090 pages include a list of premieres conducted by Stokowski as well as a lengthy discography.

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In a class by itself is The Last Prima Donnas by Lanfranco Rasponi (Knopf, $22.50). It is a collection of more than fifty interviews with singers as diverse as Kirsten Flagstad, Eva Turner, Lily Pons, Lotte Lehmann, Bidu Sayão, Jarmila Novotna, and Callas. The author is knowledgeable, and he writes of these singers, whom he clearly admires, with sympathy but without gushing. Heartily recommended. W.L.

The latest in an English series of critical surveys of recorded classical music is The New Penguin Stereo Record and Cassette Guide by Edward Greenfield, Robert Layton, and Ivan March (Penguin, $12.95). Its editorial focus is primarily on recordings bringing the four operas out separately. Das Rheingold came out last fall, and Die Walküre in January. The company's release schedule calls for Siegfried in February and Götterdämmerung in March or April.

More Wagner on screen and disc is provided by Hans Jürgen Syberberg's somewhat controversial film version of Parsifal. Shown last year at film festivals in Edinburgh and Cannes and in a special one-night stand at Lincoln Center in January, the film was scheduled for release in this country at the end of February.

The controversy involves the unconventional visual presentation of Parsifal, which is performed on screen by actors. The soundtrack was recorded by singers Yvonne Minin, Reiner Goldberg, Wolfgang Schöne, and Robert.

In the Bayreuth Festival production of Wagner's Ring of the Nibelung now being televised in installments on the Public Broadcasting Service, the role of Brünnhilde is portrayed by Welsh soprano Gwyneth Jones. At the Met this season Jones will sing her first American Brünnhilde in Die Walküre, beginning on March 18. She will be heard in the matinee performance broadcast on the Texaco-Metropolitan Opera Radio Network on April 2. Others in the cast are Hildegard Behrens, Mignon Dunn, Manfred Jung, Franz Ferdinand Nentwig, and Hans Tscharmann. Silvio Varviso will conduct.

On records Jones is the Brünnhilde in the Philips recording of the Ring, which is conducted by Pierre Boulez and is derived from the same Bayreuth performances as the PBS telecasts. Philips released the complete boxed set in October 1981 and is now bringing the four operas out separately. Das Rheingold came out last fall, and Die Walküre in January. The company's release schedule calls for Siegfried in February and Götterdämmerung in March or April.

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released or rereleased between 1977, when the last edition was published, and 1982. Since most major recordings are made for international distribution, they are readily available in this country, and American catalog numbers are given. Mail-order information is provided for records and tapes that may be hard to find here.

After a decade as music director of the Cleveland Orchestra, the American conductor Lorin Maazel gave up the duties of general manager of the Vienna State Opera. His new job evidently is less demanding than the old one because Maazel spent the last few months of 1982 working on movies. He produced his first film, Regina, with Ava Gardner and Anthony Quinn, and composed the musical score for it himself.

In addition to that, Maazel completed a recording of Bizet's Carmen to serve as the soundtrack of a movie version of the opera to be filmed this summer in Spain. The singers, who will also perform their roles on the screen, include Julia Migenes-Johnson in the title role, Placido Domingo as Don José, and Ruggero Raimondi as Escamillo. The soundtrack will be released on disc by Erato in Europe and by RCA in the United States late this year or early in 1984.

Back in Vienna at the end of December, Maazel conducted the Vienna Philharmonic in the traditional New Year's gala concert of waltzes by the Strauss family. The concert was televised on an international hookup and was recorded digitally by Deutsche Grammophon. That label has made digital recordings of three such gala concerts conducted by Maazel in previous years. All have sold well and expectations are high for the new one, which will probably be released late this year. The audience who saw this concert when it was televised at New Year's was estimated at 750 million viewers!

Disc and Tape Reviews

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

**RECORDING OF SPECIAL MERIT**


**Performance:** Beautiful

**Recording:** Very fine

This was my first experience with an "original instruments" performance of a Beethoven symphony, and I found it both fascinating and salutary. Too often in the past my ears have been assaulted in this piece with bellowing modern horns, pounding timpani, and strident strings. Hearing what this music sounds like played by a thirty-two-member ensemble using gut strings and small-bore natural horns and recorded in an ideal acoustic surround is a real pleasure, even if the interpretation under concertmaster FranzJosef Maier does not efface those of Arturo Toscanini and a number of others. The reading is unmannered, reaching its high point in a lovely rendering of the famous allegretto. The beautifully textured fugato episode is itself almost worth the price of the disc, and the digitally mastered sound is simply superb. D.H.


**Performance:** Fat and jolly

**Recording:** Tunnel-like

Borodin's lighthearted Second Quartet was written in 1881, Dohnányi's powerful Second dates from 1907. The first represents late Romanticism in its first flowering, the latter the slightly overripe end of the tradition. These are rather big, fat, jolly performances that sound as though they had been recorded in one of the narrower passages of the Moscow subway. At one point, someone unaccountably turns on a leaky radiator, but fortunately it is turned off again before the end.

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**RECORDING OF SPECIAL MERIT**

**DEBUSSY: L'Enfant Prodige. Jessye Norman (soprano), Lia; José Carreras (tenor), Azaël, Dietrich Fischer-Dieskau (baritone), Simeon, Stuttgart Radio Symphony Orchestra, Gary Bertini cond. La Damoiselle Élué. Ileana Cotrubas (soprano), Damozel; Glenda Maurice (mezzo-soprano), narrator; Women's Chorus of the South German Radio, Stuttgart Radio Symphony Orchestra, Gary Bertini cond. PRO ARTE 0 PAD-128 $12.98.**

**Performance:** Excellent

**Recording:** Atmospheric

One might not think of Stuttgart as a likely venue for such thoroughly Gallic works as these (almost more "Gallic" than specifically Debussyan, especially L'Enfant Prodigue), but this is a very attractive issue. Listening to the enchanting performance of La Damoiselle Élué, I was so moved that the pure, fresh voice of Barbara Hendricks, and the reasons why the new version works so well became clear in terms of what the earlier one lacks. In the first place, the women of the Paris chorus, in the DG recording, have neither the assurance of their German colleagues, in terms of simple accuracy of intonation, nor the soft, luminous quality that is needed to make the enchantment complete. Moreover, both the
A Special Mozart Requiem

As almost everyone knows, Mozart's Requiem was completed by a pupil of his, Franz Xaver Süssmayr, at the behest of the master's widow, who was desperate to collect the promised fee. Süssmayr had to work out most of the orchestration on his own, and it is generally agreed that he did not do a very good job. In 1972, one Franz Beyer produced a much-simplified version that was claimed to be closer to Mozart's own style. Telefunken has now released a recording of Beyer's version performed by soloists, chorus, and the Vienna Concentus Musicus under the direction of Nikolaus Harnoncourt. We thus have an "authentic" performance on "original" instruments of a modern orchestration of Süssmayr's Mozart Requiem. And it is the best performance of it I have ever heard.

Of course, the major instrument used in this work has not changed at all since the eighteenth century—the human voice. On the other hand, singing styles have changed over two hundred years quite as much as instrumental performing styles have. One of the triumphs of this performance (as in Harnoncourt's monumental Bach cantatas series) is that the singers have been selected and trained to produce a softer, purer, and cleaner—yet quite intense and dramatic—sound than we have been used to hearing. Is it authentic? I believe so.

Harnoncourt brings all his special knowledge and feeling for old music to this piece of late early music: double-dotting, accented dissonances and appoggiaturas (with soft, almost inaudible resolutions), dynamic terraces and dramatic planes. Above all, there is a real and serious attempt to treat the work in a unified way as a single conception and not merely a sequence of numbers. Some of the results are extraordinarily dramatic—the entrance of the trombones near the beginning (early trombones, very close to modern instruments, are especially hair-raising when heard against the soft sound of early strings and woodwinds), some of the vocal solos, the screams of the men in the Confutatis, the ongoing directness of tempo and phrase. Other moments are exceptionally soft, sweet, contemplative, almost dreamy. But this contrast is beautifully framed by a conception in which popular and personal expression are blended with the more formal representational and classical opera seria elements. This is a special performance.

Except for the Requiem and one or two other non-liturgical Viennese works, one hardly thinks of Mozart as a church composer. And, of course, in Vienna he was not. But the Salzburg Mozart regularly supplied the local ecclesiastical establishment—which, after all, ran the town and patronized the young composer in more ways than one—with masses of Masses, vespers, oratorios, motets, litanies, and hymns. These relatively early works were all composed in the spirit of the age—devotion with a light heart. No reason not to praise God with a spicucit, an operatic flourish, or a roulade. Good taste, lively tempos, melodies that fall softly on the ear, a bit of performer bravura, never far out, never boring. Philips has released a disc of this music, and, not surprisingly, the best thing in it is the latest: the Vesperae de Dominica (K. 321), written in 1779. The rest show the amazing skill and high level of inspiration that the young composer could achieve in traditional forms and a stillifying environment. It was to escape the Archbishop Collerado and a life of churning out works like these that Mozart went to Vienna.

Herbert Kegel and his Leipzig forces are competent and musically. These are solid and substantial performances of music that hides its workaday workmanship behind a rococo mask. The recording, made in cooperation with the East Germans, is also decent, although not in a class with Telefunken's sensational digital sound. The clarity and dynamic range of the latter are, in every way, worthy of the music and the performance. —Eric Salzman

MOZART: Requiem (K. 626). Rachael Ya-
kar (soprano); Ortrun Wenkel (alto); Kurt Equltz (tenor); Robert Holl (bass); Vienna State Opera, Raimund Herber, cond. CETA, the licensor of the present set. Telefunk en 6.42756 $12.98, 4.42756 $12.98.

MOZART: Litaniae Laetae (K. 125 and 109), Regi na Coeli (K. 127), Te Deum (K. 141), Ves perae Solennes de Dominica (K. 321), L'Enfant et Magnificat (K. 125 and 109); Regi na Coeli (K. 127); Te Deum (K. 141); Vesper ae Solennes de Dominica (K. 321). Munich Chamber Orchestra, Herbert Kegel, cond. CETA, the licensor of the present set. Telefunken 6.42756 $12.98, 6.42756 $12.98.

DONIZETTI: Maria de Rudenz. Katia Ricci arilli (soprano), Maria de Rudenz; Silvia Baleani (soprano), Matilde; Leo Nucci (baritone), Corrado; Alberto Cupido (tenor), Enrico; Giorgio Surjan (bass), Rambaldo; Silvio Eupani (tenor), Il Can -celliere. Orchestra and Chorus of the Te atra La Fenice, Venice, Eliabu Inbal cond. CBS M 79345 three discs, © M 79345, no list price.

Performance: Passionate

Recording: Fair

There was a period in Donizetti's life when his productivity defied belief. Two of his operas were premiered in 1835, four in 1836, two more in 1837. Maria de Rudenz came next, in 1838. Apparently even the composer and his inner circle were not pleased with it, and initial audience reaction at the Fenice in Venice was unfa vorable. Though a few other Italian theaters subsequently ventured to stage it, the opera eventually disappeared from the boards.

In his 1965 biography of Donizetti, William Ashbrook said that "While it is risky to write a final epitaph for any opera, it is difficult to believe that Maria de Rudenz will ever see the stage again." Well, it did. In January 1981, the opera was revived by the Fenice, and it was recorded by Fonit Cetra, the licensor of the present set. Technically it is disappointing. The sound is boxy, ill-balanced, and, while listenable, far below today's standards.

The opera itself is not even second-best Donizetti. Melodic inspiration runs at a routine level throughout, and even in the more musically exciting moments the writing is predictable and formulaic. Interestingly, there are snatches of melodic material that make one think of II Trovatore and La Traviata, suggesting that this opera must have caught the interest of the young Verdi. The Fenice cast supplies all the pas-
sounding and vibrant baritone recalls that the performance is unimpressive. Singers are undistinguished, and the orchestral performance is unimpressive. G.J.

**HAYDN: Die Schöpfung (The Creation)**

Rüdiger Wohlers (tenor), Uriel; Norma Burrowes (soprano), Gabriel; James Morris (bass), Raphael; Siegmund Nimsgern (bass), Adam; Sylvia Greenberg (soprano), Eva. Chicago Symphony Orchestra and Chorus, Sir Georg Solti cond. LONDON © LDR 72011 two discs $21.96, © LDR5 72011 $21.96.

Performance: Uneven

Recording: Excellent

Topnotch recorded sound, magnificent orchestral playing, and fine choral work lend distinction to this new Creation, the first digitally recorded one. Sir Georg Solti conducts with a strong sense of drama, using generally brisk tempos that, while they do not actually sound hurried, do seem to lack repose at times (as in the Adam-Eva episode in Part III).

Rüdiger Wohlers, a sweet-toned and cultivated tenor, is a notable asset as Uriel—somewhat slender in tonal volume, but graceful and expressive. Norma Burrowes is a good Gabriel without matching the lustrous standard set by Gundula Janowitz (in Karajan's Deutsche Grammophon set) or Lucia Popp (in Dorati's on London). It is a pity that Siegmund Nimsgern, a solid and sonorous Adam, did not assume the role of Raphael as well, for James Morris's singing in the part is unfocused and effortful. The models here are Kurt Moll (Dorati/London) and José van Dam (Frühbeck/Angel). All in all, any one of the other sets cited will provide a more satisfying presentation of this marvelous oratorio. G.J.

**RECORDINGS OF SPECIAL MERIT**

**HAYDN: The Seven Last Words of Christ (Hob. XX:1a).** Hungarian State Orchestra, János Ferencsik cond. HUNGAROTON © SLPD 12358 $12.98.

Performance: A testament

Recording: Rich

In 1785, on commission from a nobleman-priest in Cadiz, Haydn produced one of his most unusual compositions, The Seven Last Words of Our Saviour on the Cross (usually known in English as The Seven Last Words of Christ), an orchestral work laid out in the form of an introduction, seven "sonatas," and an epilogue titled "Il Terremoto" ("The Earthquake"). Probably because Haydn knew this work had little chance of frequent performance in its original form, he also prepared settings of it for string quartet, for piano, and for chorus with orchestra. By general agreement, however, it is the original version for orchestra that is the most effective, though the one for strings perhaps matches it in poignancy.

In these two new discs, however, show more persuasively than any others I know how rich and vital a work this is after all. János Ferencsik, who recently recorded the choral version of The Seven Last Words for Hungaroton, goes farther than any of his recorded predecessors in reaching the heart of this music and conveying its unique beauty with uncontrived urgency, without resisting or seeking to amend Haydn's unusual design. His players respond as if they were inscribing a joint testament, and the sound is exactly what one wants—rich, warm, yet beautifully detailed. This is surely the way of contrast, and, indeed, few readings succeed in realizing its subtle shifts of mood and tension. The performances on these two new discs, however, show more persuasively than any others I know how rich and vital a work this is after all.

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The Glory of Rameau

Into the one short, delightful act of his ballet Anacréon Jean Philippe Rameau managed to pack scenes of banquets, battles, slumber, storms, and a final joyous reconciliation between love and drink. “Bacchus does not forbid loving/And love allows us to drink!” the chorus triumphantly sings at the close. All the episodes are vividly depicted through vocal declamation, dances, and instrumental coloration, for which Rameau had an incredible flair.

On the stunning new Harmonia Mundi recording of the work by the vocal and instrumental ensemble Les Arts Florissants, baritone René Schirrer boisterously portrays Anacréon, who is torn between the pleasures of drunkenness and love. Musically, it is L’Amour who really wins the day. In that role soprano Agnès Mellon somehow manages to sound exactly as one might imagine the pert little god. Her pure voice, halved by fluttering flutes, fairly flies through agile coloratura and knots of trills and turns. She exemplifies the ultimate in vocal style for Rameau.

The members of Les Arts Florissants play their authentic instruments superbly, contrasting the delicate music of the quieter sequences and the robust storms and bacchanales with dramatic sureness, and the chorale singing is just fine. Congratulations to leader William Christie! With this splendid release we can finally hear Rameau in his full glory.

—Stoddard Lincoln

RAMEAU: Anacréon. René Schirrer (baritone), Anacréon; Agnès Mellon (soprano), L’Amour; others. Les Arts Florissants, William Christie cond. HARMONIA MUNDI HM 1090 $11.98 (from Harmonia Mundi USA, 2351 Westwood Boulevard, Los Angeles, Calif. 90064).

The performance shows that conductor Iván Fischer is clearly one of the more gifted and imaginative young conductors on the international scene. His reading is akin to that of the late Jascha Horenstein (Nonesuch H-71240), whose treatment of the four-movement version of this work is the most colorful and strongly individual one I know. Since Fischer is generous with repeats in both the first movement and the scherzo, his five movements are spread over three sides. The overall approach is poetic rather than virtuosic, as befits a performance including the sweeiy nostalgic Blume movement with its extended trumpet solo. Even so, I am among those who agree that Mahler was right in excising this movement.

The sonics are unusually fine. I suspect that the recording locale was the Vigadó, the lovely ballroom in which this music was first heard. Mahler’s orchestral heavy artillery in the finale sounds much less congested than usual, and the stereo imaging and localization are superb.

This disc was my first exposure to mezzo-soprano Klára Takác, and she seems to be a singer of formidable artistry. Largely through subtle control of her vibrato, which ranges from none to a considerable amount, she brings to Mahler’s youthful Wayfarer Songs a special degree of aching poignance while avoiding mawkishness. That these songs have thematic material in common with the D Major Symphony makes their inclusion here very appropriate.

DH


Performances: Crystaline Recordings: Reverberant but clear

There is really nothing in the world quite like the organ music of Olivier Messiaen. I wish I liked it.

These discs are Volumes I and II of what looks like a project devoted to the complete organ music of Messiaen—complete so far, that is. Messiaen, who was born in Avignon in 1910, is not only still very active as a composer, he still holds the position (since 1931) of organist at the St. Trinité in Paris. Jennifer Bate is an excellent organist. She comes from England, and so do these records, which were, however, recorded on the organ of the Cathedral of Saint Pierre of Beauvais, a sixteenth-century instrument that was essentially rebuilt in 1979 after being severely damaged in World War II.

English interest in Messiaen is a notable phenomenon dating back to his earliest work. Until recent years, it could be said that Messiaen was more appreciated abroad, especially in England, than at home. Messiaen was the spiritual and technical godfather of the post-World War II avant-garde in France. He was the teacher of both Boulez and Stockhausen, among others, and his highly original music has been well regarded in its own right.

"Original" is a key word here. Beginning in the late Twenties, Messiaen wrote and published a series of organ works that would have to be ranked among the most original and startling compositions of the century, their fame only somewhat limited by their being written for a particular and rather special medium. La Nativité du Seigneur of 1935 and Les Corps Glorieux er's first recording of chamber music beyond duo sonatas. He and his three associates bring great urgency and intensity to the music without distorting any of the musical outline. The digital sound is even more luminous than Hungaroton’s.

RECORDING OF SPECIAL MERIT

MAHLER: Symphony No. 1, in D Major; Lieder eines Fahrenden Gesellen. Klára Takác (mezzo-soprano); Hungarian State Orchestra, Iván Fischer cond. HUNGARONON SLPX 12267/8 two discs $19.96.

Performance: Colorful Recording: Very fine

This Hungaroton Mahler First is billed as "the original Budapest version 1889." That is not strictly so, since Mahler’s 1899 revised scoring is used for all the movements except the second, the Blume movement, which he suppressed following the 1889 Budapest première and the 1894 Weimar performances. In 1970 the British Pye-Virgin label issued the one and only disc documentation of Mahler’s earliest surviving scoring, that of 1893, which used the standard Romantic orchestra and included the Blume movement. There are distinctly audible differences in details in the scoring of all four of the standard movements between the 1893 and 1899 versions. So much for musicological matters.

The performance shows that conductor Iván Fischer is clearly one of the more gifted and imaginative young conductors on the international scene. His reading is akin to that of the late Jascha Horenstein (Nonesuch H-71240), whose treatment of
of 1939 are long, introspective, mystical meditations on matters theological employing the most radical and modernistic sonorities imaginable. Perhaps if Scriabin had lived and taken up the organ, he might have ended up writing music like this, but I doubt it. Messiaen seems to come from nowhere, and, despite his undoubted influence on the post-war generation, he really leads to nothing.

Messiaen’s style has a great deal to do with his intimate knowledge of the organ. His unique harmonic sound comes from the nature of the organ’s pipes and stops and the subtle ways in which he registers them. His other instrumental music, though highly regarded in some circles, lacks the mystery, the soft veil of floating harmony, that penetrates and suffuses the organ music. The use here of a modern organ and the relatively clear acoustic of the Beauvais cathedral have certain advantages. One often hears Messiaen played or recorded on nineteenth-century organs that muddy the mystical waters considerably. In these performances the organ, the cathedral acoustics, and the superb digital recording combine to create a jewel-like sound.

But when all is said and done, I still don’t care for this music. Others do. I find its supposed references to Indian music, plainchant, and bird song lacking in the very qualities that endear Indian music, plainchant, and bird song to me. Messiaen’s music seems to float along in a free fantasy chant, and bird song to me. Messiaen’s music is a personal and acceptable. As an offering from the composer to his creator, it is personal and acceptable. As an offering to the listener, in this world, it is just too thin and rootless. E.S.

MUSSORGSKY: Boris Godunov (Highlights). Nicolai Ghiaurov (bass), Boris; Neli Bozhkova (soprano), Feodor; Nadya Dobriyano" (soprano), Xenia; Milen Paounov (tenor), Prince Shuiski. Svetoslav Obretenov Bulgarian National Chorus; Sofia Philharmonic Orchestra, Emil Chakarov cond. TURNABOUT TV 34781 $5.98, © CT 4781 $5.98. Performance: Rugged. Recording: Good concert pickup.

The late Karl Böhm’s 1961 recording of Schubert’s Ninth Symphony with the Berlin Philharmonic has over the years remained one of the more distinguished recorded interpretations. This 1979 concert performance follows much the same lines, with perhaps even more pronounced but still subtle fluctuations in tempo within individual movements, particularly the first. Böhm responds strongly to the drama implicit in this music, and the Dresden orchestra with which he was associated for so many years is with him all the way. The drama comes to the fore in the wonderful “walking tune” slow movement. His pacing in the scherzo is solid without being stolid, and the demonic drive of the finale is relentless. The sound is not as refined as it would be in a studio-made recording, but it is excellent for a live concert disc.

D.H.

SCHUMANN: Symphony No. 3, in E-flat Major, Op. 97; Manfred Overture, Op. 115 (see Best of the Month, page 79)

RECORDING OF SPECIAL MERIT

The late Karl Böhm’s 1961 recording of Schubert’s Ninth Symphony with the Berlin Philharmonic has over the years remained one of the more distinguished recorded interpretations. This 1979 concert performance follows much the same lines, with perhaps even more pronounced but still subtle fluctuations in tempo within individual movements, particularly the first. Böhm responds strongly to the drama implicit in this music, and the Dresden orchestra with which he was associated for so many years is with him all the way. The drama comes to the fore in the wonderful “walking tune” slow movement. His pacing in the scherzo is solid without being stolid, and the demonic drive of the finale is relentless. The sound is not as refined as it would be in a studio-made recording, but it is excellent for a live concert disc.

D.H.

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Rossini's Mosè in Egitto

Possibly the most intriguing discovery in the Rossini revival that has been taking place on records is Mosè, a powerful and affecting Biblical drama that was first recorded (in mono) by Philips back in the Sixties, with Nicola Rossi-Lemeni in the title role and Tabul Seraphin conducting, and was brought out in stereo only last year by Hungaroton, with Jozsef Gregor as Moses and Lamberto Gardelli conducting (SXLX 12290/92). Now Philips has come forth with a digital Mosè, conducted by Claudio Scimone, with Ruggero Raimondi in the title role. It is utterly different from its two predecessors, and, I think, more valuable than either of them. In a very real sense, it is simply not the same opera.

Mosè is one of several operas that exist in more than a single version. Rossini originally presented it in Naples in 1818 as Mosè in Egitto, a three-act "azione tragico-sacra." The failure of the stage machinery involved in the parting of the Red Sea at the end provoked unsought laughter, but the following year Rossini presented the work again, with a totally new final act, and it enjoyed a stunning success. Eight years later, for the Paris Opéra, he produced still another version, in four acts instead of the original three and in French instead of Italian. In the new Philips set Scimone uses his own version, new edition of the 1819 Naples version. Scimone has herefore been associated primarily with the Baroque repertoire of his chamber orchestra, Il Solisti Veneti, but neither the scholarship nor the theatrical insight evident in the new set could have been assumed from any of his earlier undertakings. The biggest surprise here is that this slightly revised work by the twenty-seven-year-old Rossini is so effective and convincing as musical theater.

As Moses, Raimondi is very persuasive dramatically, if not always right on the mark musically. A lapse or two might be noted, but nothing can take away from the essential grandeur of his characterization. Siegmund Nimsgern, as Pharaoh, actually has a bit more singing to do, and he does it splendidly; he and June Anderson, the American soprano cast as Elcia, are probably the standouts in this cast. The duet between Anderson and Sandra Browne, as Amenosi, near the end of Act I is perhaps the single loveliest moment in the entire performance—and all the more cherishable for the way it fits into the dramatic flow. The recording is all one could ask in terms of sonic realism, and the booklet includes an illuminating essay by Rossini authority Philip Gossett.

—Richard Freed

Rossini: Mosè in Egitto. Ruggero Raimondi (bass), Mosè; June Anderson (Elcia); Sandra Browne (mezzo-soprano), Amenosi; Zehava Gal (mezzo-soprano), Amaltea; Siegmund Nimsgern (bass), Faroene; Ernesto Palacino (tenor), Osiride; Salvatore Fisichella (tenor), Amoni; Keith Lewis (tenor), Mambre; Ambrosian Opera Chorus; Philharmonia Orchestra, Claudio Scimone cond. PHILIPS 0 6769 081 three discs $38.94 © 7654 081 $38.94.

Performance: Dedicated Recording Very fine

Last year was not only the centennial of Igor Stravinsky's birth but also that of two other nationalists who, like Stravinsky, though somewhat later in their careers, achieved full integration with the classical mainstream of Western music. They were Bartók's Hungarian compatriots and friend Zoltán Kodály and Poland's Karol Szymanowski, who in his person and work symbolized a fresh and full identity for post-Chopin art music in his country.

Szymanowski arrived at his creative self-realization late in a career cut short by tuberculosis in his mid-fifties. From the very beginning, however, he was a master of his craft, as is proved by the exuberant Concert Overture of 1904-1905 and the elaborate Second Symphony of 1909-1910. Richard Strauss and Max Reger are among the most obvious influences in these works. By the time of the Third Symphony—scored for tenor solo, chorus, and orchestra and based on a mystical Persian Sufi text—Szymanowski had come under the spell of the French impressionists and had toured Sicily and Algeria. One also senses in this music some of the apocryphal things of Delius and Scriabin. The apogee of this phase in Szymanowski's work was reached in his opera King Roger, begun in 1918, two years after completion of the Third Symphony. By 1920, the first elements of "modernism" were creeping into Szymanowski's work, for example in his incidental music,
under the title Mandragora, for a production of Molier's Le Bourgeois Gentilhomme. This amusing oddity recalls Prokofiev. Only in 1922, when Szymanowski went to the Polish mountain resort of Zakopane for reasons of health, did he discover the musical folklore of the Polish highlands. If the richly colorful Harnasie ballet pantomime may be said to represent Szymanowski's extroverted reaction to this stimulus, the Op. 60 Symphonic Concertante and the Second Violin Concerto may be considered his definitive statements.

Certainly, among the works in the three-disc commemorative album under review here, the Symphonic Concertante and Harnasie provide the most fascinating and rewarding listening. Harnasie, based on Polish mountaineer folk legend, is imbued with something of the sensuous quality of RVel's Daphnis et Chloe, plus a good bit of Bartókian gusiness. In the Symphonic Concertante, on the other hand, we find a full synthesis of nationalism and classicism within the framework of what amounts to a brilliant piano concerto. Mazurka rhythms haunt the two end movements. In the opening atmosphere is Chopinesque, and in the finale the music echoes the wild Mazurka of the mountain that also found its way to Sweden as the polska. These are separated by an exquisite nocturne in which the solo violin plays a key role.

The performances in this album, as might be expected, are totally dedicated. Although Antal Dorati's digitally mastered London recording of the Symphony No. 2 (LDR 71026) offers a crisper rendering of the fugue, the Polish performers here arrive at more winning results through a more expansive treatment of the whole. For me the Symphonic Concertante performance, with its brilliant solo piano work, is the most successful in the set. Harnasie too comes off well, but it is a little constricted in sound. The recorded sound is generally very good, however, and this is a splendidly realized commemorative project. D.H.

VAUGHAN WILLIAMS: The Sons of Light. PARRY: Ode on the Nativity. Teresa Cahill (soprano, in the Parry); Bach Choir; Royal College of Music Chorus; London Philharmonic Orchestra, Sir David Willcocks cond. LYRITA SRC5125 $13.98 (from International Book and Record Distributors, 40-11 24th Street, Long Island City, N.Y. 11101)

Performance: Mostly very good
Recording: Parry better balanced

The post-Messiah English choir tradition has reached these shores through the good offices of the Episcopal Church but has hardly penetrated general musical life here. Sir Hubert Parry wrote his Ode on the Nativity in 1912 for the Hereford Three Choirs Festival, and it is surely quintessential of its time and place: polite, well-behaved, Mendelssohnian harmony and scoring surrounding a melodic style that constantly threatens to break out into good humor, even jollity. British restraint being what it is, though, it never does.

The Vaughan Williams is a bit different. It was written in 1950 for a large student chorus and is based on poems by the composer's wife, Ursula Vaughan Williams, that draw on the creation legends of the British restraint being what it is, though, it never does.

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At last, after a number of excellent German editions, we can savor Smetana's delightful The Bartered Bride in its original language. Replacing an acceptable but internationally non-competitive Czech version, Supraphon has now given us a new one, digitally recorded and excellently cast. The music, zestfully conducted by Zdeněk Košler, bubbles in its irresistible way. The redoubtable Czech Philharmonic revels in Smetana's bright and inventive orchestration. And for once I don't have to say that the singers' high spirits and dramatic involvement compensate for vocal deficiencies. The singing is good.

To detail specifics: Peter Dvoryš is an ideal Jeník, bright and youthful in sound, radiating charm and humor, singing with dashing ease. (He sings regularly in Vienna these days, and the Met could certainly use him.) There is a slight metallic edge to the timbre of Gabriela Běnáčková-Cápová's Mařenka, but it tends to enhance the character's individuality. The soprano displays a lively temperament, and her fresh tone is devoid of any unwelcome "Slavic" vibrato. Basso Richard Novák is less appealing, but he is obviously a seasoned performer with all the comic skill and self-importance the part of Kecal requires. The engagingly stuttering Vašek of tenor Miroslav Kopp is just right.

In the capable supporting cast only the chief of the Comedians falls below an acceptable level. The chorus could not be better, while the recorded sound, if unspectacular, is entirely satisfactory. I happen to like the current German version (Eurodisc 89036), but this is the way to hear this joyous opera, with libretto in hand. Supraphon provides one in four languages in its illustrated booklet.

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WAGNER: Die Walküre. Siegfried Jerusalem (tenor), Siegmund; Kurt Moll (bass), Hunding; Theo Adam (bass-baritone), Wotan; Jessye Norman (soprano), Sieglinde; John Tomlinson (soprano), Brünnhilde; Yvonne Minton (mezzo-soprano), Fricka; Eva-Maria Westbroek, Cheryl Studer, Ruth Falcon, Christel Borchers, Uta Priew, Orrun Wenkel, Kathleen Kuhlmann, Anne Gjøvage, Valkyries. Dresden State Orchestra, Marek Janowski cond. \( \text{EURODISC} \ 301 143-465 \) five discs $59.90.

Performance: Mostly okay
Recording: Good enough

Eurodisc's digital Ring is now half complete. A decent but unexticating Das Rheingold (reviewed here in January 1982) has been succeeded by an acceptable but not really distinguished Die Walküre. Given the current state of Wagnerian singing, we can hardly expect more nowadays. But then why should anybody bother with such a costly and duplicative enterprise?

Marek Janowski's propulsive leadership lacks neither power nor vigor. What it lacks is the inspiration that can make the grand moments in the drama really soar. Let me cite only two episodes, both in the third act: one, the Brünnhilde-Sieglinde scene in which Siegfried's birth is foretold with the glorious emerging "Redemption" motive, and two, the opening of the Wotan-Brünnhilde dialogue, with the god's admonition "Nicht send' ich dich mehr aus Walhall..." In both instances, the music moves on without conveying the momentous grandeur written into it. In short, this is an orderly but uneventful performance. The orchestra playing is certainly good but not always outstanding. The brasses in the Hunding motive, for example, are not precisely chored.

The singing has its satisfying moments. Certainly Kurt Moll is most impressive. Hunding is nobody's favorite operatic character, but when he is interpreted by such a...
formidable singer, one cannot help regretting that gruff warrior's early departure from the scene. I find much to praise in Siegfried Jerusalem's singing as well. He brings true lyricism and model legato phrasing to both the love episodes in the first act and the "Zauberfest" scene (Act II, Scene 3). Unfortunately, his basically lyric tones were not meant to sustain Wagnerranian burdens. Persistent tightness and lapses of intonation are the results.

Sieglinde's music poses no real problems for Jessye Norman's plush voice. Her singing is nearly always admirable, but there are dramatic nuances still to be filled in. The character's vulnerability, in particular, is not conveyed. The real surprise, for me, is that Freya also is not conveyed. The real surprise, for me, is that Freya also is

Theo Adam projects Wotan's agony with authority matured by many years of association with the role. The long narrative in Act Two is redeemed by Adam's sensitive and thoughtful handling, but he cannot take much pressure without serious losses in tonal beauty. His voice lacks weight, richness, and steadiness. Wotan's greatest scene, the Farewell, finds the artist in dry voice, lacking the majesty needed. There may not be a better Wotan anywhere today, but that painful admission will not make this one better Wotan anywhere today, but that painful admission will not make this one.

I cannot find much to praise in the recorded sound, which appears compressed in dynamic range and rather limited in transparency. Frequent comparisons with the opera's first stereo recording (London OSA 1509), far more excitingly conveyed by Sir Georg Solti, invariably favored the earlier (1965) production.


Saint-Seans: Samson et Dalila: Mon coeur s'ouvre à ta voix. Maria Callas (soprano); various orchestras; Alceo Galliera, Tullio Serafin, Antonino Votto, Georges Prêtre cond. EMI PATHE-MARCONI C 059-43263 $10.98 (from International Book and Record Distributors, 40-11 24th Street, Long Island City, N.Y. 11101).

Performance: Engrossing Recording: Good

All but one of these seven selections come from readily available complete recordings, and some have even been previously "highlighted." The exception is the familiar "Mon coeur s'ouvre à ta voix." It was recorded in Paris in 1961 but for some reason not included in Maria Callas's French album (Angel S-35882), which contains Dalila's other two arias from the same opera. For Callas fans, at least, that justifies the current release. I suspect, however, that Callas herself prevented its original appearance, for it is certainly not on the level of her deeply moving "Printemps qui commence." While by no means poorly done, the rendition is uninvolving, partly because of Georges Prêtre's blase conducting.

A fairly good sampling of the Callas artistry is provided by the rest of the collection. Interpreters of Lucia should carefully study the way Callas fills the recitative passages with expressive meaning. What she does with the all-too-familiar lines "Presso la fonte meco t'assi il baluardo" and "Alfin son tua, ahi sei mio" is a dramatic revelation. Of course, the scene benefits from the leadership of Tullio Serafin, who not only knew how the music should go but also knew the kind of artist he was working with. Two rather painful exposed top notes are the price we pay for such a rare dramatic experience.

A thoughtful, nicely detailed "Casta diva," a large-scaled, intense "Suicidio," and a deeply felt "Vissi d'arte" are also notable, along with a light and playful Habanera and an "Una voce poco fà" in which Rosina emerges more like a romantic heroine than a sparkling minx. Vocal colors abound, and Callas's agility, when that is called for, is always impressive. The recorded sound suggests some audio tampering, but it is more than acceptable. I do object to the sequencing of the arias, however: the transition from "Vissi d'arte" to the Habanera is rather disconcerting.


Performance: Mostly good Recording: Good

Although the interpretative results are somewhat uneven, this recital taped at a Budapest concert in 1979 deserves praise for its unhampered program. The second half (Debussy and Kodály) comes off more successfully than the first. Julia Hamari's sensuous tone is an ideal vehicle for the sultry poems of the Bilitis songs, though her interpretation lacks the degree of idiomatic perfection we find in the renditions of Régine Crespin or Victoria de los Angeles. It was a happy thought to follow this Debussy cycle with Kodály's "Nausikaa," which bears Debussy's influence. It and the bizarre folk ballad "Mónar Anna" (in the composer's "Hary Janos idiom) are both done to near perfection.

Where sensitivity and tonal beauty can succeed alone (the first of the two Brahms songs and all three songs by Strauss), the performances leave little room for criticism. Erkönig is dramatically understated but creditable. Both Ständchen and Der Musikanso, however, are rushed, and the latter suffers from a bumpy accompaniment. The recorded sound is good, the applause only mildly intrusive.

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News Briefs

EIGHTIES guitar hero Adrian Belew, who has worked with Frank Zappa, King Crimson, and Talking Heads, among others, is composing the music for what promises to be a most intriguing film. Titled Return Engagement, the flick is a documentary about the recent lecture tour pairing two of America's best-known ex-jailbirds: Dr. Timothy Leary, the former LSD guru, and G. Gordon Liddy, of Watergate fame. Apart from Belew's own music, the soundtrack (on Island Records) will include a twenty-four-guitar orchestra playing America the Beautiful, conducted by Belew. Apparently he invited guitarists from his home town (Champaign, Illinois) to a local club and asked them to perform the song together—each musician using his favorite guitar sound. Eat your heart out, Les Paul!

SAY what you will about the British, these days they seem to make more interesting records than we do. Cases in point are two eccentric new releases, one available domestically and one available only at your local import bin. The first, on A&M, is the soundtrack to the movie Party Party, a collection of unlikely present-day artists performing classic rock tunes from the Fifties, Sixties, and Seventies. Among the participants: Elvis Costello, Madness, Bananarama, Altered Images, Dave Edmunds, and Sting (who warbles Little Richard's venerable Tutti Frutti). As of this writing, there is no word on when the accompanying film will be released, but the album is vastly entertaining. Meanwhile, for those of you with leases to break, may we recommend "Burning Ambitions: A History of Punk." Brought to you by the thoughtful folks at Cherry Red Records, this one more than lives up to its title. Its two discs enshrine the likes of everybody from Joe Strummer's pre-Clash pub band, the 101'ers, to such colorful aggregations as the Dead Kennedys, Attila the Stockbroker, Slaughter and the Dogs, and, of course, the never to be forgotten Eater.

GRACENOTES: Despite the commercial failure of Carly Simon's "Torch" album, Linda Ronstadt is apparently going to have another go at her own similar recording of pre-rock standards (an earlier version, without orchestra, was shelved last year). Nelson Riddle is arranging the new attempt, which is tentatively scheduled for release in April. Ronstadt, meanwhile, is considering future stage work, and she's philosophizing. Says Far better (and less expensive) is John Lennon and Yoko Ono: The Final Testament (Berkeley, $3.50), an expanded version of the Playboy interviews the couple did just prior to Lennon's murder. Apart from containing his recollections of every song of his career, which are fascinating, there are some touching reminiscences of Lennon's childhood and liberal doses of his wit and cynicism that act as a very neat corrective to the near mystical bushwah of the Rolling Stone collection. I don't think it farfetched to say that Lennon would have preferred it. I certainly do. S.S. I don't think it farfetched to say that Lennon would have preferred it. I certainly do. S.S.

This season's big rock-and-roll coffee-table book is The Ballad of John and Yoko (Rolling Stone Press, $10.95). Put together by the editors of Rolling Stone (of course), it purports to be the definitive critical study of the pair and their work, and some of it is useful, particularly the reprints of their RS interviews dating back to 1968 and a nice autobiographical sketch of Yoko's childhood and early career, which should be un-

Sting (left) at the Great Pyramid
Linda, "I consider myself really fortunate in that I'm not waiting tables for a living." ... Sixties thrash Lesley Gore is contributing a song to the new album by punk standard bearers the Ramones. Before we learned the title was One, Two, Three, Four, we expected something along the lines of It's Sheena's Turn to Cry ... Skyy, the Brooklyn-based r- &-b band on Salsoul Records, recently shot a beer commercial (subtle hint: the beer's logo is a large bull) in the company of venerable soul balladeers the Drifters (Up on the Roof). Before they shot the ad, however, Skyy subjected the beverage to some careful scientific product testing. According to member Denise Dunning-Crawford, "We bought a six-pack, and, you know, we actually liked it." ... Billy Joel announced recently that his motorcycle injury will not interfere with future tour plans. On the road in Denver, Joel declared: "The first few days of the tour were the real test—it was my first chance to see if I could play the piano when the adrenaline is flowing and when I'm hitting the keys with all my might. I snapped a few bass strings the other night, and despite the fact that I've taped up my thumb [which was shattered in the accident] it hurts like hell. But the pain just means the thumb's beginning to function again." ... Elvis Costello's mentor Jake Riviera has big plans for the followup to EC's recent (expensively produced) album "Imperial Bedroom." Said Riviera: "We thought Elvis could just do the whole thing in his bedroom, with just a synthesizer, an acoustic guitar, and a harmonica. We'll call it 'Wembley.'"  

**Disc and Tape Reviews**

**By Chris Albertson • Noel Coppage • Phyl Garland • Mark Peal • Peter Reilly • Steve Simels • Joel Vance**

**PAT BENATAR: Get Nervous.** Pat Benatar (vocals), instrumental accompaniment. Shadows of the Night; Looking for a Stranger; Anxiety (Get Nervous); Fight It Out; The Victim; and five others. CHRYSLIS CHR 1396 $8.98, © CCH 1396 $8.98, © 8CH 1396 $8.98.

**Performance:** Tough as nails

**Recording:** Good

With "Get Nervous" Pat Benatar again proves what has been obvious since her first album: that she can belt out a song over the loudest, hardest metallic thrashing better than just about any woman, man, or beast in rock, that the song will probably never be written that she can't outmuscle, and that no one else has more ways to say goodbye, get out, get lost, get . . . whatever. What she has yet to prove is that she can do anything else. "Get Nervous" is just too much of a good thing. While it certainly reinforces Benatar's reputation as a woman you don't mess with, musically it adds up to little more than a mess of clichés—most of them heavy-metal, a few assembly-line synthetic, all hard, heavy, unrelenting. There is simply no variety here: not in dynamics, not in tempo, not in attitude. Benatar's tough little cookie all the way through this album will mess with you, and you'll be through three others. All right, nobody does it better. Now it's time she tried that big voice out on something—anything—different.

**M.P.**

**THE BLASTERS: Over There.** The Blast- ers (vocals and instrumentals), Lee Allen, Steve Berlin (saxophones), High School Confidential; Rock Boppin' Baby; Keep a Knockin'; and three others. SLASH/WARNER BROS. EP 23735-1 $5.99, © 23735-4 $5.99.

**Performance:** Very good

**Recording:** Very good

The British have long been fascinated with American rockabilly and Fifties rhythm-and-blues, and recently there has been yet another revival of rockabilly in England. Native British groups and American expatriates are both finding a welcome response there. The Blast-ers are Americans from Los Angeles who stopped in at the Venue, a club next to Victoria Station, in May 1982, and this live EP is taken from the guest set they played there. They're a hot band, all right, and a lot of fun. To augment their own fine, high-spirited playing, the Blast-ers had the good sense to call upon the great tenor saxophonist Lee Allen, top horn of the original Little Richard band. His solo here on Roll 'Em, Pete is not only exciting and graced with a beautiful, thick tone, but spiced with joking quotes from The Breeze and I and Across the Alley from the Alamo, two war- horse items from the Forties. Talk about elder statesmanship!

**J.V.**

**KURTIS BLOW: Tough.** Kurtis Blow (vocals, timbales); instrumental accompaniment. Tough; Daydreamin'; The Boogie Blues; and two others. MERCURY MX-1-505 $8.98, © M4X-1-505 $8.98.

**Performance:** Good

**Recording:** Good

This is a "rap" record, meaning that the lyrics are slightly longer than a paragraph of Proust and that the performer, in this case Kurtis Blow, is supposed to whip him-
self and his listeners into a near trance state with syncopated words and percussion. If whirling derisions were singers, the result would be something like this. Blow does reasonably well performing these rambling monologues, some of them gestic. "Tough/ Try to get somewhere, when you're looking for a raise and they give you trash/Rough/ When you got it like that and your woman's running 'round with a baseball bat..." "Rap" is probably fun to dance to, but listening passively is hardly an energizing experience. P.R.

GLEN CAMPBELL: Old Home Town.
Glen Campbell (vocals, guitar), Caldonia (vocals and instrumentals). Old Home Town; I Love How You Love Me; Hang On Baby (Euse My Mind); Blues My Naughty Sweetie Gives To Me; A Few Good Men; On the Wings of My Victory, and four others. ATLANTIC AMERICA 90016-1 $8.98. © CS 90016-1 $8.98.

Performance Good
Recording Good

One of the nifty little truths about pop music is that we've come to expect the people with the best voices, has been trying to stop making boring records for a couple of years now. He has largely succeeded this time, keeping the backing mostly in the hands of a small band (away from Hollywood strings) and finding at least a few songs that don't sound like attempted rewrites of Tenderly. Campbell and producer Jerry Fuller do slip up a few times, though. I Love How You Love Me is fit only for a voice with no personality in it, specifically that one of the late-Fifties bobbies (Bobby Vinton, Bobby Vee, etc.), and I Was Too Busy Loving You and Hang On Baby have very little happening in them. But the rest are kind of interesting, especially Bob Corbin's On the Wings of My Victory (picked up earlier by Jessi Colter) and Jud Strunk's Ruth. And Campbell does a little serious guitar picking on a couple of others (that way, incidentally, lies his surest escape from blandness, in my view; he plays a mean guitar, but never enough of it in any one album). He also has a return engagement with the bagpipes on Mull of Kintyre, the Paul McCartney/Denny Laine song about another old home town. His voice is silky smooth, as always, although the program doesn't really challenge it. If Campbell keeps moving in this direction, however, things figure to become more challenging—and more interesting. N.C.

RECORDING OF SPECIAL MERIT

DOCTOR ROCKIT AND THE SISTERS OF MERCY: Great Big Fun. Doctor Rockit and the Sisters of Mercy (vocals and instrumentals). Almost Grow: Dirty, Dirty; Route 66, You Know My Love; One More Chance, You; I'd Rather Be Blind; Talk to Me; and five others. PERFECT CIRCLE © PC-821 $7.99 (plus $1 postage and handling from Perfect Circle Records, 201 Kirby Drive, Suite 1001, Houston, Tex. 77019).

Performance: Big fun
Recording: Very good

Doctor Rockit is a red-hot Houston bar band and a favorite at Rockefeller's, a local dance club. This live digital recording was made at a series of Monday night gigs. The sound is crisp and penetrating, and the program is notable for its tasty mixture of material and topflight playing. I especially like Mike Sumler's piano solo on Ray Charles's When you got it like that and your woman's looking at you, you've got to have a response/Rough/Country boys running 'round with a baseball bat...."

JANIE FRICKE: It Ain't Easy. Janie Fricke (vocals); vocal and instrumental accompaniment. He's a Heartache (Looking for a Place to Happen); Who Better Than Me, I'm Falling stood out on All Janie Fricke needs is a song with some personality. "I Love How You Love Me" is not one of Di Meola's best albums, it is an honest statement of his present musical direction. P.G.
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JERRY GARCIA: Run for the Roses. Jerry Garcia (vocals, guitar); instrumental accompaniment. Run for the Roses, Jerry Garcia (vocals, guitar); instrumental accompaniment. Run for the Roses is a song by Jerry Garcia. It's about horse racing and the excitement of being at the track. The lyrics describe the thrill of anticipation as the horses run for the roses. The song captures the energy of the race track and the excitement of the audience.

The Gatlin Brothers (vocals, guitar, mandolin): The Gatlin Brothers are known for their country music and their harmonizing vocals. They often write songs about their travels and adventures. In this song, they seem to be describing a journey or a trip.

JERRY GARCIA: Some songs Garcia has written are more introspective and have a deeper emotional content. For example, the song "The Way I Love You" expresses his passion and devotion to someone.

What Jerry Garcia and some big -band -style singers here than you have song-too much aggressiveness about them. Nevertheless, Gaye remains one of the most talented and innovative artists to emerge from the old Motown stable and one of the established greats of black popular music. His "What's Goin' On" album, released in 1971, is an all-time landmark in this genre. On his new album Gaye concentrates on music that he admits, intended to be superficial and commercial. The lyrics are obviously trite and at times downright abominable, all of the worn-out sexual references are expressed in the unimaginative terms that have branded commercial funk as an aggressively anti-intellectual medium. But Gaye as an artist could not fail to produce an album that tinges with musical excitement. Sexual Healing, the first single released from this set, engagingly fuses reggae rhythms with soul references. Midnight Lady has contributed, campy lyrics yet reverberates to offset rhythm patterns and unexpected chord changes. Some tracks have no redeeming qualities—Rockin' After Midnight and Joy are so thuddingly banal as to be take-offs on the usual funk fare—while Gaye's artistry shines through. He plays most of the instruments and does all the singing, and, if the content isn't all that we would like to hear from him after a prolonged silence, it is enough to reassure us that he has not lost his basic appeal. After all, it hasn't been just what Marvin Gaye has said that has drawn us to him, it's also been the way he says it.

MERLE HAGGARD: Going Where the Lonely Go. Merle Haggard (vocals, guitar); the Strangers (instrumentals); other musicians. Going Where the Lonely Go is a song by Merle Haggard. It's about the feeling of being alone and seeking companionship or love. The song is often interpreted as a plea for understanding and acceptance, especially during times of personal hardship or struggle.

Only truck drivers seem to appreciate it fully, but Merle Haggard has put together a string of truly fine albums going back over three or four years. This one isn't quite up to that standard because its songs aren't—al
The picking, particularly of lead guitarist Frank Reckard, does a lot to keep the energy level high. Reckard’s sputtering licks on such uptempo numbers as Restless (written by Carl Perkins) are reminiscent of the electric period of the great Clarence White, and they are balanced by lyrical, delicate work on the slower pieces. Reckard is one of the most tasteful electric-guitar players this side of Red Shea, and hearing him in this live setting—which tends to persuade most instrumentalists to overplay—is instructive.

The rest of the band is not far behind. The songs, ranging in style from rockabilly to hard country to Bruce Springsteen’s Racing in the Streets (whose tempo, contrasting a bit self-consciously with its subject, is dirigé speed), are all good. Harris’s singing is at least as good as it is in the studio, and she even picks, on what sounds like a Stratoacaster, a few seconds of lead guitar. Emmylou Harris does it again, again.

N.C.

GEORGE HARRISON: Gone Troppo. George Harrison (vocals, guitar, synthesizer); vocal and instrumental accompaniment. Wake Up My Love; That’s the Way It Goes; I Really Love You; Greece, Gone Troppo, and five others. Dark Horse. 23734-1 $8.98, © 23734-4 $8.98.

Performance: Mixed
Recording: Good

Yin and Yang, as George Harrison would say. His continuing drawbacks are his voice, which sometimes sounds like an unconscious parody of Dylan’s circa 1966, and his cautious guitar phrasing, which seldom extends beyond slide riffs. As a songwriter he only occasionally produces successful material. Thus, even with good will, a listener has to plough through a lot of so-so stuff on Harrison’s albums with the infrequent reward of a song or performance that’s worth the wait.

This album is meant to be relaxed and not preachy, but Harrison’s familiar sanctimonious creeps in on That’s the Way It Goes, Mystical One, and Circles. The title tune Wake Up My Love: That’s the Way It Goes; I Really Love You; Greece; Gone Troppo; and five others. Dark Horse. 23734-1 $8.98, © 23734-4 $8.98.

Performance: High-energy
Recording: Fairly good remote

WAYLON JENNINGS AND WILLIE NELSON: WWII. Waylon Jennings (vocals, guitar); Willie Nelson (vocals, guitar), vocal and instrumental accompaniment. Mr. Shuck and Jive: Roman Candles; Dock of the Bay; Last Cowboy Song; and seven others. RCA AHL-1-4455 $8.98, © AKH-1-4455 $8.98, © AHSI-4455 $8.98.

Performance: Good
Recording: Good

Since the back-up Chips Moman produced here has a certain neutrality-through-amorphismousness to it, this album seems to stress the difference between the singing styles of Waylon Jennings and Willie Nelson. Jennings’s voice is huge and softly outlined and...
Little Steven and the Disciples of Soul: Men Without Women (see Best of the Month, page 82)

Recording of Special Merit

Clive Lythgoe: Gershwin’s Fascinating Rhythms. Clive Lythgoe (piano). Clap Yo’ Hands; Liza; Do Do Do; I Got Rhythm; Who Cares?; S Wonderful; Somebody Loves Me; Fascinating Rhythm; and six others. TOCJO-1 TD 1006 $8.98

Performance: Very good

Recording: Excellent

George Gershwin’s transcriptions for piano of his popular songs have all the rhapsodic stylistics and inventive verve of the man himself. Pianist Clive Lythgoe notes that Gershwin wrote them “to begin where the words leave off.” That they certainly do as they swirl and sidestep through variation upon variation. Gershwin’s music is so natural, so spontaneous, and so amiable that one’s immediate response is to cheer him on to even greater excess, like urging an acrobat to make that final, triumphant flourish. Lythgoe’s playing is beautifully responsive to the material, and the digital recording sparkles like dry champagne.

Joni Mitchell: Wild Things Run Fast. Joni Mitchell (vocals, guitar, piano); instrumental accompaniment. Chinese Cafe (Unchained Melody); Wild Things Run Fast; Ladies Man; Man at the Window; Solid Love; Be Cool; and four others. Gefen GHS 2019 $8.98, © MS 2019 $8.98

Performance: Cool period continues

Recording: Very good

A singer on the folkie circuit who was supposed to have “inside information” told me some months ago that this was the case, and that it was “a return to the folk style” and “on the order of ‘Court and Spark’.” Such stuff. Joni Mitchell occasionally shows herself as working in some sort of jazz style. She does have a unique approach, and she’s getting better at it; this isn’t nearly as muddled as “Mingus” was. But she has sacrificed something she is certifiably good at—call it insight-chasing—to pursue this. Instead of self-analysis we get advice to “Be Cool.” And she doesn’t seem to mean it ironically. On the other hand, as one approaches middle age, which Mitchell touches on the opening cut, Chinese Cafe, one does tend to value coolness more and self-analysis less. Chinese Cafe is integrated with the old pop song Unchained Melody and is the most impressive piece on the album. But then Mitchell drifts on to near-mindlessness with such things as You’re So Square, Baby I Don’t Care and Ladies Man, and it must be almost part of the tug of the musical settings that causes that.

The sound here is electronic, with synthesizers doing something akin to what Tom Scott used to do for her with reeds. It is...
Johnny Cash: Still Free

The Adventures of Johnny Cash on Columbia is the first whole Johnny Cash album produced by Jack Clement since the two were with Sun Records, launching the heyday of rockabilly, twenty years ago. Cash's bass-baritone voice has been exposed enough in the intervening years that it no longer seems startling, and Clement has become semi-civilized, but the collaboration suggests that old hands can still have fun making a record and that free spirits don't easily fade away. This one and 1980's "Rockabill Blues" are Cash's best albums in recent years.

Cash was something else when we first heard him—that was the phrase we used: "The man is something else." Neither country nor rock-and-roll recording had prepared us for the spartan, primitive records he and Clement fashioned for Sam Phillips. Here he and Clement have achieved a kind of freshness that has little dependency upon nostalgia. There is a similar kind of simplicity, possibly born out of their going with what they've got: not an electric tick-tack box like so many Cash albums, but a more or less the same. That seems like a state of affairs is not good—but not necessarily bad. An image change is the phrase we used:

Johnny Cash: The Adventures of Johnny Cash. Johnny Cash (vocals, guitar); Marty Stuart (guitar, mandolin); John Hartford (fiddle, banjo); Joe Allen (bass); W. S. Holland (drums); other musicians. Performance: Excellent Recording: Back to basics

STereo Review
must be the point of it, since there’s no apparent point to the music itself. Springfield has usually been presented as a bit to the right of straight, and I guess she wanted to get, as they say, “with it.” She is her old breathy self, all in all, although this does do some-all-purpose crutch. The results are rather vocally, backed by strings and piano, and that’s all right. She is her old self.

Parent point to the music itself. Springfield must be the point of it, since there’s no apparent point to the music itself. Springfield has usually been presented as a bit to the right of straight, and I guess she wanted to get, as they say, “with it.” She is her old breathy self, all in all, although this does do some-all-purpose crutch. The results are rather

JAMES BLOOD ULMER: Black Rock. James Blood Ulmer (vocals, guitar), vocal and instrumental accompaniment. Open House; Moon Beam; Love Have Two Faces; Overnight; Fun House; and eight others. WARNER BROS. 23743-1 G two discs $13.98, © 23743-4 $13.98.

Performance: Mumbo jumbo
Recording: Very good

I have heard guitarist James Blood Ulmer perform live, so I know that he is capable of generating sounds that please me immensely. He can do a fine job of playing the electric guitar, and I like his voice. But I can’t say that I have heard him play as well as he does on this album. Ulmer is a very talented musician, and I think that he has a lot to offer as a composer and performer. However, I don’t think that he is ready to release this album. I think that he should spend more time working on his craft before he releases an album like this.

On a more general note, I think that Ulmer is a very intelligent person. He has a good sense of humor, and he is not afraid to make people laugh. I think that he is a very talented musician, and I think that he has a lot to offer as a composer and performer. However, I don’t think that he is ready to release this album. I think that he should spend more time working on his craft before he releases an album like this.

This casual approach works in concert sometimes, but here you repeatedly sense that someone simply won’t make the effort to sing a note, play a fill, or whatever. The best song in “Cowjazz” is Pat and Victoria Garvey’s “Lovin’ of the Game.” It does draw to sing a note, play a fill, or whatever. The best song in “Cowjazz” is Pat and Victoria Garvey’s “Lovin’ of the Game.” It does draw
Monk Major and Minor

When pianist/composer Thelonious Monk died in February 1981, he had not made a public appearance in over five years, but his name was far from forgotten. Monk had long been regarded as an eccentric whose appearance at his own engagements could never be taken for granted. Yet, outside the Five Spot in New York, he joined a line of people who had queued up to hear him play. When he disappeared from the limelight, therefore, many attributed his long absence to his erratic behavior pattern, although there was talk of his illness.

I recall a time when we were both under obligation to Riverside Records, a time when Monk seemed strangely reluctant to record. In fact, persuading him to enter a studio would have been considered a major feat in those days. But he still paid visits to the office, and one day he entered mine, sat down, and for almost half an hour stared silently at the ceiling. "I wrote a nice little Christmas tune for the kiddies," he finally said. "Perhaps you would like to record it for us," I suggested. "Maybe," he replied, teasingly, as he walked out the door.

There were several instances of strange behavior on Monk's part in the Sixties, and I always felt that he was expressing a sense of humor and timing that was reflected— and generally overlooked—in his music. Monk's piano style was certainly unique. I never found it inaccessible or lacking in musical sense, but twenty-five years ago there were those who regarded Thelonious Monk as a technically limited player, glossing over his inadequacies with an eccentric style. Today, of course, Monk is almost universally regarded as the musical giant he clearly was, that his music has endured and worn so well over the years is ample proof of its validity.

It was inevitable that Monk's death would renew interest in his music, and 1982 saw the release of many of his recordings, including some excellent takes and some rejected ones better left in the vaults. Two recent sets are cases in point.

"Round Midnight" (there's an original title for you) is a two-disc Milestone set of recordings made for Riverside during the first half of 1957, when Monk was in full flower. The first three sides include tracks that originally appeared in an album entitled "Mulligan Meets Monk." Some critics and fans felt at the time that these two major forces in jazz simply did not blend well.

The years, we are told in the notes, have proved such contentions wrong, but I disagree: the sounds have not changed, and what sounded like bad casting in 1957 still does. If Monk had left us a skimpy legacy of recordings, there would be some justification for issuing these selections now, but with so much really great stuff around, he is being done a disservice. To compound the error, producer Orrin Keepnews fills sides one and three with alternate takes that can delight only the most dedicated fan who must have every last note that Monk ever recorded.

I nevertheless strongly recommend this album for the contents of side four, a fascinating, nearly half-hour-long study of Monk at work on his most celebrated composition, "Round Midnight." He had written the tune several years before, and this was by no means the first time he had recorded it. But that only makes this a sculpting of the piece all the more interesting. We hear Monk, unaccompanied, take the music down various paths, stopping occasionally in mid-stride to make a verbal comment and start a new take, and finally playing the composition through on the almost seven-minute take that appeared on the album "Thelonious Himself." How fortunate that these solo performances were preserved.

"Live at the Jazz Workshop" is a Columbia double album consisting of previously unreleased 1964 solo and quartet material recorded during a Thelonious Monk engagement at San Francisco's Jazz Workshop. I wonder why these recordings were not released before; Monk could surely have benefited from the income they would have provided during those last years. The quartet—with Charlie Rouse on tenor, Larry Gales on bass, and Ben Riley on drums—was a working unit; it is not always as exciting here as it was on other occasions, but this is worthwhile Monk and altogether a welcome release.

Some of the tunes in the Milestone set are duplicated in the Columbia one, reflecting a creative stagnation that plagued Monk toward the end of his career. There were many of us who tired of hearing the same repertoire every time Monk appeared, and, if the well had indeed run dry, perhaps it was wise of him to withdraw in the mid-Seventies. But even when he repeated himself, Monk remained one of the most original expressionists in jazz history. His death robbed us of the hope of seeing him emerge with a mind full of new ideas. Let us all the more cherish his old ones, but let us also show our respect by keeping out of earshot recordings that Monk might have himself regretted making.

—Chris Albertson

Thelonious Monk/Gerry Mulligan: 'Round Midnight. Gerry Mulligan (baritone saxophone); Thelonious Monk (piano); Wilbur Ware (bass); Shadow Wilson (drums). Straight, No Chaser (two takes); Decidedly (two takes); I Mean You (three takes); 'Round Midnight (in progress and accepted take); Rhythm-a-Ning, Sweet and Lovely. Milestone M-47067. Two discs, $9.98.

Thelonious Monk: Live at the Jazz Workshop. Thelonious Monk (piano); Charlie Rouse (tenor saxophone); Larry Gales (bass); Ben Riley (drums). Don't Blame Me; Epistrophy; Blue Monk; Ravel's Aren't We; You Don't Need It; Evidence (Justice)/Rhythm-a-Ning; 'Round About Midnight; I'm Gettin' Sentimental over You; Bemsha Swing; Memories of You/Just You, Just Me; Blue Monk. Milestone. Hackensack, New Jersey. Columbia C2 38269. Two discs, no list price.
JAZZ

RECORDING OF SPECIAL MERIT

CHICK COREA: Trio Music. Chick Corea (piano); Miroslav Vitous (bass); Roy Haynes (drums). Slippery When Wet; Eronal; Hackensack; Little Rootie Tootie; Reflections; Rhythm-a-Ning; Think of One; and eight others. ECM ECM-2-1232 two discs $14.98, © 2E5-1232 $14.98.

Performance: Superb

Recording: Excellent

Chick Corea has not always played to my liking, but after hearing this new ECM album it is much easier to forgive him for having originated the souped-up Return to Forever group and for other occasional lapses in taste. "Trio Music" is a double album almost half of which is devoted to free-form improvisations, the rest to seven Theolonious Monk compositions and a Corea original. Some of the tracks actually feature a piano and bass duo with Miroslav Vitous playing bass, but mostly this is a set of trio performances reuniting Corea and Vitous with the estimable Roy Haynes. The three originally made a joint appearance on "Now He Sings, Now He Sobs," recorded fifteen years ago for the short-lived Solid State label, but the result was not nearly as satisfying as it is on these 1981 sessions.

The seven nameless but numbered duet and trio improvisations may be a bit too abstract for some tastes, though there are limits to how far piano, bass, and drums can be taken beyond the norm. I happen to find this part of the set just as appealing as the new ECM productions, and I strongly recommend the album to anyone with an ear for unadulterated, imaginative, and thoroughly tasteful music.

C.A.

JIMMY DORSEY AND HIS ORCHESTRA, 1939-1940. Bob Eberly, Helen O'Connell (vocals); Jimmy Dorsey and His Orchestra (instruments). On the Trail; Cherokee; Do It Again; The Breeze and I; John Silver; I Can't Resist You; and six others. CIRCLE © CLP-30 $7.98.

Performance: Good

Recording: Fair

This is a nice breeze of nostalgia from the days of the big bands. After splitting with his brother Tommy in 1935, Jimmy Dorsey went on to form his own very popular band, and his recordings with it steadily placed on the charts of the times. These cuts from 1939 and 1940 were made with his commercially successful vocalists, Bob Eberly and Helen O'Connell. Eberly's big
"Casino Lights"

As marvelous as they are together, it is Crawford who elevates this album to the sublime with her interpretation of John Lennon's "Imagine," a poignant hymn of peace and undoubtedly one of the most remarkable songs to flow from the prolific pen of the late Beatle. Crawford conveys, in a profoundly moving manner, a sense of the song's real message. Popular music simply does not come any finer than this.

Instrumentally, saxophonist David Sanborn anchors an impressive supportive group on the first side and then steps into the spotlight on side two to offer lively renditions of "Love Is Not Enough" and "Hideaway." These are tuneful, catchy ditties, easily dismissed except for Sanborn's ability to generate excitement with his vigorously aggressive attack and his talent for building solid sound structures. The album closes with the title selection, "Casino Lights," a low-keyed but mellow mood piece in which Neil Larsen on keyboards and Buzz Feiten on guitar weave a delicate instrumental web.

There is only one clinker, a raucous number called the "Monmouth College Fight Song," performed by the Yellowjackets, which confirms suspicions that fusion is sometimes more sound and fury than music (it also made me vow never to go near Monmouth College), but even this is not sufficient to detract from the special moments created here by those who made the scene that summer's day in Switzerland.

—Phyl Garland

**CASINO LIGHTS.** Al Jarreau and Randy Crawford: Your Precious Love; Who's Right; Who's Wrong; Sure Enough; Randy Crawford and the Yellowjackets: Imagine; Neil Larsen and Buzz Feiten: Casino Lights. The Yellowjackets: Monmouth College Fight Song. David Sanborn: Theme from "Love Is Not Enough"; Hideaway. **WARNER BROS. 23718-1 $8.98, © 23718-4 $8.98.**
and of drummers Billy Hart and Jack DeJohnette, but also introduces two very talented men whose names are new to me: trumpeter Wallace Roney and pianist Clyde Criner. They were well chosen. C.A.

RECORDING OF SPECIAL MERIT

CLEO LAINE: Live at the Wavendon Festival. Cleo Laine (vocals); instrumental accompaniment. Eleanor Rigby: Control Yourself; Papaito, Happiness Is Just a Thing Called Joe; Go and Catch a Falling Star; You Spotted Snakes; Lorelei; and seven others. JAZZ MAN JAZ 5033 58.98.

Performance: Delightful Recording: Excellent remote

Singer Cleo Laine has enjoyed widespread popularity in this country for the past ten years, but she had a fairly large following in Europe long before then. If you ever wondered what it is that makes Laine so special to her fans, you'll find the answer in this recent release. Recorded by the B.B.C. Transcription Service, this album catches Laine, saxophonist John Dankworth (her husband), guitarist John Williams, and pianist (and composer) Richard Rodney Bennett at the Wavendon Festival, which they founded. Not surprisingly, Laine is a regular at Wavendon, so I would be hard put to guess the date of this superb concert, a piece of information glaringly absent from the jacket notes and credits.

In terms of performance, Cleo Laine is simply magnificent here from beginning to end. The sophisticated and wonderfully varied program (the lyrics span more than three hundred years, from Shakespeare to John Lennon) treats us to a pleasant earful of her awesome vocal range and a goodly amount of whimsy. Her reading of Eleanor Rigby is silky and lighter than air, her mimicry of a tone-deaf novice rendering Lorelei is hilarious (it brings to mind Jo Stafford's Darlene Edwards character). Don't miss this album. C.A.

RECORDING OF SPECIAL MERIT

CLAUS OGERMAN and MICHAEL BRECKER: Cityscape. Michael Brecker (tenor saxophone); Warren Bernhardt (keyboards); Steve Gadd (drums); Eddie Gomez, Marcus Miller (bass); John Tropea, Buzz Feiten (guitar); Paulinho da Costa (percussion); other musicians; Claus Ogerman arr. and cond. Cityscape; Habanera; Nightways: In the Presence and Absence of Each Other. WARNER BROS. 23698-1 $8.98, © 23698-4 $8.98.

Performance: Bravo Brecker Recording: Very good

Although Claus Ogerman's arranging credits are numerous, including portions of George Benson's spectacularly successful "Breezin'" album and backings for such mainstream horns as Stanley Turrentine and Freddie Hubbard, he is most closely associated with a kind of "fusion" infrequent- ly spoken of today, namely, jazz and classical music. He builds on the Third Stream tradition established during the Sixties by Gunther Schuller, John Lewis, and others. Some of Ogerman's experiments have been highly effective, particularly his "Symbiosis" album with the late Bill Evans, whose own training and piano style were classically weighted.

In "Cityscape" Ogerman has created a similar work for saxophone virtuoso Michael Brecker. Side one is a group of three tone poems capturing the mood of New York City at night, and the second side is devoted to a suite titled In the Presence and Absence of Each Other. Brecker's saxophone soars majestically over a heavy orchestral background led by an army of strings. The colors are dense and lush, and sometimes the density clogs into downright murkiness, but these stretches are saved by Brecker's inventive improvisations. He seems to play every note his horn is capable of producing, holding up this weighty work like Atlas on his sturdy shoulders. That may not be exactly what Ogerman had in mind, but his experiment succeeds largely because of Brecker's heroic efforts. P.G.

MARTY PAICH: What's New. Marty Paich Big Band (instrumentals). Black Rose; New Soft Shoe; Martyn Time; Nice and Easy; From Now On; and four others. DISCOVERY DS-857 $8.98.

Performance: Antiseptic Recording: Good

In the late Fifties, Marty Paich was one of those "hip" West Coast composer/arranging
Mike Lipskin's Stride Piano

ONLY a handful of contemporary pianists play in the Harlem "stride" style, and few of them play stride consistently. Only Mike Lipskin, so far as I know, is writing new stride material. Half of the dozen selections on his first solo album, "Harlem Stride Piano" on his own Buskirk label, are originals, and so is Lipskin himself. Both in person and at the keyboard, he displays an a cappella sense of humor that feasts on the irrefutable. In Lipskin's lyrics, Cupid is a bookie whose clients are always wangling on their bets. Yet his melodies are finely crafted and often wistful. The clash between his sometimes quirky vocals and his fluent instrumental parts is part of what makes him so interesting—and so much fun—to listen to.

Lipskin began studying stride at the age of twelve with Willie "The Lion" Smith, one of the three giants of stride, the others being James P. Johnson, the dean of the form, and Johnson's protégé Fats Waller. From Johnson, whom he idolizes, Lipskin derives his attention to compositional detail; Waller's legacy is a rowdy humor and sturdy professionalism. Now happily settled as resident pianist of the Washington Square Bar and Grill in San Francisco, Lipskin spent most of his career in New York as executive, engineer, and producer in the commercial record business. His previous appearances on records have been guest shots on other artists' albums. But "Harlem Stride Piano" is all his, right down to the delightfully sardonic liner notes.

A listener who's never heard Lipskin before may be puzzled by the deliberately awkward vocals. Lipskin goes for notes that can't hit and misses notes that are comfortably within his limited baritone range. The intention is to produce a comic effect, rather like Fats Waller's mocking hijinks when he recorded Tin Pan Alley junk.

Some of Lipskin's lyrics, which are always literate and occasionally tricky, require a singer able to make fast changes to accommodate barrages of words that may crowd the melody and need very precise breath control to put across. The earlier material here (some dating back to 1976) almost needs a spoken delivery à la Noel Coward or Danny Kaye for full effect. This is not to say that Lipskin's songs don't "translate"; any other qualified singer with a sense of humor, true style, and an appreciation of first-class melody should be able to handle them. But one of the things I like about hearing Lipskin do them is the way he takes chances and trusts the intelligent listener to follow him.

You may, after listening to this album, find yourself whistling Nothing Holds a Candle to a Night with You or Am I Blue, both wonderful tunes with lyrics about people who are stuck on a particular sexual partner. And you will probably agree with Lipskin's cheerful contempt for the overblown language used in singles bars (There's No Need to Say "I Love You"). I also think you'll be impressed with the relaxed simplicity of his most recent song, 1923, in which the melody, sentiments, and vocal performance are entirely complementary. The purely instrumental selections feature an exquisite version of Johnson's Snowy Morning Blues, a muscular and subtly passionate What Is This Thing Called Love, a stride adaptation of the Beatles' Yesterday, and a fond remembrance of Willie "The Lion" Smith in his Echo of Spring.

Mike Lipskin may well be the last of the true striders, working exclusively in the form yet putting no limits on the range of material he performs. In this he follows Johnson, Waller, and Smith, all of whom justifiably believed that stride could tolerate, encompass, and enhance any aspect of popular music while still retaining its distinctive identity. There's no doubt that Mike Lipskin, like his predecessors a highly individual artist, is a worthy continuer of a great tradition.

---Joel Vance

MIKE LIPSKIN: Harlem Stride Piano. Mike Lipskin (piano, vocals); Sam Schaffer (drums). Nothing Missing Now; Am I Blue; What Is This Thing Called Love; Snowy Morning Blues; If Dreams Come True; Yesterday; Echo of Spring; Down on the Tropical Isle; There's No Need to Say "I Love You"; S'Wonderful; 1923. BUSKIRK 001 $8.98 (plus $1 postage and handling charge from Buskirk Productions, P.O. Box 503, Nicasio, Calif. 94946).

ER/bandleaders who could be relied on to come up with bouncy charts that sounded ever so au courant. "What's New" is an album of original Paich tunes dating back to that period—1957, to be exact—and it features a veritable Who's Who of the day's white West Coast studio stars: Buddy Childers, Jack Sheldon, Bob Enevoldsen, Herb Geller, Bob Cooper, Mel Lewis, Joe Mondragon, Pete Candoli, et al. It is technically flawless, perhaps too clean and too pat, but pleasant.

---C.A.

RECORDING OF SPECIAL MERIT

SPHERE: Four in One. Charlie Rouse (tenor saxophone); Kenny Barron (piano); Buster Williams (bass); Ben Riley (drums). Monk's Dream; Light Blue; Eronel; Reflections; and two others. ELEKTRA/MUSICIAN 60166-1 $8.98, © 60166-4 $8.98.

Performance: Meaningful Recording: Excellent

Ironically, the recording session for "Four in One," a tribute to Thelonious Monk, began only two hours after his death a year ago. Tucked away in the remote New Jersey studio of Rudy Van Gelder, the four distinguished members of Sphere—Charlie Rouse, Kenny Barron, Ben Riley, and Buster Williams—did not even hear of Monk's passing until five hours later.

Sphere (which was Monk's middle name) was set up to give its members "both business and artistic control" over such related ventures as publishing and recording. A wise move, and one that has certainly paid off in artistic terms on this premiere album. Thelonious Monk composed many well-known tunes, but the group deliberately chose a program of six lesser-known selections and performs them with characteristically excellent musicianship. A finer tribute could hardly be imagined.

---C.A.

COLLECTION

BASIE REUNIONS. Buck Clayton, Shad Collins (trumpets); Paul Quinichette (tenor saxophone); Jack Washington (baritone saxophone); Nat Pierce (tuba); Nat Pierce (trumpet); Freddie Greene (guitar); Eddie Jones, Walter Page (bass); Jo Jones (drums). Rock-a-Bye Baby; Texas Shuffle; Blues I Like to Hear; John's Idea; Jive at Five; and five others. PRESTIGE P-24109 two discs $15.96.

Performance: Essential Recording: Excellent mono

If you like the bouncy swing of Count Basie's small groups, don't pass up "Basic Reunions," a reissue of two superb Prestige albums from the late Fifties. No, the Count himself is not present, but Nat Pierce slipped easily into the Bassie mode even then, and his piano is hard to tell from the real thing. The rhythm sections are the real thing, one being the so-called All-American Rhythm Section (Freddie Greene, Walter Page, Jo Jones), the other the same except with Eddie Jones in place of Page, whom he also replaced in the actual band. Buck Clayton, Shad Collins, Paul Quinichette, and Jack Washington give added Basie flavor. All in all, a delicious swing meal with all-natural ingredients.

---C.A.

(Continued on page 114)
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The Second Urban Folk Revival

The second urban folk-music revival of modern times is upon us, and it is a condition of unexpected ironies and, as Pogo would say, puzzlements. There is much talk about it in New York’s Greenwich Village, for example, yet some of the acts playing the folk spars there seem more like punks than folkies. It is not a big, taking-the-country-by-storm movement according to the way most people are measuring it; the stars—Sian Rogers, David Mallett, Bill Staines, and the like—are playing comparatively small clubs and recording for small or independent record labels, and there is no hint of a forthcoming Hootenanny-type TV show or the like. Yet, if you include Dan Fogelberg and all his platinum albums in it, or if you claim Gordon Lightfoot has stayed in it all along, it does look pretty big.

This revival doesn’t seem to be doing big-name holdovers from the first revival much good; the new, young audiences, perhaps, are unfamiliar with such names as Joan Baez and Eric Andersen. Yet Staines, Michael Cooney, Paul Geremia, and a few others seem more live, but the performances are pretty good. McShee strikes some lovely tones in The Trees They Grow High and High Germany. Renbourn’s voice is large and nasal (he and Bert Jansch gave Pentangle a decidedly nasal sound), but it seems to go with the songs. There are some excellent four-part harmonies in Ye Mariners All, an old drinking song, and John Barleycorn Is Dead. This version of the latter is faster and lighter and less dramatic than the old Traffic one, by the way, and, I suspect, more nearly mainstream. It keeps you from overestimating how weighty the lyrics are meant to be—but the Traffic version is, I’ll concede, prettier. There’s a fair amount of pretty stuff here, though, and Renbourn apparently is serious about getting back to his Renaissance roots.

I suppose getting back to some kind of roots is what the second urban folk-music revival is all about. In 1969, the young white people locked to the blues when pop alternatives were similarly unappealing. This second revival doesn’t seem likely to dominate the pop culture temporarily in the manner of disco, but it does seem to be eluding its way to reclaiming turf, to getting itself reinstated as a kind of music that has a claim on a certain segment of the market. The John Renbourn Group may remain a small frog in a small pond, but, from the sound of it and from the look of what’s going on around us, it could be a surviving frog. That’s something, in the Eighties.

Noel Coppage

THE JOHN RENBOURN GROUP: Live in America. The John Renbourn Group (vocals and instrumentals): Lindsay; Ye Mariners All; English Dance; The Cruel Mother; Breton Dances; The Trees They Grow High; Farewell Nancy; Van Dielman’s Land; High Germany; Sidi Brahimi; The Month of May Is Past/Night Orgies; John Dory; So Early in the Spring; Fair Flower; John Barleycorn Is Dead; Flying Fish/Fine Catch FF 27103 two discs $9.98.
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THEATER • FILMS


Performance: Surprising
Recording: Very good

Noel Coward characterized Lionel Bart's stage musical Blitz as "louder and longer than the original." Tom Waits's soundtrack One from the Heart is as soft and slow as the movie itself, which was released last year to mixed reviews and a short run. Nearly all the items in the score are jazz ballads—skillfully written, well played by West Coast jazzmen (including Jack Sheldon, Victor Feldman, and Teddy Edwards), and carefully produced and engineered by Bones Howe. Taken individually, many of the songs could stand on their own, but their temps are so uniformly vapid that collectively they induce coma. Not that Waits is to blame; any film composer must tailor his music to the pace of the film, and that is imposed by the director.

There are, however, three surprises here. The first is the gentleness and sentimentality of the material—this from a composer who specializes in portraits of grungy street folk. The second is that Waits has, for this project at least, tempered his guttural, abrasive vocals to a breathy croon. The third surprise is from Crystal Gayle, better known as a country performer, who turns in several fine jazz vocals. Her technical prowess is matched by feeling; her combination of agility and restraint plus an emotional understanding of the characters she's singing about is most impressive.

S.S.

ONE FROM THE HEART (Tom Waits). Original-soundtrack recording. Tom Waits (vocals, piano); Crystal Gayle (vocals); orchestra, Bob Alcivar cond. COLUMBIA FC 37703, © FCT 37703, no list price.

Performance: Surprising
Recording: Very good

by Squeeze and the Go-Go's seem completely inappropriate.

NOEL COPPAGE
(1938 - 1982)

This issue contains the last reviews by our contributing editor Noel Coppage, who died of a heart ailment last December. Born in Ohio County, Kentucky, February 19, 1938, he studied journalism at West-
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Koss Clean n Toss™ disposable tape cartridges are hermetically sealed in a pouch with just the right amount of a specially formulated cleaning solution. This unique solution loosens the dirt particles that build up on the heads, tape guides, capstan and pinch roller of your VCR unit. Then the ultra-soft Clean n Toss™ tape picks up the dirt and permanently removes it. Your VCR is ready to play in seconds.

Look for the Koss automatic VCR cleaning cassette starter kit containing 3 Clean n Toss™ disposable cartridges. Once you’ve disposed of those, you simply buy Clean n Toss™ replacement cartridges. You’ll save a lot of money. And you’ll give your VCR added protection because you’ll be starting with a fresh tape each time you clean it.

THE DISPOSABLE VCR CLEANING SYSTEM FOR BETA OR VHS THAT NEVER RECYCLES DIRT.

KOSS®
Automatic VCR Cleaning Cassette with Clean n Toss™ Disposable Cartridges.

CIRCLE NO. 21 ON READER SERVICE CARD