THE CAMCORDER CRAZE
WHAT YOU NEED TO KNOW BEFORE BUYING ONE
JVC'S VHS-C VS. SONY'S 8mm: WHICH IS BETTER?

TESTED THIS MONTH
- NAKAMICHI CD PLAYER
- DENON RECEIVER
- SONY SUPER BETA VCR

MINI REVIEWS
- 17 POP & JAZZ CDS,
  LPS, AND VIDEOCASSETTES
- 12 CLASSICAL CDS

"ORIGINAL BEETHOVEN"
CAN MUSICIANS COPE
WITH A "NEW" TRADITION?
Pioneer's Revolutionary C-90/M-90 Elite High-Fidelity Components.

Audiophiles, take note: The preamp and amplifier you've been waiting for are finally here.

Introducing the Pioneer Elite Hi-Fi C-90 Preamp and M-90 Power Amplifier. Together, they combine the finest in both audio and video to retrieve every detail and nuance found in your cherished records, tapes, compact discs, LaserVision™ discs and other software. Imagine a soundstage spread throughout your entire listening room! Stunning, transparent, three-dimensional music, the likes of which you've never heard, apart from a live performance.

We paid fantastic attention to detail to gain this level of musical truth. One example: the C-90 volume control is a motorized, high precision rotary potentiometer. This permitted us to create the world's first high-end preamp with a no-compromise hand-held "SR"™ remote-control unit.

The C-90 features three separate power transformers—two to power left and right audio channels for vanishingly low crosstalk—and a third transformer to drive the preamp's unique video capabilities, relays, display and microprocessor. All switching functions are accomplished by electronic relays. Thus the signal paths are as short as possible, improving signal-to-noise ratio and channel separation. Anti-vibration measures taken to further the C-90's sonic excellence include a solid aluminum volume control knob, polycarbonate chassis feet, and rubber-encased PC boards. Soft copper-plated screws insure a snug fit of chassis, transformers, transistors, and help to dampen vibration.

The M-90 is a superb high-power stereo amplifier, utilizing dual-mono construction. It is conservatively rated at 200 W/CH into 8 ohms' and delivers 800 W/CH of dynamic power at 2 ohms. The wide dynamic range of digital sources can now be reproduced effortlessly, with any loudspeakers. The M-90's high current capacity of 47 amps can handle the challenge of the most complex speaker loads. To further enhance S/N ratio and channel separation, relay-operated electronic switches and a long shaft volume control keep the length of signal paths down to a minimum. Why include a high quality volume control on a power amp? Simple. To pursue the straight-wire-with-gain philosophy when using a CD player connected directly. Pure sound, redefined.

We paid fantastic attention to detail to gain this level of musical truth. One example: the C-90 volume control is a motorized, high precision rotary potentiometer. This permitted us to create the world's first high-end preamp with a no-compromise hand-held "SR"™ remote-control unit.

The C-90 features three separate power transformers—two to power left and right audio channels for vanishingly low crosstalk—and a third transformer to drive the preamp's unique video capabilities, relays, display and microprocessor. All switching functions are accomplished by electronic relays. Thus the signal paths are as short as possible, improving signal-to-noise ratio and channel separation. Anti-vibration measures taken to further the C-90's sonic excellence include a solid aluminum volume control knob, polycarbonate chassis feet, and rubber-encased PC boards. Soft copper-plated screws insure a snug fit of chassis, transformers, transistors, and help to dampen vibration.

Revolutionary.

CATCH THE SPIRIT OF A TRUE PIONEER.
Matthew Polk, the loudspeaker genius, with his Audio Video Grand Prix winning SDA-SRS and latest technological triumph: the extraordinary SDA-SRS 2, honored with the 1986 CES Design & Engineering Award.
The Genius of Matthew Polk Has Created Two Awesome Sounding Signature Edition SDAs

"Spectacular...it is quite an experience"

Stereo Review Magazine

Matthew Polk's own dream loudspeakers can now be yours!

Matthew Polk's ultimate dream loudspeaker, the SDA-SRS, won the prestigious Audio Video Grand Prix Speaker of the Year award last year. Stereo Review said "Spectacular... It is quite an experience" and also stated that the SRS was probably the most impressive new speaker at the 1985 Consumer Electronics Show. Thousands of man hours and hundreds of thousands of dollars were spent to produce this ultimate loudspeaker for discerning listeners who seek the absolute state-of-the-art in musical and sonic reproduction.

Matthew Polk has, during the last year, continued to push his creative genius to the limit in order to develop a smaller, more moderately priced Signature Edition SDA incorporating virtually all of the innovations and design features of the SRS without significantly compromising its awesome sonic performance. The extraordinary new SRS 2 is the spectacularly successful result. Music lovers who are privileged to own a pair of either model will share Matthew Polk's pride every time they sit down and enjoy the unparalleled experience of listening to their favorite music through these extraordinary loudspeakers, or when they demonstrate them to their admiring friends.

"Exceptional performance no matter how you look at it"

Listening to any Polk True Stereo SDA is a remarkable experience. Listening to either of the Signature Edition SDAs is an awesome revelation. Their extraordinarily lifelike three-dimensional imaging surrounds the listener in a 360° panorama of sonic splendor. The awe-inspiring bass performance and dynamic range will astound you. Their high definition clarity allows you to hear every detail of the original musical performance; while their exceptionally smooth, natural, low distortion reproduction encourages you to totally indulge and immerse yourself in your favorite recordings for hours on end.

Julian Hirsch of Stereo Review summed it up well in his rave review of the SDA-SRS: "The composite frequency response was exceptional... The SDA system works... The effect can be quite spectacular... We heard the sound to our sides, a full 90° away from the speakers... As good as the SDA feature is, we were even more impressed by the overall quality of the Polk SDA-SRS... The sound is superbly balanced and totally effortless... Exceptional low bass. We have never measured a low bass distortion level as low as that of the SDA-SRS... It is quite an experience! Furthermore, it is not necessary to play the music loud to enjoy the tactile qualities of deep bass... Exceptional performance no matter how you look at it."

The awe-inspiring sonic performance of the SDA-SRS 2 is remarkably similar to that of the SRS. Words alone can not express the experience of listening to these ultimate loudspeaker systems. You simply must hear them for yourself!

"Literally a new dimension in sound"

Both the SDA-SRS and the SDA-SRS 2 are high efficiency systems of awesome dynamic range and bass capabilities. They both incorporate Polk's patented SDA True Stereo technology which reproduces music with a precise, life-like three dimensional soundstage which is unequalled and gives you, as Julian Hirsch of Stereo Review said, "literally a new dimension in sound". Each beautifully styled and finished SRS 2 cabinet contains 4 Polk 6½" trilaminate polymer drivers, a planar 15" sub-bass radiator, 2 Polk i" silver-coil polyamide dome tweeters and a complex, sophisticated isophase crossover system. It is rated to handle 750 watts. The SRS utilizes 6-6½" drivers, a 15" sub-bass radiator, 4 Polk tweeters and an even more complex crossover. It is rated to handle 1000 watts.

Both the SDA-SRS and SRS 2 incorporate: 1.) time compensated, phase-coherent multiple driver vertical line-source topology for greater clarity, increased coherency, lower distortion, higher power handling, increased dynamic range and more accurate imaging. 2.) a monocoque cabinet with elaborate bracing and MDF baffle for lower cabinet read-out and lower coloration. 3.) progressive variation of the high frequency high-pass circuitry for point-source operation and wide vertical dispersion. 4.) the use of small active drivers in a full complement sub-bass drive configuration coupled to a large 15" sub-bass radiator for extraordinarily tight, quick and three-dimensional mid and upper bass detail combined with low and sub-bass capabilities which are exceptional. The speakers are beautifully finished in oiled oak and walnut.

Other superb sounding Polk speakers from $85 ea.

No matter what your budget is, there is a superb sounding Polk speaker perfect for you. Polk's incredible sounding-affordably priced Monitor Series loudspeakers start as low as $85 ea. The breathtaking sonic benefits of Polk's revolutionary True Stereo SDA technology are available in all Polk's SDA loudspeakers which begin as low as $395 ea.

"Our advice is not to buy speakers until you've heard the Polks"

The experts agree: Polk speakers sound better! Hear them for yourself. Use the reader service card for more information and visit your nearest Polk dealer today. Your ears will thank you.

Where to buy Polk Speakers? For your nearest dealer, see page...
Matthew Polk’s incredible/affordable monitors offer state-of-the-art technology and performance usually found only in systems which sell for many times their modest cost.

- **Monitor 10B**: $229.95 ea.
- **Monitor 5Jb**: $129.95 ea.
- **Monitor 4A**: $84.95 ea.
- **Monitor 5B**: $189.95 ea.
- **Monitor 7C**: $249.95 ea.
Polk Audio was founded in 1972 by three Johns Hopkins University graduates, who were dedicated audiophiles with a common dream: superior sound for everyone.

**The affordable dream**

They believed that it was possible to design and manufacture loudspeakers of uncompromising quality which performed as well as the most expensive and exotic loudspeakers available, but in a price range affordable to virtually every music lover. The Monitors are the spectacularly successful result of their quest.

Polk Monitor Series loudspeakers have earned a well deserved reputation for offering state-of-the-art performance and technology usually found in systems which sell for many times their modest cost. In fact, they have been compared in sound quality with speakers which sell for up to $10,000 a pair.

Matthew Polk has continued to work hard over the years to maintain the Monitor Series' preeminent position as the standard for quality and value in the audio industry. There have been literally thousands of improvements made to the Monitors and the current models incorporate the same high definition silver coil dome tweeters and Trilaminate Polymer drivers used in the SDAs. They are absolutely the best sounding loudspeakers for the money available on the market. It’s no wonder Musician Magazine said, “Our advice is not to buy speakers until you hear the Polks.” You owe it to yourself.

**There’s A Polk Monitor Perfect for You**

The RTA 12C ($479.95 ea.) has won the Audio Video Grand Prix Speaker of the Year Award, its extremely high power handling (1500 watts) and efficiency ($260 1 meter 1 watt) result in remarkable dynamic range and bass performance from large or small amplifiers.

The Monitor 10B ($329.95 ea.) is considered one of the world’s best sounding loudspeakers and in the words of Audio Am Magazine, “At the price they’re simply a steal.”

Like the 12, the 0 utilizes dual Polk bllumiate polymer bass midrange drivers coupled to a built-in subwoofer for outstanding bass performance and dynamic range.

**Absolutely first rate... superior sound at a moderate price.**

All the Polk Monitors regardless of price offer consistently superb construction and sonic performance. They achieve open boxless, three dimensional imaging surpassed only by the SDAs. In addition dynamic bass performance, lifelike clarity, silky smooth frequency response, ultra wide dispersion, high efficiency and high power handling are all much appreciated hallmarks of all the Polk Monitors. This is in large part due to the fact that they all utilize very similar components and design features. However, more importantly, it is the elegant integration of concepts and components which results in the superior sonic performance and value which sets the Monitor Series apart.

**“At the price they’re simply a steal.”**

Stereo Review Magazine

“Absolutely first rate... superior sound at a moderate price.”

“Valuable and medium-size loudspeaker,” said the experts. “I wish I could have them all.”

**Win a Pair of Awesome Sounding Polk Audio SDA SRSs**

Where to buy Polk Speakers? For your nearest dealer, see page 79.
**High Fidelity**

Volume 36 Number 12 December 1986

**TEST REPORTS**

24 Nakamichi OMS-7AII Compact Disc player
26 Denon DRA-95VR audio-video receiver
28 Pioneer DSS-E10 loudspeaker
32 Dual CS-5000 turntable
39 Linn LK-1 preamplifier
40 Sony SL-HF750 Super Beta videocassette recorder

**AUDIO & VIDEO**

47 Product of the Year: 1986
by David Ranada and Michael Riggs
The eight finalists (and the winner) in our first annual Product of the Year competition

58 VHS-C vs. 8mm
by Robert Angus
A lens-to-lens comparison of minicamcorders from JVC and Sony

**MUSIC**

68 On to the Past
by Michael H. Gray
The early music movement has come of age; now it comes face to face with Beethoven.

**DEPARTMENTS**

8 Front Lines
News from the 1986 Japan Audio Fair

9 Letters

11 Currents
Digital video noise reduction VCRs from NEC

21 Tape Tracks
Everything but the squeal; Little incentive to create audio-only VCRs

22 Crosstalk
Once and future tapes; QS and SQ decoders

72 The CD Spread
Symphonies galore: Nielsen, Beethoven, Brahms, Schumann, Mahler

75 Classical Reviews
The first of ten volumes of 100 Years of Italian Opera

78 Critics' Choice

88 Pop Reviews
Paul Simon's African sojourn; Van Morrison's passionate rebirth

91 Jazz Reviews
Avant-gardists in Detroit; Bill Evans on CD

96 Advertising Index
FOR UNDER $500 YOU CAN OWN AN AMPLIFIER JUDGED TO HAVE THE EXACT SOUND CHARACTERISTICS OF AN ESOTERIC $3000 MODEL.

Bob Carver recently shocked the staid audiophile world by winning a challenge that no other amplifier designer could ever consider. The new M-1.0t was judged, in extensive listening tests by one of America's most respected audio publications, to be the sonic equivalent of a PAIR of legendary, esoteric mono amplifiers which retail for $3000 each!

CARVER'S GREAT AMPLIFIER CHALLENGE. Last year, Bob Carver made an audacious offer to the editors of Stereophile Magazine, one of America's exacting and critical audio publications. He would make his forthcoming amplifier design sound exactly like ANY high-priced, esoteric, perfectionist amplifier (or amplifiers) the editors could choose. In just 48 hours, in a hotel room near Stereophile's offices in New Mexico! As the magazine put it, "lf it were possible, wouldn't it already have been done? Bob's claim was something we just couldn't pass up unchallenged."

What transpired is now high fidelity history. From the start, the Stereophile evaluation team was skeptical ("We wanted Bob to fail. We wanted to hear a difference"). They drove the product of Bob's round-the-clock modifications and their nominees for "best power amplifier" with some of the finest components in the world. Through reference speakers that are nothing short of awesome. Ultimately, after exhaustive listening tests with carefully selected music ranging from chamber to symphonic to high-impact pop that led them to write, "Each time we'd put the other amplifier in and listen to the same musical passage again, and hear exactly the same thing. On the second day of listening to his final design, we threw in the towel and conceded Bob the bout. According to the rules... Bob had won."

BRAND CHALLENGES BRAWN. Below is a photo of the 20-pound, cool-running M-1.0t. Above it are the outlines of the pair of legendary mono amplifiers used in the Stereophile challenge. Even individually, they can hardly be lifted and demand stringent ventilation requirements. And yet, according to some of the most discriminating audiophiles in the world, Bob's new design is their sonic equal.

The M-1.0t's secret is its patented Magnetic Field Coil. Instead of increasing cost, size and heat output with huge storage circuits, Magnetic Field Amplification delivers its awesome output from this small but powerful component. The result is a design with the dynamic power to reproduce the leading edge attacks of musical notes which form the keen edge of musical reality.

A DESIGN FOR THE CHALLENGES OF MODERN MUSIC REPRODUCTION. The M-1.0t's astonishingly high voltage/high current output and exclusive operation features make it perfect for the demands of compact digital discs, video hi-fi and other wide dynamic range playback media. The M-1.0t

- Has a continuous FTC sine-wave output conservatively rated at 200 watts per channel *
- Produces 350-500 watts per channel of RMS power and 800-1100 watts momentary peak power (depending on impedance).
- Delivers 1000 watts continuous sine wave output at 8 ohms in bridging mode without switching or modification.
- Is capable of handling unintended 1-ohm speaker loads without shutting down.
- Includes elaborate safeguards including DC Offset and Short Circuit Power Interrupt protection.

SHARE THE RESULTS OF VICTORY. We invite you to compare the new M-1.0t against any and all competition. Including the very expensive amplifiers that have been deemed the M-1.0t's sonic equivalent. You'll discover that the real winner of Bob's remarkable challenge is you. Because world class, superlative electronics are now available at reasonable prices simply by visiting your nearest Carver dealer.

*SPECIFICATIONS: Power, 200 watts/channel into 8 ohms 20Hz to 20kHz, both channels driven with no more than 0.15% THD. Long Term Sustained RMS power, 500 watts into 4 ohms. 350 watts into 8 ohms. Bridged Mono power, 1000 watts into 8 ohms. Noise, 110dB+/-F. A weighted Weight, 20Ibs

CARVER
P.O. Box 1237 Lynnwood, WA 98046

PO Box 1237 Lynnwood, WA 98046
NEXT YEAR’S STAR?

THIS YEAR FOR THE FIRST TIME, WE ARE RECOGNIZING significant audio and video products through the High Fidelity Product of the Year awards. As elaborated upon elsewhere in these pages by Editor Michael Riggs, finalists are those products that are deemed truly innovative, either through the introduction of a new technology or in their application of an existing technology.

Some idea of what innovative products are expected in the coming year can be gleaned from the Japan Audio Fair held in October, about three months prior to the Winter Consumer Electronics Show here in the U.S. As the capsule report below shows, digital audio tape (DAT) was the hot item.

LEFT TO RIGHT, FROM TOP: AT THE 35TH JAPAN AUDIO FAIR HELD IN TOKYO IN EARLY OCTOBER, SEVERAL COMPANIES SHOWED CD-ROM PLAYERS; VCRS; RECEIVED A SHOT OF DIGITAL TECHNOLOGY, SPROUTING SUCH SPECIAL-EFFECTS MODES AS “STROBE” AND “ART,” WHICH ALLOW YOU TO DIGITALLY ALTER THE IMAGE ON YOUR MONITOR. PROMINENT WERE DOZENS OF PROTOTYPE DAT DECKS, SUCH AS THE VICTOR (JVC) MODEL ERS. VCRS RECEIVED A SHOT OF DIGITAL TECHNOLOGY, SPROUTING SUCH SPECIAL-EFFECTS MODES AS “STROBE” AND “ART,” WHICH ALLOW YOU...
CD PLAYER RELIABILITY
SINCE THE SONIC DIFFERENCES BETWEEN MOST
good Compact Disc players are almost nil, the significant concern for most of us will be
how dependable the machines we buy turn
out to be. I could have used some reports
along these lines before I acquired my lemon,
but in fact, all the reviews of CD players I
ever read were favorable and spent more
time rattling off the bells and whistles, with
hardly a word about long-term reliability.
Now that some of the brands have been
around for a while, could you report on their
track records? That kind of information
might be hard to come by, but if you could
do it, you might raise some eyebrows.

John Barr
Narberth, Pa.

See October's "Basically Speaking" for a full treat-
ment of this subject. In short, you are right on both
counts: Information on reliability would be very
useful, but it is very hard to come by. We do not have
the players we review on hand long enough to deter-
mine how reliable they are (the reports would be ob-
solete by the time they hit the stands), and even if we
did, how would we know in any particular case
whether a failure was the result of a design weakness
or just a fluke? We would need many samples of
each model tested. The only other way we can think
of to obtain such data would be to survey dealers and
repair shops, and given the time required for that
plus our three-month publication lead time, the
information would be badly out of date by the time it
reached print.—Ed.

VIDEO COVERAGE DEBATED
I AGREE WITH JOHN L. MILEWSKI ["LETTERS";
June]: If I wanted information and articles
about video, I'd buy a video magazine. In
other words, I think that High Fidelity is a
great source of information to its readers
and that it shouldn't waste space on matters
that are of no use or interest to many of
them.

Al Patuzzo
WMNR-FM
Monroe, Conn.

I SUBSCRIBE TO YOUR MAGAZINE (AND NOT TO
your competition) precisely because of the
completeness of your video product cover-
age. Your attention to the technical aspects
of video is all the more welcome now that
one of the dedicated video monthlies has
oriented itself more toward "lifestyle" arti-
cles. In fact, I would welcome more video
coverage—a test report on at least one video
product per month, for example, and a regu-
lar monthly column on the subject. How
about it?

Ronald J. Kopnicki
New York, N.Y.

It's a rare issue that doesn't include a test of at least
one video component. For the time being, however,
Technical Editor David Ranada's video column,
"Scan Lines," will run approximately every other
month.—Ed.

DUAL SOLUTION
LIKE EDWARD PICKERING ["CROSSTALK,"
October], I own a Dual turntable with which
I have had tracking problems. Recently, I
could not get any of my records to play prop-
erly with either of my two principal car-
tridges. I thought that maybe by some coinci-
dence both styli had worn out or broken
simultaneously, but inspection proved that
both were in very good condition. I finally
traced the trouble to a rubber ring (part ref-
ence number 230, part number 216 845)
in the detent mechanism for the 1229Q
"single/multi" selector. If this ring is not
tight enough, the tonearm can rise just
enough to cause the two other parts to rub
against each other, resulting in excessive

Discwasher gets the grubbies out of your grooves.

The Discwasher® D4+™ Record Care System features a unique fluid and special direc-
tional micro-fiber pad to clean your records safely
and effectively. It picks
up the grubbies without
leaving behind any residue.
For your stylus, Discwasher® SC-2™ Stylus Care System
loosens and wipes away
all damaging con-
taminants. Gently and
thoroughly.

Discwasher is the
 technological leader in
keeping your records
and equipment in top
condition. Discwasher,
4309 Transworld Road,
Schiller Park, IL 60176.

Find out what we can do for your tape,
compact disc and video equipment, too!

discwasher® For good, clean fun.
The last word in phono cartridges

horizontal friction and mistracking. I replaced the ring with a vinyl grommet and have had no more trouble of this type.

David O'Reeley
Santa Maria, Calif.

FREEDOM AND CULTURE

I HAVE FOLLOWED THE DEBATE ON THE TIKHON Khrennikov interview ("The Czar of Soviet Music," March; see also "Letters," May and July, and "A Reply to Tikhon Khrennikov," August], and I must say that, whatever the limitations on intellectual freedom under communism, the anti-Soviet diatribes that make up most of the replies generate more heat than light. One correspondent suggests that the dearth of Russian composers of the stature of Prokofiev and Shostakovich means that the system finally has won. Well, all I can say is that a system that takes that many years to win clearly is not trying very hard.

Is there even any obvious correlation between freedom and cultural flowering? Would your readers, I wonder, consider 19th-century England relatively free compared with much of continental Europe at the time? If so, how can we account for this being a musical (though not literary) Dark Age in Britain? Is it possible that some form of oppression can be a spur to creative activity, just as the Great War produced great poetry with the same prodigality with which it slaughtered the poets?

Robert Young
Midanbury, England

THE IDENTITY OF "RECORDING AMOUR"

HARLOW ROBINSON’S EXCELLENT ARTICLE ON THE Soviet record company Melodiya [June] failed to identify the "private concern bearing the romantic name 'Recording Amour' [that] operated out of the same building" before the Revolution. Its disc label bore the name Pushshchey Amour (in Cyrillic, of course) and EMI's 1898 trademark, which we still call the Recording Angel. Fred Gaisberg's pioneering recordings—produced in Russia (or EMI then the Gramophone Company) before and after the Revolution—were locally marketed with the little angel secularized as Cupid or Amour.

George Spenhelts
Angel Records
Hollywood, Calif.

BAD BUSINESS?

I AGREE WITH JAY C. TAYLOR’S OBSERVATION IN THE July "Autophile" that "a High Fidelity reader can’t be considered an average American." So shame on Telarc and High Fidelity, both for doing business in South Africa, and the latter especially for letting its readers know that a South African businessman is "overwhelmed by the demand" for CDs, despite "the strong dollar that has made their prices outrageous" ("Letters," May). Surely none are so obtuse as those who fail to see that for the average black South African—and indeed, for all 24 million of them—neither Telarc nor High Fidelity is within reach, to say nothing of liberty and freedom.

Carole A. Forsberg
Williamsville, N.Y.

ANOTHER REMEMBRANCE OF RUBBRA

I WAS MOVED BY ROBERT R. REILLY’S EULOGY for Edmund Rubbra ("Medley," August). How right he is in his remarks.

It might interest your readers to know that the Albany Symphony Orchestra commissioned what turned out to be Rubbra’s final composition: Sinfonietta for Large String Orchestra. It will be given its world premiere on December 5, 1986. Rubbra was a superb composer. Too few people know this, especially in the United States. I hope Mr. Reilly’s remarks help correct this.

Peter R. Kermack
President, Board of Directors
Albany Symphony Orchestra

SACK ISSUES WANTED

I’VE ENJOYED READING HIGH FIDELITY FOR almost 20 years. You have a truly fine magazine. I would now like to add to my collection of copies from the 1950s and 1960s. If any readers have individual copies or whole collections that they would like to sell, please contact me at 505 King Ave., Columbus, Ohio 43201.

Freeman Matthews
Columbus, Ohio

Letters should be addressed to The Editor, High Fidelity, 825 7th Ave., New York, N.Y. 10019. All letters are subject to editing for brevity and clarity.
FROM THE PERSPECTIVE OF AN ELECTRONICS aficionado, this decade could very well be regarded as the beginning of mankind's Digital Era. Nonetheless, decisions on new product development are being made with more than a little consideration for compatibility with existing goods.

A case in point is today's videocassette recorder, which, though seemingly an ultra-modern device, has remained fundamentally unchanged from its predecessors of ten years past. Differing formats aside, efforts to improve VCR performance have been reined in by the need to maintain compatibility with those models already in 30 percent of American homes. So far, audio per-

Digital Video Noise Reduction VCRs

Discwasher® takes the tackies off your tape path.

Discwasher tape care products do away with tacky contaminants for the purest sound possible. The Discwasher® Perfect Path™ Cassette Head Cleaner removes oxides and residues from all tape heads and the entire tape path. This unique dry cleaning system is gently effective and totally non-abrasive.

Discwasher® C.P.R.™ cleans capstans and pinch rollers to prevent tape jamming. And Discwasher® D'Mag™ eliminates magnetism problems that could erase portions of your tapes.

Discwasher, with a complete tape care system, is the technological leader in keeping your tapes and equipment in top form. Discwasher, 4309 Transworld Road, Schiller Park, IL 60176.

Find out what we can do for your record, compact disc and video equipment, too!

For good, clean fun.

© 1986 Discwasher
A Division of International Jensen Inc.
formance has made the greatest strides, as evidenced by Beta Hi-Fi, VHS Hi-Fi, and, more recently, the entirely new 8mm format with both AFM and PCM sound recording. More subtle have been the picture improvements made possible by Super Beta and HQ circuitry. Digital circuitry has not been a factor in improving actual picture quality: Field-storage techniques have been employed in so-called digital VCRs solely to provide jitter-free still frames and slow motion, clearer picture scanning, special effects, and picture-in-picture displays.

But now NEC, the world's largest producer of semiconductors, has developed a digital video noise reduction system for VCRs that actually seeks to improve the picture quality of any tape being played. The technique is said to increase the video signal-to-noise ratio by as much as 9 dB (compared to 2 or 3 dB with HQ alone). Video noise manifests itself in three ways: as flecks of spurious color, as graininess in the dark areas of a scene, or as "snow." Since the noise is random, some of it can be canceled if successive video fields (two fields equal one picture "frame") are averaged. The NEC circuit does this by digitizing and temporarily storing one field, then adding it to the next and halving their sum (in effect, taking the average), creating a single field with as much as 29 percent less noise (a figure derived from the probability of the two fields canceling some of each other's noise). Each successive original video field is then averaged with the previously stored noise-reduced field (which is itself an average). All of this, of course, is happening very rapidly, displaying a picture that is composed entirely of these noise-reduced fields. The degree of noise reduction is governed by a feedback loop and can be adjusted to suit the quality of the tape being played (high-quality material might actually be compromised if too much noise reduction were to be used).

Two NEC VHS videocassette recorders are the first to get this digital treatment: the monaural DX-1000U and the VHS Hi-Fi DX-2000U (pictured). Definition is improved by the effects of two HQ circuits: white-clip extension and detail enhancement. Although each model has just two video heads, the quality of effects like slow motion and still frame is said to surpass that of conventional four-head machines—an added benefit of the digital field-storage process. Also, a freeze frame can be taken from any off-air broadcast received on the VCR's tuner. Other features common to both models are a wireless remote control that also works with current NEC TV monitors, an electronic cable-compatible tuner, and on-screen timer programming. The DX-2000U has an MTS/SAP TV tuner and can record and play back both VHS Hi-Fi and Dolby linear stereo soundtracks. Price is $700 for the DX-1000U and not yet announced for the DX-2000U. For further information, write NEC Home Electronics, 1255 Michael Dr., Wood Dale, Ill. 60191.
and audio switching and processing controls, and according to the company, it is designed to act as a "foundation on which to build a home entertainment center."

The unit contains four amplifiers rated at 30 watts (14.8 dBW) per channel (bridgeable to 60 watts, or 17.8 dBW, per channel for stereo), making it possible to connect two pairs of speakers for surround sound without using an additional back-channel amplifier. A monaural center-channel output can be used to reproduce the dialogue in Dolby Surround-encoded movies (a separate amplifier is needed); a separate subwoofer output is also provided. In addition to Dolby, there are two surround modes for use with other stereo sources. Three sets of video connections (one for playback only) and a fourth hookup for an audio tape deck are included. Switching among the sources is arranged for easy dubbing. An unusual (and welcome) feature for a component of this type is a phono input, although owing to Shure's heritage, it seems almost obligatory.

Other features include a video image enhancer, a high-frequency noise filter for videotape hiss, individual volume controls for the four channels, and a master volume control. Most functions can be operated from the wireless remote. The AVC-20 integrated amplifier is priced at $550 and is available from Shure Brothers, Inc., 222 Hartrey Ave., Evanston, Ill. 60202.

CLARION CAR COMPONENTS

CLARION'S TOP-OF-THE-LINE CAR UNITS are headed by the Audia 200 ($580), which includes a digital tuner that receives both FM and AM stereo broadcasts, a full-logic auto-reverse cassette deck with Dolby B and C, a preamp output, and separate bass and treble controls. The 200E is a DIN-size version priced at $590. The Audia 20 ($500, available in compact chassis only) is a similar model without full-logic control or AM stereo reception.

Two passive seven-band equalizers, the EQX-70 ($200) and the EQX-700 ($330), each have RCA and DIN inputs in a slim 1-inch-high chassis. The EQX-70 has an "ef-

The best sound you can hear next to Carnegie Hall.

Toshiba's new CD player makes concert quality sound portable. Yet, hooked up to your stereo system it's a top of the line home CD player. Offering 16 program random memory, 3 beam laser pick up, even a wireless remote. Toshiba's XR-P9 is the complete, portable CD player. Outside of a concert hall nothing sounds better.
FOR THOSE OBSESSED WITH MUSICAL PERFECTION,
TECHNICS NOW OFFERS FOUR WAYS TO ATTAIN IT.

Before we could satisfy your obsession with musical perfection, we had to satisfy our own. And we have.

Our newest home compact disc player is the ultra-sophisticated and fully programmable SL-P500. It plays any selection. In any order. Even by remote. Or you may choose to drive off with the new Technics combination car CD player and digital AM/FM tuner. Its shock-absorbing suspension system helps ensure a truly flawless musical performance no matter where the road leads. Or select our biggest achievement—the incredibly small SL-XP8 portable CD player. It's barely larger than the disc it plays. It even has a built-in AM/FM tuner.

Or perhaps you'd prefer a Technics CD player that comes with everything—because it's part of a perfectly pre-matched audio rack system.

No matter which you choose, you'll experience the musical perfection of the compact disc. Because every Technics CD player has been engineered with a powerful and accurate line-focus single-beam laser system (FF1).

A word of caution, however. Knowing about Technics CD players could lead to another obsession: wanting to own all of them.

Technics
The science of sound
fector" control that is said to create a "concert hall" experience. The EQX-700 is an electronic design with an LED spectrum analyzer, a three-preset EQ memory, and separate front/rear defeat controls.

A fourth model has been added to Clarion’s amplifier line. The slimline four-channel AFX-20 ($100) delivers a claimed 20 watts (13 dBW) per channel (5 percent total harmonic distortion) in its bridged stereo mode. Additional information may be obtained by writing Clarion Corporation of America, 5500 Rosecrans Ave., Lawndale, Calif. 90260.

ZEITH’S HI-FI TVs

ZEITH DEVELOPED THE TECHNOLOGY FOR multichannel television sound (MTS), which showed the potential for high-quality stereo audio in TV broadcasts. Unfortunately, the dismal audio quality of most TV sets severely limits the benefit of MTS; serious listeners have to run the sound through their hi-fi systems. But not anymore, according to Zeith. The company has retained the services of the loudspeaker manufacturer Bose for the design of a high-performance sound system that’s built into a 27-inch digital set.

The Bose system is centered on the company’s “acoustic waveguide” design, which is basically a small woofer with two different-length tubes (waveguides) attached at either end. The tubes are folded so that each end is directed out the back of the set, and the entire assembly fits into the top rear portion of the cabinet, making the TV no deeper than competitive models. The key characteristics of the waveguide design are high operating efficiency and extended bass reproduction unusual for such a small enclosure. (See our report on the Bose Acoustic Wave Music System in the June 1985 issue.)

One amplifier powers the driver in the waveguide, while mid and high frequencies are reproduced through two front-mounted “twiddlers” (a name coined by Bose for combination midrange-tweeters), each driven by its own amplifier. Loudness compensation is achieved by what Bose calls its “dynamic equalization circuitry,” which automatically adjusts the bass output to maintain the same tonal balance at all volume levels. To permit the Bose system’s use as a hi-fi sound system, an “audio only” switch disengages the TV picture.

The set itself rides on a digital chassis, converting incoming video and audio signals to their digital equivalents; an on-board computer then controls the picture-processing circuitry and ensures that the set stays up to spec. Naturally, an MTS/SAP decoder is part of the package. Other features include on-screen display of remote-controlled functions and 178-channel tuning.

The Digital System 3 Color TV with Sound by Bose is available in four styles: The SC-2793S and the SC-2793P are table models with slate and pecan finishes, respective-
by: the SC-2747P is a pecan-finish compact console with doors; and the SC-2749Y is a black-lacquer compact console with "Chinese style" doors. Prices are expected to range from $1,400 to $1,700. More information is available from Zenith Electronics Corp., 1600 Milwaukee Ave., Glenview, Ill. 60025.

AUDIOSOURCE SURROUND PROCESSOR

THE REAR-CHANNEL SOUNDS ENCODED IN Dolby movies can be reproduced using Audiosource's Model SS-One Dolby Surround Processor. It features an amplifier rated at 15 watts (11.8 dBW per channel) to power the back-channel speakers for two additional effects: "Matrix" is said to create a stereo image from a mono source, and "Hall" uses a variable delay (10 to 30 milliseconds) to simulate the acoustics of a larger listening room. Delay time is variable as well in the Dolby Surround mode, to optimize the effect in rooms of different sizes. Separate left and right "calibration" controls can be adjusted to effectively cancel any front-channel information coming out the back, according to the company. There are two tonal boost switches, centered at 100 Hz and 10 kHz, that affect only the back-channel signals. Overall balance between front and back requires adjustment of both the SS-One's volume control and that of the front amplifier. Price is $290. For $50 more, a pair of LS-Ten two-way speakers (with 4-inch woofers) is included for the surround channel. For more information, contact Audiosource, 1185 Chess Dr., Foster City, Calif. 94404.

DISCWERASHER CD RACK

MADE OF DARK GRAY ABS PLASTIC, THE CD Storage System from Discwasher can be wall-mounted or placed on any flat surface. Its light weight makes it easily portable between home and car. Measuring 6 by 15 by 2 inches, the $20 device can hold as many as 20 Compact Disc jewel boxes in its pivoting storage clips. Details are available from Discwasher, 4309 Transworld Rd., Schiller Park, Ill. 60176.

SHERWOOD'S TOP RECEIVER

THE 5-270K RECEIVER INCLUDES A WIRELESS remote control that can also operate certain other Sherwood components. A seven-band graphic equalizer can memorize four EQ settings that can be called up by the remote. Three video components can be connected (two for playback only), and an RF terminal is provided for hookup to a standard TV. During video dubbing, an original soundtrack can be replaced with audio from any connected source. A surround-sound circuit is said to create a "home theater" experience when a pair of back-channel speakers is used. Other features include a digital frequency-synthesis AM/FM tuner with 16 presets and inputs for tape deck, turntable, and CD player. The receiver is rated at 70 watts (18.5 dBW) per channel. The price is $450. Details can be obtained by writing Sherwood, 13845 Artesia Blvd., Cerritos, Calif. 90701.

Our new UX tapes deliver higher highs, lower lows and wider dynamic range.

If you're going to listen to music at all, you may as well get it all. No matter how high or low, how loud or soft. Captured so faithfully that trying one of these new tapes at least once is something you owe yourself And your music.

Each of these four new UX tapes represents the kind of advancement of music reproduction you've come to expect from Sony. UX-ES, for instance, offers the best frequency response of any Type II tape we've ever formulated. Yet UX-PRO actually goes one better with a ceramic tape guide that yields the most incredibly quiet tape housing Sony has ever produced.

Sony UX tapes. Now when a musician really extends himself, so will your tape.

SONY®

THE ONE AND ONLY.
Remote control sounds great.

If the components sound great.
Lots of companies let you run a component hi-fi system from across the room. Some even let you do it with only one remote controller. Sound terrific? That depends...on how the components sound.

At Denon, we believe that superior sound is the only thing that makes high fidelity worth the money. We call this philosophy Design Integrity. And it's evident in every new Denon remote component—from the top of the line you see here* to our most affordable remote models.

The DCD:1500 Compact Disc Player (shown) has already been declared "Reference Class" by Germany's Audio and HiFi Vision magazines. In the U.S., Digital Audio proclaimed, "The Denon engineers who created the DCD-1500 should be honored in public."

Denon's expertise in making pro digital recorders and blank tape is reflected in the new DRM-30HX Cassette Deck. You can see it in the three-head design. In the super-smooth three-motor transport. And in the choice of Dolby® B, C, and HX Pro.

Thanks to Design Integrity, the DRA-95VR Receiver uses the same Pure Current Power Supply, Non-NFB circuitry, and MC cartridge inputs as Denon integrated amps. What's more, every Denon receiver provides switching facilities for a VCR, a video disk player and a video monitor.

So before you buy components whose most impressive feature is a remote control, get yourself to a Denon dealer. And listen to the remote control whose most impressive feature is the components it controls.

DENON
DESIGN INTEGRITY
To hear why Genesis records on Sony digital equipment, play them back on a Sony Compact Disc Player.

When it comes to capturing the experience of live music, no audio equipment delivers the lifelike reproduction of digital audio.

That's why the only digital recording equipment chosen by Tony Banks, Phil Collins and Mike Rutherford of Genesis is, not surprisingly, the leader in the industry: Sony.

Not only has Sony led the way in professional digital recording equipment, we invented the digital audio system for playback—the compact disc player. Sony also introduced the first home, car and portable CD players. And Sony sells more types of compact disc players than anyone else in the world.

But whichever Sony Compact Disc Player you choose, each allows you to hear the music the way the artist originally intended.

So why not do what Genesis does? Play back the top-selling compact discs like "Invisible Touch" the way they were mastered. On Sony Digital equipment. You'll find that when it comes to bringing you close to the music, nothing even comes close.

The Sony CDP-55. Sony's best value in a full-featured compact disc player.

From its Unilinear Converter and digital filter to its programming flexibility and supplied Remote Commander® unit, the Sony CDP-55 has everything you need in a home CD player.

© 1986 Sony Corporation of America. Sony Remote Commander and The Leader In Digital Audio are trademarks of Sony.
Buy Any Sony Compact Disc Player and get 2 CDs free.

During September 15, 1986 and January 31, 1987, buy any Sony home, car, or portable compact disc player and receive 2 CDs free from the list below. (You pay only for shipping and handling.) Just mail the coupon below, together with a copy of the proof of purchase for your Sony CD player.

346478 Madonna True Blue (Epic)
346312 Billy Joel The Bridge (Columbia)
346270 Wham Music From the Edge of Heaven (Columbia)
346031 Genesis Invisible Touch (Atlantic)
343327 Wynton Marsalis Joiner/Thompson Trumpet Concertos (CBS Masterworks)
346809 Erasure Blue Dr. Dreyfus Symp No. 9 New World Symphonies Philharmonic (Vereen Sarabande)
346016 Jean-Claude Malagris, Cond. Harmonie Symphonica Music La Clarté Enrichi La Fantaisie De Roy (CBS Masterworks)
345982 Rihanna People Original Sound Track (Epic)
345997 Bob James and David Sanborn, David Sanborn and Barbara Streisand Born In The USA (CBS Masterworks)
345503 Branford Marsalis Romances For Saxophone (CBS Masterworks)
345467 Troy Ross The Art of Violinist (Columbia)
343622 Van Halen 5150 (Warner Bros.)
342077 Barbara Streisand The Broadway Album (Columbia)
342097 Barbra Streisand Hi-Fi Fashion (Columbia)
346023 Genesis Music From the Edge of The Bridge (Columbia)
346478 Madonna True Blue (Sire)
323261 Lionel Ricketts Born In The USA (CBS Masterworks)
336222 Dire Straits Alchemy (Warner Bros.)
323304 Lionel Richie Dancing On A Dime (Motown)
339054 Stevie Wonder In Square Circle (Tamla)

And, as a special bonus we'll enroll you in the CBS Compact Disc Club—which offers you the CDs you want at substantial savings but without absolutely any obligation to buy anything, ever—and you may cancel your membership at any time.

How the Club works: every four weeks (13 times a year) you'll receive the Club's music magazine. If you want only the Selection of the Month, do nothing—it will be shipped automatically. If you prefer an alternate selection—or none at all—mail the coupon above to the CBS Compact Disc Club. You'll receive 2 CDs (or none) each month, at the cost of shipping and handling only. Depending on your choice of tape, you'll receive a brand of tape (if not another deck). The cost of shipping and handling is determined by both the arm and the tape, just as tonearm resonance in turntables is determined by both the arm and the cartridge.

I've brought up the subject with deck and tape manufacturers. Most don't seem to know what I'm talking about; others acknowledge that such a problem could exist, with tape makers citing the deck and tape makers citing the tape. Usually, the only concrete advice I turn up is to try a different brand of tape (if not another deck). Most of those who have written to me about the problem have done just that. Along the way, they have compiled lists of the variety of decks and tape types and brands used (ranging from well-known, high-quality brands to some that I've never heard of or would avoid using anyway).

I understand the frustration that this problem generates. But while I can empathize with it, I can't dispel it beyond citing some obvious remedies: readjustment of the deck's tape tensioning, checking the capstan(s) for worn bearings or a bent shaft, examining all parts in the tape path (guides, heads, pick-ups) for signs of wear or misalignment, checking the reel- or hub-drive parts for alignment or friction, and cleaning the deck.

Audio-only VCRs? Letters continue to arrive asking about the potential of Hi-Fi videocassette recorders for audio-only use. As a reader from Hollywood, Maryland, puts it: “We need better metering, level controls that are easier to use (larger and visibly calibrated), and easier cueing.” And, as he goes on to imply, off-the-tape monitoring during recording.

Frankly, I don’t see much hope of VCR-based recorders replacing open-reel home audio decks, though that looked like a fair bet only a few years ago. The reason is that digital audio tape recorders (using the RDAT format) are close to introduction, and that’s where the manufacturers will turn to after a new high-performance audio format are placed their chips. The storage density is far better (two-hour RDAT cassettes are even tinier than 8mm videocassettes), and the RDAT format is engineered from the ground up for audio, whereas Hi-Fi VCRs (and the PCM digital sound option in 8mm video decks) are designed with video as the top priority.

Andy other things, that means cramped and undervalued audio controls. Even as, many VCRs are monstrously complicated. I know of one line of models that can’t be operated until the owner has gone through a complex installation ritual that is difficult for many to understand. The result: The decks come back to the company in droves as “defective.” The company in question can legitimately point out that the manual gives all of the necessary instructions, so if buyers can’t or won’t follow that much, the prospect of piling on still more functions and controls for audio use is dim. Add to this the fact that the potential market for audio-only features is minute compared with that for the advanced video capabilities, and you can see why there’s little incentive for designers to compromise good video designs by catering to audiophiles. And that readily translates into no dollars for the development of monitoring rotary heads. With all that’s going on already in a Hi-Fi VCR head assembly, I shudder to think what the structure would be like with an added set of playback heads.

But monitoring heads aren’t as important with Hi-Fi VCRs as they are with conventional audio recorders because what comes off the tape has less opportunity to differ from what’s fed to it; and if there is a difference you don’t like, there’s relatively little you can do about it. With conventional machines—particularly professional-grade open-reel decks—you can tweak bias, recording EQ, or head azimuth or some combination of the three to tailor the sound. The frequency modulation system in a Hi-Fi VCR doesn’t respond the same way to these factors. And digital systems (such as RDAT) are virtually unaffected by them.

T A P E T R A C K S

SQUEALING TAPE IS ONE PROBLEM—for which, more than any other, I wish I could be of some help to our readers; frankly, it has me entirely stymied. I’ve experienced it—but not for many years, though I work with all sorts of decks and all sorts of tapes. Squealing is a form of scrape flutter. Instead of moving at a constant speed, the tape is slowed by friction. Jumps ahead when tension overcomes the friction, slows when the tension is released, and so on. This not only modulates tones that the recorder is trying to record or play but produces acoustic output directly from the site of the friction. The frequency of the squeal is a function of both the deck and the tape, just as tonearm resonance in turntables is determined by both the arm and the cartridge.

I’ve brought up the subject with deck and tape manufacturers. Most don’t seem to know what I’m talking about; others acknowledge that such a problem could exist, with tape makers citing the deck and deck makers citing the tape. Usually, the only concrete advice I turn up is to try a different brand of tape (if not another deck).

Most of those who have written to me about the problem have done just that. Along the way, they have compiled lists of the variety of decks and tape types and brands used (ranging from well-known, high-quality brands to some that I’ve never heard of or would avoid using anyway).

I understand the frustration that this problem generates. But while I can empathize with it, I can’t dispel it beyond citing some obvious remedies: readjustment of the deck’s tape tensioning, checking the capstan(s) for worn bearings or a bent shaft, examining all parts in the tape path (guides, heads, pick-ups) for signs of wear or misalignment, checking the reel- or hub-drive parts for alignment or friction, and cleaning the deck.

AUDIO-ONLY VCRS?

LETTERS CONTINUE TO ARRIVE ASKING ABOUT the potential of Hi-Fi videocassette recorders for audio-only use. As a reader from Hollywood, Maryland, puts it: “We need better metering, level controls that are easier to use (larger and visibly calibrated), and easier cueing.” And, as he goes on to imply, off-the-tape monitoring during recording.

Frankly, I don’t see much hope of VCR-based recorders replacing open-reel home audio decks, though that looked like a fair bet only a few years ago. The reason is that digital audio tape recorders (using the RDAT format) are close to introduction, and that’s where the manufacturers will turn to after a new high-performance audio format are placed their chips. The storage density is far better (two-hour RDAT cassettes are even tinier than 8mm videocassettes), and the RDAT format is engineered from the ground up for audio, whereas Hi-Fi VCRs (and the PCM digital sound option in 8mm video decks) are designed with video as the top priority.

And on other things, that means cramped and undervalued audio controls. Even as, many VCRs are monstrously complicated. I know of one line of models that can’t be operated until the owner has gone through a complex installation ritual that is difficult for many to understand. The result: The decks come back to the company in droves as “defective.” The company in question can legitimately point out that the manual gives all of the necessary instructions, so if buyers can’t or won’t follow that much, the prospect of piling on still more functions and controls for audio use is dim. Add to this the fact that the potential market for audio-only features is minute compared with that for the advanced video capabilities, and you can see why there’s little incentive for designers to compromise good video designs by catering to audiophiles. And that readily translates into no dollars for the development of monitoring rotary heads. With all that’s going on already in a Hi-Fi VCR head assembly, I shudder to think what the structure would be like with an added set of playback heads.

But monitoring heads aren’t as important with Hi-Fi VCRs as they are with conventional audio recorders because what comes off the tape has less opportunity to differ from what’s fed to it; and if there is a difference you don’t like, there’s relatively little you can do about it. With conventional machines—particularly professional-grade open-reel decks—you can tweak bias, recording EQ, or head azimuth or some combination of the three to tailor the sound. The frequency modulation system in a Hi-Fi VCR doesn’t respond the same way to these factors. And digital systems (such as RDAT) are virtually unaffected by them.

S E P T E M B E R 1986 21
CD OVER LP
I’ve noticed that some CD packages carry the message that the enclosed disc is limited by the quality of the original tape from which it was mastered. Is it safe to assume that if an LP contains a lot of background noise or sounds bad, then the CD version will also sound inferior because it was made from the same master tape? If so, why can’t the noise be filtered out of the original tape to make a better-sounding Compact Disc?

John Pendiede
Hawthorne, N.Y.

It all depends. If the reason on LP sounds bad is that the original master tape was hissy or poorly recorded, the CD version is not going to sound much, if any, better. But making a record is a complicated process: There can be many a twist and turn. In other words, you can take a good master tape and make mediocre records. It’s even possible (though harder) to goof up the CD transfer. So the short answer to your first question is that unless the fault you’re hearing is steady, low-level hiss (which most likely is tape hiss from an old analog master), you can’t be certain that it will be duplicated on CD—or even on a reissue of the LP.

The answer to your second question is less equivocal but may change soon. It’s very hard with current technology to remove preexisting noise without taking some of the desired signal along. However, after-the-fact noise reduction schemes based on digital signal processing are under intensive development. When such methods become available, record companies will be able to issue CDs (and LPs, for that matter) from old master tapes that will sound (at least in terms of noise) as though they were recorded on modern equipment.

TAPE FOR TOMORROW
WHENEVER I BUY A PRERECORDED TAPE, I DUB it onto a Type 4 (metal) blank cassette; I then store the original safely away and use the copy for listening. This keeps the original tape in mint condition, so that if the dub ever wears out or gets damaged, I can easily replace it with a new copy that’s just as good. However, a friend tells me that Compact Discs have greater longevity than cassette tapes, which can wear out and stick after being stored for a long time. Would it make sense for me to get a CD player and copy the discs onto cassettes, instead of buying and copying prerecorded cassettes the way I do now? Which approach will give me the best sound and greatest longevity?

Steven Douglas Taylor
Norton A.F.B., Calif.

You will be better off on both counts buying CDs instead of cassettes. In fact, you probably will be amazed at how much better Compact Discs (and tapes made from them) sound compared to prerecorded tapes, which often are pretty bad sonically. And since Compact Discs do not wear out and only rarely sustain permanent damage in normal handling, you probably could forget the hassle of dubbing a tape every one you buy, unless you make the tapes primarily for use in a portable or car cassette deck.

QUAD DECODERS
ARE THERE ANY COMPANIES THAT CURRENTLY manufacture matrix decoders for extracting back-channel information from old QS and SQ quadraphonic recordings?

Paul R. Wilkinson
Washington, D.C.

Many surround-sound decoders have settings that either are designed specifically for this purpose or will do a creditable job of it, Sansui’s DS-77, for example, has a QS setting, and the Sony 505E5’s Matrix mode is intended for use with SQ and QS records.

We regret that the volume of reader mail is too great for us to answer all questions individually.

A BALANCHINE ALBUM
A Balanchine Album features four of George Balanchine’s most enduring ballets: Tchaikovsky’s Serenade, Hindemith’s The Four Temperaments, Stravinsky’s Agon, and Emeralds [with music from Faure’s Pelleas and Shylock], performed by the New York City Ballet Orchestra, Robert Irving, conductor. “Just as there is a Balanchine style in choreography and in dancing, there is a Balanchine—or Balanchine/Irving—style in the performance of music. Irving brings to the music years of watching the ballets being created, reshaped, rehearsed and performed... and so the score for him is not only a cluster of black notes on white paper, but the images of dancers dancing as well.” (From the liner notes)

Steven Reich
The release of “The dancing, hypnotically involving” (W.H. Times) Sextet and Six Marimbas marks Steve Reich’s first compositions for percussion ensemble since the classic Music for 18 Musicians.

Stratas Sings Weill
Stratas Sings Weill is Teresa Stratas’ long-awaited follow-up to The Unknown Kurt Weill. Only the second solo recording in her career, it features fifteen of Weill’s greatest American, French and German theatre songs in the composer’s original orchestrations, with Gerard Schwarz conducting the T Chamber Symphony.

On Nonesuch Records, Cassettes and Compact Discs
The Energy 22 Pro Monitor has been hailed by critics as one of the major loudspeaker design breakthroughs of the last decade. In fact, the Energy 22 may well rank as a standard against which other speakers should be judged. Audition either the Energy 22 Pro Monitors or the Reference Connoisseurs and we think you'll agree that they are not only the most exciting speakers you've ever heard, but "a stunning achievement" indeed!

"A STUNNING ACHIEVEMENT"

Top Retail Experts
Personal Views About
The Energy 22

New York, New York, The Listening Room, Ron Mintz – Owner. "As one of the First dealers in the U.S. to realize the quality of the E-22, we continue to be amazed by the imaging and spaciousness of this speaker of such compact size & price."

Hicksville, Long Island, New York, Designatron, John Thomas – Manager. "Never before have we experienced a speaker system which exhibits the level of realism that the Energy 22 provides. The excitement generated by Energy speakers is only exceeded by the pleasure of owning them. The Energy 22 sets a reference standard by which all other speakers must be judged."

Washington, D.C., Audio Associates, Mike Zazanis – Owner. "The ENERGY 22 is a very musical speaker at a very inexpensive price that easily could cost a lot more money."

Chicago, Illinois, Pro Musica, Ken Christianson, John Schwarz – Co-owners. "The Energy 22 Reference Connoisseur & Pro Monitors simply outperform the competition. Musically satisfying to the most demanding listeners."

Miami, Florida, Audio By Caruso, Don Caruso – Owner. "The REFERENCE CONNOISSEURS are among the most neutral, uncolored, speakers we have found!!! They provide very relaxing listening."

El Paso, Texas, Sound Room, Mark Pearson – Owner. "Energy 22 pro monitor is the most three dimensional speaker ever."

Phoenix, Mesa, Arizona, Hi Fi Sales, Dave Ross – G. Mgr. "ENERGY 22. One of the most accurate, best imaging speakers we have ever heard."

Los Angeles, California, Christopher Hanson Ltd., Christopher Hanson – Owner. "The Energy 22 is very musically involving. Absolutely Brilliant!!" San Diego, California, Stereo Sound Co., Bob Kokley – Owner. "Over the years we have heard many promises of new breakthroughs in speakers with disappointing results. The ENERGY 22 is one of the only products which performed beyond those promises. A job well done!!"

Berkley, California, The Sounding Board, Jeff Smith, Jim Serena Co-Owners. "The Energy 22 is an outstanding speaker. What's incredible is the value, compact size and its performance level."

Copyright 1985, Energy Loudspeakers
Report preparation supervised by Michael Riggs, David Ranada, Christopher J. Esse, Robert Long, and Edward J. Foster. Laboratory data (unless otherwise indicated) is supplied by Diversified Science Laboratories.

Nakamichi OMS-7AII Compact Disc Player


Externally, the OMS-7AII compact disc player shows its heritage most obviously in its use of well-placed, luxurious-feeling slanted-keypad transport controls similar to those found on Nakamichi cassette decks. A 24-slot programmed-playback memory is provided, and the tastefully simple status readout is all of one color (pale yellow-green), not the usual razzle-dazzle. The remote control duplicates every front-panel function except the power switch and the headphone volume control. The output pin jacks are gold plated, and a subcode output jack is provided. And yes, the player does grant direct access to each track or index point on a disc via a numeric keypad. Despite all this, the Nakamichi OMS-7AII is most special where it counts: inside.

One can get an inkling of what’s going on from some of the test results. The channel separation of 133½ dB at 1 kHz is in itself extraordinary, but what is really astounding is that it is still 116 dB at 20 kHz. Although these figures are far in excess of what is necessary for subjectively complete stereo separation, they speak volumes about the quality of engineering behind this product: Such performance is difficult to achieve even in something as simple as a preamplifier.

There’s more. The linearity figures (which portray the difference in actual vs. expected output level) are the best we have ever encountered. In fact, Diversified Science Laboratories couldn’t find any error except at the lowest test level (~90 dB), and there it amounted to less than 1 dB. This is
one player that approaches "the theoretical limits imposed by the digital system," to quote from a Nakamichi white paper. That paper also goes on to explain some of the details of the OMS-7AII circuitry, which may be responsible for this exemplary behavior.

Digital-to-analog conversion, that most crucial of processes in a CD player, has apparently come under intense engineering scrutiny at Nakamichi. The OMS-7AII contains two digital-to-analog converter ICs (DACs), a separate one for each channel, which restore the binary numbers decoded from the CD to analog voltages. Most, but not all, DACs used in CD players generate small bursts of noise ("glitches") before their output settles down to the value it is supposed to have according to the binary number fed to it. Glitches are commonly removed by a sample-and-hold circuit placed at the output of the DAC to store the correct analog voltage reached after the DAC output has stabilized. Nakamichi's designers have opted to eliminate this stage and try instead to reduce glitch generation by adjusting the timings of the eight most significant bits (the "leftmost" eight digits in a binary number) of each sample value as it enters the DAC. Two glitch-prevention trimming adjustments are made on each converter: one to optimize performance at 1 kHz, the other at 10 kHz.

Nakamichi makes a third adjustment following the recommendation of the DAC chip's manufacturer (Burr-Brown of Tuscon, Arizona). The particular converter used in the OMS-7AII (the PCM54KP) can be trimmed to a most-significant-bit differential linearity of nearly zero at "bipolar zero," which reduces distortion as a signal crosses between positive and negative voltage values. Each of these three adjustments can improve measured linearity, though this last is probably the most important. Also improving linearity is the running of the DAC's at four times the normal CD sampling rate. They operate at 176.4 kHz to convert the outputs of the player's four-times oversampling digital filters. In any case, Nakamichi's three adjustments are three more than most other CD player manufacturers make when using the same DACs—another example of the lengths the company has gone to improve player performance.

As for the other test results, none is less than excellent. Frequency response both with and without de-emphasis is unusually flat, the signal-to-noise ratio is exceptionally high, and the channel imbalance (measured as 0.07 dB) is strikingly small. And the player easily passed the now somewhat tame tortoise trials of the Philips error-correction test disc.

How much Nakamichi's extra efforts have contributed to the OMS-7AII's sound quality is hard to say. In a single-blind comparison with another high-quality player, using pink noise and music, we could not hear any difference between the two machines. Output levels were matched to within 0.01 volt at 1 kHz (by means of the other player's volume control), listening was over headphones, and music playback was synchronized by using pairs of the same discs.

This is not to say that the Nakamichi necessarily sounds the same as all other CD players—merely that its sound quality is not unique. Fortunately, that sound is very clean and smooth: we heard nothing untoward and smooth: we heard nothing untoward...
Denon DRA-95VR Audio-Video Receiver

**FM TUNER SECTION**

**FREQUENCY RESPONSE & CHANNEL SEPARATION**

<table>
<thead>
<tr>
<th>Frequency response</th>
<th>Channel separation</th>
</tr>
</thead>
<tbody>
<tr>
<td>100 kHz</td>
<td>20 Hz</td>
</tr>
<tr>
<td>-10 dB</td>
<td>-5 dB</td>
</tr>
<tr>
<td>-20 dB</td>
<td>-25 dB</td>
</tr>
<tr>
<td>-30 dB</td>
<td>-35 dB</td>
</tr>
</tbody>
</table>

**FM SENSITIVITY & QUIETING**

<table>
<thead>
<tr>
<th>Sensitivity</th>
<th>Channel separation</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 µV</td>
<td>20 Hz to 15 kHz</td>
</tr>
<tr>
<td>20 µV</td>
<td>40 Hz to 15 kHz</td>
</tr>
</tbody>
</table>

- **Dimensions:** 17 by 5 inches (front), 13½ inches deep plus clearance for controls and connections. AC convenience outlets: one switched (100 watts max.), one unswitched (250 watts max.). Price: $650, including RC-95 wireless remote control. Optional ACA-37 wood endpieces, $30 per pair. Warranty: "Limited," two years parts and labor. Manufacturer: NIPPON COLUMBIA COMPANY, LTD., JAPAN. U.S. DISTRIBUTOR: DENON AMERICA, INC., 27 LAW DR., FAIRFIELD, N.J. 07006.

Denon brings the sort of circuit refinements that have characterized its purely audio components to the service of audio-video systems. No video circuitry is built in (no TV tuner, for instance), but switching is provided for two video sources, whose associated audio may be chosen for reproduction through the receiver or replaced by a different audio source—as for simulcasts. All switching, including the volume adjustment, is electronic, which offers performance benefits in addition to making possible the receiver’s wireless remote control.

The total complement of connections includes two direct video inputs—VCR and Video, intended for a video recorder and a play-only video source such as a videodisc player, respectively—and two video outputs. Each of the video inputs also has an associated set of stereo audio connections: inputs and outputs for the VCR, inputs only for the other. The selected video signal will be fed to both video outputs. And if the video source button is pressed, the audio from that video input will be sent to the amplifier section.

The remaining audio portion includes the receiver’s own tuner section, a CD (aux) input, a phono section (switchable for use with either moving-coil or fixed-coil cartridges), and two audio tape inputs. When the monitor/copy button is off, any input except those for tape will feed the recording outputs; for dubbing from deck to deck, you must turn the monitor/copy switch on and choose the source machine at the audio selector buttons. As a result, you cannot use the monitor/copy button for source/tape switching during dubbing, although it will serve this function (provided you have a three-head deck) during taping from other sources.

To simplify operation, Denon has limited the tuner section to two modes: one includes automatic stereo switching (for stereo FM stations received above the stereo threshold), automatic seek of the next "receivable" station when you press the up or down tuning button, and automatic muting of the selected channel. The other permits manual tuning and muting of the selected channel.

**REPORT POLICY**

Equipment reports are based on laboratory measurements and controlled listening tests. Unless otherwise noted, test data are provided by Diversified Science Laboratories. The choice of equipment to be tested rests with the editors of High Fidelity, and samples normally are supplied on loan from the manufacturer. Manufacturers are not permitted to read reports in advance of publication. And no report or portion thereof may be reproduced for any purpose or in any form without written permission of the publisher. All reports should be construed as applying to the specific sample tested. High Fidelity and diversified science laboratories assume no responsibility for product performance or quality.
of interstation noise. The other offers mono reception only, manual tuning (100-MHz half-channel steps on FM, 10-kHz full-channel steps on AM), and no muting (so that you can listen for signs of life down in the roar).

There are 16 station presets—each of which will hold one AM or one FM frequency. They are arranged in two eight-button banks, with a shift button for toggling between them. The tuner automatically shifts bands if you choose a memorized AM station while the receiver is tuned to the FM band or vice versa. A stereo/am-fm switch is only one of the capabilities; there is also a front-panel control also can be used with Denon cassette decks and Compact Disc players (except the DCD-1800R). For these purposes, most commonly-used options (recording, skip, repeat, programming, pause, and so on) are included.

On Diversified Science Laboratories' test bench, the loudness-compensation and tone controls proved relatively gentle in their action. The treble control itself shelves above 10 kHz or so at the extreme settings, delivering about 8 dB of boost or cut in that range. Less extreme settings begin shelving at lower frequencies—as low as about 500 Hz for a 1-dB attenuation. The bass shelves below about 100 Hz at any setting, with the same 8 dB or so of maximum boost or cut.

Turning the loudness to its minimum setting attenuates the range near 1 kHz by a maximum of just over 15 dB, the bass below 80 dB by no more than about 6 dB, and the treble above 10 kHz by about 10 to 11 dB. Relative to the 1-kHz range, then, maximum compensation boosts the deep bass by less than 10 dB, the extreme treble by about 5 dB. The volume control is very unusual, but beneficially so, in being "linear." (Standard practice is to taper the control's action so that a median setting delivers much more than median level, giving the uninitiated the impression that the receiver or amplifier must be very powerful.) It steps in increments of very nearly 2 dB for the most part, though some are closer to 1 dB.

No filters are built into the DRA-95VR. What attenuation of infrasonic (from warps on feedback) it provides is inherent in the phono preamp and—as is usually the case—is greatly for the moving-coil option than the 300-ohm FM twinline and the supplied AM loop are conventional lightweight finger-screw terminals, but we were delighted to find that Denon also provides a 75-ohm coaxial F connector, which has become the standard in the U.S. for coaxial FM and TV leads.

The supplied RC-95 remote handset duplicates most of the front-panel controls. One significant difference is in the way the power switches work. The main chassis's power switch is marked to indicate that on is standby and off is just off. If you leave the receiver on standby and turn it off at the remote, it will return to the current source and volume settings when you once again press the remote's power switch. But when it has been turned off at the chassis switch, it always reverts to the tuner section (though to the last-tuned station) and to the minimum volume setting.

All such preset controls plus the up and down tuning buttons are included on the remote, but not the tuning-mode button, so you can't tune manually from the remote unless you've left the receiver itself in the mono mode. Also on the remote are all of the source selectors (audio and video) and tape monitor/dbb controls of the front panel plus its "muting" (actually, 20-dB attenuation) switch. And the manual says that the control also can be used with Denon cassette decks and Compact Disc players (except the DCD-1800R). For these purposes, most commonly-used options (recording, skip, repeat, programming, pause, and so on) are included.

ABOUT THE dBW

We currently are expressing power in terms of dBW—meaning power in dB with a reference (0 dBW) of 1 watt. The conversion table will enable you to use the advantages of dBW in comparing these products to others for which you have no dBW figures.
The slight bass rise evidently is not a characteristic of the phono section itself, because it appears in the measurements through the aux input and from the tuner section. Overall, though, FM response is flatter than that of most receivers we test. FM separation, at a little less than 25 dB, is lower than average (though remarkably consistent across the frequency band) but still more than adequate. Adjacent-channel selectivity is remarkably good, and measured distortion is quite low; in other respects, the tuner section is quite typical of the models we test—meaning that we would rate it somewhat better than average overall, particularly for an audio-video receiver.

The amplifier section is the 95VR's highlight. Its Non-Switching-A circuitry (Denon's way of approaching Class A performance with Class AB efficiency) uses no overall negative feedback. The Pure Current power supply uses a floating ground for isolation from the audio circuitry, and an unusual paralleled-capacitor configuration is credited with reducing DC ripple and supplying unfettered current peaks from the specially designed power transformer.

The amp section is rated at a not inconsiderable 85 watts (19.3 dBW) per channel, and some Denon literature credits it with more than 200 watts (25 dBW) of dynamic power into a 2-ohm load. Though the owner's manual cautions against running the output into so low an impedance, the lab not only tested it that way but confirmed the latter rating with a slight margin to spare. In fact, it will also deliver 23 dBW of dynamic power into a 4-ohm load and more than 20 dBW (100 watts) per channel continuously into any typical load.

And despite Denon's avoidance of the usual negative feedback, harmonic distortion is quite low: below our 0.01-percent reporting threshold through all but the very highest frequencies at 0 dBW (1 watt) and measuring only a little more throughout the range even at full rated power. Distortion is, in a word, negligible.

The DRA-95VR is an excellent choice for the centerpiece of an audio-video system in which video signal processing will be handled elsewhere but switched at the receiver. Considering the number of features and capabilities, the control scheme is surprisingly uncluttered and uncomplicated—far better than is common for this type of component. And on the basis of the lab measurements together with our listening tests, we would rate sonic performance as distinctly better than we have come to expect in audio-video gear.
As soon as the dealer said, "Tot without/and!"
I said "Okay, Akai!"

There were other things about Akai's CD-A70. Naturally, I loved the 3-beam laser pick-up, digital filter, subcode terminal, and insulated floating mechanism.

Loved 'em.

But then the dealer showed me the Natural Logic Operation.

Three buttons take me to the music I want to hear without the music I don't. And play all that's in between just like a CD should.

It blew me away.
BERYLLIUM is also difficult to work with, so Pioneer has adopted a rather arcane metal-evaporation technique to make the tweeter.

A copper strip is used as a "mold"; it has transverse pleats near each end, with a pattern of hexagonal pyramids in the central section that actually will become the diameter of hexagonal pyramids in the central section evaporation-coated with beryllium.

After further masking, the diaphragm is then masked with an acid-resistant coating and the central section that will become the diameter of hexagonal pyramids in the central section is made. Boron alone is potentially better than aluminum or iron. But it's essentially unworkable by normal industrial processes.

The surround also embodies a proprietary Pioneer design: DRS (Dynamic Response Suspension), which is said to maintain linearity over an unusually broad dynamic range.

The system combines these three drivers, with crossovers at 650 Hz and 4 kHz, in what looks like an oversize "bookshelf" enclosure, though the labeling everywhere confirms that it is designed to be upright. Beyond that, the folder that serves as an owner's manual offers no specific instructions or recommendations about placement—only a drawing in which the speakers seem to be placed directly on the floor. The folder does say, however, that you must take care not to transpose left and right speakers, which are so marked on the speaker boxes and on the backs of the enclosures themselves.

The 12-inch woofer cone is made of PG (a polymer-graphite composite)—chosen, again, for its density and stiffness as well as its insensitivity to changes in humidity and temperature.

The grille, which covers the entire baffle, is made of stretch fabric over a rigid plastic frame. It has solid stiffening pieces at top and bottom but leaves the sides open for sound propagation. Not incidentally, these slots also offer a ready hand grip for removing the grille to gain access to the controls.

Most radical of the three drivers, perhaps, is the woofer. It has two voice coils. One operates in the conventional way; the other acts in parallel but only below the first woofer's resonance frequency. The combination behaves rather like a so-called electronic subwoofer, drawing extra power from the amplifier in the range where bass rolloff otherwise would take over. In fact, Pioneer calls it Electronic Bass Driver, or EBD. In the DSS-E10, it is used in conjunction with bass-reflect woofer loading (via a ducted port on the back panel).

To allow for the extra voice-coil excursion produced when the woofer descends to maximum levels into deeper-than-normal bass, the main magnet pole piece on the inside of the magnetic gap is specially contoured to direct the magnetic flux in a pattern intended to reduce distortion at high excursions (a design called DLMC, for Linear-Drive Magnetic Circuit).

The tweeter adjustment bends the top range downward quite steeply—like a 12-dB-per-octave filter at 3.5 kHz—at its minimum, indicating perhaps that the tweeter is removed from operation altogether at that setting. At its maximum, the midrange control introduces a shelf that is up about 3 dB from the "0" setting through the center portion of the driver's range, tapering off at the two crossovers; at its minimum, it introduces a dip of about 4 dB in the 500-Hz band together with a deep midrange void extending to about -22.5 dB at around the 2-kHz band. Obviously, we won't recommend turning the midrange control all the way down.

Distortion figures are good—about what you'd expect of a three-way system in this price range. Also typical of its size and design is the sensitivity figure. The unit accepted the full 63-volt peak output of the test amplifier (equivalent to 496 watts, or 27 dBW, into 8 ohms) during DSS-E10's 300-Hz pulse test, to deliver a calculated peak sound pressure level of 117.5 dB at 1 meter. Impedance, which isn't influenced to any significant extent by the control settings, is fairly well controlled, ranging within the audio band from a high of 23 ohms (at the primary bass resonance near 60 Hz) to a low of 4.4 ohms (near 45 Hz, in the range where the two woofer voice coils are operating in parallel). The midbass impedance is low enough (5.8 ohms at around 100 Hz) that running extension speakers in parallel with the E10s might not be the best of ideas, but the average impedance is high enough (more than 10 ohms) that you need not be seriously concerned in doing so with most amps.

In our listening tests, we confirmed the appropriateness of the lab's 12-inch stand. With the speakers on the floor but away from other room boundaries, we judged the bass distinctly on the heavy side. With the speakers raised off the floor, the bass goes remarkably deep and remains rather prominent yet better balanced with the upper bands. In addition, the stand raises tweeter and mid-

<table>
<thead>
<tr>
<th>ROOM RESPONSE CHARACTERISTICS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sensitivity (at 1 meter; 2-W, pink noise)</strong></td>
</tr>
<tr>
<td><strong>Approx. Tweeter Control Range (± 0 dB)</strong></td>
</tr>
<tr>
<td><strong>Approx. Midrange Control Range (± 0 dB)</strong></td>
</tr>
</tbody>
</table>
So then the dealer said, "Get the Akai, okay?"

So I said, "Okay." And then I said, "But like why the Akai, okay?"

And he said, "The Interactive Monitor System."

And I said, "Omygod, no way!"

He said, "Yes indeed, on-screen VCR programming on every one of their models."

So I said, "Okay, okay. Akai!"
range driver closer to typical ear levels, a desirable condition inasmuch as this speaker’s sound depends more than that of most other recently tested units on the relative heights of drivers and listener. This is the result, we think, of the deliberately limited vertical dispersion of the tweeter and the horizontal staggering of the drivers. When auditioning the DSS-E10, try to have it placed at the same height relative to your ears as it will be used in the home. You might also experiment with the controls set for a slight reduction in treble sensitivity and, depending on speaker position and program material, perhaps a slight midrange increase; these are the settings we liked.

To us, the E10’s most appealing, and perhaps most obvious, quality is its crystal-line delineation of instrumental textures—a little on the cool, bright side, but otherwise quite uncolored and natural-sounding. On some poorly recorded program material, it sounded a trifle hard, but still with very sharp transients and with an almost tactile immediacy that’s very involving, whether on intimate chamber music or complex large-orchestra scores. With rock music, the bass felt was useful but never boomy.

Stereo imaging is less sharply defined, presenting a wider and deeper stage than average among similar speakers we’ve tested recently, but with slightly blurred instrumental placement, depending on the program material. Related to this phenomenon is the speaker’s smallish “sweet spot”: It sounds best from a centrally placed seat with the drivers pointed inward, directly toward the listener.

The extraordinary measures that Pioneer has used to engineer the DSS-E10 for the rigors of digital sound presumably account for its sharp, crisp sound on transients, its ability to sustain high playback levels with no sense of strain, and its potential for prodigious deep-bass output—three characteristics we particularly noted in our listening tests. Yet despite the unusual technologies embodied in the drivers, the speakers are not unreasonably priced, suggesting that their innovations may find application in a relatively wide range of models. And because the virtues of the E10 appear to be the direct result of those innovations, we look forward to their further development.

---

**TEST REPORTS**

**Dual CS-5000 Turntable**

The CS-5000 is a quartz-lock design in which an optical control circuit monitors the frequency of passage of a pair of reflectors mounted on the underside of the platter. A precision-ground belt couples the platter to the drive shaft and motor, isolating them from the subchassis on which the platter bearing and tonearm are mounted. The platter itself is made of cast and machined aluminum alloy with a weighting bead in the outer edge, encased in a plastic sleeve to damp vibration. The heavy platter mat further helps damp any internal vibration.

The dual chassis rests on feet offering two degrees of damping, depending on the forces to which your record-playing system is subjected. As delivered, the turntable goes for maximum isolation from acoustic feedback. If you find the CS-5000 unduly affected by footfalls—and on the basis of our tests, we don’t expect that you will—you can add supplied dampers to the feet, which then become exceptionally insensitive to footfalls. You can easily hear the difference by tapping on the top panel of the base, which is less isolated from the platter/tone-arm subchassis with the dampers installed. (In the earliest production units, the dampers were inserted at the factory and should be removed unless you have a footfall problem.)

The arm is dynamically balanced, meaning that it doesn’t depend on gravity to supply vertical tracking force and thus can theoretically be used without leveling the turntable. A counterweight balances the arm, then an independent mechanism—usually, as here, a coil spring—creates the required VTF. The idea, as expounded by Dual, is to keep the arm as perfectly balanced as possible for behavior that is predictable and consistent. As the data from Diversified Science Laboratories show, the precision of the spring in the CS-5000’s arm is above question. Periodic checking with a good VTF gauge may be in order in future years, because springs do fatigue, but Dual’s point that an inherently balanced arm can be better behaved in some respects than a deliberately unbalanced one is well taken. The adjustable antiskating bias, set at a movable screw just in front of the arm mount, evidently works a similar spring arrangement around the vertical axis.

An important aspect of the design is the
The dealer said, "Surround Sound" is the difference between okay and Akai. And every Akai receiver has "Surround Sound."

So I surrendered. Wouldn't you?

Wouldn't you buy a receiver that wrapped you in a saxophone sound so big it made you shiver and so real it woke up your cat?

Especially if it came with a seven-band graphic equalizer and wireless remote? Wouldn't you?

Surrender.
Building a breakthrough color TV takes brains: the computer brains of IC chips. Unlike the analog workings of conventional TVs, these new chips from NEC store, process, and control the picture in digital form. So TV performance can be raised to a higher level. The level of NEC Digital Television.

Take a look at our 26" square picture. You'll see richer color, more contrast, more resolution, and more picture than ever before. With a VCR connected, NEC's digital Picture-in-Picture lets you watch two shows at the same time on the same screen. And our three-way digital freeze lets you stop even the fastest running back in his tracks.

It shouldn't surprise anyone that the company behind this surprising new TV is NEC. We're at the forefront of computers, monitors, and broadcast video. And that takes real brains.

The best brains in television.
“discontinuity” of the arm at the four-point “gyroscope” gimbal. This arrangement brings the arm’s center of rotation into coincidence with its center of gravity, a must if the advantages of a dynamically balanced arm are to be realized. The configuration is necessitated by the vertical pivot being at the level of the record’s surface—one of the few instances of this optimum positioning we have seen in many years of turntable watching.

When a warp raises and lowers the pick-up mounted in the CS-5000, there is virtually no fore-and-aft movement of the stylus in the groove, as there is in a conventional arm with a vertical pivot above the level of the groove. This fore-and-aft motion “scrubs” the stylus tip with a velocity that alternates adds to and subtracts from the record’s rotational speed, creating the characteristic pitch wavers known as “warp wow” that we all have learned to know and hate in playing analog records (its elimination is doubtless one of the reasons for the success of the Cartridge Discs now available). Having warped EPS on the CS-5000, we were indeed impressed by its absence. Dual’s literature also implies some advantage to the design in playing off-center pressings, though here we could perceive and, because of the geometry of the situation, would expect none.

At the front end of the straight, tubular tonearm is a removable headshell with an adjustment for vertical tracking angle. In the days of record changers (a format in which the company was a leader), such an adjustment would be used to compensate for the height of the record stack, though it never caught on for that purpose because it required attention each time the stack was added to. Here, it makes it possible to minimize distortion by compensating for a known disparity between vertical cutting angle and the cartridge’s inherent vertical tracking angle.

The instructions in the multilingual owner’s manual assume that your records were cut with a vertical angle of about 20 degrees simply because that is an international standard. (Many aren’t, but you normally have no way of knowing what the real angle is, so Dual’s assumption is as good as any.) The manual gives adjustment data for several well-known cartridges, and we publish measured V1A for each cartridge we test. On the basis of these figures, if they include your cartridge, you can tell by how many degrees it departs from the standard and, therefore, how much compensation (up to 5 degrees either way) should be dialed in at the calibrated knob in the top of the shell.

A plain headshell, without the V1A adjustment, is available as well. If you need extra headshells to house additional cartridges, you might automatically go for the adjustable model. But we can think of one circumstance where the nonadjustable version might prove better; to avoid excessive sensitivity to warps when using an extremely compliant cartridge by keeping total mass as low as possible (the nonadjustable shell lowers the arm’s effective mass by about 4 grams). Our test reports on cartridges give arm-mass recommendations in order to avoid any problems in this area. The relationship also is explained by a nomograph that we make a practice of publishing with turntable or cartridge reports.

For the record, Diversified Science Laboratories tested the CS-5000 with the lighter shell (except where results with both are specified), though this should make absolutely no difference in the other performance figures as long as the mass is appropriate to the cartridge in use. As you can see in our data columns, the lab could measure no speed error, and flutter is on a par with that of other top models these days. Measured with an unmodulated test lacquer (our regular method), the rumble figure isn’t quite in the championship league, but it’s very good nonetheless.

Performance, then, is excellent all around. The only technical feature that might be considered wanting is a variable speed adjustment. How serious an omission this is will depend on the use you plan for the CS-5000. With electrical recordings at any of the three basic speeds, it’s a nonissue for all but the rarest of exceptions or special needs. However, if you want to play acoustically recorded 78s, an adjustment range of at least ±10 percent would be desirable (and even that won’t quite accommodate some relatively esoteric discs) for reproduction to be at true pitch—if you can determine what that is. Then again, many owners will be delighted to hear their ancient artifacts at all, even transposed by a half-tone and with vocal and instrumental colors, as well as tempos, slightly altered.

In more obvious and practical terms, the CS-5000 strikes us as very attractive. The base (which deserves the British term “plinth” in this case) is covered with real walnut veneer and is engagingly sculptural in form. The controls are inside the dust cover, but since cueing is manual, this is no hardship: The cover must be open when you start play under any circumstance. When you move the arm toward the platter, the drive starts automatically. At the end of play, the arm rises and the drive shuts off. This minimum of automation keeps the dust from ever getting in your way but supplies the two features of automatics that are, in our opinion, the most desirable. The CS-5000 is, in fact, among the most handsome and capable models we have ever tested from Dual—and that includes more than a few that were trendsetters in their day.
There are exotic cars and exotic cars. And then there's the Lamborghini Countach Quattrovalvole.

There are CD players and CD players. And then there's the Alpine 7902.

Until the 7902, there has never been a CD player and FM/AM tuner engineered together in a complete 7"x2" unit, to fit the dash of virtually any car.

Like the Lamborghini, every cubic inch of the 7902 is serious performance technology. By redesigning and applying advanced Alpine technology to each element in the system, we've created an entertainment package that easily handles rough roads and weak radio signals.

The 3-beam laser pickup created for the 7902 is about 70% lighter than others. It reads data more accurately and rides on a precision drive mechanism that absorbs mechanical backlash, ensuring outstanding tracking accuracy.

The laser transport is protected against road-shock by a silicon-oil suspension system, and is mounted on a rigid zinc die-cast chassis to maintain perfect alignment.

Our T-10 II Tuner utilizes multiple FM circuits on a single tiny chip, smaller than ever before, for superior reliability and reception.

How does it sound? You'll just have to audition it at an Alpine dealer. Come on in when you're ready to get serious. ALPINE
TDK BRINGS OUT THE RECORDING ARTIST IN YOU.

Backspin on your volleys is great. Backspin on your music is not. That's why TDK developed a series of high-quality audio cassettes that give you power-servo of pure lifetime performance. TDK SA delivers an unmatched high end with extra sensitivity for all of your most sophisticated musical favorites. For music that's all over the court, we've developed an improved TDK SA-X, which is now the world's lowest-noise tape. It reaches high and low to deliver crisp, clear sound without distortion. And for error-free follow-through in recording from compact discs, we offer TDK HX-S. It captures all of the dynamic purity of the original digital sound like no other.

TDK high-bias audio cassettes. They'll sure improve the way you play—your music.
Linn LK-1
Preamplifier

Linn has long been celebrated as the source of the estimable Linn Sondek turntable, but recently it has branched into other component categories with accelerating vigor. Among its most impressive achievements so far are the LK-1 preamplifier and matching LK-2 power amp, which, though designed to be operated together, can also be used separately. We chose to test the preamp with its optional wireless remote control, which makes use of the microprocessor-supervised signal-routing logic built into the LK-1.

By means of that microcomputer, the controls—contained in a keypad on the front of the preamp (and duplicated on the remote)—operate semiconductor switches placed in the signal path (as opposed to mechanical switches on the front panel). Such a layout, which requires no signal leads to the front panel, keeps both circuit-board traces and point-to-point wiring as short and simple as possible. The volume control is also digitally controlled, using a 256-step "ladder" of resistor elements (built into an IC) instead of the voltage-controlled amplification stage or similar means commonly employed. The result is much finer resolution than we usually encounter in electronic volume controls—about 1/2 to 1/4 dB per step over most of the operating range—and no added noise or distortion.

Linn's literature has a lot to say about similar concerns for detail, such as the extraordinary pains taken to keep control-signal noise out of the audio path. Although these efforts certainly contribute to the unit's sonic quality, they are no less than we would expect of the company. More telling in conveying the LK-1's flavor is the absence of tone controls. In the context of the sort of sonic precision Linn is after, conventional tone controls make little sense; if you want deliberate response alterations, a high-quality equalizer would be more to the point.

The last selected signal-route and volume setting remains memorized at shutoff, as do any differences in gain adjustment you choose to make for the various inputs, thanks to a built-in nicad battery that recharges automatically and runs for several months even with the power cord disconnected. Life expectancy of the battery itself, which can be replaced by Linn dealers, is five to ten years. When it fails, the preamp continues to work normally except that it fires up with all controls in their "zero" settings: minimum volume, centered balance, all inputs disconnected, and so on.

Listening and recording functions are separate, so that you can record from one source while you listen to another. For testing, there are quick-set commands for full left and full-right balance—as well as one to recenter the balance (which

| OUTPUT AT 1% THD (at 1 kHz; see text) | 5.2 volts |
| HARMONIC DISTORTION (THD: 20 Hz to 20 kHz) | < 0.112% |
| aux input | < 0.054% |
| fixed-coil (fixed-coil) | < 0.054% |
| PHONO OVERLOAD (1 kHz clipping) | 78 dB |
| fixed-coil phono | 78 dB |
| moving-coil phono | 78 dB |
| FIXED-CAP PHONO EQUIVALENT | 4.5 mV |
| fixed-cap phono | 4.5 mV |
| moving-cap phono | 4.5 mV |
| INPUT IMPEDANCE | 50 k ohms |
| fixed-coil phono | 50 k ohms |
| moving-coil phono | 50 k ohms |
| CHANNEL SEPARATION (at 1 kHz) | 80 dB |
| main output | 80 dB |
| tape output from aux input | 80 dB |
| tape output from phono input | 80 dB |

has no "center detent" because it consists of a button pair, rather than a knob. And there are commands to disable the controls (for kid- or party-proofing) or to disable just the remote, leaving the front panel in sole command.

On the back panel—in addition to the two sets of gold-plated pin-jack phono connectors—are two high-level inputs (TUNER and AUX), two tape input/output sets, and two outputs. These line-level signals are connected via XLR multipin jacks and plugs—what often are called Cannon connectors, after the company that introduced them. Those for the tape connections have five pins (input and output signals for each channel plus ground), while the remainder have three pins. In professional gear, XLRs usually are employed for "balanced," "push-pull" connections: a pair of conductors for the signal plus a ground shield. Here they evidently have been chosen for their ruggedness and the surety of their connections; electrically, they provide the same unbalanced hot-plus-ground setup as conventional pin jacks.

Fortunately, that makes it relatively easy to fabricate the necessary adapters, because no matching transformers are needed, as might be the case with balanced connections. And Audiophile Systems, which supplied adapters for our tests, says they can be acquired through Linn dealers; you are not likely to find them at your local parts store. Nor will you find an AC cord to mate the single IEC-style grounded accessory outlet on the back panel. Since the outlet is unswitched, most U.S. users probably will simply ignore it.

As with many of the products we test that are designed for listening quality rather than specsmanship, there are some measurements that would seem a trifle disappointing if you were to place them against comparable data for competing products that are more spec-oriented in design. For example, harmonic distortion is a little higher than average for a top preamp, and response rolls off slightly toward the frequency extremes. But one must always assess the significance of such disparities: The I-K-1's departures from flat response are so small and so limited to the frequency extremes as to be of no material importance. Its distortion performance is likewise more than adequate for subjectively distortion-free listening.

Our primary response measurement is through the aux input. The low-frequency rolloff is greater through the phono inputs, and the moving-coil stage is a hair less flat overall—but again by only a trifling amount. The fixed-coil input actually rolls off more in the deep bass. This isn't all bad, because it also achieves greater warp-signal attenuation than the moving-coil input. No other infrasonic filtering is supplied, and none is needed for the other inputs.

Most surprising, however, is the fixed-coil phono input impedance, which (at least in our test sample) varies with frequency and cannot be represented as a simple resistor/capacitor network. And at 1 kHz (the frequency at which phono input impedance normally is specified), the resistive component measures nearly twice the standard 47,000 (47k) ohms. With many pickups, this presumably would make little or no difference, but some fixed-coil models are loadsensitive and therefore may deliver more irregular treble response than could be expected with a more conventional impedance characteristic.

But if the sound of the phono section may, to that extent, depend on the cartridge you choose, the overall sound of the preamp impressed us with its clean openness. More immediately remarkable, however, is the digital control scheme, which, though taking some study to master, is well thought out and a pleasure to use.

---

Sony SL-HF750
Super Beta Videocassette Recorder

VCR SECTION

Except where otherwise indicated, the recording data shown here apply to all three speeds—Beta I, Beta II, and Beta III—with Super Beta on. All measurements were made at the direct audio and video outputs, with test signals inserted through the direct audio and video inputs. For Beta Hi-Fi, the 0-dB reference input level is the voltage required to produce 3 percent third-harmonic distortion at 315 Hz; for the standard audio recording mode, it is 10 dB above the voltage at which the automatic level control (ALC) produces 3 dB of compression at 315 Hz. The 0-dB reference output level is the output voltage from a 0-dB input.

BETA HI-FI RECORD/PLAY RESPONSE (-20 dB)

<table>
<thead>
<tr>
<th>Frequencies (Hz)</th>
<th>20</th>
<th>50</th>
<th>100</th>
<th>200</th>
<th>500</th>
<th>1K</th>
<th>2K</th>
</tr>
</thead>
<tbody>
<tr>
<td>SL-HF750 (I)</td>
<td>0</td>
<td>−1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>SL-HF750 (II)</td>
<td>0</td>
<td>−1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>SL-HF750 (III)</td>
<td>0</td>
<td>−2</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

STANDARD RECORD/PLAY RESPONSE (-20 dB)

<table>
<thead>
<tr>
<th>Frequencies (Hz)</th>
<th>20</th>
<th>50</th>
<th>100</th>
<th>200</th>
<th>500</th>
<th>1K</th>
<th>2K</th>
</tr>
</thead>
<tbody>
<tr>
<td>SL-HF750 (I)</td>
<td>+2</td>
<td>+3</td>
<td>+4</td>
<td>+5</td>
<td>+6</td>
<td>+7</td>
<td>+8</td>
</tr>
<tr>
<td>SL-HF750 (II)</td>
<td>+1</td>
<td>+2</td>
<td>+3</td>
<td>+4</td>
<td>+5</td>
<td>+6</td>
<td>+7</td>
</tr>
<tr>
<td>SL-HF750 (III)</td>
<td>+0</td>
<td>+1</td>
<td>+2</td>
<td>+3</td>
<td>+4</td>
<td>+5</td>
<td>+6</td>
</tr>
</tbody>
</table>


To judge by Sony's SL-HF750 VCR, the reports of the death of the Beta format are as exaggerated as were those of the demise of Mark Twain. As if deliberately combating such rumors, the SL-HF750 has almost every feature you could imagine: both Super Beta and standard Beta recording, Beta Hi-Fi stereo audio, a six-event/three-week programming system, the extensive variable-speed playback facilities unique to the Beta format, equally comprehensive on-screen displays and programing aids, and a top-notch cable- and MTS-ready tuner. And, wonder of wonders, the SL-HF750 reintroduces the Beta I recording speed of the first Betamaxes. To be more precise, the VCR incorporates a variation, Beta Is; while partially incompatible with the original Beta I format, it is claimed to produce the best home video sound and picture available today.

Beta Is is simply a Super Beta recording made at the fast Beta I speed. In theory, the combination should result in video resolution and signal-to-noise ratios unexcelled by any other home video recording system. On the SL-HF750, Beta Is recordings are made in the Super Beta mode regardless of the Super Beta switch setting. For that reason, they cannot be properly reproduced on a non-Beta Is deck even if it is able to reproduce conventional Beta I tapes. And though the Super Beta switch has no effect when recording a Beta Is tape, it must be set in the Super Beta position to play that tape without overload. The off position is used to reproduce conventional Beta I tapes and to make recordings for use on non-Super Beta VCRs. Naturally, the SL-HF750 also records and plays at the popular Beta II and Beta III speeds. Playback speed is set automatically; choice of recording speed and Super Beta
SEND FOR YOUR FREE ISSUE TODAY.

We'll send you a FREE copy of OPERA NEWS to introduce you to the world's foremost opera magazine. Look at it, read it — and only then decide if you wish to become a regular subscriber.

You'll sit front row center — without ever leaving home.

Each beautifully illustrated issue of OPERA NEWS brings you the latest news of outstanding operatic events the world over: forecasts, reviews and reports of important openings — new productions — exciting debuts from San Francisco to Salzburg and Boston to Buenos Aires.

Preview opera on radio and TV

Only OPERA NEWS gives you profiles of the cast, the story and background of the opera, onstage action photos, all in advance of each performance — including every Metropolitan Opera Saturday broadcast and "Life From the Met" telecast.

Meet the brightest stars. On stage. Off-stage. Backstage.

Celebrated artists of the past, today's super-stars and tomorrow's challengers talk intimately of their lives and careers in OPERA NEWS. You'll read the latest gossip and the hard facts in every colorful issue.

Sample OPERA NEWS free

There's just one way for you to fully appreciate OPERA NEWS' fascinating articles, stunning photographs and lively reporting. And that's to see a copy for yourself. We'll send you the current issue of OPERA NEWS absolutely free, and a full year's worth (17 issues in all) for only $19.95 — a savings of over 50% off the single copy price.

For your free copy of OPERA NEWS, fill out and return the coupon and we'll enter your subscription. We know you'll be delighted with OPERA NEWS. But if for any reason you choose not to subscribe, simply write "cancel" on your bill and owe nothing. In any event the free issue is yours to keep.
### AUDIO S/N RATIO (in O dB output; R/P; A-weighted)

<table>
<thead>
<tr>
<th></th>
<th>Beta Ia</th>
<th>Beta II</th>
<th>Beta III</th>
</tr>
</thead>
<tbody>
<tr>
<td>standard</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beta Ia</td>
<td>41 dB</td>
<td>41 dB</td>
<td>41 dB</td>
</tr>
<tr>
<td>Beta II</td>
<td>43 dB</td>
<td>90 dB</td>
<td>90 dB</td>
</tr>
<tr>
<td>Beta III</td>
<td>47 dB</td>
<td>90 dB</td>
<td>90 dB</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>INDICATOR CALIBRATION (315 Hz; Beta Hi-Fi)</th>
</tr>
</thead>
<tbody>
<tr>
<td>for 0 dB input</td>
</tr>
<tr>
<td>for &gt; 5 dB input</td>
</tr>
<tr>
<td>DISTORTION (THD at -10 dB input; 50 Hz to 5 kHz)</td>
</tr>
<tr>
<td>standard</td>
</tr>
<tr>
<td>Beta Ia</td>
</tr>
<tr>
<td>Channel Separation (315 Hz; Beta Hi-Fi)</td>
</tr>
<tr>
<td>standard</td>
</tr>
<tr>
<td>Beta Ia</td>
</tr>
<tr>
<td>CHANNEL SEPARATION (315 Hz; Beta Hi-Fi)</td>
</tr>
<tr>
<td>standard</td>
</tr>
<tr>
<td>Beta Ia</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SENSITIVITY (for 0 dB output; 315 Hz)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beta Ia</td>
</tr>
<tr>
<td>maximum AUDIO OUTPUT (from 0 dB input; 315 Hz)</td>
</tr>
<tr>
<td>standard</td>
</tr>
<tr>
<td>Beta Ia</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>FLUTTER (ANSI weighted peak; R/P; average)</th>
</tr>
</thead>
<tbody>
<tr>
<td>standard</td>
</tr>
<tr>
<td>Beta Ia</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SHARPNESS CONTROL RANGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>standard</td>
</tr>
<tr>
<td>Beta Ia</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>LUMINANCE LEVEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>standard</td>
</tr>
<tr>
<td>Beta Ia</td>
</tr>
</tbody>
</table>

---

**Audio Video Record/Play Response**

<table>
<thead>
<tr>
<th>Beta Ia</th>
<th>Beta II</th>
<th>Beta III</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.5811 M 3.0 MHz</td>
<td>2.0 MHz</td>
<td></td>
</tr>
<tr>
<td>42.2 MHz</td>
<td>42.2 MHz</td>
<td>90 dB</td>
</tr>
</tbody>
</table>

**Indicators & Ballistics**

- Response Time: 1.4 ms
- Decay Time: 1.600 ms
- Overshoot: 0 dB

**Maximum Audio Output** (from 0 dB input; 315 Hz)

<table>
<thead>
<tr>
<th>Beta Ia</th>
<th>Beta II</th>
<th>Beta III</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beta Ia</td>
<td>2.54 V</td>
<td>2.54 V</td>
</tr>
</tbody>
</table>

**Audio Input Impedance** (Beta Hi-Fi)

<table>
<thead>
<tr>
<th>Beta Ia</th>
<th>Beta II</th>
<th>Beta III</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beta Ia</td>
<td>0.38 V</td>
<td>0.38 V</td>
</tr>
</tbody>
</table>

**Super Beta Video Record/Play Response**

<table>
<thead>
<tr>
<th>Beta Ia</th>
<th>Beta II</th>
<th>Beta III</th>
</tr>
</thead>
<tbody>
<tr>
<td>at 500 kHz</td>
<td>±0.06 dB</td>
<td>±0.06 dB</td>
</tr>
<tr>
<td>at 1.5 MHz</td>
<td>±0.10 dB</td>
<td>±0.10 dB</td>
</tr>
<tr>
<td>at 2.0 MHz</td>
<td>±0.15 dB</td>
<td>±0.15 dB</td>
</tr>
<tr>
<td>at 3.0 MHz</td>
<td>±0.25 dB</td>
<td>±0.25 dB</td>
</tr>
<tr>
<td>at 3.5 MHz</td>
<td>±0.25 dB</td>
<td>±0.25 dB</td>
</tr>
<tr>
<td>at 4.3 MHz</td>
<td>±0.30 dB</td>
<td>±0.30 dB</td>
</tr>
</tbody>
</table>

**Standard Video Record/Play Response**

<table>
<thead>
<tr>
<th>Beta Ia</th>
<th>Beta II</th>
<th>Beta III</th>
</tr>
</thead>
<tbody>
<tr>
<td>at 500 kHz</td>
<td>N/A</td>
<td>-0.25 dB</td>
</tr>
<tr>
<td>at 1.5 MHz</td>
<td>N/A</td>
<td>-0.25 dB</td>
</tr>
<tr>
<td>at 2.0 MHz</td>
<td>N/A</td>
<td>-0.25 dB</td>
</tr>
<tr>
<td>at 3.0 MHz</td>
<td>N/A</td>
<td>-0.25 dB</td>
</tr>
<tr>
<td>at 3.5 MHz</td>
<td>N/A</td>
<td>-0.25 dB</td>
</tr>
<tr>
<td>at 4.2 MHz</td>
<td>N/A</td>
<td>-0.25 dB</td>
</tr>
</tbody>
</table>

**Sharpness Control Range**

<table>
<thead>
<tr>
<th>Beta Ia</th>
<th>Beta II</th>
<th>Beta III</th>
</tr>
</thead>
<tbody>
<tr>
<td>at 500 kHz</td>
<td>±1.25 dB</td>
<td>For</td>
</tr>
<tr>
<td>at 1.5 MHz</td>
<td>±1.25 dB</td>
<td>-3.25 dB</td>
</tr>
<tr>
<td>at 2.0 MHz</td>
<td>±1.25 dB</td>
<td>-3.25 dB</td>
</tr>
<tr>
<td>at 3.0 MHz</td>
<td>±1.25 dB</td>
<td>-3.25 dB</td>
</tr>
<tr>
<td>at 3.5 MHz</td>
<td>±1.25 dB</td>
<td>-3.25 dB</td>
</tr>
<tr>
<td>at 4.2 MHz</td>
<td>±1.25 dB</td>
<td>-3.25 dB</td>
</tr>
</tbody>
</table>

**Luminance Level**

<table>
<thead>
<tr>
<th>Beta Ia</th>
<th>Beta II</th>
<th>Beta III</th>
</tr>
</thead>
<tbody>
<tr>
<td>at 500 kHz</td>
<td>N/A</td>
<td>-3.6 dB</td>
</tr>
<tr>
<td>at 1.5 MHz</td>
<td>N/A</td>
<td>-3.6 dB</td>
</tr>
<tr>
<td>at 2.0 MHz</td>
<td>N/A</td>
<td>-3.6 dB</td>
</tr>
<tr>
<td>at 3.0 MHz</td>
<td>N/A</td>
<td>-3.6 dB</td>
</tr>
</tbody>
</table>

**Distortion (THD at 40 Hz)**

- Beta Ia: 1.5 MHz: ±0.25 dB
- Beta II: 2.0 MHz: ±0.25 dB
- Beta III: 3.0 MHz: ±0.25 dB

**Slew Time**

- Beta Ia: 100 ns
- Beta II: 100 ns
- Beta III: 100 ns

**On-Screen Display Response**

- Response Time: 10 ms
- Decay Time: 10 ms

**Super Beta Video Editing Controller**

- The SL-HF750 automatically records an index mark on the tape whenever a recording is initiated by means other than releasing the pause control. Pressing INDEX MARK enables you to place such cueing points on other parts of the program during recording and normal playback even if the safety tab on the cassette has been removed; in this way, you can mark favorite scenes in prerecorded tapes. If you press INDEX on the main panel once and then press FAST FORWARD or REWIND during playback, the controls further allow momentary viewing of a picture while fast-forwarding or fast-rewinding (Beta Skip Scan).

- The SL-HF750 has a cassette-loading system that we've not encountered before. Linear Skate Cassette Loading uses a slide-out tray (which makes up most of the left half of the front panel) that combines the primary advantages of both top- and front-loading VCRs: to wit, the ability to stack other equipment on the VCR while minimizing the height of the VCR itself. Touching EJECT causes the tray to slide out of the VCR proper and the tray's internal cassette holder to tilt up so you can load or unload a tape easily. The larger open/close button causes the tray to slide back into the chassis or to slide out again during normal operation so you can check the amount of tape remaining (the holder does not elevate in this case). For convenience, pressing EJECT with the power off automatically turns the deck on, and you cannot eject a tape while recording.

- On the lower right half of the cassette tray are the TV/VTR, counter reset, index, and tape return buttons. The last automatically returns the tape to counter-zero—indicated as "000 000 000," since the counter reads time rather than "footage." If you press PLAY during the rewind period, the SL-HF750 will automatically replay the tape after rewinding. Above these buttons are dual sliders that control audio recording level for the Beta Hi-Fi mode. Recording level on the edge track is set automatically. Audio level is indicated by two peak-reading LED meters, with the recommended setting for off-the-air tapping suggested by a dot on the midpoint of each control.

- The SL-HF750's Remote Commander operates all important deck functions and then some. It also can be used to control certain functions of compatible Sony televisions. And it has a command-set selector.
that must be switched to match the mode of the SL-HF750 as described above. Then, from the remote, you can control power, raise and lower volume, mute the sound, switch from TV to VCR viewing, scan up or down through the channel memory (or raise and lower the tuner setting), tune any channel directly via a ten-key pad, and set and check the program memory contents. Other buttons enable you to switch the deck into the timer-recording or quick-timer modes, place and erase index marks, reset the tape counter, activate and deactivate the on-screen display, and control the special playback effects (still frame, Beta Scan, and one-tenth, one-fifth, normal, and double speed in either direction). The preceding is only a partial list of what the SL-HF750 Remote Commander will do. The complete list is so extensive that Sony has seen fit to design the remote with a transparent door that covers all the aforementioned keys except the most important tuner and VCR controls.

Also on the remote are index and tape-return buttons and Sony's unusual Jog Dial and Shuttle Ring with accompanying channel/timer and Jog Shuttle buttons. By pressing CHANNEL/TIMER and rotating the Jog Dial clockwise, you advance through the channels toward the higher-numbered stations. Counterclockwise takes you the other way. Similarly, the Jog Dial can be adjusted both on the programmer time settings. In tape playback, a press of Jog Shuttle initially freezes the picture and enables you to play the tape in either direction at a variable speed determined by the rate at which you rotate the Jog Dial. The Shuttle Ring (which surrounds the Jog Dial) selects one-fifth, normal, or double speed or continuous Beta Scan in either direction.

Diversified Science Laboratories' bench tests and our viewing tests basically confirmed each other: Picture quality is excellent. In the Super Beta mode, video frequency response (proportional to horizontal resolution) is exceptionally good at both the Beta II and Beta Is speeds. Luminance response is essentially flat to 2 MHz at either speed—something we've never seen even in a consumer VCR, and then only with Beta machines—implying a resolution comfortably in excess of 160 lines. Even at the Beta III speed, Super Beta recording yields a resolution of almost 160 lines (based on a -6-dB criterion), a response almost identical to that of a Beta II tape recorded without Super Beta. Clearly, for best performance you should use the Super Beta recording mode whenever possible.

Luminance level is fairly accurate at all three speeds, although the gray-scale linearity is somewhat better at the two faster speeds than at Beta III. Chroma level and average phase error (corresponding to saturation and hue, respectively) are excellent at all speeds, with only a slight edge given to Beta Is. In all cases, the chroma differential gain and phase were less than the residual AM and PM chroma noise. Nonetheless, the faster the tape speed, the less the chroma noise (both on the test bench and in viewing), so here's one respect in which Beta Is has a slight but visible edge.

However, neither on the bench nor in the viewing room did the Beta Is mode exhibit such superior performance that we'd willingly sacrifice half the recording time (compared to Beta II) to get it. That's not to say that it isn't better. It's just that, in our opinion, it will be only a rare occasion (like an important live recording) that warrants the trade-off of time for performance, especially in light of the excellent performance available at the Beta II speed in the Super Beta mode. Still, the SL-HF750's Beta Is mode offers the best picture quality of any home VCR we've tested.

If there is one respect in which Beta Is performance is clearly superior to that at the slower speeds, it is for normal edge-track audio recording. Flutter at the fastest speed is lower than we've ever before measured on a VCR and a match for that of a good audio cassette deck. Flutter at Beta II is admirably low as well. Distortion is lowest at the Beta Is speed (about two-thirds that of Beta II and half that of the slowest speed), and A-weighted noise is 3 to 4 dB lower as well. Frequency response with Beta Is edge-track recording is substantially better than can be had at the slower speeds.

As is to be expected from the way the system operates, Beta Hi-Fi performance is essentially identical at all speeds; in the case of the SL-HF750, it's excellent. The tracking of the noise reduction system is as perfect as we could document. At every speed, A-weighted noise is a full 90 dB below 3-percent distortion, and flutter is below our reporting limit of 2±0.1 percent. Distortion performance at 10 dB below the 3-percent point (a level equivalent to approximately a 0-dB reading on the meters) is about the best we can recall seeing from any VCR.

The SL-HF750's tuner is first-rate. Audio response is very flat, and the signal-to-noise ratio is substantially better than we usually measure, with highly repetitive, noise-inducing video patterns. Stereo TV performance also is more pleasing to the ear than we've experienced before. And though the lab found a trace of whistle at half the horizontal-scan frequency, it was quite low (inaudible during our viewing tests); at the full-scan frequency, it was almost completely suppressed.

Tuner video performance also measured well. Its frequency response implies a resolution of about 300 lines or so if the signal is fed directly to a good monitor. Luminance level and gray-scale linearity are good. And though the lab found a somewhat greater than usual chroma differential gain, the discrepancy is confined to the brightest scene level, where it is likely to go unnoticed. Chroma differential phase (hue change with scene brightness) is very low, as is actual chroma phase (hue) error.

All our measurements and viewing point to one conclusion: The Sony SL-HF750 is an extraordinary VCR. If we seem a bit down on its Beta Is mode, that's only because of how impressed we are with the deck's Super Beta performance at the Beta II speed. In the Beta Is mode, there is no question that the Sony SL-HF750 produces the finest picture we've seen from a home VCR to date. Then again, were it not for the presence of Beta Is, we'd also say that about the SL-HF750's Beta II mode! Either way, it's a real winner.
With the introduction of the new Yamaha DSP-1 Digital Sound Field Processor, listening to recorded music at home is no longer the next best thing to being there.

It is being there. Quite literally.

The most significant advancement in acoustic realism since stereo, the DSP-1 enables you to enjoy performances in the actual listening environments in which they were intended to be heard in the first place. Without leaving your home.

In twelve of the world’s most famous sites, to be exact. Including three concert halls, a chamber, cathedral, church, disco, jazz club, rock concert arena, warehouse loft, pavilion, and outdoor stadium.

Additionally, the DSP-1 offers a four-directional presence mode as well as three surround-sound systems: a large theater, a medium sized theater and even digital delay Dolby® surround.

Previous analog “surround” processors simply produced the illusion of a sound field by altering the existing stereo signal. The new DSP-1, however, digitally reproduces the actual sound fields of the world’s finest listening environments, without affecting the purity of the original source material.

Utilizing the Yamaha-developed four-microphone Single Point Quad sound field analysis technique, Yamaha engineers spent five years analyzing the acoustic architecture of the world’s most noted performance facilities, including echo patterns, reflective personalities and such data as timing, volume level and apparent source directionality. This information was then programmed into the DSP-1’s computer memory (ROM).

The frequency response and dynamic range...
characteristics from your stereo source material trigger the continuous release of this information, to precisely reproduce the acoustic personalities of selected performance environments.

The reproduction of this acoustic architecture in your home is made possible by the development of a proprietary Yamaha VLSI (very large scale integrated circuit), the YM-3804. It calculates early sound reflections in real time based on the echo patterns stored in the DSP-1 memory — enabling accurate re-creations of these listening environments at the push of a button.

Each reflection is calculated using the very same sampling rate and quantization as compact discs (44.1 kHz, 16 bit linear), producing an output with dynamic range of 94 dB and 0.006% THD, making audiophile quality digital sound field synthesis possible for the very first time.

Every DSP-1 acoustic response pattern has several key response parameters you can alter to customize the size, shape and character of the listening environment. These include room size, liveness, initial delay time, high pass filter cutoff, low pass filter cutoff and reverberation time.

After modifying a program, you can then give it a name, and store it in one of the DSP-1’s 16 user memories. In addition, there are 16 sound effector programs built in, such as time-delay, stereo flange, tremolo, chorus, pitch change and auto panning. So the DSP-1 can also be used effectively as a musical instruments effects device.

All sound field modes and parameters are controlled from the palm of your hand, since the DSP-1 is operated by a 30-key wireless remote control. This allows you to select the performance environment and adjust parameters — even program them into memory — without sacrificing the perspective of your listening position.

Its large backlit LCD confirms all mode selections and parameter readings as you make them. The remote control also lets you adjust the effect level and front/rear balance, and even give titles to those new modes you program.

The full benefits of Yamaha sound field synthesis is best experienced with four speakers which are powered by the new Yamaha 4-channel M-35B power amplifier, in addition to the front stereo speaker pair, driven by your existing amplifier.

If desired, however, the front left and front right output may be combined with the existing main-channel speakers.

For our thorough White Paper on Yamaha digital sound field synthesis, please write us at the address shown below.

But mere words can never hope to convey the magnitude of this accomplishment. Visit an authorized Yamaha dealer today for a complete demonstration. And discover why stereo alone is now as outdated as living in a castle.

Yamaha Electronics Corporation, USA, P.O. Box 6660, Buena Park, CA 90622
Reality Realized.

SONIC HOLOGRAPHY TRANSFORMS EXCITING NEW PROGRAM SOURCES AS WELL AS FAMILIAR OLD ONES INTO TRULY LIFELIKE MUSIC EXPERIENCES.

Watch a movie on a 13" black and white TV. Now see it in 70 millimeter Technicolor with Surround Sound.

Listen to your favorite musicians on a portable radio. Now sit three rows back from the stage at a live concert.

The difference is dimension: Width, depth, breadth and detail that turn flat sensory input into breathtaking reality. They're the missing ingredients of live musical performance that Sonic Holography restores to records, compact discs and even hi-fi movie soundtracks.

The most experienced and knowledgeable experts in the audio industry have concurred. Julian Hirsch wrote in Stereo Review, "The effect strains credibility - had I not experienced it, I probably would not believe it."

High Fidelity magazine noted that "...it seems to open a curtain and reveal a deployment of musical forces extending behind, between and beyond the speakers." According to another reviewer, "It brings the listener substantially closer to that elusive sonic illusion of being in the presence of a live orchestra."

All this with your existing speakers and music collection.

HOW SONIC HOLOGRAPHY WORKS. Unfortunately, conventional stereo cannot isolate the output of left and right speakers and send their output only to your left and right ears. Left and right versions of a sound occurrence also cross in the middle of your listening room, confusing your ears with additional extra sound arrivals a split second apart. Stereo imaging and separation suffer because both speakers are heard by both ears, confusing your spatial perception.

The Sonic Hologram Generator in the Carver 4000t Preamplifier, C-1 Preamplifier and Carver Receiver 2000 solve this muddling of sound arrivals by creating a third set of sound arrivals. These special impulses cancel the objectionable second sound arrival, leaving only the original sound from each loudspeaker.

The result is a vast sound field extending not only wider than your speakers, but higher than your speakers as well. Sounds will occasionally even seem to come from behind you! It is as if a dense fog has lifted and you suddenly find yourself in the midst of the musical experience. Or, as the Senior Editor of a major electronics magazine put it, "When the lights were turned out, we could almost have sworn we were in the presence of a live orchestra."

IMAGINE THE POSSIBILITIES. Thanks to VHS and Beta Hi-Fi stereo soundtracks (found even on rental tapes), and the increasing number of stereo TV broadcasts, Sonic Holography can put you inside the video experience, too.

It's a breathtaking experience. Without the need for additional rear speakers, extra amplifiers or decoders, the visual experience is psychoacoustically expanded by lifelike sound that envelops you, transforming stereo from monochromatic flatness into vibrant three-dimensional reality. Instead of being at arm's length from the action, you are immersed in it.

Then there are the familiar audio sources which Carver innovation has further improved upon, each of which gains character and heightened impact through Sonic Holography.

Compact discs, whose potential is still trapped in the two-dimensionality of conventional stereo, are even more lifelike with Sonic Holography.

Thanks to the Carver Asymmetrical Charge-Coupled FM Detector, FM stereo broadcasts can be received hiss- and interference-free, ready to take on an astonishing presence and dimension through Sonic Holography.

Even AM stereo can actually become a three-dimensional phenomenon with Sonic Holography and the new Carver TX-11a AM/FM tuner which delivers AM stereo broadcasts with the same dynamics and fidelity as FM.

ENHANCE YOUR SPATIAL AWARENESS WITH CARVER COMPONENTS. When considering the purchase of a new preamplifier or receiver, remember how much more you get from the Carver 4000t, C-1 and Receiver 2000. Or add Sonic Holography to your existing system with the C-9 add-on unit.

Each can transcend the limits of your listening (and viewing) experiences by adding the breathtaking, spine-tingling excitement that comes from being transported directly into the midst of audio-video reality.

Visit your nearest Carver dealer soon and expand your range of experiences with Sonic Holography.
HEN TECHNICAL EDITOR DAVID RAMADA FIRST SUGGESTED that we start giving an award for product of the year, we had two reactions. The first was "Great idea!" The second was "If only we'd thought of this before." Last year, for example, saw the introduction of the Acoustic Research MGC-1 loudspeaker, the Sony Handycam, the Share HTS-5000 surround-sound decoder, and the Pioneer PD-M6 Compact Disc player—and those are just the products that come immediately to mind. Contenders from earlier years might have included the Compact Disc itself, the first Carver Magnetic Field amplifier, the Allison One loudspeaker, the original Apt electronics (the Holman preamp and Model One power amp).

CONTINUED ON PAGE 51
A Denon amp
vs.
its only competition.
Admittedly, it’s tough to compete with Denon’s integrated amplifiers. In Japan, they’ve been praised for a “wide balance and richness in sound” and called “nothing short of phenomenal.” But now Denon amps are getting a run for their money... from the new Denon receivers.

Combining a separates-quality amplifier and tuner on the same chassis is not a new idea. But who else actually does it? Look inside the new DRA-95VR Receiver and you’ll find precisely the same circuits that make Denon amps so highly acclaimed.

You’ll discover the same Pure Current Power Supply for an amazing 60 dB reduction in dynamic IM distortion. You’ll see the same discrete output transistors (not cheap IC “power packs”) for superior sonic resolution. The same video inputs and outputs. And the same MC cartridge headamp.

Beyond even this, Denon’s top two Receivers are supplied with an integrated remote control that also operates a Denon Cassette Deck and any of three Denon CD Players.

So before you make your next high-fidelity purchase, get yourself to a Denon dealer. He’ll show you the only receivers with the guts to stand up to the world’s finest integrated amps.
He’s good. But can he remember 785 of your favorite songs?

This Magnavox compact disc player can. In fact, the top-rated CDB650 is the only CD you can program to play 785 selections. As you build your library, just program in your favorite selections from each disc in any order you want. The CDB650 will never forget them. Because it’s the only CD with Favorite Track Selection. With FTS, the memory remains forever, even during power outages, even if it’s unplugged. And it comes with full-function remote control.

With 4 times over-sampling and digital filtering, all you hear is the absolutely flawless reproduction of sound. What else would you expect from the people who invented CD technology? The CDB650. Unforgettable.

Flawless sound. The ultimate memory.
Nobody puts it together like MAGNAVOX.
which embodied important new ideas about how such components should be designed), the first Sony Betamax VCR, the Nakamichi 1000 cassette deck, the Advent 201 cassette deck and Videobeam projection television, the Pioneer TX-9100 tuner, the AR-1 speaker and AR-XA turntable, the Shure V-15 Type II phono cartridge (and most of its successors), the Phase Linear 700 power amp, the Crown DC-300 power amp, and the original Quad electrostatic speaker (not to mention the more recent ESL-63).

If I had time, I could make the above list considerably longer—as you might, too, though perhaps not always with the same choices. In fact, you may be wondering exactly how we selected our eight finalists for this year. There were two main requirements. One was that a component had to be a consumer audio or video product introduced between September 15, 1985, and the same time this year. The other was that it had to represent a significant advance in the state of the art or in the application of existing technology. All of our finalists embody technical innovations that in some way further the cause of high fidelity, in the broadest sense of that term.

One would expect the nominations to reflect underlying trends in product development, and as you look through the pages that follow, you will discover that to be the case. The recurrent themes are loudspeakers, signal processing, and digital technology—categories that have almost vibrated with excitement over the last few years. When I sat down with HF's technical editors to make the final cut, my biggest fear was that it might be difficult to arrive at a consensus. There were some heated discussions, but in the end, we all were satisfied with the list of finalists—and delighted to find ourselves in complete agreement on the winner. So without further ado, the silver and the gold. The envelope please.

Michael Riggs

B&W MATRIX LOUDSPEAKERS

SIMPLE AND EFFECTIVE INNOVATIONS ARE FEW AND FAR BETWEEN IN SPEAKER DESIGN THESE DAYS (ONE OF THE LAST WAS FERROFLUID DAMPING AND COOLING OF DRIVER VOICE COILS). BUT THE MATRIX TECHNOLOGY INVENTED BY LAURENCE DICKIE, CHIEF ELECTRONICS ENGINEER OF B&W, IS AT ONCE ALMOST COMICALLY UNCOMPLICATED AND SERIOUSLY EFFICIENT IN ATTACKING THE OLD SPEAKER-CONSTRUCTION PROBLEM OF CABINET VIBRATION AND RESONANCE.

Although the amplitude of enclosure vibration in a typical speaker is small, B&W rightly points out that the cabinet's total surface area is often as much as 30 times greater than that of the driver diaphragms. Measurements made on some cabinets show that their low- and mid-frequency radiation level may be only 30 dB below that of the driver emissions. And since this spurious sound is not deliberately designed for, its effect on the speaker's sound quality is similarly uncontrolled. Cabinets also tend to resonate, or "ring," after application of a sound, the vibrations taking a while to die down since they are not directly controlled by the amplifier as are the driver diaphragms.

The Matrix reduces these effects quite elegantly by cross-bracing the entire inside volume of the enclosure with a honeycomb-like structure. This is a series of interlocking, perforated sheets of a wood-composite material that slides into grooves cut into the inside surface of the speaker cabinet. Not only is an enclosure's external vibration reduced, but the Matrix, whose interstices are filled with acoustic foam, also serves as a more effective absorber for internal standing waves and resonances than the typical foam or acoustic-wool enclosure stuffing. A review of one of the first B&W speakers based on the Matrix construction, the Matrix 2, appears in our November issue.

Fred

THE DUPLICATION OR REPLACEMENT OF VIDEO EQUIPMENT ENCOURAGED BY THE INTRODUCTION OF STEREO TV (OTHERWISE KNOWN AS MULTICHANNEL TELEVISION SOUND, OR MTS) UNDOUBTEDLY
edly struck peripatetic tuner designer Larry Schotz as ridiculous. Could there be a way to provide MTS decoding without having to completely replace the TV set or duplicate its tuner section? There is, and Schotz found it: By picking up a certain stray signal emitted by nearly every television receiver, it is possible to decode stereo TV broadcasts without altering any of the set's original features—indeed, without even a direct electrical connection, meaning that the set's remote control remains fully effective except for changing the volume.

This concept is now embodied in the FRED series of components from Recoton. With each Friendly Recoton Entertainment Decoder comes a wired probe that mounts on the cabinet of a monaural TV. When positioned properly, it picks up stray 4.5-MHz "intercarrier" radiation from the television's audio demodulation circuitry. This signal carries all the MTS information (stereo sum and difference signals and the secondary audio program, or SAP) for the selected channel. The FRED simply substitutes for the tail end of a television set's audio demodulator: Using the 4.5-MHz signal, it extracts the baseband MTS signal, decodes the stereo information, applies the required DBX-TV noise reduction, and produces a stereo line-level output. The latest FRED models also provide SAP decoding.

Some televisions are too well shielded for the external pickup to work, so Recoton makes available an internal probe for installation by a technician. The system is quite forgiving of the quality of the set with which it is used, however, and is a sensible alternative to junking your present television in favor of one with built-in MTS decoding.

KLOSS NOVABEAM 100 PROJECTION VIDEO MONITOR

KLOSS VIDEO HAS FOR SOME YEARS BEEN PRODUCING THE BEST front-projection video monitors available to the consumer. The quality of their pictures, especially their rarely equaled combination of large image size and brightness, stems not only from Henry Kloss's Novatron image tubes but also from the company's attention to the small but crucial details of video signal processing. And it is its treatment of small image details that merits the Novabeam the attention it is receiving here. The Novabeam 100 is the first home video product to incorporate a sophisticated detail-enhancing system called Faroudja Image Processing, named after its developer, Yves Faroudja (pronounced "Fa-roo-jah").

In his patent, Faroudja describes why his system is needed, especially when playing videocassettes. To minimize picture noise (snow), VCRs incorporate circuitry that reduces or eliminates low-level, high-frequency transitions in the video signal—those portions of the image containing fine picture details. Once lost, they cannot be restored—certainly not by conventional sharpness controls—and the resulting picture can end up looking cartoonlike or pasty. The Novabeam 100's Faroudja circuit modifies and boosts the low-level portions of the video signal in both the horizontal and vertical directions without also increasing noise or adding distortion. This is achieved by enhancing only rapid signal transitions that fall in a middle brightness range. Processing small transitions would end up increasing noise, and enhancing large brightness changes would overemphasize detail, leading to undesirable white or black outlines around objects. As we concluded in our July test report, the system works superbly, adding an obvious sense of detail without (CONTINUED ON PAGE 55)
STEREO DEMANDS THE **REAL SOUND** OF AMERICA'S BEST-SELLING SPEAKERS

Realistic brand speakers from Radio Shack are the first choice of music lovers who know uncompromised sound when they hear it... and solid-value craftsmanship when they see it. Every Realistic speaker is engineered and built to our demanding quality standards, from the mighty Mach Two to our widely acclaimed Minimus series. For the real sound of stereo, millions choose Realistic.

Exclusively at Radio Shack®

A DIVISION OF TANDY CORPORATION
Panasonic puts more power in the dash than most cars have under the hood.

The 90-Watt AM/FM Cassette Car Stereo.

It goes from 0 to 90 watts in less than 1.0 second.
It gives you a choice of Dolby® B & C plus dbx® So you not only reduce tape noise, but eliminate it.
And its Full Logic Control with easy glide in and out loading will help keep your tapes from being jammed or destroyed. It's the new Panasonic CQ-E650 AM/FM Cassette Car Stereo with 90 watts of power.
And it's just one of a new line of Panasonic car stereos that come loaded with state-of-the-art sophistication.
Example: electronic tuning that automatically searches for and locks in the strongest signals.
A Hypertuner that uses three separate systems to help eliminate interference.
A built-in jack* allows you to play your portable CD Player through your Car Audio System. And, of course, auto reverse is standard on most every Panasonic car stereo.
There's even a multi-function display that on some models* actually changes from a soft orange to green when you go from radio to cassette.
So the next time you take to the road, take along a Panasonic car stereo. You'll experience a power that will move you like never before.

*Available on models CQ-E452 and CQ-E352 only.
† Dolby is a trademark of Dolby Laboratories.
‡ dbx is a registered trademark of dbx, Inc.
undesirable side effects. We hope other manufacturers follow Kloss's pioneering efforts to help standard NTSC television reach its full but seldom approached potential.

**MAGNAVOX CDB-650 COMPACT DISC PLAYER**

In a time when, despite claims to the contrary, most CD players behave, measure, and sound almost identical to each other, any model using new technology to provide truly audible gains in performance and several unusual operating features stands out automatically. The Magnavox CDB-650 is such a player.

Among the CDB-650's claims to fame (though not the reason for its appearance here) is its use of two separate 16-bit digital-to-analog converters running at four times the normal sampling rate (176.4 vs. 44.1 kHz) with digital filtration—a formidable technological achievement. More significant, however, is the player's unique Favorite Track Selection (FTS) system, which can memorize a programmed playback sequence for a particular disc. Place that disc in the player at a later date, and the sequence is immediately called out of a nonvolatile memory circuit that stores the sequence with the record number identifying the CD. The player can store sequences for any number of discs up to a total of 785 tracks.

But the main reason the CDB-650 is so special is not what comes immediately to mind when one thinks of player features or sound quality. Then again, if the disc you are trying to listen to skips, sticks, clicks, pops, or is otherwise unplayable, sound quality is ruined absolutely. The CDB-650 provides audibly improved performance not as a result of its audio circuitry, but because it is the first player promising a degree of tracking, error-correction, and error-concealment capability substantially exceeding that of the first generation of machines (which date from 1982).

Three factors are responsible for the improvements. First, the already top-performing Philips (parent of Magnavox) single-beam laser-scanning mechanism has been trimmed down (to 325 grams, about 10 ounces), leading to lower inertia, greater shock and vibration resistance, and better control of laser positioning. Second, unlike most other players, the CDB-650 uses error-correction chips that exploit the full theoretical potential of the CD system's Cross-Interleave Reed-Solomon Code (CIRC). About 60 different error-correction processing "paths" are available to the player; the strategy chosen at any instant is the one most likely to completely correct the particular configuration of errors detected by the system (a process called adaptive error-correction). Lastly, when the error-correction system is swamped with errors from a severely damaged or defective disc, the digital filters in the CDB-650 are able to interpolate over eight consecutive bad samples (the previous Philips chip, like most others, could interpolate only over one sample). The integrated circuits that give this player its unusual capabilities undoubtedly will be used by other manufacturers. We can only hope that they are as successful with the resulting products as Magnavox deserves to be with the CDB-650.

**SONY CDX-A10 DISC JOCKEY CAR COMPACT DISC PLAYER**

Although Sony is a leader in both compact disc and car stereo technology, nothing prepared us for its thoroughly thought-out combination of the two in the CDX-A10 Disc Jockey, a ten-disc car CD changer. Several features immediately mark it as something special. The most obvious is that, to paraphrase an old commercial for a TV set, the works are in the trunk: The player mechanism, its preamplifier, and its optional tuner are designed to be firmly bolted to the inside of the trunk, leaving only a very complete wired remote control in the passenger compartment. Use of a changer eliminates the dangerously distracting task of disc handling while
PRODUCT OF THE YEAR: 1986

driving, reduces the chance of disc damage from handling or dust and grit, and provides extended playing times and fingertip control of a wide selection of music. The vibration-isolated player takes a ten-disc cartridge, which in theory can hold as much as 12½ hours of music, and the operator has direct access to any track on any disc.

As if all this weren't enough, the Disc Jockey is the first car CD player to provide a crucial feature that should be in any car system: a switchable compressor, so that you can play music at a reasonable level above the road noise without risking deafness on crescendos. While this is absolutely vital to enjoyable playback of wide-dynamic-range CDs in the car, it is also suitable for use with Dolby-encoded cassettes and the rare live music broadcast. We hope Sony will be imitated in this feature, as it assuredly will be in the Disc Jockey's revolutionary trunk-mounted changer.

KEF 107 LOUDSPEAKER

The KEF 107 is the culmination of a line of development stretching back more than half a decade, to the Model 105. Its most obvious debt to that respected progenitor is the separate, swivelable housing for the midrange and high-frequency drivers. This lends the 107 many of the structural and acoustical advantages typically enjoyed by small speakers. But there are less obvious borrowings as well, such as decoupling woofer mountings.

Otherwise, however, the 107 is more similar to the Model 104/2, introduced last year. Most significant is its adoption of the 104/2's coupled-cavity bass loading, which combines the advantages of acoustic suspension and bass reflex enclosures, yielding a very desirable combination of deep-bass extension, efficiency, and cone control below resonance. A further gain in effective sensitivity is achieved by means of what KEF calls conjugate load matching, which gives the speaker an almost purely resistive 4-ohm impedance, free of the reactive elements that can severely limit the power output of some amplifiers.

Completely new to the 107 is the Kube: an electronic equalizer designed for connection between preamp and power amp or in a tape monitor loop. The Kube's response is tailored to that of the 107, extending low-frequency response to below 20 Hz while smoothing irregularities at middle and high frequencies that otherwise would require addition of power-wasting elements to the speaker's internal passive crossover networks.

The result of all this innovation is truly splendid reproduction, as documented in last month's test report.

SONY SDP-505ES SURROUND-SOUND DECODER

Sony's SDP-505ES has the distinction of being the first consumer product based on digital signal processing. As such, it marks the start of the DSP era in audio, one promising increased product versatility and higher sonic quality.

DSP is the mathematical transformation of a signal: One series of numbers is changed into a different series under control of an equation or set of equations (for a more detailed explanation, see "Bits & Pieces," September). Those formulas can embody virtually any audio function: switching, mixing, filtering, reverberation, delay, image enhancement, and so forth. The best "number crunchers" for DSP are high-speed digital computer circuits such as those contained in the SDP-505ES. They apply their formulas to the input signals with incredible speed, but only after those signals have been turned into 16-bit binary numbers by the unit's internal analog-to-digital converters. The processed output of the SDP-505ES is in analog form, obtained from 16-bit digital-to-analog converters.
That output hints at the power of DSP. For ambience enhancement, either channel can be delayed from 0 to 90 milliseconds in 0.1-millisecond increments, with no loss of sound quality accompanying longer settings, as happens with analog (charge-coupled device or bucket-brigade) signal delays.

And for accurate Dolby Surround decoding, the 505 implements the required 7-kHz difference-signal filter very precisely and totally in the "digital domain"—no resistors or capacitors here, just arithmetic at work. Our test report on the SDP-505ES is in the September issue.

**PRODUCT OF THE YEAR: 1986**

**YAMAHA DSP-1 DIGITAL SOUND FIELD PROCESSOR**

In the meetings to select High Fidelity's Product of the Year, one nominee went straight to the top of the list: Yamaha's DSP-1 Digital Sound Field Processor. In both concept and execution, it's an extraordinary component.

The DSP-1 is the most sophisticated realization to date of the principle of listening enhancement by multiple-speaker presentation of recovered or synthesized ambience. As such, it represents the culmination of a decade's worth of component designs from a host of companies. It creates the multiple delayed and recirculated signals available from previous devices, but in a wholly innovative way: The spacings of the synthesized reflections, in both time and direction, along with their amplitudes and spectral characteristics, are derived from data taken in actual concert halls and listening spaces and stored in the DSP-1's digital read-only memory. The encoded hall is accurately re-created around the listener by means of digital signal processing. When played over a four- or six-speaker system, the results are stunningly realistic.

The DSP-1 represents an important milestone in the transition from analog to digital audio in that it is the first consumer product to give a real taste of the enormous potential of digital signal processing. Only one of its multitude of functions is performed in the analog domain: the Dolby B decoding required for correct reproduction of Dolby Surround movie soundtracks.

Yet for all its 16 surround-sound simulations and recreations, its 16 special-effects modes, its ability to vary each hall simulation or effect over an impressively wide range, and its excellent performance by all the traditional criteria of fidelity (distortion, noise, and frequency response), the DSP-1 is not a very complex device. There is less going on in it than in a CD player and possibly even an FM tuner. Like all other digital signal processors, the DSP-1 has only three principal subsections: analog-to-digital converters, a microcomputer, and digital-to-analog converters. That microcomputer, and others like it, will eventually alter some cherished concepts of audio component design and manufacture.

For instance, because all the versatility of the DSP-1 stems from the microcomputer's programming, it is not very practical to make a stripped-down version by omitting features—the conventional way to create a line of less costly products. As long as a processing-mode program fits within the available digital memory—and there's evidently quite a bit of it in the DSP-1—it costs no more for the manufacturer to put it in than to leave it out. The most costly parts of the system, the converter chips and the microprocessor, can scarcely be eliminated without also making the device inoperable. Lower-cost digital signal processing will come only with mass production and higher levels of circuit integration, so that more functions are performed by fewer parts.

If digital signal processing develops as we hope it will, the DSP-1 will be seen to be a landmark device, as important a development as, say, the acoustic suspension loudspeaker. At the very least, the Yamaha DSP-1 is, as we said in our September test report, "the most important audio product released since the beginning of the Compact Disc era, the most significant advance in the control of auditory space since stereo, and one of the few components in the history of high fidelity truly meriting the accolade 'breakthrough.'"
VHS-C vs. 8mm

JVC's GR-C7U goes lens to lens with Sony's CCD-V8AFu in a camcorder format faceoff.

How happy I could be with either,
Were 't other dear charmer away.
But while you thus tease me together,
To neither a word will I say.
— John Gay

The truth about JVC's diminutive GR-C7U VHS-C and Sony's CCD-V8AFu 8mm camcorders is that both are outstanding pieces of equipment. I'd be happy to own either one, and so, I believe, would most readers of this magazine. But you'd never guess this from what is being said about them, most notably by Sony and JVC themselves. These camcorders are pawns in a power struggle between two Japanese electronics giants, and as they see it, it's a battle to determine the future of home video into the 1990s.

What's at issue is whether the familiar VHS format will continue as the medium of choice in the home and whether its little brother, VHS-C (or Compact VHS, as JVC calls it), can gain acceptance as a portable tape system. Or will Sony and its allies in the photographic and home electronics industries replace VHS both in the field and in the

Robert Angus is an avid videophile and a frequent contributor to this magazine.
THE ONKYO INTEGRA DX-320 WITH OPTO-COUPLING

THE SOUND IS NO ILLUSION

The Integra DX-320 Compact Disc player is the first of ONKYO's new generation of CD players to incorporate our unique Opto-Coupling digital signal processing system. Conventional CD players transmit digital data internally via printed circuit board wiring, which interacts with analog audio signals to produce Digital Signal Interference (DSI), resulting in an audible "harshness" in the music.

Specially designed high speed Opto-Coupling modules in the DX-320 transfer the digital audio and other data signals to the analog output stage via fiber optics, preventing DSI. The result is noise-free, life-like reproduction with none of the harsh sound characteristics often attributed to other CD players. This remarkable new technology can only be found in the ONKYO DX-320.

Double oversampling and digital filtering greatly improve phase and harmonic accuracy. A fully programmable wireless remote control includes memory selection, phrase capability, and indexing for maximum convenience.

Our unique transport design incorporates ONKYO's exclusive Poly-Sorb rubber-like compound that improves isolation by absorbing extraneous vibrations, eliminating skipping and mistracking.

The Integra DX-320 Compact Disc player fulfills the promise of digital audio, with sound quality that's as close to the original as anything you've ever heard. Audition the DX-320 at your authorized ONKYO dealer today.

Artistry In Sound

200 Williams Drive, Ramsey, N.J. 07446
stuff their stockings with the perfect gift & save 73%

This year, give gift subscriptions to High Fidelity. You'll not only make their holidays happy, you'll spread cheer all year. Because they'll remember your thoughtfulness every time they receive another fresh and exciting issue.

Think of all the special people on your gift list (and, don't forget yourself!) who would like to get more from their sound system. High Fidelity will bring them the latest information on compact discs and CD players, speaker systems, audio-video receivers, digital audio components, cassette decks. Classical, popular, and jazz CD, LP and tape reviews. And more.

It's so easy to give a gift of High Fidelity. A 1-year gift subscription (12 issues) is only $7.98. You save a full 73% off the $30 cover price, and you won't be billed until after January 1st. At this Happy Holiday rate, you can afford to make a lot of people happy — and wrap up your holiday shopping fast! An attractive gift card comes with each gift subscription. Happy Holidays to you.

To Order Call Toll-Free 1-800-247-GIFT
In Iowa 1-800-532-1272
home with 8mm videocassettes? At stake are not only the reputations but also the wallets of some very large corporations on both sides of the Pacific.

Hence, the war of words over these two camcorders. Sony, it seems, not only objects to much of the design and engineering of the GR-C7U but considers the VHS-C format itself to be an abomination. This is hardly surprising for the people who invented the Beta format and watched it go down to defeat by the technically inferior VHS system. Nor is it surprising that JVC would utter equally unjust words about the 8mm format and its ultimate camcorder representative to date: the CCD-V8AFu. The charges and counter-charges have been heated, confusing to the would-be consumer, and often downright misleading. (One might be tempted to say untrue, but companies of this size and stature never dissemble—well, hardly ever.)

For the moment, however, let's step aside from the verbal skirmishing and take a look at the equipment. What we find are two top-of-the-line video systems, both offering the latest in technology and crammed with convenience features and performance. Both use a charge-coupled device (CCD) solid-state imager instead of a conventional camera tube, and they have such features as electronic viewfinders with instant-replay, automatic color balancing, 6:1 power zoom lenses, autofocus, low-light capability, one-hand operation, and the often useful ability to override any or all of the automatic controls.

The Sony machine also offers a maximum recording time of two hours, AFM high-fidelity audio recording (in mono, though), the use of 8mm metal-particle tape (with the promise of improved performance when metal-evaporated videocassettes become generally available), a 1-inch viewfinder (JVC's is 0.6-inch), a shoulder mount, and a "flying" erase head, which permits cleaner insertion edits and scene-to-scene cuts. It costs $1,500.

The JVC unit is both lighter and smaller (2.9 pounds vs. Sony's 5.1 pounds; 4⅛ by 6½ by 8⅛ inches vs. Sony's 5 by 7¾ by 13½ inches, all dimensions including viewfinder). It uses the VHS-C format, which means that the diminutive cassettes can be played on any VHS deck when slipped into an adapter, which is supplied. There are two speeds, equivalent to the SP and EP modes on home decks. At the former speed, you can record up to 20 minutes with a VHS-C cassette; the slow (EP) speed yields a 60-minute recording time. Battery packs capable of driving the system for as long as 120 minutes are available in addition to the 30-minute battery supplied. The list price for the system is $1,800.

In the GR-C7U, JVC has used two of the available HQ processes for improving VHS picture quality. (Not all HQ machines are created equal; this one offers detail enhancement and a 20-percent extension of the white-clip level.) Even slow-speed recordings look very good indeed. It has a macro switch for shooting close-ups and an automatic fader for smooth transitions between scenes (the stationary erase head used will not perform glitch-tree scene-to-scene cuts).

CAMERA COMFORT

In terms of handling, I found the JVC generally easier to use and to tote around. Its controls are easier to find and operate, and the unit is probably simpler for a novice to control. Although Sony's zoom control and recording start/stop buttons are located in the same relative positions as JVC's (within fingertip reach with the right hand inserted in the grip handle), I never seemed to be able to reach the one I wanted when I needed to, mainly because they require greater finger movement from "rest position" (unless you have fairly large hands). It took me a while to get the V8AFu into the record mode the first couple of times I tried it. And while 2 pounds difference in weight may not sound like much, you'll feel it at the end of a day of sightseeing and recording.

I discovered early on, however, that one pays for JVC's lightness and compactness. It's much easier to brace Sony's shoebox-size unit against your shoulder while shooting than to balance the JVC in your hand. The resulting jitter from camera unsteadiness, although present with both machines, is particularly noticeable in the zoom shots of distant objects made by the JVC. If you're willing to lug around the extra weight and bulk of a tripod or if you plan to rest the camcorder on a solid surface while shooting, the JVC will do just fine.

JVC's viewfinder offers a rotary focusing adjustment that is a boon for those who wear glasses. Sony's viewfinder, on the other hand, produces a bigger picture, and I found it easier to see what I was shooting. The Sony viewfinder is more securely attached to the camera body, too. It mounts on a shoe so that it can be removed for packing, and it slides toward or away from the camera body to suit each user. JVC's telescoping viewfinder is affixed to the top of the camera by a swivel bracket, which I found too sturdy and likely to rotate when I least expected it. The bracket moves a full 360 degrees in the horizontal plane and 90 degrees vertically, which seems almost too much of a good thing. The instruction book warns against using it for a handle, as well it might. When zooming and focusing manually, the Sony lens controls proved easier to manipulate without accidentally blocking the lens with the hand.

A few words about the recording times of the two units are in order here. I've traveled with camcorders of various formats on three continents; I've used them for family outings and business purposes; and I've made documentaries and covered meetings for cable TV with them. And only very rarely have I found the 20-minute recording time of a VHS-C cassette used in the SP mode to pose a problem. In fact, in conducting tests on the V8AFu for this report, I used 15-minute 8mm cassettes (they're also available in 30-, 60-, 90-, and 120-minute lengths) to facilitate location of particular recorded segments. Most camcorder shots are relatively short: from 1½ to 5 minutes at most. When you're shooting continuously for 10 minutes or more, it seems like an eternity, and the arm and shoulder joints start to get sore. Likewise, watching a full 10 minutes of home movies can seem like forever, especially if they're somebody else's. Therefore, the 20-minute SP playing-time limit imposed by JVC isn't all that critical; if you need extended playing time, that's what the EP speed is for.

PICTURE QUALITY

Some Sony dealers have been telling their customers that the JVC's picture is so bad that you can't make copies from it or that
it may not reproduce properly on some old VHS VCRs. The truth of the matter is that although more noise is evident in the JVC picture, it’s nowhere near bad enough to make it unviewable, much less unacceptable. I recorded the same scenes at both speeds with the JVC and was almost unable to determine from the picture quality alone which was which. The giveaways were the details in certain scenes and the audio track, which in the EP mode is distinctly low-fi (because the tape speed is even slower than that of an audio microcassette). Even a copy made in the EP mode of the EP original was found very satisfactory by friends I invited to watch.

Part of the credit for this must surely go to the HQ circuitry, the rest to JVC’s CCD image sensor. However, I did notice one unwanted side effect: a sharp outline around two tan dogs frolicking on a shaded green lawn.

I expected to find a good deal of chroma (color) noise visible in the 8mm recordings I made, particularly in large areas of red and yellow, because I had found it in previous 8mm camcorder models. I was pleasantly surprised. Sony was at least as successful as JVC in hiding this granular quality. In sum, while JVC’s SP image was very, very good, Sony’s was just a hair better: It had sharper detail and better color.

Just how superior was the Sony? Not so much that you’re likely to notice the differences—unless you conduct side-by-side tests, as I did—and possibly not enough to outweigh the GR-C7U’s many advantages. In fact, only an experienced eye could notice most of the differences between recordings made simultaneously of the same scene. For example, one of our test scenes showed thick New England foliage blowing in a brisk wind. We panned to a deep-blue sky containing fluffy white clouds and a satellite antenna, a yellow house, and a recently built addition. JVC’s green was tinged with blue, however, resulting in a darker, duller, and less natural color than Sony’s—but again, casual viewers would be unlikely to pick up the difference without a side-by-side comparison (and the original scene just outside the front door). In any case, the JVC results were perfectly satisfactory for all but video fidelity purists.

As the camera panned from the leaves to the white expanse of the satellite dish, the sky became distinctly darker in all three recordings, although the Sony seemed to have less trouble coping with the change in overall light level. JVC’s version of the satellite dish and the clouds had a faintly pinkish tinge, compared to Sony’s snowy white. The only difference between SP and EP on the JVC was in picture definition (worse with EP). Color values remained the same, regardless of VHS tape speed. Another scene had a mass of ripening apples on a tree. Both JVC SP and Sony did very well in separating the still-green fruit from the green foliage around them, but Sony’s colors seemed slightly truer and its images sharper. JVC EP scored much lower on this test.

Both cameras did very well in low-light situations: in a dimly lit shed during the day and by candlelight at night. It would be unfair to award a prize to either model here, but JVC’s automatic focus seemed to have more trouble adjusting to the dim light than Sony’s. Until we switched the autofocus off, it kept focusing on whatever light source was available in the room rather than on the subject to be photographed.

**SOUND QUALITY**

In view of the picture-related nitpicking being speared by both sides in the camcorder controversy, it’s surprising that it was in the audio tests where the greatest differences showed up. Because live music wasn’t available to us during the test period, we made do with Compact Discs played through a pair of particularly good outdoor speakers. We placed the two camcorders side by side to record audio through their built-in microphones while recording a stationary video scene. No doubt about it: Sony’s AFM audio sounded bright and natural while JVC’s SP sound tended toward the dull and noisy. In the EP mode, the JVC results were even worse, with the loss of high frequencies tending to limit the intelligibility of the spoken word. And when the background music happened to consist of a solo piano, the wow was excruciating.

So which camcorder is for you? Well, the plain fact is that neither is a clear-cut winner; each has its strong and weak points. Your choice may depend on how you plan to use the equipment, what you’re most likely to record, and just how good your eyes and ears really are. The differences we’ve outlined above (except for sound quality) are mostly very minor, we’ve exaggerated them simply to be able to draw distinctions. If your sole consideration is for the very best picture and sound quality, you will opt for the Sony. If you’re willing to make some very minor compromises on some of these points in favor of greater portability and ease of use, you should instead choose the JVC.

Your choice also depends on what you’re used to in home video. Both of these camcorders will produce excellent results when you’re taping the kids’ birthday parties or the highlights of your vacation. Both will do well in most business and hobbyist applications, and both suffice as a kind of video instant movie.

But when it comes to critical videophile applications, each camcorder has something special to offer. JVC has touch-button fading and macro (ultra-close-up) capabilities, while Sony does not. Sony offers slight edge on picture quality under varying or low-light conditions. JVC is easier to pack and carry on trips, although its larger cassettes can add considerably to the bulk. It takes off of them (or two in the EP mode) to equal the playing time of one 120-minute 8mm tape. Sony does an excellent job of recording musicians and other scenes enhanced by sound (trains, airplanes, cable cars, tour guides). And so it goes.

Either of these camcorders is a worthy piece of equipment that will satisfy your video-recording needs for many years. To decide which camcorder is right for you, examine your needs and its possible uses and compare these with the strengths and weaknesses listed above. But don’t just take our word for it: Never buy a camcorder without examining it. Ask the dealer to let you handle various units. See for yourself whether their weight, size, and control placement are comfortable. Make a few test recordings under various lighting conditions. Watch the recorded results on a full-size TV screen, not through the viewfinder, paying attention to detail, noise, color accuracy, and how the camera copes with different light and focusing situations. In short, retrace some of the steps I have taken and you’ll be able to make a well-informed purchase.
RADIO SHACK TAKES YOU TO NEW HEIGHTS IN HOME ENTERTAINMENT

Stereo from Six Sources! CD, VCR, TV, Tape, FM, Phono

Total Entertainment. Radio Shack's new System 747 gives you everything: 19-inch color TV/monitor with MTS stereo, VHS Hi-Fi Stereo VCR, CD player, dual cassette deck with high-speed dubbing, digital AM/FM stereo tuner, turntable, equalizer, amplifier, wireless remotes, deluxe three-way speakers and the matching racks.

High-Power Performance. The heart of this magnificent system is our Realistic® SA-1000 amplifier, rated 100 watts per channel minimum rms, into 8 ohms from 20 to 20,000 Hz, with no more than 0.09% THD. Infrared remote lets you adjust and mute the volume of every sound source, pause during cassette operation, even select memorized stations from the digital tuner. The seven-band equalizer gives you total control of frequency response. The dual cassette deck has Dolby B noise reduction and high-speed or real time dubbing. Our Realistic CD-2200 compact disc player has the proven Tri-Spot laser system for accurate tracking. And the LAB-1000 turntable includes a factory-installed magnetic cartridge.

State-of-the-Art Video. Our TC-1000 high-resolution 19" color TV monitor/receiver has a built-in comb filter for dramatically sharper pictures, MTS/SAP decoder for broadcast stereo and second-language audio, and its own full-function wireless remote control.

Our Best-Ever VCR Included. Realistic Mode 41 has the HQ system and comb filters for sharper pictures, plus VHS Hi-Fi Stereo for sound that rivals CD. It also includes a full-function remote control.

Everything at 21% Off. Purchased separately, these quality components total $2,519.60. Buy System 747 complete and you'll have deluxe stereo sound from every source for only $1999. Or as low as $92 per month*.

FREE 1987 Radio Shack Catalog!
Mail to Radio Shack, Department 87-A-580, 300 One Tandy Center, Fort Worth, TX 76102

*Credit plan available. Actual payment may vary depending on balance. Prices apply at participating Radio Shack stores and dealers. Dolby is a trademark of Dolby Laboratories Licensing Corp. TV measured diagonally, simulated reception. Records, tapes and discs not included.
The best CD Player is a matter of opinion. Many opinions.
The audio critics of the world hardly ever agree on anything. But when it comes to superlative CD players, Ken Pohlmann, Len Feldman, Masamitsu Fukuda, Ulrich Smyrek, David Prakel, Yoshiyuki Ishida, Artur Jung, and Hideo Kaneko recommend one model with amazing consistency: the Denon DCD-1500.

How did Denon achieve this exalted status? Not by offering useless buttons, switches and fluorescent displays. But by developing better digital circuitry, building to higher standards, and using better parts. Our proprietary Super Linear Converter is the only one that actually corrects D/A transfer distortion. Each circuit gets its own separate power supply. And our filters are computer-analyzed for linear phase. So you hear sound that rewards the most critical listening.

If a player as reasonably priced as the DCD-1300, these refinements are enough to make even a hard-boiled critic stand up and cheer. And now there's more cause for celebration: three new Denon CD Players. They're built on the same principles as the DCD-1500, and they're even more affordable.

So if you want to hear the best that the Compact Disc format has to offer, get yourself to a Denon dealer. And don't forget to tell him who sent you: Ken, Len, Masamitsu, Ulrich...
**TECHNICS AUDIO COMPONENTS**

- Akai Audio Components
- Technics SL-PJ1J Programmable Compact Disc Player: $149.95
- Technics SL-P500O Deluxe Programmable Compact Disc Player: $249.95
- Technics SA-2490 Digital AM/FM Stereo Receiver: $119.95

**AUDIO ACCESSORY**

- Audio Accessories
- Technics SL-Q022 Quartz Direct Drive $149.95
- Technics SL-Q110 Quartz Direct Drive $199.95

**STEREO RECEIVERS**

- Stereos
- JVC 2X-9V8 Remote Digital AM/FM Stereo Receiver: $149.95
- Marantz SR-940 Remote Digital AM/FM Stereo Receiver: $349.95
- Technics SL-GQ22 Quartz Direct Drive Automatic Tunetable: $199.95
- Technics Si-M31 Quartz Direct Drive Automatic Tunetable: $229.95

**GRAPHIC EQUALIZERS**

- Graphic Equalizers
- ADC Sound Snapper 425X Computer Memory Graphic Equalizer: $229.95

**TEAC CAR AUDIO**

- Sony Car Audio
- Sony ES-89 Digital AM/FM Cassette Auto Receiver: $149.95

**STEREO TAPE SPECIALS**

- Video Tape Specials
- Panasonic 1280 Video Cassette: $38.88

**TEAC VIDEO DISC/CD PLAYER**

- TEAC Video Disc/CD Player
- Teac LV-5000 Laser Video Disc/Audio Compact Disc Player: $499.95

**FREE**

- Enclose coupon with your mail order or mention it at checkout when ordering by phone. (P978)
ON TO THE PAST

Some reflections as the early-music movement reaches Beethoven’s symphonies and piano concertos

LONG BEFORE SUCH THINGS BECAME FASHIONABLE, a series of chamber music concerts performed on antique instruments prompted a young London music critic, intrigued by their “new” sound, to ask for more. “It is greatly to be desired,” George Bernard Shaw wrote in 1885, “that some orchestral concerts be attempted with a view to reproducing the effects heard by Bach, Handel, Haydn, and Mozart, during what may be called the pre-clarinet period of orchestration.” At last, the leaders of the movement he foretold over a century ago are taking up Shaw’s challenge, not only in his beloved Mozart and Handel and not only in public concerts. The early-music movement has now reached Beethoven, and in such recordings as Christopher Hogwood’s of Beethoven’s Eroica Symphony, recently released on Oiseau-Lyre Florilegium (417-235-1, -2, and -4), it has posed a challenge to the hallowed performances recorded by many of the great names of 20th-century conducting.

The challenge, some would say, is that the conductors of period-instrument bands have set out to do Beethoven not their way, but his. But are musicians reared on Baroque niceties up to the sweat and passion Beethoven demands? And how will audiences take to the new scholar-musicians who aspire to replace Bernstein, Furtwängler, and Toscanini?

The answers won’t be long in coming. Two cycles of the Beethoven symphonies are already underway, the one from Oiseau-Lyre that passed the halfway point in September with sessions for the Fourth and Fifth, and a second one from archival EMI/Reflexe, which recorded the Second and Eighth with Roger Norrington’s London Classical Players in July and plans to have all nine finished by the end of next year. On this side of the Atlantic, the Smithsonian Chamber Orchestra under visiting music director Jaap Schroder is slated to record Symphonies Nos. 1, 2, and 3 next year, while American pianists Malcolm Bilson (with John Eliot Gardiner’s English Baroque Soloists, for Philips) and Steven Lubin (with the Academy of Ancient Music, for Oiseau-Lyre) prepare cycles of Beethoven’s piano concertos. While not everybody is doing Beethoven (Trevor Pinnock, on records at least, is sticking to Haydn, Vivaldi, and Handel), the period-orchestra world is buzzing with activity that would have been unimaginable just a
It's not surprising that the city of London, with five full-time conventional orchestras, turns out to be the center of all this activity. Impresarios/conductors like Hogwood, Norrington, Gardiner, and Pinnock draw upon a pool of about 100 musicians to form their ensembles, which in each case center upon a continuing core of principal players. In the small world of period music, loyalty still counts for a lot, and as the careers of several leaders have grown more peripatetic, some of their formerly loyal collaborators have concluded that their own careers are just as important as those of their old bosses. The result has been the creation of a new, self-governing period orchestra called The Age of Enlightenment, which made its debut in June under the direction of the Belgian violinist Sigiswald Kuijken. With advice from musicologist H. C. Robbins-Landon, this band has outlined an ambitious series of concerts over the next three years featuring invited visitors, among them Norrington, Sir Charles Mackerras, Christian Rattle, Nikolaus Harnoncourt, and Gustav Leonhardt, chosen from both the period and conventional-music scenes.

London is not, however, the only locus of period-orchestra activity. From the Netherlands, long a hotbed of period players, comes Frans Brüggen's Orchestra of the 18th Century. Germany is home to the veteran ensemble Collegium Aureum; France boasts several Baroque ensembles, including Kuijken's La Petite Bande; and Hungary has the Capella Savaria, a new ensemble that has already recorded music by Vivaldi, Haydn, and Telemann for Hungaroton Records. Here in the United States, in addition to Washington, D.C.'s Smithsonian Chamber Orchestra, there are California's Philharmonia Baroque Orchestra, led by former Academy of Ancient Music principal flute Nicholas McGegan; Boston's Early Music Festival Orchestra and Banchetto Musicale (now in its fifth season under music director Martin Pearlman); and Steven Lubin's Mozartean Players in New York City.

Playing original instruments, whether in Europe or America, doesn't necessarily mean abandoning conventional work, because there simply aren't enough period gigs to give more than a handful of key instrumentalists a full-time career. But mastering a period style does mean rejecting conventional playing techniques in favor of methods sanctioned by scholarship and motivated by the musicianly instinct that inspired Pinnock, for one, to "experiment with the instruments that the composer knew." Indeed, learning the old style is often facilitated by the instruments themselves. Players and conductors alike acquire what Schröder has called a "natural education" as they familiarize themselves with the alliance between the notes on the page and descriptions in old (and frequently contradictory) musical treatises. The results of this relearning process are often striking. Take the case of the Mozart piano concertos. While Gardiner characterizes modern performances of these scores as a dialogue between a glossy-sounding orchestra and a piece of "monster furniture," performances conceived around period pianos come to terms with the wholly different timbres those instruments have, which not only dictate to a certain extent the music's phrasing and articulation but also distort what's so grandly possible on today's louder and more penetrating concert grand. Furthermore, wind instruments in the classical orchestra, playing at lower pitch and without the mechanical improvements made in range and flexibility in the 19th century, tend more toward mellowness than brilliance, a characteristic shared by the string instruments of the period.

The testimony of period players and the evidence of their scholarly allies should be converging as proof that that has come to the period conductors as the result of making a lot of very popular records. Recording also makes it easier for period-instrument orchestras to survive without having to risk losses from which the musicians must cover out of their own pockets. Some conductors, Gardiner in particular, nonetheless insist that pieces they played live before being recorded, not to waste money, but to ensure that the recorded result represents a completely thought-through performance. Hogwood, on the other hand, is committing so much repertory to disc that he gives every year will be filled with pieces he may not have played even once in public.

With all this activity, it's easy to overlook the fact that the record companies continue to play it safe by issuing yet another version of Vivaldi's Four Seasons or Mozart's Clarinet Concerto, pieces that already have plenty of representation in the catalog. Marketing concerns dictate such moves and explain why Philips is matching Hogwood's complete recording of Mozart's symphonies with a new traversal by Gardiner, and why there will be another recording of Beethoven's Eroica (this one with Brüggen) on the heels of the Hogwood, aimed at the same audience.

It's not surprising that it's the European labels, with most of the groups based in their own territory, that have made period-orchestra records hit items on the American classical charts. So far, the boom has been led by Oiseau-Lyre's Florilegium series, transformed by executive producer Peter Warland in a little over a decade from a superlative ensemble's label into a major market force almost solely on the strength of Hogwood's Academy of Ancient Music. But with EM/Reflexe running Parrott's Taverner Players in Baroque music and Norrington's London Classical Players in Beethoven, as well as Philips fielding Gardiner in Mozart and Brüggen in other classical repertory, Oiseau-Lyre and Hogwood have to cover all by (CONTINUED ON PAGE 83)
SOMETIMES THE MAN WHO HAS EVERYTHING HAS A FEW THINGS TOO MANY.

There's one problem with having all those components in your system. All those remotes in your way. And trying to find the right one when you need it can really test your self-control.

That's why GE® created the Control Central® remote. One infrared remote that does the work of four. Even if they're not GE's.

See, we're not afraid to turn off a few competitors. Or turn them on. So Control Central can power a Pioneer® audio system, fast forward a Fisher® VCR, even supervise a Sony® Trinitron® TV. Simply place it head to head with a most any infrared remote, press the matching buttons, and it learns the operating codes n minutes putting your entire system in the palm of your hand.

And if your system changes, Control Central will change right with it, reprogramming for any new addition.

For those with fewer components, we present the Control Central with fewer functions-Control Central 3.

So get your TV, your Car, your VCR, and your CATV converter under control. The GE Control Central remote.

For the name of your nearest dealer, call The GE Answer Center® at 800-626-2000.

We bring good things to life.
THE CD SPREAD

MINI-REVIEWS OF THE LATEST COMPACT DISCS

BY ROBERT E. BENSON, THOMAS L. DIXON, IRVING KOLODIN, ROBERT R. REILLY, K. ROBERT SCHWARZ, BERT WECHSLER, JAMES WIERZBICKI, BILL ZAKARIASEN

ROSSINI SONATAS FOR STRINGS: CAMERATA BERN

Rossini's Six Sonate a Quattro for Two violins, cello, and double bass were written in 1804, when the composer was a mere twelve years old. Though far from profound, they are remarkably precocious and meticulously crafted works. Child Rossini had no interest in Viennese motivic development or contrapuntal interplay; here, sunny, uncomplicated melody reigns supreme, alternating with frothy, effervescent passagework. The latter gift usually saves the day. Particularly fascinating are those moments when the mature composer shines through: The finales, with their motoric repetitions of rapid passages, presage the radiant climaxes of countless later overtures.

The Camerata Bern's performances are polished, graceful, and polite; passion and force are hardly required by this music. Especially remarkable is the impeccable ensemble that prevails even through the fiendishly difficult violin passagework. Playing time: 54:19. (Deutsche Grammophon 413 310-2.)

K. R. S.

NIELSEN ORCHESTRAL WORKS: GOTHENBURG, CHUNG

This second installment in Myung-whun Chung's traversal of the orchestral works of Carl Nielsen for BIS was rather long in coming (the first, BIS CD 321, devoted to the Second Symphony and the Incidental Music from Aladdin, was issued over two years ago), but, as expected, it was worth the wait. On a generously packed CD, Chung, leading the Gothenburg Symphony, gives us the Maskerade Overture, the Clarinet Concerto, and the Third Symphony (Espressivo). Once again, the young Korean conductor shows a splendidly firm grasp of the tricky Nielsen idiom, and in the case of the Espressivo, he gives a reading of immense heroic breadth and power that recalls Leonard Bernstein's superb performance of it with the Royal Danish Orchestra some 25 years ago. Chung is equally assured in the spiky Clarinet Concerto (Ole Schill is a fine soloist), and the Maskerade Overture possesses optimum bounce. The Gothenburgers' playing seems beyond caviar, and the sound is up to BIS's high standards for instrumental focus and all-over openness of tone. Now for the next volume! Playing time: 67:45. (BIS CD 321.) B. Z.

BRITTEN ORCHESTRAL WORKS: BIRMINGHAM, RATTLE

Simon Rattle's transformation of the City of Birmingham Symphony Orchestra from a regional outfit into a world-class ensemble continues to be one of the great successes of our time. The latest recorded chapter in the saga is devoted to the substantial Sinfonia da Requiem of Britten and the same composer's Rejoicing but certainly not charmless: An American Overture, Occasional Overture, and Suite on English Folk Tunes (the latter three from 1942, 1946, and 1966-75, respectively). Under Rattle's direction, all of it comes off brilliantly, especially those passages that feature the orchestra's percussion and brass sections in tandem. Playing time: 52:47. (Angel EMI CDC 47345.)

J. W.

Britten "Peter Grimes": ROYAL OPERA, BRITTEN

London's 1958 recording of Benjamin Britten's opera Peter Grimes is of historic significance: Britten himself conducts, the late Peter Pears is an outstanding presence in the title role, which was written for him, and the supporting cast, featuring Claire Watson as Ellen Orford, James Pease as Captain Balstrode, David Kelly as Hobson, and Owen Brannigan as Swallow, is superb. The Orchestra and Chorus of the Royal Opera House, Covent Garden, complete the stellar list of participants. The result is an authoritative, powerful performance, essential for all interested in 20th-century opera.

Sonically, this issue (for which Erik Smith drew this description from Edward Lockspeiser: "...a long bridge passage, chiefly in the lower strings, was made to sound almost Musorgskyan [sic] in its harrowing gruesomeness." Thus it always was with Funwangler, who could produce totally absorbing revelations in sections of masterpieces other conductors merely passed over. In that sense, most of Funwangler's recorded performances have become self-recommending. These wonderful accounts of the Seventh and Eighth symphonies—both from a broadcast of April 14, 1953—fall directly into that category. What with six performances of the Seventh and five of the Eighth listed in the latest Funwangler discography (published by the British Funwangler Society), it would be impossible to discuss the variations in each within the scope of a limited review. Suffice it to say that these accounts, issued by Deutsche Grammophon in recognition of the Furtwangler centenary, represent the conductor and his beloved Berlin Philharmonic in top form, and that the sound engineers of the time and the DG restorers of the present day have together achieved something of a sonic miracle. The Eighth in particular emerges with a degree of symphonic weight that all but removes it from the category of "lighter" Beethoven to which it seems to have been assigned by so many other conductors. It is surely one of the glories of the CD medium that we are offered such classics as these. Who says the industry has no vision? I doubt that any record catalog contains more absorbing performances. Playing time: 66:20. (Deutsche Grammophon 415 666-2.)

T. L. D.

Beethoven Symphonies: Berlin, Furtwangler

In one of his first post-world war ii concerts with the London Philharmonic, Wilhelm Furtwangler performed Beethoven's Seventh. A part of the final movement drew this description from Edward Lockspeiser: "...a long bridge passage, chiefly in the lower strings, was made to sound almost Musorgskyan [sic] in its harrowing gruesomeness." Thus it always was with Funwangler, who could produce totally absorbing revelations in sections of masterpieces other conductors merely passed over. In that sense, most of Funwangler's recorded performances have become self-recommending. These wonderful accounts of the Seventh and Eighth symphonies—both from a broadcast of April 14, 1953—fall directly into that category. What with six performances of the Seventh and five of the Eighth listed in the latest Funwangler discography (published by the British Funwangler Society), it would be impossible to discuss the variations in each within the scope of a limited review. Suffice it to say that these accounts, issued by Deutsche Grammophon in recognition of the Furtwangler centenary, represent the conductor and his beloved Berlin Philharmonic in top form, and that the sound engineers of the time and the DG restorers of the present day have together achieved something of a sonic miracle. The Eighth in particular emerges with a degree of symphonic weight that all but removes it from the category of "lighter" Beethoven to which it seems to have been assigned by so many other conductors. It is surely one of the glories of the CD medium that we are offered such classics as these. Who says the industry has no vision? I doubt that any record catalog contains more absorbing performances. Playing time: 66:20. (Deutsche Grammophon 415 666-2.)

T. L. D.
BEETHOVEN SEVENTH:
KEILBERTH

Of the 12 versions of Beethoven’s Seventh Symphony I possess, this one by Joseph Keilberth and the Berlin Philharmonic is the best—or should I say, my favorite. It came as a surprise when I first encountered it on a Telefunken record I have long since treasured, I had not really heard of Keilberth, who was little known in comparison with the great name conductors whom he displaced. That first impression is now strongly reaffirmed by Teldec’s reissue of this classic performance on a CD generously filled out by the Egmont Overture and Leonore Overture No. 3. The CD is one of a series dedicated to the artistry of Keilberth, who died in 1968 during the second act of a performance of Tristan und Isolde.

Few works of music can communicate so terrifying a sense of power as the Seventh, if it is allowed to build in all its inexorable force. Keilberth had the controlled pacing, combined with the lack of eccentrcity, necessary to gather and release that overwhelming power. There is an overhang of tension in his performance that makes even its most pastoral moments electrifying.

The sound, from a 1967 analog recording, is greatly improved over the original incarnation on Telefunken. Though not of audiophile quality, it is still considerably more than acceptable. The excellent performances of the overtures date from 1960 and 1961. Their slightly dated sound in no way diminishes their power. Playing time: 57:18. (Teldec 8 43192.) R. R. R.

BRAHMS FIRST; HAYDN VARIATIONS: FURTWÄNGLER

Contrary to prevalent opinion, critics should allow themselves a holiday once in a while, even while reviewing. I intend to do just that now.

The Furtwangler discography lists 12 recordings of the Brahms First Symphony. After having sampled a fair share of them, along with most of the other major versions of the present and past, I am happily forced to concede that this account by the Berlin Philharmonic, released by Deutsche Grammophon as part of its Furtwängler centenary observation, is the greatest performance of this majestic human drama I have ever heard. (And I would add that the only living conductor capable of making passionate music on this level is Leonard Bernstein.) Coupled with the symphony are the Haydn Variations, which receive a performance on the same plate.

The original broadcast sound (from 1952 and 1950) was fine. The CD restorations are wonderful. Playing time: 68:23. (Deutsche Grammophon 415 662-2.) T.L.D

DVOŘÁK, GOLDMARK VIOLIN CONCERTOS: MILSTEIN

This Angel compact disc resuscitates beautiful performances by Nathan Milstein of the Dvořák and the Goldmark violin concertos, recorded a year apart—the Dvořák in 1966 with Rafael Frühbeck de Burgos conducting the New Philharmonia Orchestra, and the Goldmark in 1967, with Harry Blech and the Philharmonia Orchestra. The Goldmark was previously issued on Seraphim.

Both works were written in the 1870s, and one would have to be a grump not to like them. Although they remain on the periphery of the concert repertory, they are hard to resist in performances as enlivening as these: Milstein plays them as serious music, not simply as showpieces, yet he is scintillating in the bravura passages. His approach is shared by both of his collaborators, as a result, the music shines. The sound, if not the latest, is fine and only occasionally constructible in the tutti passages. Playing time: 60:56. (Angel EMI CDC 47421.) R. R. R.

HAYDN, SCHUMANN SYMPHONIES: FURTWÄNGLER

This volume in the Deutsche Grammophon series of CD reissues in honor of Wilhelm Furtwängler deserves the most careful consideration by any who love Furtwänglersians alike, as well as by anyone foolish enough to get caught in the middle.

The account of Haydn’s Symphony No. 88 is a fine one, a performance full of insight, yet with a degree of solemnity that may leave some wondering. Alongside it, Schumann’s Manfred Overture receives a statement distinguished by a quality of sympathetic attention that I have heard only in the same conductor’s commercial recording of the work (made in 1951, two years after this live performance) and in Charles Munch’s early mono LP. For the collector, of course, the performance of the Schumann Fourth Symphony is what claims the major consideration. In this, one of Furtwängler’s final studio recordings (made on May 14, 1953), the difficult-to-introduce Fourth emerges with more of the feeling of a passionate tone poem than I have ever experienced on records. Although it is understood that there will be those who prefer the “classic” understanding lavished on the score by Guido Cantelli, I find myself completely swept away in my enthusiasm for conducting as passionate as Furtwängler’s.

As with every other volume in this series, the performances by the Berlin Philharmonic are arresting, and, in their unique way, quite beyond normal criticism. Playing time: 65:50. (Deutsche Grammphon 415 661-2.) T.L.D.

SCHUMANN SYMPHONIC WORKS:
STUTTGART RADIO, MARRINER

The appeal of this disc will be for those Schumann lovers who (like me) are happy to have a Compact Disc version of the seldom performed Overture, Scherzo, and Finale. I hasten to add, however, that earlier accounts, such as the one by Herbert von Karajan, will probably loom longer in memory than this one.

The disc offers in addition average performances of Schumann’s Symphony No. 1 and the Manfred Overture that will add little luster to Neville Marriner’s magnificent discography. The reading of the symphony does not stand up to the competition offered by the Vienna Philharmonic and Leonard Bernstein on CD, to say nothing of older performances on standard LPs.

Let us hope, then, that this is not the beginning of another Schumann cycle [It is — Ed., unless Marriner’s personal sympathy for the other symphonies greatly exceeds what is all too obvious here. The catalog is already crowded with tepid, neutral performances of these works — and whatever faults they may contain, the symphonies of Schumann are not by nature pallid. Playing time: 60:01. (Capriccio CDC 10063. Distributed by Delos International.) T.L.D.

FAURÉ QUÉMIER, "ÉLÉGIE," "MESSE BASSÉE"

This disc, admirably remastered from analog, offers one major work and two shorter ones of Gabriel Fauré, all involving performances by the French conductor.

The Requiem is presented in its full orchestral version but performed under the direction of Michel Corboz with such restraint as to be chamber-like. This seems to be a family affair: The organist is Philippe Corboz and the chorus master André Corboz. Fortunately, there are no squabbles. The collaboration produces a hushed, beautiful reading, full of feeling. Soloists are both soprano Alain Clément and baritone Philippe Huttenlocher, with the chorus of the Maitrise Saint-Pierre-aux-Liens de Bulle and the Bern Symphony Orchestra.

As a bridge between two church works, Frédéric Londe plays the Élégie for Cello and Orchestra with Armin Jordan leading the Monte Carlo Philharmonic. The disc ends with the short Messe basse also lovingly sung by soprano Arlette Seyer, with organist Marie-Claire Alain and the Ensemble Vocale “Audite Nova” of Paris directed by Jean Sourisse. While the booklet says the disc’s playing time is 66:26, it reads out as 56:34. (Erato ECD 88126.) B. W.

MAHLER SYMPHONY NO. 4: VIENNA PHILHARMONIC

Bruno Walter died in 1962. A dozen years after this recording was made at the Salzburg Festival. His account of Mahler’s Fourth Symphony is characterized by his highly uncommon sense of both the music and the style of playing of the Vienna Philharmonic and is defined by his identity with the composer, a man whose musical life he shared. Unfortunately, the recorded sound is not the best, and Irmgard Seefried’s singing in the finale lacks the expressiveness she imparted to the music in a later, more responsive effort in live performances of the New York Philharmonic conducted by Georg Solti in January 1962. Playing time: 54:30. (Varèse Sarabande VCD 47228.) I.K.
In the trendy world of high tech electronics-of-the-month, Peter Perreaux makes each unit as if it were his last... and yours.
OPERAS RARA RIDES AGAIN

SOME OF THE UNHERALDED VOCALISTS WHO MAKE THIS A WORTHWHILE COLLECTION (TOP TO BOTTOM): DELLA JONES, YVONNE KENNY, AND MARILYN HILL SMITH

VARIOUS PERFORMERS:
100 Years of Italian Opera,
Volume One (1800-1810)


Some might assume that if 24 operas by 17 composers have been undisturbed for 175 years there must be a reason and that Opera
Rara must be digging up the dregs. Nothing could be further from the truth. All of the music recorded on these three discs is worth hearing—more than once—and we should be in Opera Rara’s debt for making it available to us.

Opera was clearly the form of popular entertainment in Europe in the first half of the 19th century; the public demanded and got new operas the way Americans currently demand dozens of new movies each year. Judging from these works, the level of performance was quite high. Nothing here is easy to toss off; the arias, duets, and ensembles require disciplined, well-trained singers with the ability to execute a smooth legato line, trill, perform various vocal acrobatics, and command a two-octave range, all while making the words, particularly in the comic pieces, clear and meaningful. These discs present the complete range of Italian opera at the start of the 19th century—from opera seria to historical drama to farce to opera buffa—works that were presented not only in Italy but in France, England, Austria, and Germany as well.

It would be impossible to analyze each selection offered here without turning the review into an academic tract, but several must be singled out for particular praise. One is Giovanni Simone Mayr’s L’Amore congiugale, which appeared in 1805, three years before Beethoven set the same story in his Fidelio. Eidwenn Harrhy sings the role of Zeliska (the action of the opera has been moved from Spain to Poland), and the aria recorded here is the equivalent of Leonora’s “Abscheulicher.” It is a gentler piece, more spiritually probing than furious, but the dramatic coloratura of the final part is as thrilling a piece as one would want to hear. Similarly, there is an excerpt from Marco Portogallo’s La Serenissima which stands up superbly alongside Rossini’s setting, which was presented 17 years later. It is sung here by the spectacular Yvonne Kenny, and it makes one wonder why this singer’s career is not on the international level. This aria would throw fear into even Joan Sutherland’s heart; its high-flying floridture, rapid scalework, and staccato passages make a fitting challenge to a great singer.

Fernando Paer’s Sargina is a representative of a Mozaritan tenor aria exquisitely sung by Keith Lewis, who takes a high D with grace and follows it with a fine trill. The finale to the first act of Niccolo Zingarelli’s La Se- renissima is given here complete. It is an energetic quartet sung by Marilyn Hill Smith (with her lovely bassoon obbligato), tenor Ian Caley, and baritone Russell Smythe. The result is Bach-like becomes a cataclysmic event. Yet it is just as viable as the dutiful, impersonal performance—turn out to be more than mere mannerisms. Maisky is an insightful musician who employs his methods as a means to achieving long, thoughtfully directed phrases, sustained to nearly impossible lengths. His rich tone and utterly seamless bow stroke aid him in shaping those phrases and in elucidating implied polyphonic lines. The result is Bach of harrowing intensity and visionary power: In Maisky’s hands, a simple three-line Sarabande becomes a catalyzing piece, or the quietude of the Preludes and the slower movements; in the faster Dances, he is forced to be more rhythmically disciplined.

Yet Maisky’s freedom of tempo, his immense dynamic range, and his extraordinary timbral variety—from a hushed, breathy pianissimo to a bright, assertive fortissimo—turn out to be more than mere mannerisms. Maisky is an insightful musician who employs his methods as a means to achieving long, thoughtfully directed phrases, sustained to nearly impossible lengths. His rich tone and utterly seamless bow stroke aid him in shaping those phrases and in elucidating implied polyphonic lines. The result is an achievement of harrowing intensity and visionary power: In Maisky’s hands, a simple three-line Sarabande becomes a catalyzing piece, or the quietude of the Preludes and the slower movements; in the faster Dances, he is forced to be more rhythmically disciplined.

Martha Argerich joins Maisky in a performance of the three cello and piano (really viola da gamba and harpsichord) sonatas. She succeeds in tempering some of his mannerisms, but she shares his questing, poetic spirit. While the tempos are less extreme and the rubato more sparing, the dynamic and timbral variety and that ability to craft lengthy musical lines are still much in evidence. Argerich applies a pleasantly light touch, though the piano’s recorded sound is somewhat muddy. The accounts are imbued with a marvelous combination of probing intellect and impetuous spontaneity, and while hardly idiomatic, they are never less than challenging. K. Robert Schwarz
BEETHOVEN:

BEETHOVEN:
Symphony No. 9, in D minor, Op. 125.

FRANCK:
Symphony in D minor.

STRAUSS:
Don Juan, Op. 20.

BILL TAKANASHI

THE BOOMS OF COMPACT-DISC RECORDING seem to have no bounds, even when the technology is applied to the restoration of performances that were originally recorded on acetate transcription discs. The Philips label is now in the process of reissuing the famous 1939-40 broadcast performances of the Concertgebouw Orchestra of Amsterdam under Willem Mengelberg that were once available in LP format. Listeners who are partial to the unique Mengelberg style (and even those who emphatically are not) need no introduction to these performances. Mengelberg was a law unto himself, and there was scarcely a score that emerged from his scrutiny without cutting or revisions to tempos, phrasing, and orchestration. He was definitely not a conductor for purists, but the purists themselves had to admit that he was one of the great podium geniuses of all time. Moreover, he hewed the Concertgebouw into an instrument of rare perfection of response (sorry to say, the orchestra today just doesn’t play the way it did in 1940).

A detailed description of these performances would be impossible here—as I said, anyway, they are familiar to most record collectors. Included are definitive readings of the Beethoven Eighth and Don Juan (notably superior to their studio counterparts), a most illuminating Franck Symphony, and a classically inimitable Mahler Fourth. On the debit side are some infuriating idiosyncrasies, mainly the patently absurd treatment of the last few chords of the Beethoven Ninth. Never mind—these performances remain compulsory listening. By the way, one thing remarkable about them is that several took place immediately before or after the German invasion of the Netherlands; that sad event apparently had no effect artistically upon conductor or orchestra. Philips’s CD processing hasn’t removed the surface noise of the original discs, but otherwise the sound quality is markedly improved, especially with regard to the defective dynamics that plagued the original issues. All in all, a noble project, which thus far Philips has nobly accomplished.

BEETHOVEN:


BEETHOVEN:
English Chamber Orchestra, Thomas. Steven Epsiein, prod. CBS Masterworks IMT 39707-4 (D).

BEETHOVEN:

THE ACADEMY OF ANCIENT MUSIC’S DIGITAL coupling of Beethoven’s First and Second Symphonies, the first installment of a new Beethoven cycle played on original instruments, is one of the most striking Beethoven symphony recordings to come along in

TWO HITS FOR ANY SEASON

DIGITAL. CHRISTMAS.
DIGITAL. BROADWAY.

It’s Christmas like you’ve never heard it before. It’s Broadway better than it would sound in the theatre. Arranged, designed and produced especially for your Compact Disc player, these two recordings feature the broadest range of tone ever presented in holiday or show music. Performed by the brilliant Orchestra Manhattan and featuring a magnificent chorus on many of the holiday selections, these hour long recordings are for the serious audiophile and for all lovers of great music.

TWO GIFTS THEY WON’T ALREADY HAVE.

Featuring Orchestra Manhattan conducted by Byron Olson.
ON MANHATTAN COMPACT DISC.
ALSO AVAILABLE ON HIGH-QUALITY XDR Cassettes.
years. Both performances were recorded without a conductor (Christopher Hogwood led from the fortepiano). The tonal scale is modest, the tempos fast and unmodified, the overall approach strongly reminiscent of the later Toscanini in its clean lines and agogic simplicity. Heard next to these remarkable performances, Herbert von Karajan's latest digital recordings of Beethoven's First and Second Symphonies, with their stodgy tempos and jumbo orchestral forces, sound almost as obese and ponderous as Klemperer on a bad day.

Michael Tilson Thomas's digital recording of this coupling on CBS is part of a "chamber version" of the Beethoven symphonies that he is currently recording with the English Chamber Orchestra. These interpretations lie somewhere between the anachronistic romanticism of Karajan and the radically "new" approach of Hogwood. Thomas's generally conventional tempos are energized by the passionate playing that he draws from the English Chamber Orchestra. For those who find the sound of original instruments unattractively raw but like the idea of Beethoven's symphonies performed on a comparatively small orchestral scale, these excitingly intelligent performances will prove very satisfactory. Even if you definitely prefer original instruments, you will prove very satisfactory. Even if you definitely prefer original instruments, you should listen to this recording. Michael Tilson Thomas is the best conductor we have today, and everything he does is worth hearing.

**Terry Teachout**

**BERLIOZ:**

*Nuits d'été, Op. 7.*

**RAVEL:**

*Shéhérazade.*

Baker; New Philharmonia Orchestra, Barbirolli. Christopher Bishop, prod. Angel EMI 4AE 34473 [A].

DAME JANET BAKER'S MEMORABLE SIXTIES RECORDINGS of Berlioz's *Nuîts d'été* and Ravel's *Shéhérazade* have been digitally remastered by Angel and are now available on LP and cassette. Though not always ideally idiomat ic, Dame Janet's extraordinarily intense and sensitive singing, beautifully accompanied by Sir John Barbirolli and the New Philharmonia, remains an expressive touchstone in both works. The remastering is quite effective, and there is still no more satisfying coupling of these great cycles. **Terry Teachout**

**BERNSTEIN:**

*Candide.*

Mills, Enèl, Lortkipanidze, Castle, Reese, Harrold, Billing, Clement; New York City Opera Chorus and Orchestra, Mauceri, Elizabeth Ostrow, prod. New World Records NW 340/341 [D, 2].

WHEN LEONARD BERNSTEIN'S *CANDIDE,* the comic opera based on Voltaire's novella, opened at the Martin Beck Theater on Broadway on December 1, 1956, Walter Kerr in the *Herald Tribune* led the charge: "Three of the most talented people our theatre possess—Lillian Hellman, Leonard Bernstein, and Tyrone Guthrie—have joined hands transforming Voltaire's *Candide* into a really spectacular disaster." Other critics were far more favorably disposed toward the work, but the public was not won over. The curtain came down for good after 73 indifferently attended performances.

The blame was placed on those proverbial broth-spoilers: too many cooks. There was Lillian Hellman's libretto, straining to find a parallel between the hero's naive belief in the philosophy of his teacher, Dr. Pangloss, that "all is for the best in this best of all possible worlds" and the excesses of Senator McCarthy's then rampant witch-hunt for Communists. There were the lyrics of poet Richard Wilbur, which had been turned over for renovation to the clever John La touche and the even cleverer Dorothy Parker. There was the eye-filling but lumbering production staged by Tyrone Guthrie, who up to then had dealt with operas but never with a musical. Though caught in the middle, the cast—Max Adrian, Robert Rounseville, Barbara Cook, Irra Petina, et al.—was an abundantly gifted one.

Bernstein had proven his worth as a contriver of sophisticated scores with *On the Town* and *Wonderful Town* and was to do it again a year later with *West Side Story.* For *Candide,* he concocted a lavish score that was hailed as delightful. But it took a persistent cult of admirers—armed with Columbia's stunning original-cast recording—to sustain hopes down through the years that *Candide* would emerge as a viable work for the stage.

In 1974, with a new book by Hugh Wheeler, additional lyrics by Stephen Sondheim, John Mauceri as musical director, and a cast of young, willing, athletic interpreters with attractive looks and voices, Ruth Mitchell and Harold Prince (who also directed) brought *Candide* back to Broadway (after 73 performances at BAM's Chelsea Theatre Center) for a 740-performance, critical if not financial, theater-in-the-round success. The revival, complete with dialogue, was released on a two-disc set by Columbia (S2X-39293). A decade later, on October 13, 1982, *Candide* awoke once more, this time as a full-flung operatic work in an elaborate, much-praised staging by the New York City Opera. It is that version, also staged by Prince, that New World Records has now recorded on two LPs—marking its initial venture into the Compact Disc and cassette formats at the same time. (When I checked with the label, it had just sent the entire lot of cassettes back to the manufacturer for failing to meet the company's technical standards.)

The question is, which *Candide* to choose? The landmark original-cast recording in stereo (Columbia OS 2350) lives up to its vaunted reputation but contains only a part—the best part, to be sure—of the music. The later Columbia release, with every note and all the dialogue intact, sweeps the listener into the action and holds him there so intriguingly that when I listened to it recently I refresh my memory, I couldn't re-
sist playing all four sides. It was recorded, however, with a chamber orchestra of only 13 players, and the singing, for all its youthful appeal, is less than spectacular. Let’s face it: Any true Candide afficionado is simply going to have to find room on the shelf for all three versions.

The new album, with only a scattering of spoken lines, can’t purport to take the listener along step by step on that bitter but hilarious voyage around the globe that all but shatters the innocent hero’s faith in the creed of Dr. Pangloss, but it does contain absolutely all the music, as the composer originally orchestrated it with help from Hershy Kay. It is exuberantly performed—again under Maucen’s intrepid supervision—by the New York City Opera Chorus and Orchestra and a cast of certificated opera singers who may not be household names yet but assuredly know their business. These forces combine to do Bernstein’s scintillating and ambitious—if occasionally pretentious—conception proud.

David Eisler’s lusty tenor is just right for the title role, though Errie Mills, fine as she is, is not quite as enthraling as was the inimitable Barbara Cook in the part of Cunegonde, the indescribably heroine whom even conchibungie cannot corrupt. Scott Reeve makes Maximilian sound as good as he is alleged to look. Joyce Castle, as the Old Lady from Wallenstadt, Il Penseroso, Les Jeux d’eau à la Villa d’Este (Annees of Plerinage), Hungarian Rhapsody No. 13.

LISTEN: Piano Works.
Watts. Marc Aubert and Joanna Nienzen, prod. Angel EMI 4DS 37534 [D]. ©© CDC 47380.


LISTEN: Piano Works.
Watts. Marc Aubert and Joanna Nienzen, prod. Angel EMI 4DS 37535 [D]. ©© CDC 47381.

Sonata in 8 minor; Valse ouliée No. 1; Nuages gris; En rêve; Schloflos; Frage und Antwort; Torsendecomposend; Etude No. 10; Bagatelle ohne Tonart.

ANDRÉ WATTS, HAVING SWITCHED FROM CBS MASTERWORKS TO ANGEL EMI AFTER A Long ab-

NAME_2556791
sence from the recording studios, has just brought out a matched pair of Liszt recitals. Each of these thoughtfully programmed albums, recorded in long takes so as to capture the atmosphere of a live performance, contains one major work and an assortment of shorter pieces. The selections range from the B minor Sonata and the Paganini Études to the later (and greater) Liszt of such subtle miniatures as "Nuités grâî" and "Les jeux d'eau à la Villa d'Este." Watts's playing is dazzling in its technical finish and refreshing in its lack of interpretive idiosyncrasy. Though some listeners will prefer a more explicitly personal approach to these Liszt works, the performances are highly satisfactory all the same, and André Watts's playing has never sounded so good on record.

Terry Teachout

POWELL: Sonate psychologique; Variations and Double-fugue on a Theme of F. C. Hahn, Op. 20. André Watts. Carter Harm on and Eve Beglarian, prod. Composers Recordings CRC 505 (A). Virginia Powell was a pianist and composer whose work is generally given short shrift in history texts. Yet Powell's mixing of Anglo-Saxon folk elements with turn-of-the-century German post-Romanticism resulted in a highly distinctive, if at times tortuous, style that is reinspiring a new cadre of supporters. One is University of Maryland professor/pianist Roy Hamlin Johnson, who here provides a convincing presentation of two Powell piano pieces: Sonate psychologique and Variations and Double-fugue on a Theme of F. C. Hahn. The sonata enters a morally diffuse, psychologically troubled world that, for me, has a strong resonance with the later novels of Henry James. The recording is fine, the Composers Recording pressing a bit on the noisy side.

Noah André Trudeau

SIBELIUS: "Kullervo" Symphony, Op. 7; Tanon synty (The Origin of Fire); Oma maan (Our Native Land).

Kullervo was heard complete again until the composer's son-in-law, Jussi Jalas, revived it during the Helsinki Sibelius Festival of 1958, a year after its creator had died. It didn't pass into the international repertory, however, until Paavo Berglund led the Bournemouth Symphony Orchestra and Finnish vocal forces in a 1971 Angel recording, which became a surprise best-seller. Since then, other conductors (notably Kenneth Schermerhorn in Milwaukee) have taken up the Kullervo gauntlet to great audience and critical acclaim.

The character of Kullervo himself might be described as the Joe Blow of the Kalevala (the Finnish national epic). In the main, this immense multicanopo poem celebrates Finland's legendary heroes and their superhuman deeds of greatness; Kullervo, however, never does anything right. He spoils everything he touches, including his own sister, whom he unwittingly beds during a whirlwind sleigh ride over the snow (oh, those Finns!). Sibelius's powerful—if at times rather ruminative—music mirrors the stark, larger-than-life tragedy of this hapless character: in the somber, almost Brucknerian finale ("The Death of Kullervo"), in which our antihero meets his end by falling on his own sword.

"Finnish music, but not music quite that Finnish (whatever that was supposed to mean). At any rate, Kullervo wasn't heard complete again until the composer's son-in-law, Jussi Jalas, revived it during the Helsinki Sibelius Festival of 1958, a year after its creator had died. It didn't pass into the international repertory, however, until Paavo Berglund led the Bournemouth Symphony Orchestra and Finnish vocal forces in a 1971 Angel recording, which became a surprise best-seller. Since then, other conductors (notably Kenneth Schermerhorn in Milwaukee) have taken up the Kullervo gauntlet to great audience and critical acclaim.

The character of Kullervo himself might be described as the Joe Blow of the Kalevala (the Finnish national epic). In the main, this immense multicanopo poem celebrates Finland's legendary heroes and their superhuman deeds of greatness; Kullervo, however, never does anything right. He spoils everything he touches, including his own sister, whom he unwittingly beds during a whirlwind sleigh ride over the snow (oh, those Finns!). Sibelius's powerful—if at times rather ruminative—music mirrors the stark, larger-than-life tragedy of this hapless character: in the somber, almost Brucknerian finale ("The Death of Kullervo"), in which our antihero meets his end by falling on his own sword.

Noah André Trudeau

SIBELIUS: "Kullervo" Symphony, Op. 7; Tanon synty (The Origin of Fire); Oma maan (Our Native Land).

Kullervo was heard complete again until the composer's son-in-law, Jussi Jalas, revived it during the Helsinki Sibelius Festival of 1958, a year after its creator had died. It didn't pass into the international repertory, however, until Paavo Berglund led the Bournemouth Symphony Orchestra and Finnish vocal forces in a 1971 Angel recording, which became a surprise best-seller. Since then, other conductors (notably Kenneth Schermerhorn in Milwaukee) have taken up the Kullervo gauntlet to great audience and critical acclaim.

The character of Kullervo himself might be described as the Joe Blow of the Kalevala (the Finnish national epic). In the main, this immense multicanopo poem celebrates Finland's legendary heroes and their superhuman deeds of greatness; Kullervo, however, never does anything right. He spoils everything he touches, including his own sister, whom he unwittingly beds during a whirlwind sleigh ride over the snow (oh, those Finns!). Sibelius's powerful—if at times rather ruminative—music mirrors the stark, larger-than-life tragedy of this hapless character: in the somber, almost Brucknerian finale ("The Death of Kullervo"), in which our antihero meets his end by falling on his own sword.

Noah André Trudeau
Certainly it sounds so in this superb new presentation, which notably surpasses Berglund's earlier effort. The greater clarity and impact of digital sound has a lot to do with this, but Berglund has, in addition, completely rethought the piece. In his first recording, he made many emendations in the original orchestra, taking out some inner voices that he claimed muddied the instrumental texture, but at the same time removing some important midrange dissonant string writing, the loss of which left the second movement, for instance, sounding rather barren. Berglund has restored some of these passages, and the improvement should be apparent to any Sibelian. Moreover, slow tempos are slower and fast ones faster, which helps considerably in holding the listener's interest. The playing of the Helsinki Philharmonic seems beyond cavil, as does the singing of chorus and soloists. Jorma Hynninen's contribution in the title role is, as expected, definitive. Hynninen is also featured on the first recording in some 25 years of The Origin of Fire, an inimitably blunt, blunt setting of the miracle that is described in the 47th canto of the Kalevala. Written in 1902, it's a striking example of Sibelius's most uncompromising style: tough, not especially attractive, but impeccable, and almost all the same. A late, purely choral work, Our Native Land, receives its first recording. Written during the bloody Civil War of 1918, it's a surprisingly conciliatory and optimistic piece, quite winning in its lyricism and (when one follows the translation of Sanul Kuusela Kallio's poem) very inspiring as well. In sum, this superbly performed disc, the 1984 Falstaff, is a stunner. If one were to compare this release with Mahler, it's a stunner. Plain about a few patches), and like the bearably moving Mahler Ninth Symphony (212) 680-3633

For fastest service call: (212) 684-6363

or Write Direct:

2 PARK AVE., DEPT. 15, NEW YORK, NY 10016
HOURS: 9AM-7PM EST Mon-Sat
GET THE HIGH END. ON THE FLIP SIDE.
INTRODUCING THE FUJITSU TEN DUAL AZIMUTH.

Auto-Reverse never sounded better. Only a re-calibrated tape head permits perfect sound reproduction in Forward and Reverse. Fujitsu Ten's unique Dual Azimuth System automatically adjusts the tape head, realigning it with the tape. The result: an enhanced Dolby and the full range of frequency response in both directions.

FROM $250.....TO $2000

The Dual Azimuth Adjusting System introduced in Fujitsu Ten's incredible $2000 Compo is now available in the new "M" Series. Features of the M3 auto-reverse cassette receiver include electronic tuning, pre-set scan, Ultra Tuner (for superior FM reception), Dolby NR, automatic tape program search, high power (56 Watts total output), 4 channels amplified, soft green fully illuminated controls and, of course, the expensive Dual Azimuth System. Like all Fujitsu Ten car audio products, the "M" Series offers you high-end performance at a reasonable price: $250-$350.

FUJITSU TEN CAR AUDIO
51 MILLION UNITS...34 YEARS EXPERIENCE

Write: Fujitsu Ten, 19281 Pacific Gateway Drive, Dept. 321, Torrance, California 90502.
©1986 Fujitsu Ten Corp. of America. In Canada: Neneco Canada Inc., Toronto, Ontario, Manufactured by Fujitsu Ten Ltd.
out the Requiem, Karajan's simplicity now shows up that style for the stunt it is.

Sonically, as well, he surrenders his usual dictatorial control of the mikes for the more naked sound of the orchestra and live singers in a real space. A thrilling sound it is, too. (When was the last time we heard genuine hall resonance in a Karajan recording?) Here the swelling and dying away of the Res timentor inspires genuine awe, conveying, like no recording I've heard, the terrifying majesty the text evokes. (It's the quick decrescendo with the hall still resounding that defines the power of the initial jolt.)

The perceived life of Karajan's present account of the Requiem lies less in its occasional hints of heaven than in its constant terror of eternal death, that "Mors" to which the basses especially keep returning. The work begins by asking merciful intercession for others; it ends in the higher truth of helplessness: "Liber mea ... Libera me." In a performance grand in its humility, Karajan conducts as if for once the stakes were truly eternal—as of course they are.

Thomas W. Russell III

WAGNER:
Parisof.

BERLIOZ:
Requiem; Symphonie funèbre et triomphale.
Dowd*; London Symphony Orchestra and Chorus, Davis. Philips 416 283-2 (A, 2), 0 6700 019 (2), 0 7699 008 (2).

There exist no finer examples of the successful transfer of older analog tapes to Compact Disc than these two Philip albums originally recorded in the '60s: the 1962 Bayreuth Festival performance of Wagner's Parsifal and the 1969 Colin Davis/London Symphony Orchestra and Chorus, version of the Berlioz Requiem. Both performances have received their share of deserved praise in previous issues of this magazine, so it's unnecessary to dwell on the virtues of Hans Knappertsbusch's elevated conducting and the fine singing of Jess Thomas, Irene Dalis, George London, and Hans Hotter in Parisof, or Davis's impeccably paced traversal of the Berlioz masterpiece. The fact is, the CDs of both are sonically so superior to their LP counterparts that the listener will be tempted to insist that these are different—and noticeably better—performances. The original issue of Parsifal was plagued with foggy sonorities (in many ways, it was actually inferior to the 1985 mono London version), but on CD, Wagner and his interpreters are at last completely in focus. Hearing this edition, one truly feels as if he is seated square center in the acoustically perfect Festspielhaus, Davis's Requiem, on the other hand, was regarded as a state-of-the-art recording when it was first issued, but even then, the LP just couldn't quite take the cataclysmic roars of the Tuba mirum or the Lucernos without some sonic breakup. On CD, these passages now reg-

ister with remarkable clarity and an impact that, despite the volume, sounds completely natural. Philips also offers a bonus in this version: Davis's fine rendition of the Symphonie funèbre et triomphale—and the results are equally impressive. As with Parsifal, Philips's sonic restoration of the Requiem is little short of miraculous. These CDs must now be regarded as benchmark examples of audio technology as well as performance.

Bill Zakarasen

RECTALS AND MISCELLANY

GIDON KREMER:
Edition Lockenhaus, Volumes 1, 2.
Various performers. Manfred Eicher and Gidon Kremer, prads. ECM 1304/5-1 (D, 2).

CAPLET: Conte fantastique d'après une des histoires extraordinaires d'Edgar Allan Poe: "Le Masque de la mort rouge." FRANCK: Quintet for Piano and Strings in F minor. Janáček: String Quartet No. 1. POULENC: Two Pieces from Françaiss pour lire, SHOSTAKOVICH: Two Pieces for String Octet, Op. 11; Two Waltzes for Flute, Clarinet, and Piano, STRAVINSKY: Concerto in D, Piano, Waltz, and Ragtime from Histoire du soldat. THE FESTIVAL THAT VIOLINIST GIDON KREMER directs each year in the Austrian village of Lockenhaus has a reputation not too different from Kremer’s own: "Lockenhaus has been called an anti-festival, and I have been described as a musical dissident," says the violinist. He has become known for offering daring interpretations of the standard repertory and for championing new and unusual music. This nonconformist spirit is much in evidence in Edition Lockenhaus, Volumes 1 and 2, a retrospective survey of recent performances that inaugurates an ongoing relationship between the festival and ECM.

Edition Lockenhaus is evenly divided between French and Slavic repertory. The bulk of the French is taken up by Franck’s Piano Quintet in F minor, which receives an impassioned but often scathing, sometimes reading from members of the Hagen Quartet and Alexandre Rabinovich, piano. First violinist Lukas Hagen is rough and overly strident, emphasizing Franck’s Germanic angst at the expense of his sensuous French subtlety. Only Rabinovich fully communicates the quintet’s poetry and lyricism. André Caplet’s fantasy on Poe’s Masque of the Red Death combines Debussyan color and Stravinskian rhythmic vitality with an adventurous harmonic palette. Though airless and somewhat disjointed, Caplet’s work receives an evocative reading from Ursula Holliger, harp, Michael Schnitzler and Daniel Phillips, violins, Gérard Caussé, viola, and Ko Ikawa, cello. Two Poulenc songs are treated to delicate, understated, but exquisitely perfumed performances by soprano Catherine Whittlesey.

The Hagen Quartet fares far better in Janáček’s String Quartet No. 1 than in the Franck; here their rough-hewn, rhythmically incisive approach perfectly matches Janáček (Continued on Page 95).
IN SHORT ORDER

Mini-reviews of 17 rock, jazz, and country releases on CD, LP, and videocassette

For those of you who may need a few recommendations for your holiday shopping list—and a few pointers on what to keep off of it—we offer the first installment of “In Short Order,” a column of mini-reviews that will appear in these pages every month. Our aim is to cover a variety of musical styles on a variety of formats. In this way, we hope to report on many releases that we otherwise would not have the space to mention.

With that limited space in mind, we have adapted for this column a condensed version of the headings used in our regular section of reviews. Please note that these revised headings supply only the reviewed format and its catalog number. Ken Richardson

QUICKSILVER:

DIFF: Peace by Peace. Capitol ST 12498. If Jefferson Starship can go platinum by shortening its name and bequeathing its sound with glossy synthesizers, then why can’t a 1986 version of Quicksilver Messenger Service? Well, for one thing, the “reunion” boils down to only one original member, guitarist/singer Gary Duncan, which is like a Beatles reunion featuring only Ringo Starr. For another, Duncan’s nonscript voice lacks even the recognition factor of, say, that of the Starship’s Mickey Thomas, not to mention ex-Quicksilver singer Dino Valenti. And last, forty-year-old hippies should never, ever, name a song “Good Times” or, as on the 9:54 title track, attempt a rap loaded with lines like “You gets no chance . . . You gets no breakdance.” As they used to say, a bad trip. David Browne

CHICK COREA:

DIFF: Children’s Songs. ECM 25005-2. Why these fragments for solo piano, most between one and two minutes long, are designated for children I’m not sure, as there’s a range of unchildlike moods here, from hopefully romantic to dissonantly anxious; some of the languorous moments even suggest a certain world-weariness. Maybe it’s the brevity of the pieces, which probably would match a child’s attention span. At any rate, Chick Corea fans should find this of interest since several of his past (and probably future) ideas and melodies are touched upon. Others may find the 20 songs in 30 minutes a little skimpy, if not a little precious. For the CD, a five-minute track called “Addendum” has been included, a sprightly piece for piano, cello, and violin that, despite its length, actually does sound like a child’s song.

Richard C. Wells

XTC:

DIFF: Best Hits. Virgin Video TE-M 546 (Beta, VHS). This is an excellent collection of videos that, despite being available only as a Japanese import, is worth catching the time to search out. XTC debuted in 1978 with a fun, quirky brand of new wave; since then, Andy Partridge’s lyrics have become pungent and purposeful, and the band’s music has matured into artful (not arty), aggressive British rock. Best Hits has nothing from 1984’s neglected masterwork The Big Express or its quiet predecessor, Mummer, but it does offer 11 videos of tracks from XTC’s five other LPs and, as such, is the visual counterpart to the band’s compilation of U.K. singles. Waxworks, Partridge’s humor is front and center in the early clips: He gleefully eats a record in “This Is Pop” and plucks a violin during the opening guitar of “Respectable Street.” Things get serious in “Seuse Working Overtime,” a standard performance clip, and “All of a Sudden (It’s Too Late),” a precursor to the video of “Every Breath You Take.” “Making Plans for Nigel” and “Generals and Majors” are here, too. Essential for XTC devotees, recommended for all others.

Ken Richardson

KEITH JARRETT:

DIFF: Changes. ECM 25007-2. This is the famous Standards Trio, pianist Keith Jarrett joined by bassist Gary Peacock and drummer Jack DeJohnette, exploring two Jarrett compositions: the half-hour “Flying” (Parts 1 and 2) and the truly beautiful “Pavane.” “Pavane” is a lyric, creates some confusion between style and substance. The question may arise, “Does he really mean it?” If you like Lionel, you won’t be disappointed by any of this: a message number done in flawless reggae fashion (“Se La”), a big radio hit (“Say You, Say Me”), and some very pretty love songs, as usual. What I can’t help feeling is that to make this record, Richie and coproducer James Anthony Carmichael went into a laboratory and isolated the essence of what his fans like. The formula may work, but only on those fans.

Joe Blum

LIONEL RICHIE:

DIFF: Dancing on the Ceiling. Motown 6158 ML. Lionel Richie’s emphasis on production values, plus his remarkable ability to act out a lyric, creates some confusion between style and substance. The question may arise, “Does he really mean it?” If you like Lionel, you won’t be disappointed by any of this: a message number done in flawless reggae fashion (“Se La”), a big radio hit (“Say You, Say Me”), and some very pretty love songs, as usual. What I can’t help feeling is that to make this record, Richie and coproducer James Anthony Carmichael went into a laboratory and isolated the essence of what his fans like. The formula may work, but only on those fans.

Richard C. Wells

ANY GRANT:

DIFF: The Collection. A&M/Myrrh SP 3900. I’m cynical about any artist who’s singing to the converted, especially a “Christian pop” vocalist who crossed over after selling millions on a religious label. But Amy Grant’s mainstream anthology showcases a decent vocalist, and her co-written singles are better than I’d imagined. “Stay for Awhile” has trite lyrics about childhood friendships, but its cotton-candy melody is catchy. The equally nonsecular “Find a Way” is a perfectly okay rock song, and I
can’t get over how much I dig the chorus on “Angels,” the religious rocker about God’s attendants saving people from near accidents. The slower, prayerful stuff (“El Shaddai,” “This World”) isn’t as good. All those sweeping strings and celestial harmonies make me feel like I died and went to heaven. It’s still too early for that. (Note to collectors: The cassette version includes five extra tracks, and the CD version adds seven extra tracks.) 

KATE WALTER

JOHN EDDIE: John Eddie, Columbia CK 40181.
This debut album quite obviously shows John Eddie to be an East Coast rocker firmly—but perhaps too firmly—in the Springsteen mode, but he knows it and seems to be trying to build upon it. So where the hollow voice, phrasing, and attack all come dangerously close to sound-alike, the writing is more concise, youthful, and rocky and lacking any of his mentor’s visionary pretensions. Though many songs follow classic rock ’n’ roll song tradition, tunes like “Stranded” also show Eddie to be an affecting balladeer. The CD particularly emphasizes Ian MacLagan’s piano and organ crispness.

JIM BESMAN

GWEN GUTHRIE: Good to Go Lover: Polydor 829 532-1.
BIG GIRLS DON’T CRY, CHUNKY GWEN GUTHRIE testifies. Those looking for some genuine emotion, some tear stains, some love pain, won’t find them here. The first single, “Ain’t Nothin’ Goin’ On But the Rent,” contends that love has little to do with it: “Gotta have a hand in on the party.” Cold and brutal, upbeat and down, it’s a natural club anthem—a liberating theme. Sturdy jigsaw rhythms hold up more flygirl funk, and two ballads come off like Gwen’s fronting, thinking about getting on with the party.

As with most albums by Hank Williams, Jr., this one is guest-filled, including Huey Lewis and while all of the remaining songs are beautifully produced and sung, the writing is less memorable.

JIM BESMAN

WEATHER REPORT: This Is This: Columbia FC 40280.
PROBABLY THE LAST RECORD BY WEATHER Report, This Is This is adorned with a picture of co-leaders Josef Zawinul and Wayne Shorter shaking hands and includes inner-sleeve drawings of all the musicians who played with the group in its 15-year existence. The music it contains seems equally concerned with the group’s past. Its funky numbers, “This Is This” and “Man with the Copper Fingers,” sound almost perfunctory. Better is Zawinul’s “I’ll Never Forget You,” an agreeable ballad dedicated to his parents, while “Jungle Stuff (Part 1),” written and sung by percussionist Mino Cinelu, sounds freshly energetic. Much of the rest breaks no new ground, and Shorter is barely to be heard throughout.

MICHAEL ULMAN

KRONOS QUARTET: Music of Sill Evans: Landmark LLP 1510.
IN THESE INGENIOUS ADAPTATIONS, THE string quartet gives great drama to Bill Evans’s most innocent piano progressions (like “Waltz for Debby”) as well as enhances the lyrical qualities inherent in any Evans original. The telling question is whether the first violinist, David Harrington, can carry out the improvised uptempo passages (we know that guest artists Eddie Gomez and Jim Hall won’t have any trouble), but he does it impressively and without hesitation. Why none of Evans’s drummers was invited I don’t know, but the purpose is nonetheless admirably fulfilled: We are given a new way to appreciate Evans and, if we wish, to study him.

ANDREW NASH

Eurythmics: Revenge, RCA PCD 1-5847.
JIMMY “Z” ZAVALA’S CHICAGO BLUES harmonica intro to lead track “Missionary Man,” together with his sax playing and ex-Blondie drummer Clem Burke’s heavily-handed slugging, gives this recording a harder rock sound at the outset than that of previous work. But while it carries over to the pop gem “Thorn in My Side,” things eventually stray toward the too flighty, orchestrated, and electronicized, though the overabundance of effects sparkles on CD.

ANDREW NASH

Together for the first time on the same pages (from far left): Ted Nugent, Rodney Crowell, Chick Corea, Kronos Quartet, Gwen Guthrie, and Eurythmics lead vocalist Annie Lennox.

DECEMBER 1986

85
TO MENTION!

PRICE TOO LOW $(1

VHS HO

PANASONIC PV 220

Lowest Price

Technics ST -G50

Technics ST -G40

JVC A -X 500 JB

CAMCORDER

JVC Ax 900 81120 wafts)

Mai AM -A401

Tevknocs SU,V74

Ccmputer Drive

Varantz SR 940 00 walls,

JIC RX 8VBK i100 *ass

,JRA 50BOr 160 walls

rxa AAV30. .60 waits,

echncs SA -290 i50 wans

AM FM RECEIVERS

28 -key wireless AV remote control

50 watts per channel

Technics SA -390

50 watts per channel

Technics SL -333

Linear tracking direct

AM/FM Receivers

TUNABLES

TECHNICS SA -390

AM/FM Receivers

SANYO FTE-50

All night illumination

Lincoln automatic

All MICHELSENOW

AM/FM Receivers

Available at lowest prices

Digital Display 18 Station Preset

Auto Reverse

F R Faders

$129$5

JVC CAR STEREOS

Call Now For

LOW PRICES!

of -D -T -S -5

Copyright C 1994

containupped

JVC A -X 500 JB

CAMCORDER

JVC Ax 900 81120 wafts)

Mai AM -A401

Tevknocs SU,V74

Ccmputer Drive

Varantz SR 940 00 walls,

JIC RX 8VBK i100 *ass

,JRA 50BOr 160 walls

rxa AAV30. .60 waits,

echncs SA -290 i50 wans

AM FM RECEIVERS

28 -key wireless AV remote control

50 watts per channel

Technics SA -390

50 watts per channel

Technics SL -333

Linear tracking direct

AM/FM Receivers

TUNABLES

TECHNICS SA -390

AM/FM Receivers

SANYO FTE-50

All night illumination

Lincoln automatic

All MICHELSENOW

AM/FM Receivers

Available at lowest prices

Digital Display 18 Station Preset

Auto Reverse

F R Faders

$129$5

JVC CAR STEREOS

Call Now For

LOW PRICES!

of -D -T -S -5

Copyright C 1994

containupped

JVC A -X 500 JB

CAMCORDER

JVC Ax 900 81120 wafts)

Mai AM -A401

Tevknocs SU,V74

Ccmputer Drive

Varantz SR 940 00 walls,

JIC RX 8VBK i100 *ass

,JRA 50BOr 160 walls

rxa AAV30. .60 waits,

echncs SA -290 i50 wans

AM FM RECEIVERS

28 -key wireless AV remote control

50 watts per channel

Technics SA -390

50 watts per channel

Technics SL -333

Linear tracking direct

AM/FM Receivers

TUNABLES

TECHNICS SA -390

AM/FM Receivers

SANYO FTE-50

All night illumination

Lincoln automatic

All MICHELSENOW

AM/FM Receivers

Available at lowest prices

Digital Display 18 Station Preset

Auto Reverse

F R Faders

$129$5

JVC CAR STEREOS

Call Now For

LOW PRICES!

of -D -T -S -5

Copyright C 1994

containupped

JVC A -X 500 JB

CAMCORDER

JVC Ax 900 81120 wafts)

Mai AM -A401

Tevknocs SU,V74

Ccmputer Drive

Varantz SR 940 00 walls,

JIC RX 8VBK i100 *ass

,JRA 50BOr 160 walls

rxa AAV30. .60 waits,

echncs SA -290 i50 wans

AM FM RECEIVERS

28 -key wireless AV remote control

50 watts per channel

Technics SA -390

50 watts per channel

Technics SL -333

Linear tracking direct

AM/FM Receivers

TUNABLES

TECHNICS SA -390

AM/FM Receivers

SANYO FTE-50

All night illumination

Lincoln automatic

All MICHELSENOW

AM/FM Receivers

Available at lowest prices

Digital Display 18 Station Preset

Auto Reverse

F R Faders

$129$5

JVC CAR STEREOS

Call Now For

LOW PRICES!
that, but there is very little here that's extraordinary. Though Tyler's influences run from Dave Bartholomew and the sire of the Marsalis dynasty, Ellis, to Professor Longhair, the meters are sometimes tricky but definitely not funk (nor were they meant to be). Johnny Adams offers up a pleasant surprise and expands his musical horizons with a version of "I'll Only Miss Her When I Think of Her" that sounds like a higher-register Billy Eckstein. This track has all the warmth that Germaine Bazzle's take on "Lush Life" lacks. Beyond these vocal excursions, the side-closing instruments "New Day" and "No Relation" are also quietly noteworthy.

**TED NUGENT:***

**GREAT GONZOS!***

**EC** EP 37 667.

**THIS TEN-TRACK 1981 COMPILATION—OF which such titles as "Cat Scratch Fever," "Dog Eat Dog," and the immortal "Wango Tango" say it all—is full of the tasteless and obscene young male sex-and-aggression fantasies that have made Ted Nugent the premier rock 'n' roll beast. At the same time, the blues-based tunes showcase an always existing rock guitarist of the first order. The CD format thus becomes the perfect medium for delivering Nugent's muddied guitar textures as cleanly as possible.

**LET'S ACTIVE:***

**BIG PLAN FOR EVERYBODY, I.R.S. IRS 5703.** OVERDUBBING HIMSELF INTO A BAND WITH THE RESIDUAL HELP OF SOME fellow hermits, Mitch Easter turns Let's Active's third release into an oddly decadent pleasure: easy listening for the memory-overloaded hipster. Ringing with catch phrases and melody lines both familiar and half-forgotten, the finest songs ("Whispered News," "Writing the Book of Eternity," "In Little Ways") are mosaics of post-Beatles guitar riffing and choral vocals as addictive as they are evanescent. It's as if Easter had shrunk the universe to the size of his bedroom and the most complicated choice was choosing the next record to queue up. Is that the ghost of Marc Bolan on drums throughout? Is this head music for people who have given up drugs? Mark Bousis

**RODNEY CROWELL:***

**STREET LANGUAGE, Columbus FC 40116.** PERHAPS BEST KNOWN, IF UNFAIRLY, AS MR. ROSEANNE CASH, RODNEY CROWELL DELIVERS A NIGHTSPEED GOOD TIME HERE. CROWELL MAKES ROSES: "ROSEANNE" FROM THE MULHER ON THE SINGING THAT ALTERNATELY SOOTHES AND SCORCHES. BEST-OF-SHOW GOES TO "WHEN THE BLUE HOUR COMES," WHICH COUNTERS THE DESPAIR OF CO-WRITER ROD ORBISON'S FINEST WORK WITH A REDemptive OFFER OF LOVE AND FAITH. IT'S DiffICULT TO SEPARATE THE PITCH FOR NEW COUNTRY FROM THE HYPER SURROUNDING, LET'S SAY, NEW COKE, RODNEY CROWELL STANDS TALL AS THE REAL THING.

**Hank Boodowitz**

**FREE NEWSLETTER**

212 575-1840

'NATIONWIDE SERVICE THAT SPANS THE NATION Free newsletter. 1 yr. $13.95

Affix label. Please print OLD address here.
PAUL SIMON:
Graceland.
[2] Paul Simon, prod. Warner Bros. 25447-4 O O WITH HIS LATEST ALBUM, PAUL SIMON HAS made a major move toward cultural imperialism. He freely admits that the music for about a third of the songs is more than loosely based on material by the South African bands with which he recorded them. That still doesn't stop him from taking first credit among the listed writers. It doesn't matter, though, because the end result is brilliant.

Grown from the seed of an idea Simon had when he was first exposed to the "township jive" music of South Africa, Graceland covers a broad stylistic range, from the almost country feel of the title track to "Homeless," an eerily beautiful a cappella collaboration with the 13-member vocal group Ladysmith Black Mambazo. Just to show what a small place the world is, Simon includes two songs recorded with American bands Los Lobos and Good Rockin' Dopsie and the Twisters. The common theme is the accordion. Indeed, "The Boy in the Bubble," recorded with the group Tao Ea Matsekha, sounds as much like zydeco as does "That Was Your Mother," the Dopsie track.

The concept of grace runs through many of the songs, less in a religious sense than as a spiritual centering. Besides the title track's metaphor of a pilgrimage to Elvis Presley's home, it crops up sardonically in "The Boy in the Bubble," as "the days of miracle and wonder" are equated with "the days of lasers in the jungle." And it manifests itself as beauty in both "Homeless" and "Under African Skies."

The latter song also benefits from the gorgeous vocal pairing of Simon with Linda Ronstadt. The Everly Brothers' appearance on "Graceland," however, is largely wasted. Best are the Ladysmith group and the Gard Sisters, who turn in some extraordinary high harmonies on "I Know What I Know."

Graceland seems to have been made by an entirely different artist from the one who recorded the droning Hearts and Bones two years ago. If nothing else, Paul Simon's African sojourn gives this album a joyous feel, attained when you don't think too much.

Hank Bordowitz

VAN MORRISON:
No Guru, No Method, No Teacher.
O Van Morrison, prod. Mercury 830 077-1 O O STUBORNLY DISOBEDIENT OF POP FORM, VAN Morrison's last three albums offered mystical Celtic jazz as uplifting as it was hermetic. The elements of No Guru, No Method, No Teacher are the same: ethereal melodies, transcendent scat singing, and a thematic obsession with the intertwining of sexual fulfillment and spiritual healing. But Morrison hasn't sounded this spontaneously passionate or direct since 1979's masterful Into the Music.

"Got to Go Back" opens the LP with a memory of Morrison running home from school to play Ray Charles's "I Believe to My Soul" and falling into epiphany—Charles revealed as the ideal of rapture via music by which Morrison still measures his own work. That tone of rededication recurs throughout the album. "In the Garden" is Morrison's most purifying erotica since Into the Music's "And the Healing Has Begun," blissful lovemaking in the rain the only proof he needs of the existence of a Divinity ("No guru, no method, no teacher/Just you and I and nature/And the Father in the garden"). "Tir Na Nog" follows these lovers into heaven: Morrison testifies about eternal love and reincarnation while a string section shadows his vocals like a choir of mischievous angels.

The rest of Side 2 sustains an eloquently cantankerous note, as Morrison denies his
WISCONSIN DISCOUNT STEREO
2417 W. BADGER RD.
MADISON, WIS. 53713
800 356-9514

* 95% of all orders shipped within 48 hours
* Buyer Protection Plan included with every item at No Extra Charge
* Largest inventory of: Stereo, VCRs, and TVs.

SOME EXAMPLES OF OUR SUPER SPECIALS!

<table>
<thead>
<tr>
<th>RECEIVERS</th>
<th>SPEAKERS</th>
<th>CAR STEREO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sansui SXV1000</td>
<td>$349</td>
<td>The Tower by Sansui $109 ea. 160 watt/spkr.</td>
</tr>
<tr>
<td>Sony CDP30</td>
<td>$169</td>
<td>Technics 12 inch 3-way $69 ea.</td>
</tr>
<tr>
<td>Sony Portable Disc Man with Battery Pack</td>
<td>$159</td>
<td>Scott 312DL 12 inch 3-way $99 ea.</td>
</tr>
<tr>
<td>Teac PD200</td>
<td>$149</td>
<td>Jensen 12 inch 3-way $89 ea.</td>
</tr>
<tr>
<td>Technics SA39C</td>
<td>$219</td>
<td>Front-loading, Auto-reverse Plays both sides, programs up to 16 tracks, linear tracker Dual 620Q with Ortofon $139</td>
</tr>
<tr>
<td>Teac V850</td>
<td>$339</td>
<td>Sansui PL95 $199</td>
</tr>
<tr>
<td>3-Head, Dolby B+C &amp; dbx</td>
<td></td>
<td></td>
</tr>
<tr>
<td>JVC KDV6</td>
<td>$199</td>
<td>Yamaha CR-820 Digital, Dolby B+C $149</td>
</tr>
<tr>
<td>Teac V450X</td>
<td>$199</td>
<td>Concord 550 CALL</td>
</tr>
<tr>
<td>Dolby B+C &amp; dbx</td>
<td>$109</td>
<td>Sherwood CR-320 Digital, Dolby B+C $225</td>
</tr>
<tr>
<td>Teac R888X</td>
<td>$399</td>
<td>Sherwood CR-3165 Digital, Auto-Reverse $119</td>
</tr>
<tr>
<td>3-Head, 3 Motor Auto Reverse</td>
<td>$399</td>
<td>Jensen JTX380 6x9 Triax 150 watt $59 pr.</td>
</tr>
<tr>
<td>SA-390D905</td>
<td>$299</td>
<td></td>
</tr>
<tr>
<td>CASSETTE DECKS</td>
<td>MISC. SPECIALS</td>
<td>VIDECE</td>
</tr>
<tr>
<td>Teac X2000</td>
<td>$788</td>
<td>Toshiba 4-Head $299</td>
</tr>
<tr>
<td>HQ Pro, wireless, 4 event/7 day</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hitachi 4-Head HiFi</td>
<td>$399</td>
<td></td>
</tr>
<tr>
<td>GE HQ Camcorder</td>
<td>$969</td>
<td></td>
</tr>
<tr>
<td>Sony CCDV1 Camcorder</td>
<td>CALL</td>
<td></td>
</tr>
<tr>
<td>Sony SLHF1000</td>
<td>CALL</td>
<td></td>
</tr>
<tr>
<td>Toshiba 14&quot; Remote</td>
<td>$269</td>
<td></td>
</tr>
<tr>
<td>Pioneer CLD999</td>
<td>$689</td>
<td></td>
</tr>
</tbody>
</table>

STOP
IF YOU'RE BUYING ANYWHERE ELSE — YOU'RE NOT GETTING THE LOWEST PRICE FOR THE BEST SERVICE!

Hours M-T 8-8
FRI 9-8
SAT 9-5

Some items closeouts
Some limited quantities
own pop divinity ("Here Comes the Knight"), denounces false security ("Thanks for the Information"), and, on "Ivory Tower," scolds a spoiled rich girl. "Ivory Tower" is his swingiest, most succinct pop tune in years, proving that he may be cranky but he hasn't forgotten how to rock.

Joyce Millerman

ANITA BAKER: RapTURE.

Michael J. Powell, Maril Sharon, and Gary Skardina, prods. Elektra 60444-2. ©

I’ll forever enjoy weekend mix Master-Mix dance parties, multiple edits by the Latin Rascals, and other creative exercises in funk. Still, there will always be a warm spot in my heart for good, old-fashioned rhythm ’n’ blues. For a while, it seemed like an endangered species: A little more than a decade ago, black pop became dominated by electronics, and writing skills suffered. But back in 1982, when Luther Vandross came onto the scene, the song returned. Since then, women have tugged on a few heartstrings as well: Stephanie Mills, Mel’ta Morgan, and Patti LaBelle come to mind. The real trendsetter, though, was Sade.

Maybe it isn’t fair to call Detroit-born Anita Baker America’s Sade, but it is irresistible. Both singers eschew fast tunes, use real bass and drums, and possess a husky throat, all scotch and smoke. As with Sade, there is something definitely sexy about the way Baker extends notes, prolonging ecstasy and foreshalling climax. Anyhow, a comparison isn’t a dismissal, for I love Rapture to death. And the translation of this analog recording to Compact Disc results in a markedly clearer sound (which, unfortunately, also reveals slight tape hiss.)

With just one allusion to ’80s slickness out of eight cuts (a still listenable “Watch Your Step”), Rapture speaks of love and loss in well-crafted soul-jazz dependent on the beauty of the Afro-American vocal cord. Instrumentation is sympathetic to Baker’s voice, which caresses and consoles. At twenty-eight, she has a cadence, tonality, and register that are fundamentally pleasing to the ear, an instinct reminiscent of Sarah Vaughan’s. But there’s also a powerful streak. On Rod Temperton’s “My Mystery,” she delivers charged, flowing whoops; on David Lasley’s “You Bring Me Joy,” there are shades of gospel and LaBelle-ish shouting.

Still, Baker’s own “Been So Long” and “Sweet Love” suggest that jazz is her main influence. She slides through the latter with the grace of John Coltrane’s sax, directing Freddie Washington’s bass (deeper throughout on GL) and Rick Lawson’s drum kit (tighter in this format) with controlled ease. And though she has been dazzling at venues as large as Radio City and Carnegie Hall, when I listen to the dark, pleading “Been So Long,” I picture her in a supper-club setting, where Saturday night trends like me aren’t even welcome.

Havelock Nelson

CAMPER VAN BEETHOVEN: II & III.

Pitch a Tent O1. (Distributed by Rough Trade, 326 Sixth St., San Francisco, Calif. 94103.)

Someone has to carry on the warped acid-folk legacy of the Holy Modal Rounders, and it may as well be Santa Cruz’s Camper Van Beethoven. At their early gigs, they would risk life and limb by playing Russian folk songs to hardcore crowds, and when they finally committed themselves to vinyl with last year’s Telephone Fire Landaule Victory, they crammed 19 disparate songs onto one recording. II & III finds them with a better distribution deal but still using the same buck-shot approach to recording. The 19 songs on this album wander from oddball international instrumentals to mild rave ups and scuffy, hummable folk-rock.

This isn’t so much an album as one long hairpin curve. “Sad Lovers’ Waltz,” which wouldn’t be out of place on a Flying Burrito Brothers LP, is quickly followed by the psychedelic bluegrass instrumental “Turtlehead,” which in turn is followed by a loping cover of Sonic Youth’s “I Love Her All the Time.” Then it’s on to “No Flies on Us,” a Celtic-flavored march driven by violinist Joyce Millman.

—David Browne

Format Key

[2] Cassette
[3] Compact Disc
[4] Videocassette
[5] Videodisc
[6] 12-inch single
[7] Open reel

Large symbol beneath title indicates reviewed format. Small symbols following catalog number of reviewed format indicate other available formats (if any). Catalog numbers of all formats of a particular recording usually are identical except for differing prefixes or suffixes. Catalog numbers of formats other than the reviewed format are printed only if their basic numbers differ substantially from that of the reviewed format. Arabic numeral in parentheses indicates number of items in multiple-set.
JAZZ

GRIOT GALAXY:
Opus Krampus.

* Pedro de Freitas, prod. Sound Aspects SAS 004. (Distributed by Polygram Special Imports.)

BAREFIELD/HOLLAND/TABBAL TRIO:
Live at Nickelsdorf Konfrontationen.

* Pedro de Freitas, prod. Sound Aspects SAS 007.

WHEN, AND IF, YOU THINK OF DETROIT’S contribution to jazz, you probably think of Griot Galaxy.

GRIOT GALAXY:

When you think of Griot Galaxy, you may think of the grinding reality of both the factories and the music. The Griots bring a relentless repetitive framework of riffs, a music wholly appropriate for the city: The Griot set is the hot one. And the Griot set is the hot one. And the Griot set is the hot one.

They were able to do so because of the remarkable and almost unprecedented agility of La Faro, who played his bass as swiftly as if it were a guitar. His surprising countermelodies enlivened Evans’s introspective playing; his sophisticated harmonic sense echoed Evans’s own. And in Motian, the trio had its ideal drummer. Tastefully melodic, Motian was witty as well as swinging, as we hear in the crispy chattering figures he plays on his cymbals during the first and last choruses of “Israel” (on Explorations).

Brilliant though it is, 1959’s Portrait in Jazz shows that the group was still evolving toward that ideal of simultaneous improvisation, realized only on the two takes of “Autumn Leaves.” Yet there is nothing tentative about the playing on “Witchcraft,” “Come Rain or Come Shine,” or Evans’s collaboration with Miles Davis, “Blue in Green.” Explorations, recorded in February 1961, shows the trio’s progress. It is notable for Evans’s warmly lyrical introduction to “Haunted Heart,” where he manages to play out of tempo without losing the pulse. On “Sweet and Lovely,” La Faro weaves between Evans’s notes in what sounds like a zestful game of tag.

The Village Vanguard session from June 1961 proved to be the trio’s swan song, and it caught them at the top of their game, relaxed and exuberant and occasionally experimental. La Faro bursts in on Evans’s statement of the theme of “Solar,” and Evans’s counterpoint is a kind of good-humored fury while Motian lets his cymbals ring. Evans recorded his “Waltz for Debby” repeatedly, but never with as much energy and power as with this trio. And “My Man’s Gone Now” and “My Foolish Heart” are classics in jazz ballad playing.

The CD versions do not eliminate the slight tape hiss that was part of the original

Richard C. Walls

THE BILL EVANS TRIO:

Portrait in Jazz.

* Orrin Keepnews, prod. Riverside JCD 630-1162. OJC 088. (Distributed by Fantasy, Inc.)

Explorations.

* Orrin Keepnews, prod. Riverside JCD 653-9751. OJC 037. (Distributed by Fantasy, Inc.)

Sunday at the Village Vanguard.

* Orrin Keepnews, prod. Riverside JCD 645-9376. OJC 140. (Distributed by Fantasy, Inc.)

Wait for Dobby.

* Orrin Keepnews, prod. Riverside JCD 664-9399. OJC 210. (Distributed by Fantasy, Inc.)

These compact discs reproduce with new definition the original commercial recordings of the Bill Evans trio that featured drummer Paul Motian and bassist Scott La Faro. The group lasted from late in 1959 until La Faro’s accidental death on July 6, 1961, which drove Evans into temporary retirement and brought to a premature end one of the most influential and exciting groups of the Sixties.

Evans said early in the trio’s life that he wanted the three of them to “grow in the direction of simultaneous improvisation.” They were able to do so because of the remarkable and almost unprecedented agility of La Faro, who played his bass as swiftly as if it were a guitar. His surprising countermelodies enlivened Evans’s introspective playing; his sophisticated harmonic sense echoed Evans’s own. And in Motian, the trio had its ideal drummer. Tastefully melodic, Motian was witty as well as swinging, as we hear in the crispy chattering figures he plays on his cymbals during the first and last choruses of “Israel” (on Explorations).

Brilliant though it is, 1959’s Portrait in Jazz shows that the group was still evolving toward that ideal of simultaneous improvisation, realized only on the two takes of “Autumn Leaves.” Yet there is nothing tentative about the playing on “Witchcraft,” “Come Rain or Come Shine,” or Evans’s collaboration with Miles Davis, “Blue in Green.” Explorations, recorded in February 1961, shows the trio’s progress. It is notable for Evans’s warmly lyrical introduction to “Haunted Heart,” where he manages to play out of tempo without losing the pulse. On “Sweet and Lovely,” La Faro weaves between Evans’s notes in what sounds like a zestful game of tag.

The Village Vanguard session from June 1961 proved to be the trio’s swan song, and it caught them at the top of their game, relaxed and exuberant and occasionally experimental. La Faro bursts in on Evans’s statement of the theme of “Solar,” and Evans’s counterpoint is a kind of good-humored fury while Motian lets his cymbals ring. Evans recorded his “Waltz for Debby” repeatedly, but never with as much energy and power as with this trio. And “My Man’s Gone Now” and “My Foolish Heart” are classics in jazz ballad playing.

The CD versions do not eliminate the slight tape hiss that was part of the original
recording, but their more precise imaging makes them attractive: The format allows us to hear the buoys’ interplay among these three musicians better than ever before.

Michael Ullman

SHADOWFAX:
Too Far to Whisper.
Chuck Greenberg, prod. Windham Hill WH 1051.

THE PROBLEM WITH SHADOWFAX IS NEVER that they’re unlistenable. As with most Windham Hill artists, the problem is sometimes you forget you’re supposed to be listening. These talented musicians have largely managed to overcome that syndrome in the past, but Too Far to Whisper is the closest they’ve come to making the audio equivalent of tasteful wallpaper. Mind you, the band’s brand of Third World-influenced fusion remains distinct. But on Shadowfax’s most electric outing since 1976’s Watercourse Way, it’s ironic that the electricity fails to generate much excitement.

Chuck Greenberg’s production is impeccable as always; however, the “perfect” mix and the ensemble playing become frustrating. In particular, G. E. Stinson’s wailing guitar, which provided some of the most intense moments on Shadowdance and The Dreams of Children, gets lost in the album’s homogenized sound. In line with this democratic approach, the writing has never been quintessentially sound. In line with this demotic moment on Shadowdance and The Dreams of Children, gets lost in the album’s homogenized sound. In line with this democratic approach, the writing has never been quintessentially sound. In line with this demotic moment on Shadowdance and The Dreams of Children, gets lost in the album’s homogenized sound.

Chuck Greenberg’s production is impeccable as always; however, the “perfect” mix and the ensemble playing become frustrating. In particular, G. E. Stinson’s wailing guitar, which provided some of the most intense moments on Shadowdance and The Dreams of Children, gets lost in the album’s homogenized sound. In line with this democratic approach, the writing has never been quintessentially sound. In line with this demotic moment on Shadowdance and The Dreams of Children, gets lost in the album’s homogenized sound. In line with this democratic approach, the writing has never been quintessentially sound. In line with this demotic moment on Shadowdance and The Dreams of Children, gets lost in the album’s homogenized sound.

Chuck Greenberg’s production is impeccable as always; however, the “perfect” mix and the ensemble playing become frustrating. In particular, G. E. Stinson’s wailing guitar, which provided some of the most intense moments on Shadowdance and The Dreams of Children, gets lost in the album’s homogenized sound. In line with this democratic approach, the writing has never been quintessentially sound. In line with this demotic moment on Shadowdance and The Dreams of Children, gets lost in the album’s homogenized sound.
MAIL TO: 825 7th Ave., 7th floor, New York, N.Y. 10019
Phone: 1-800-ABC-MAGS. In New York call (212) 887-8458. GENERAL: all copy subject to publisher approval.
MAIL TO: 825 7th Ave., 7th floor, New York, N.Y. 10019
CLOSING DATE: 1st of second month preceding cover.

CALL THE #1 DEALER IN THE U.S.A.!!!

PERREUX, REVOX, PS Audio, Hafler, New York Audio Labs, Oracle, Thorens, VPI, Dual, Proton, Tandberg, Adcom, Denon, Luxman, Onkyo, Kyocera, SAE, VSP Labs, Sony, APT-Holman, Infinity, ADS, Klipsch, Dahlquist, DCM, Acoustat, OHM Acoustics, Harman/Kardon, DBX Soundfield, AudioPro, Celestion, Spica, JBL, Rauna, Bose, Nitty Gritty, Audioquest, Stax, Grado, Koetsu, Taliassan, AKG and More!


“MEMBER—BETTER BUSINESS BUREAU”

WE ARE AMAZING!!! Amazing offers on hi-fi, video and car stereo. Choose from: Yamaha, Sony, Alpine, Kenwood, Infinity, JBL, Meridian, Carver, Nakamichi, Canton, Mission, PS Audio, Apogee, Hafler, Stax. Much more. We have no competitors if you’re serious or curious, you cannot afford to wait. For a look at the future of electronics retailing, call or write today: Amazing Int'l. Sight & Sound, Inc., 1323 South 4th St., Philadelphia, PA 19106 (215) 969-1166.

CALL TOLL FREE 1-800-826-0520 FOR ACOUSTAT, DAHLOIUST, NAD, HAFLER, DENON, dbx, 3D, PROTON, TANDBERG, BELLES, ORACLE, M&K, GRADO, NITTY GRITTY, AUDIOQUEST, NEC, DUNTEC, MONSTER, SUMIKO PERREUXS, CWD, SNELL, &B, DEM, THORENS, VSP, STAX, SOTA, ORACLE, ANTRONIC, DYNAMAX. THE SOUND SELLER, 1796 MAIN STREET, MARINETTE, WI 54143, (715) 735-9002.

DIRECT SIGHT AND SOUND, America’s best kept audio and video secret, continues to please... Five years and over 40,000 customers later, we still offer the best in audio, video, and auto sound including esoterics at incredible prices! We sell and service only U.S. warranty merchandise! Our staff is not only knowledgeable, but helpful and courteous in choosing the right component for you. Become one of the ELITE! Call 404-351-6772. Direct Sight and Sound, 3095 Boiling Way, Dept. H, Atlanta, Ga. 30305. MC/Visa/Amex. COD with deposit. Free catalog.

BANG & OLUFSEN FULL LINE, ADS, B&W, OLED AND ESEE SPEAKERS AND OTHER QUALITY PRODUCTS AT REASONABLE PRICE. SOUNDCREST, INC., (201) 956-4858

CALL US LAST !!!!!!!!!!!!!!!!!!!!!!!!!!!!!!

Shop around. Get your best price, then call THE SOUND APPROACH. Guaranteed LOWEST PRICES on all HOME and CAR STEREO. Factory fresh, fully warranted. For FAST FREE DELIVERY AND GUARANTEED LOWEST PRICES, call THE SOUND APPROACH, 6067 Jericho Tpke., Commack, New York, 11725 (516) 499-7680. Visa/MC/Amex.


FACTORY ORIGINAL DIAMOND NEEDLES & PHONO CARTRIDGES. MOST POPULAR LINES AT DISCOUNT PRICES. FOR FREE CATALOG SEND SELF-ADDRESSED STAMPEDE ENVELOPE, LYLE CARTRIDGES, DEPT. H, BOX 158, VALLEY STREAM, NY 11582. CALL TOLL FREE (800) 221-0906, N.Y. (516) 599-1112. Visa/MC.


THEY DON'T DISCOUNT IT? WE DO! We offer LOW PRICES on ALL types of audio equipment—including high-end and even esoteric products not normally discounted! Now we can save you money on the equipment you REALLY WANT. Extensive selection—no need to settle for second choice. Thousands of satisfied customers nationwide. Call us for price quotes or friendly, expert advice. Catalog $1. 616-451-3868. VISA/MC/Amex. THE AUDIO ADVISOR, INC., 225 Oakes Southwest, Grand Rapids, MI 49503.

HIGH-END AND HARD-TO-FIND AUDIO COMPONENTS. LOW, LOW PRICES! AUDIO AMERICA CALL 1-804-797-5861.

COMPACT DISCS/LASER VIDEO DISCS. Nice Prices—free lists. MC/Visa. SIGHT & SOUND, INC. 18 Bennett Street, Dept. HF, Boston, MA 02135. (617) 787-4465.

WHERE WAS THAT REVIEW? What did it say? Annotated Index of Classical CD Reviews. A Guide to recommended performances. Covers HIGH FIDELITY and ten other magazines. 120+ pages of references to over 6000 reviews of more than 2000 compact discs. Revised quarterly $37.50/issue. KEN’S KOMPENDIUM, 2400 Hawthorne Dr., Atlanta, GA 30345

CD list: Critics’ Choices of the Basic Classical Repertoire. Updated monthly. $2 applicable to purchase TELE-SHOP Box 280893 San Francisco CA 94128.

Inventions

Inventors! AIN wants—Ideas, Inventions, New Products. Improvements on existing products. We present ideas to manufacturers. Confidentiality Guaranteed. Call Toll Free 1-800-225-5800 for information kit.

Tapes & Records

OPEN REEL TAPE-AMPEX 641/671, USED ONCE, UNSPUN, UNBOXED. 7" 1800' or 2400' REELS; 25 FOR $29.00. SAMPLE: $2.00. TEN 3600' 10½" REELS: $39.00. SAMPLE: $4.00. NEW, PREMIUM CASSETTES; SAMPLE: $1.00. AUDIO TAPES, BOX 9584-J, ALEXANDRIA, VA 22304. (703) 370-5555 VISA/MASTER.

LONE OPERA TAPE, CASSETTES. Incredible selection Free Catalogue, Live Opera, Box 3141, Stenway Station, L.I.C., NY 11103.

SOUNDTRACKS, SHOW, NOSTALGIA & JAZZ—FREE Catalog & Offering List—A 1 Record Finders, P.O. Box 7507-I-H, L.A. CAL. 90075

SEARCHING FOR OUT-OF-PRINTS? Try for Discontinued Records, 444 South Victory, Burbank, California 91502 (213) 849-4791.

RARE CLASSICAL AND JAZZ, 150,000 LP's, The Record Collector, 1585 N. Highland, Los Angeles, CA 90038. (213) 467-2975.

SHOW ALBUMS—Rare, out-of-print tps 64-page list $1.00 Broadway-Hollywood Recordings, Georgetown, CT 06064

FREE RECORD, CASSETTE AND COMPACT DISC CATALOG. Features a tremendous selection of discontinued and rare recordings. Cassette and LP new releases at discount prices. Many imports and smaller labels offered. Prompt delivery. Rose Records, Dept. H, 214 South Wabash Avenue, Chicago, IL 60604

IN PRINT & OUT OF PRINT RECORDS ALL CATEGORIES Spectacular Catalog! $2.00 USA $3.00 Foreign. Serendipity Records, 4775 Durham Road, Guilford, CT 06437 USA

JUST CHRISTMAS: CHICAGO CHAMBER BRASS, CHILDREN'S CHORUS. CD $16.95, Record/ Cassette $9.98. Shipping $1.50/order FREE Catalog Specializing Brass! Woodwinds! Crystal Records, Sedro-Woolley, WA 98284

CASSETTES (1:1 Real-time), RECORDS (DMM) AND COMPACT DISCS. Classical only. Free catalog. Gasparo Co., P.O. Box 120069, Nashville, TN 37212. (615) 254-8460.

REDUCE audio cassette taping costs 70% Use recording company professional bulk pack instead of expensive consumer packaging. All popular major brand equivalents. Only the best! Satisfaction or money back. Call toll free for discount price list. Only we sell cassettes. GREENCORP INC., 1-800-972-0707.

Jazz and Rock, discontinued and new, related books Dark Ages Records, Box 673, Orillia, Ontario L3V6K5

FROM EDISON TO ELVIS (AND BEYOND) LP's, 78's, 45's, etc. Visit or mail in wants. The Olde Tyme Music Scene, 915 Main Street, Boonton, NJ 07005. 201/335-5040—Tuesday thru Sunday.

STOP NOISY RECORD WEAR! Preserve Quality, PROVEN PROCESS. S.A.S.E. Consumer Information Services, Box 70231, Mobile, Alabama 36607-8231.

VIENNESE OPERETTA RECORDS, INC. BLUE MURA, COUNTESS MARITZA, EVA, GYPSY PRINCESS, WIENER BLUT, MANY OTHER DELIGHTS! LP's, MC's, CD's. FREE 48 PAGE NEWSLETTER. PO BOX 14-B, BRUNSWICK, MAINE 04011.

Miscellaneous

IS IT TRUE... JEPS for $44 THROUGH THE GOVERNMENT? Call for facts! 1-312-742-1142 Ext. 4671.


Electronics

CABLE T.V. CONVERTERS & EQUIPMENT. Plans and Parts. Build or Buy. Send S.A.S.E. -C&D Electronics, P.O. Box 1402, Dept. H.F., Hope, Arkansas 71801.

Video

OPERA ON VIDEO—Greatest performances—selections—lowest prices. FREE catalog. C.O.V., Box 578, Riverside, CT 06878.
60011KREMER'S NON-CONFORMIST SPIRIT IS EVIDENT THROUGHOUT THE LOCKENHAUS FESTIVAL PERFORMANCES.

(CONTINUED FROM PAGE 8)

ček's rhapsodic, folk-inflected utterances. Similarly, in Shostakovich's Two Pieces for String Octet, Op. 11, the Hagens succeed in capturing the music's melodramatic, wildly juxtaposed extremes of mood as well as its demonic edge. Stravinsky's Concerto in D is given a graceful, lean performance by the Kammerorchester der Jungen Deutschen Philharmonie under the direction of Heinz Holliger.

Kremer himself appears only in the trio version of 'Lingo, Waltz, and Ragtime from Stravinsky's Histoire du soldat. Too many violinists play this music in a desiccated, inexpressive manner; Kremer's conception is alternately lilting, surging, and caressing. His irreverent spirit, which is evident not only in Histoire but throughout the festival performances, makes these Lockenhaus recordings challenging even when they are not entirely successful and bodes well for future ECM/Lockenhaus collaborations.

K. Robert Schwarz

JOAN MORRIS

JOAN MORRIS'S LATEST ALBUM, RECORDED last December at a pair of Ann Arbor, Michigan, recitals, is an unusually diverse collection of American cabaret songs interpreted with inspired straightforwardness. Morris is perfectly at home with this kind of repertoire material, moving from the barbed misanthropy of Stephen Sondheim's "The Miller's Son," to the bleak urban pathos of Charles Burr's "Sweet-Mary-Go-to-the-Movies," to the hymnlike nostalgia of Alec Wilder's "Did You Ever Cross Over to Sneden's?" (an old Mabel Mercer standard) with miraculous ease.

The economy of interpretive means that is Morris's special gift is particularly welcome here, and she consistently escapes the campy archness that is the curse of so many cabaret singers. William Bolcom, who wrote the informative liner notes for this RCA Red Seal Skylark series release and composed two of the best songs on the album ("The Same Thing" and "Lime Jello Marshmallow Cottage Cheese Surprise"), accompanies his wife with his customary sympathy and flair.

Terry Teachout
Critic's Choice

"The MG-III is a remarkable speaker at any price; at $2,000 it will be a runaway best seller."
INTERNATIONAL AUDIO REVIEW (U.S.A) HOTLINE #31, 1984

"With me, it's now a question of trying to live without them, rather than with them. In other words, I'm 'hooked'.'
HI-FI ANSWERS (U.K) JULY, 1985

"Here we have a remarkable, true audiophile speaker."
HI-FI NEWS AND RECORD REVIEW (U.K.) JUNE, 1984

"One of the best sounds at the Riviera (Consumer Electronics Show)."
AUDIO MAGAZINE MAY, 1985

"Especially with full orchestral music, the MG-III really shows its full potential."
STEREOPLAY (GERMANY) AUGUST, 1984

"This speaker will be a classic."
HIGH FIDELITY (DENMARK) JULY-AUGUST, 1984

The Absolute Sound Magazine. SEE REVIEW IN VOL. 9, NO. 35 AUTUMN, 1984.

Advertising Index

Akai America, Ltd. 29, 31,33 NEC 34
Alpine Electronics of America 36-37 New York Wholesaler 81
Audio Products International 23 Nonosuch Records 22
Audio Technica 10 Onkyo 59
Carver Corp. 7, 46 Panasonic 54
Component Accessories 13 Perreux 74
Donor America, Inc. 18-19, 48-49, 64-65 Pioneer Electronics of America Cover II, 1
Discwasher, Inc. 9, 11 Planet Video 95
Electronics R Us 91 Polk Audio, Inc. 2-3, 4-5, 79
Focus Electronics 90 Radio Shack 53, 63
Fujitsu Ten 82 Sansui Electronics Corp. Cover III
General Electric 71 Sony Corp. of America 16-17, 20-21
Illinois Audio 92 TDK Electronics Corp. 38
International HiFi 87 Technics 14-15
J&R Music World 66-67 Tennessee Sound 12
LaBella Camera & Stereo 86 Toshiba America, Inc. 13
Magnepan 96 Vandersteen Audio 87
Manhattan Records 77 Wisconsin Discount 89
Makamichi Cover IV Yamaha 44-45
Nationwide 87

Magneplanar® MG-III
*PLUS FREIGHT

MAGNEPAN
1645 9th Street
White Bear Lake, MN 55110
Sansui's S-X700 is the intelligent choice for upgrading your system or starting a new one.

Sansui takes performance and value to heart. That's why our new S-X700 AM/FM stereo receiver should be the heart of your system. With solid power, it flawlessly reproduces the exciting experience of digital music.

Engineered with traditional attention to detail and state-of-the-art performance, there's no comparison for pure quality and real value.

Built with a heavy-duty transformer generally used only in higher output models, plus exclusive Sansui circuitry, the S-X700 produces music with a unique openness and clarity that other receivers just can't match.

 Styled for elegance with a functional yet uncluttered appearance, the all-metal cover, chassis and faceplate are only an outward indication of the S-X700's solid performance capabilities. The solid feel of its controls confirms the quality of performance which awaits you.

So why spend more and get less for your system? Put Sansui's S-X700 at the heart of it and get pure performance and value. The idea is just as smart as it sounds.

* 40 watts per channel, minimum RMS, both channels driven into 8 ohms at 20-20,000 Hz, with no more than 0.04% THD.

Start smart with this pure performance receiver.
They look like receivers…
Until you turn them on!

The Nakamichi SR-3A and SR-2A are unlike any receiver you’ve ever heard!
They’re designed… and sound… like “separates”
—like component tuners, preamps and power amps.
They’re the first with STASIS power amplifiers
—like our highly acclaimed PA-7 and PA-5—which gives them
an uncanny ability to elicit optimum performance from every loudspeaker.
They’re the first with Nakamichi Isolated-Ground Power Supplies
—like our Series-7 components—which prevent interstage coupling
and produce a sound stage of extraordinary depth and realism.
And they have a Quartz-Locked PLL Synthesis Tuner that is gaining
a reputation for unusually clean reception with exceptional stereo separation.

Escape from the ordinary
Experience the reality of Nakamichi Sound.

*STASIS is a trademark of Threshold Corporation*