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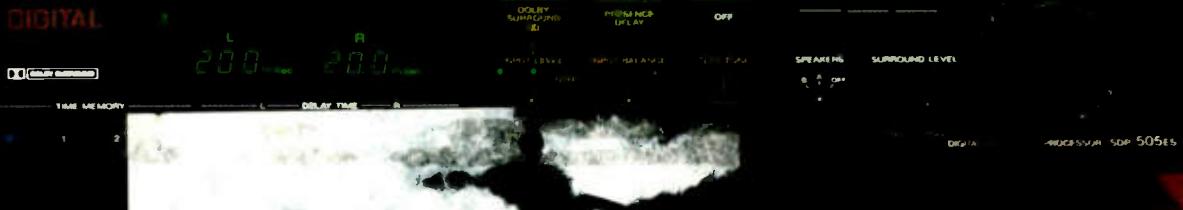
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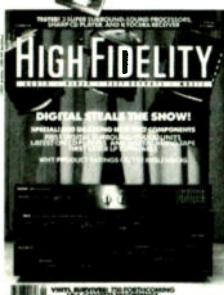
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Cover Photo: Nick Basilion

On the Cover: From top: Shure HTS-5000 surround-sound decoder, Yamaha DSP-1 surround-sound processor, and Sony SDP-505ES surround-sound decoder.

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FRONTLINES



BY
WILLIAM
TYMAN

ALWAYS A FEW SURPRISES

FLIPPING THROUGH SEPTEMBER HIGH FIDELITY ISSUES FROM years past is a lesson in the inexact science of forecasting. In some years our predictions of trends and products have been on the nose; in others we've been quietly surprised. This year, it's both—and in recordings and equipment.

On the hardware side, our annual fall roundup of new components introduced at the recent Summer Consumer Electronics Show details the advances in Compact Disc players and other high-tech items, as expected. But many of the most technologically interesting products were imaging devices, such as surround-sound processors, three of which are covered in this month's test reports.

Digital equipment—whether in the form of signal processors, CD players, or PCM adapters—stole much of the show. In "Bits & Pieces," Technical Editor David Ranada tackles the topic of digital processing, explaining the common thread that links all digital products.

SCES also was a good indicator of what effect the rising value of the Japanese yen against the dollar will have, in terms of both pricing and product. Essentially, prices of Japanese components have increased, but not by an extraordinary amount. Japanese manufacturers continue—at least in the short run—to dominate the market, shaving their costs, in many cases, by establishing facilities in other countries that have lower labor costs. The hedging seems to have come in regard to which products with which features would be introduced on what date at what price. When most companies were establishing their 1986 business plans, the conversion was about ¥200 / \$1. By SCES it had slipped to ¥168 / \$1; as I write this, it hovers around ¥162 / \$1.

In compiling this year's annual preview of forthcoming recordings, Classical Music Editor Theodore W. Libbey, Jr., and Associate Editor Mildred Camacho determined that, though the CD market continues to fulfill its promise for explosive growth, "Vinyl Survives!" Our listings this month of the projected LP and cassette releases from more than 65 labels confirm that these formats hardly have succumbed to CD's challenge.

In BACKBEAT, Barry Walters's "Auteurs of Soul" takes a close look at the star-making team of producers Jimmy Jam and Terry Lewis. John Morthland reviews a unique set of Mexican folk music now available north of the border.

Next month, our features will include a report on new car stereo products, a preview of upcoming CD releases, and a very special face-off of portable CD players. ■

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DOING ATLANTA A DISSERVICE

THE LEAD ON TED LIBBEY'S JUNE "MEDLEY" IS a disgrace. To dismiss the achievement of Robert Shaw, the Atlanta Symphony Orchestra and Chorus, and Telarc [in winning four Grammys this year, including the award for best classical album] as being the result of packed nominations and bloc-voting is a demeaning and unjustified cheap shot.

For a lifetime, Robert Shaw has been the standard of choral music. The work of Robert Woods and Jack Renner has made Telarc recordings among the finest available. The Atlanta Symphony Orchestra and Chorus on a Telarc recording is in a class by itself. Berlioz's Requiem—for which Shaw, John Aler, Woods, and Renner were honored—is an excellent example.

I do not recall that HIGH FIDELITY published a review of this recording, but *Stereo Review* did in its August 1985 edition. Reviewer Richard Freed noted, "Robert Shaw has all of his forces at the very top of their form. . . . All elements are superbly balanced here with every delicate effect making in its own way as much impact as the thunder of the Tuba Mirum."

Could it be that Mr. Libbey is one who

harbors the jaundiced view that unless it is from New York, Philadelphia, Chicago, Montreal, or any place in Europe, the recording is not good? If he has questions about the Grammy process, let him say so. If he has legitimate criticism of the Atlanta Berlioz recording, let him say so. But to imply that the Grammy recognition is the result of ballot-stuffing by the Atlanta Symphony Orchestra is as ludicrous as it is irresponsible.

If Mr. Libbey truly believes that 100 ballots could "pack the nominations and bloc-vote" a Grammy, then perhaps he has become a cynic, and Oscar Wilde's definition of a cynic is apropos: "a man who knows the price of everything and the value of nothing."

Mr. Libbey's comments do a disservice to your readers and the Atlanta performers.

John B. White, Jr.

Decatur, Ga.

Classical Music Editor Theodore W. Libbey, Jr., replies: As I made clear in the first sentence of the column, my complaint is with the absurdity of the Grammys, not with the artistic achievements of the Atlanta Symphony Orchestra and Chorus and their

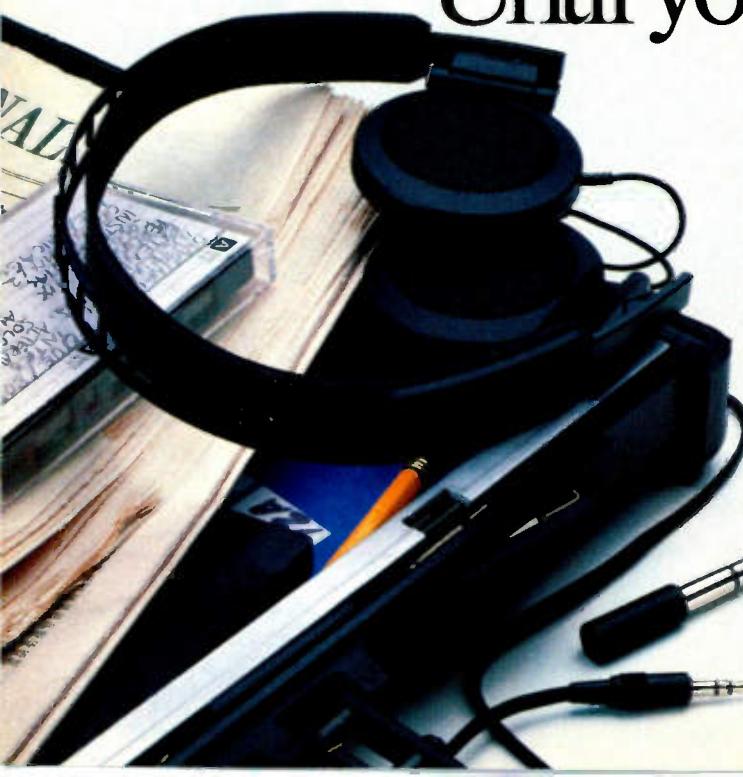
music director Robert Shaw. My views on music are hardly jaundiced, but I proudly accept the designation "cynic" when it comes to my opinion of the process by which nominations for the Grammy awards are made. Unlike Wilde's cynic, however, I think I do know the value of a Grammy, and—you may be surprised to find out—so does Robert Shaw.

Of the many great artists America has produced, Shaw is one of the greatest. I have always, since my days as a student, looked up to him with respect and admiration. We are acquainted, and our meetings and phone talks have always been cordial. When I called Shaw in Atlanta shortly before his 70th birthday to wish him well and inquire about the Atlanta Symphony's plans to perform in Paris in June (the tour was later called off), I also asked him his reaction to the Grammys. Here's what he said:

"I'm solaced," he began, with a chuckle, "that Atlanta's NARAS [National Academy of Recording Arts and Sciences] chapter, though small, is obviously selective." (So much for your contention that bloc-voting can't do what I said it can do.) "Our things," he continued, "are vastly superior to those that won in the '60s, both technically and artistically."

"But," said the maestro, "I believe that one should go through life with a healthy distrust of pop." (CONTINUED ON PAGE 8)

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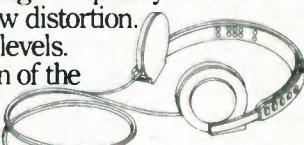


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completely separate sets of drivers (stereo and dimensional) into each speaker cabinet. The stereo drivers radiate the normal stereo signal, while the dimensional drivers radiate a difference signal that acoustically and effectively cancels the interaural crosstalk distortion and thereby restores the stereo separation and imaging lost when you listen to normal "mono" speakers. The sonic benefits are remarkable.

"Breathtaking...a new world of bi-fi listening"

Stereo Buyers Guide

"Mindboggling...astounding...flabbergasting"

High Fidelity Magazine

Words alone cannot fully describe how much more lifelike SDA TRUE STEREO reproduction is. Reviewers, critical listeners and novices alike are overwhelmed by the magnitude of the sonic improvement achieved by Polk's Stereo/Dimensional technology. You will hear a huge sound stage which extends beyond the speakers and beyond the walls of your listening room itself. The lifelike ambience revealed by the SDAs transports you to the acoustic environment of the original sonic event. Every instrument, vocalist and sound becomes tangible, distinct, alive and firmly placed in its own natural spatial position. You will hear instruments, ambience and subtle musical nuances (normally masked by conventional speakers), revealed for your enjoyment by the SDAs. This benefit is accurately described by Julian Hirsch in Stereo Review, "...the sense of discovery experienced when playing an old favorite stereo record and hearing, quite literally, a new dimension in the sound is a most attractive bonus..." Records, CD's, tapes, video and FM all benefit equally as dramatically.

"You owe it to yourself to audition them"

High Fidelity Magazine

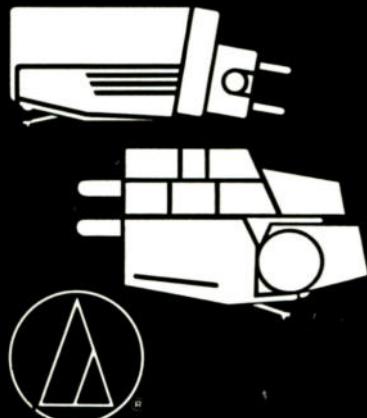
SDAs allow you to experience the spine tingling excitement, majesty and pleasure of live music in your own home. You must hear the remarkable sonic benefits of SDA technology for yourself. You too will agree with Stereo Review's dramatic conclusion: "the result is always better than would be achieved by conventional speakers...it does indeed add a new dimension to reproduced sound."

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(CONTINUED FROM PAGE 4) clarity contests and that one has a moral obligation to resist public acclaim, particularly when it is linked to commercial exploitation. My feeling is, if you're popular, you're probably doing something wrong."

SOMETHING FISHY IN "SOUTH PACIFIC"?

I MUST SET THE RECORD STRAIGHT ON A PIECE of information contained in Edward Greenfield's "South Pacific Takes Shape in the North Atlantic" [July]. Mr. Greenfield states: "[Conductor] Jonathan Tunick . . . had to reorchestrate the piece from scratch when no one could find the original theater score."

As Tunick himself was first to point out, that is simply untrue. At the time the recording was made, the full scores (partitur, that is) could not be found. What we had and have had for 37 years are the orchestral parts from 1949, which were extracted from Robert Russell Bennett's full scores. As was the custom in the theater in those days, the conductor used only an annotated vocal score with orchestral cues. (In the 1930s the conductors used only one-line lead sheets!) Yes, Tunick did adjust some of the Bennett orchestrations to fit the vocal qualities of Kiri

Te Kanawa and José Carreras, and he made a few slight voicing changes elsewhere, but everything else on the *South Pacific* recording is heard in the original theater orchestrations, albeit played by a larger orchestra.

Incidentally, only last week I did locate the full scores, which were sitting, peacefully, on the shelves of the Library of Congress. The secretary at this office had listed them as "Richard Rodgers manuscripts" when they were sent to Washington in the 1960s. It pleases me that we have been able to locate these scores so scholars and musicians can now see for themselves how these shows were put together. But to perpetuate misinformation about Rodgers and Hammerstein scores serves only to continue confusions that have grown over the years.

Fans of *South Pacific* can rest assured that the familiar French horns will be there blaring out "Bali Ha'i" at the downbeat of the overture in this new CBS recording.

Theodore S. Chapin

Rodgers and Hammerstein
New York, N.Y.

Classical Music Editor Theodore W. Libbey, Jr., replies: You are quite right, but I must say a few words to clear Contributing Editor Edward (Ted) Greenfield of any wrongdoing. It was not Jonathan Tunick, but the CBS people in London, who "perpetrated" the misinformation. Ted thought it sounded rather fishy when they told him about the score the first time at the sessions, and he made a point of calling the label a few days later to double-check. He was assured that the score was unavailable and that Tunick had reorchestrated the whole thing. By that time, it was impossible to discuss this with Tunick himself.

I am grateful to you for setting the record straight, and as a native Washingtonian, I am especially proud to note that the Library of Congress, yet again, has preserved something of true importance to our musical heritage.

CONSUMER CONFUSION CODE?

I READ WITH GREAT INTEREST DAVID RANADA'S July "Bits & Pieces" on the SPARS Consumer Clarification code. I have a rather modest collection of Compact Discs and find that the triple-D discs are better sonically than the others. But how can Creedence Clearwater Revival's *Chronicle* CD be a DDD disc when the group split up before the advent of digital recording?

Rick Valenza
Baltimore, Md.

It can't.—Ed.

CD HOP SCOTCHED

IN THE JUNE "CROSSTALK" THERE IS A LETTER complaining of skipping on Compact Discs. I own a Sony CDP-111 that is approximately two years old. After six months of use, it be-

gan mistracking and jumping on perfectly good discs. Since the unit was by then out of warranty (and the service charge would have been very high), I resolved to try to fix the problem myself.

After talking to several technicians, I removed the player's cover and cleaned the lens on the laser pickup mechanism with a camera lens brush. The problem disappeared. Recently I had to do another cleaning, but this time I used a cotton swab and lens-cleaning solution following the brush. Because the lens in my player is concave, it tends to hold dust particles like a bowl and therefore requires periodic cleaning.

There is a new cleaning disc out for just this purpose, but so far, I have not been able to find it.

Bob Zack
Anaheim, Calif.

Audiosource makes a lens-cleaning disc for CD players. You can obtain more information (and perhaps a dealer list) by writing the company at 1185 Chess Dr., Foster City, Calif. 94404.—Ed.

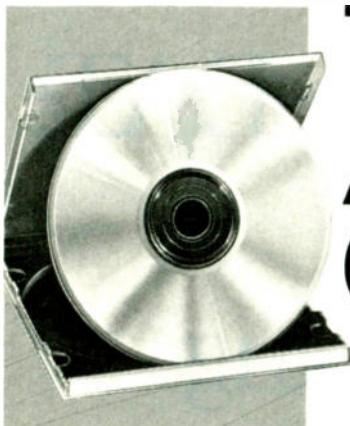
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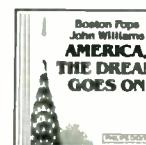
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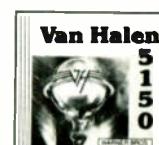
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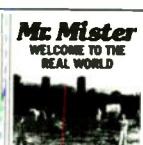
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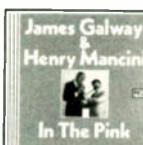
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Chick Corea: Elektric Band
Rumble, Side Walk, Cool
Weasel Boogie, Got A Match?, etc. GRP DIGITAL 140093

Brahms: 21 Hungarian Dances
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Carmen (Highlights) • Film soundtrack. Migenes-Johnson, Domingo, Maazel conducts. Erato DIGITAL 154105

Phil Collins: No Jacket Required • One More Night, Susudio, Don't Lose My Number, etc. Atlantic 120771

Daryl Hall & John Oates: Live At The Apollo • Apollo Medley, Everyday You Go Away, others. RCA 140625

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John Cougar Mellencamp: Scarecrow • Small Town, R.O.C.K. In The U.S.A., etc. Riva 144512

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Mozart, Requiem • Schreier leads the Leipzig Radio Choir & Dresden State Orch. Philips DIGITAL 115039

Lionel Richie: Can't Slow Down • All Night Long (All Night), Running With The Night, etc. Motown 110767

Wagner, Orchestral Highlights From The Ring • Vienna Philharmonic Orchestra/Solti. London DIGITAL 115426

The Cars: Greatest Hits • Tonight She Comes, Drive, You Might Think, Shake It Up, others. Elektra 153702

The Canadian Brass: High, Bright, Light & Clear • Baroque gems for brass ensemble. RCA DIGITAL 144529

The Glenn Miller Orchestra: In The Digital Mood • In The Mood, Chattanooga Choo-Choo, etc. GRP DIGITAL 143293

Rimsky-Korsakov, Scheherazade • Andre Previn conducts the Vienna Philharmonic. Philips DIGITAL 115415

Led Zeppelin IV (Stairway To Heaven, Black Dog, Rock And Roll, Four Sticks, etc.) Atlantic 112014



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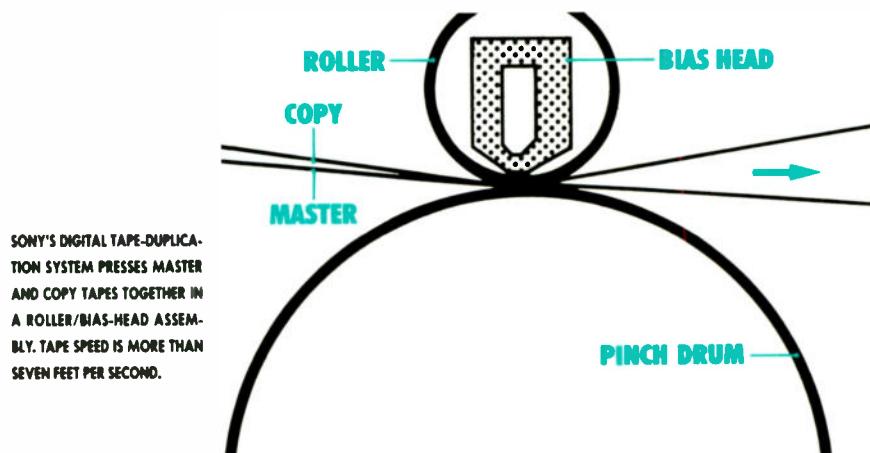
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C U R R E N T S

Zippity-Doo-DAT:

High-Speed

Digital Dubbing



EVERY YEAR IN CHICAGO AT ABOUT THE SAME time as the Summer Consumer Electronics Show, the Consumer Electronics Society of the IEEE (Institute of Electrical and Electronics Engineers, the worldwide organization for technical types) holds a conference where the latest in consumer high-tech is described by its creators. There are usually a few gems among the mass of papers given, and this year is no exception.

Most promising are the submissions devoted to the evidently already-upon-us RDAT digital audio cassette system. It is described in incomplete but nonetheless gory detail by papers covering the basics of the format, its error-correction code (of Reed-Solomon type, similar to the one employed for the Compact Disc), the tape required (metal particle, like that used in 8mm videocassettes), and the rotary-head tracking control (resembling that of 8mm VCRs).

But the RDAT paper that caught my fancy comes from Sony engineers: a description of a high-speed tape-duplication method based on contact printing. This dubbing technique, in which a high-coercivity master is simply pressed up against a low-coercivity copy to leave a magnetic "imprint" on it, has been demonstrated with videotapes, but technical or economic difficulties seem to have prevented its widespread commercial application. Nonetheless, high-speed dupli-

cation is the only road to success for prerecorded RDAT cassettes. Unlike prerecorded videocassettes, which mostly are rented, audio tapes are sold, meaning that huge numbers of copies are needed. Some economical dubbing method has to be found if RDAT is to go anywhere.

According to the Sony engineers, contact printing will do. They pressed together master and slave tapes and zipped them through a roller/bias-head assembly (see diagram) at 2.2 meters ($\frac{7}{4}$ feet) per second, which is about 270 times the normal playing speed of 8.15 millimeters ($\frac{1}{3}$ inch) per second. Now that's high-speed duplication! Applied pressure on the two tapes by the roller/drum assembly was about 113 pounds per square inch.

The great thing about RDAT encoding is that any duplication process's distortion, noise, and time-base errors—all of which are important considerations in high-speed video copying—are to a significant extent irrelevant. All that matters is whether an RDAT deck can tell a one from a zero. As it turns out, digital errors from Sony's dubbing process were low enough for full correction by standard RDAT error-correction systems; thus, the audio is completely and correctly reconstructed. The principal remaining engineering problem is that the "pressings" are about 3 dB below standard

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in output level. But the Sony engineers say that this obstacle can be overcome "with the improvement of master and slave tapes and the optimization of the duplication process." With the ultimate success of RDAT contingent on a low-cost duplication process, you can bet those guys are at this moment busy improving and optimizing.

RDAT's imminent is also demonstrated by a list from Hitachi of its pending integrated circuits for RDAT decks. Made up of subsystems for overall deck control, error correction, head/motor servo control, and analog-to-digital and digital-to-analog conversion, the chips are scheduled to go into mass production in December, although preproduction samples were available in July. Judging from a preliminary block diagram showing how the ICs dominate the circuitry of an RDAT deck, it appears that a recorder's cost will be determined mainly by its rotary-head mechanism, not the electronics. This is similar to the situation with a Compact Disc player, in which the critical electromechanical assembly, the laser pick-up, is the most expensive single element. What's promising about the RDAT system is that rotary-head helical-scan recording is

technologically old hat, having already served as the foundation for Beta, VHS, and 8mm video recording. In this respect, the launch of RDAT will be quite different from that of the Compact Disc, which depended on then-futuristic semiconductor laser-diodes and optical tracking systems. Well-proven rotary-head technology combined with high levels of circuit integration will keep RDAT deck prices low—certainly less than \$1,000 at the start and, if we're lucky, maybe even under \$700. *David Ranada*

LUXMAN HYBRID AMPLIFIERS

LUXMAN HAS INTRODUCED TWO INTEGRATED amplifiers, both using a combination of tube and solid-state technology. The LV-105 and LV-103 use field-effect transistors (FETs) in the first amplification stages, twin triode tubes in the driver stages, and high-current MOS-FETs (metal-oxide-semiconductor FETs) in the output stages. This arrangement is said to eliminate many distortion-causing components found in conventional designs. The amplifiers also incorporate separate power supplies for the audio circuitry and the tube-heating filaments. A pre-



LUXMAN LV-105 INTEGRATED AMPLIFIER

heating system provides for immediate operation when the amplifiers are turned on, and it also is claimed to significantly extend the tubes' life expectancy.

The LV-105 is rated at 80 watts (19 dBW) per channel into 8 ohms and has a dynamic headroom figure of 3 dB. In addition to inputs for moving-coil and moving-magnet phono cartridges, tuner, CD player, and two tape decks, the amplifier has connections and switching for audio and video signals from as many as three sources. The video signal passes through its own buffer amplifier. Source selection for dubbing is independent of the main source selector. The LV-103 is rated at 50 watts (17 dBW) per channel, and of the two video sources it can accommodate, it handles only the audio signals. Otherwise, it appears to be identical to

Sony just extended the range of



the LV-105. Prices are \$700 for the LV-105 and \$600 for the LV-103. Further details are available from Luxman, 19145 Gramercy Pl., Torrance, Calif. 90501.

BASIC VIDEO BOOKS

THOSE READERS DESIRING A HEAVIER DOSE OF video technology than our features and columns provide might want to look into several recent books. By far the best single-volume introduction to video technology I've found is Bernard Grob's *Basic Television and Video Systems*, now in its fifth edition from McGraw-Hill (\$24.50). Written at a level understandable by anyone who reads HIGH FIDELITY test reports, this book is *not*, thank goodness, another primer on how to repair a television set. Rather, it provides a fundamental how-and-why look at nearly every facet of present-day video systems, including color signals, picture tubes, cameras, television receivers, videotape recorders, videodiscs, television transmission, and cable TV. Containing very little unexplained engineering jargon, the book also manages to keep the math to a minimum (essentially none) without falling into overgeneraliza-

tion or inaccuracy. The only omissions are satellite technology and the rapidly evolving fields of digital video and signal processing.

Those fields are covered, along with almost everything else related to video, in another, more math-ridden, weighty (1,478 pages), and pricey (\$89.50) tome from McGraw-Hill: *Television Engineering Handbook*, edited by K. Blair Benson. This volume covers the nitty-gritty engineering details of video, starting with how the eye perceives detail and color (essential reading, these chapters), continuing with the video chain (including lenses, cameras, transmitters, antennas, picture tubes, videotape, videodisc, and film-to-videotape conversion), and ending up with digital television and effects. The final chapter is a compendium of international television standards and includes such esoterica as where every UHF and VHF channel is assigned in the U.S. (listing, for example, the state and city to which every Channel 5 is assigned). This is the book for the videophile who has to know everything.

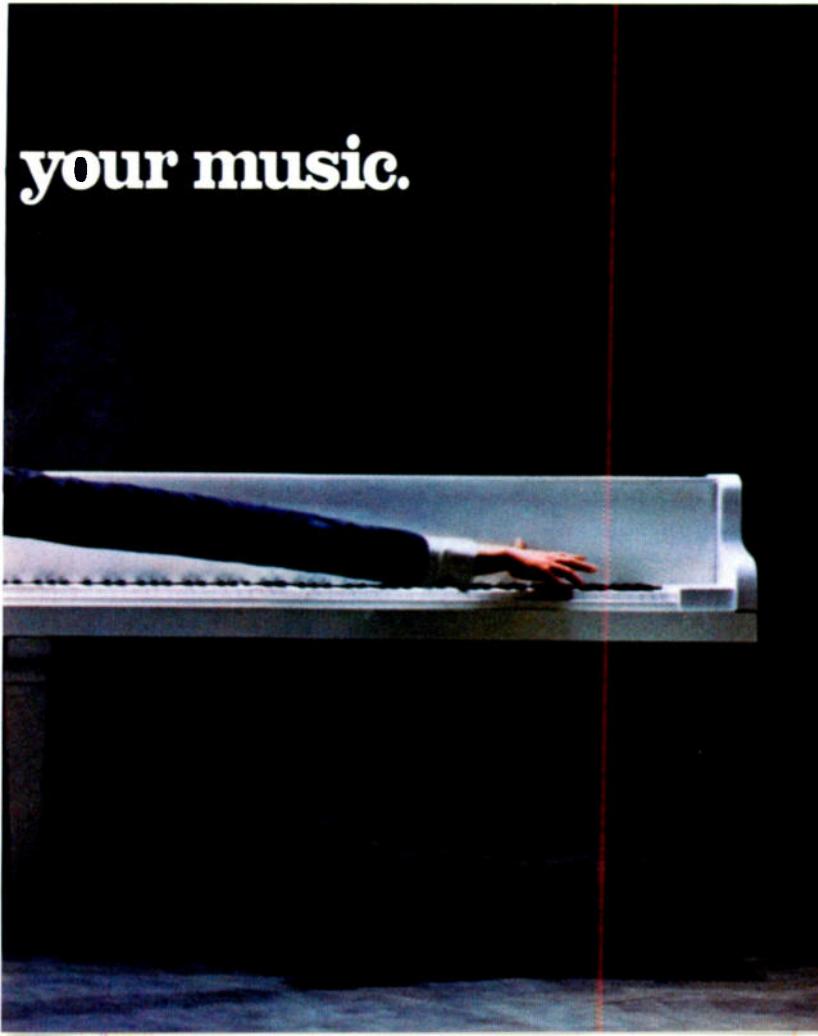
For those who just want to make video movies, *Electronic Cinematography* (Wadsworth Publishing Co., \$18.75), by Harry Matthias and Richard Patterson, approaches the

field from the point of view of the cinematographer. Aside from being a tutorial on video waveforms and camera construction, this book is most useful for its continual comparison and contrast of video and film and should be most instructive for those who have some photographic background. It does not, however, offer any advice on how to use a camera. For that, you're best off taking a filmmaking course to learn how to compose shots and then edit them into coherency.

Finally, for more detailed and practical information about video cameras than any of the above books provides, I highly recommend Gerald P. McGinty's *Video Cameras: Theory and Servicing* (Howard W. Sams & Co., \$14.95). Although the book is intended for those working with professional equipment, there is much here of use to the home videographer, including a good rundown on the various types of video pickups (Vidicons, Plumbicons, Saticons, Newvicons, and CCDs) and their characteristics. You also will learn more than you ever thought you needed to know about basic camera operation, setup, and performance.

David Ranada

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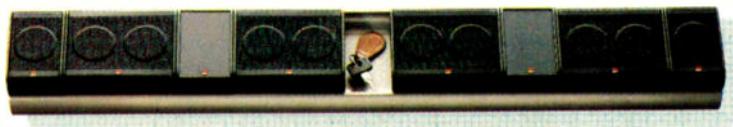
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C R O S S TALK

CLASS STRUGGLE

I HAVE BEEN TOLD THAT CLASS A AMPLIFIER design has a great many advantages over conventional Class B design. Is Class A better than Class B, and if so, why?

Lewis Brown
Charlotte, N.C.

All else being equal, a Class A amplifier will generate less distortion (particularly at low levels) than a Class B model, but many other factors play a role as well. Unfortunately, pure Class A operation is relatively inefficient and generates more heat than Class B. Most modern amps operate in a hybrid mode called Class AB or use a "sliding bias" scheme to make Class A more efficient. Either way, you get the best of both worlds. It is not normally something you need to consider in making a buying decision.

A HUMDINGER

RECENTLY I BOUGHT A YAMAHA K-520 CASSETTE deck to go with my Yamaha R-70 receiver and VV-1000 VCR. After plugging all the cables into the correct jacks, I could hear a faint hum. Not knowing where it was coming from, I started moving the cables around, and the noise stopped. Several months later I moved my equipment to a new cabinet and the hum returned, but this time it was very loud and I couldn't make it go away. The dealer suggests that I may be getting bombarded by microwaves. What can I do?

Douglas L. Pierson
Chicago, Ill.

Microwaves—that's a new one. We doubt, however, that your problem springs from anything so exotic. If the hum is in one channel, try swapping the cables at the receiver end of the connection. If the hum switches sides, one of the cables is defective and should be replaced. Another possibility is that the cables are running too close to a power line and are picking up hum from it. RF (radio frequency) interference from lower-than-microwave frequencies is another possibility, but we would expect it to manifest itself in some other way, and there always is the outside chance of some defect in the cassette deck (though the fact that moving the cables helped the first time points strongly in the other direction).

CARTRIDGE REPLACEMENT

I'VE BEEN TOLD THAT A PHONO CARTRIDGE should be replaced after a few years regardless of the condition of its stylus because it begins to lose quality. My stylus is going to need replacement soon, but the cartridge is several years old. Would it pay to replace only the stylus?

Darrell Anderson
Renton, Wash.

Yes, the body of the cartridge should remain as good as new almost indefinitely; only the stylus will

deteriorate. However, replacement styli often cost almost as much as an entire cartridge, so you sometimes can upgrade for little or no more money than you would pay for a new stylus alone. Unfortunately, this is less true now than it was in the past, when the pace of pickup development was much faster than it is today.

FLOATING-GROUND WOES

I BOUGHT A PAIR OF POLK SDA-1A SPEAKERS, but when I went to install them, I found that they require a common-ground amplifier. My Sansui AU-D11c integrated amp is a floating-ground model. Is floating-ground the same as common-ground?

Norman W.M. Englander
Dexter, N.Y.

No, it's not, and the difference is important. Connecting a pair of SDAs to a floating-ground amplifier could damage the amp's output transistors; it certainly will mess up the sound. Fortunately (at least in general, if not in your particular case), the Polk SDA speakers are the only ones we know of that make this demand, and floating-ground amplifiers are relatively rare.

CD FOR THE ROAD

I AM LOOKING FOR A COMPACT DISC PLAYER for my home and for a complete system for my car. It seems to me that the most practical thing probably would be to buy a portable player, which I could use at home and hook up to the front end in the car when necessary. However, you mention in your April issue that portables don't hit the highs quite as well as home models do, and in the May issue you say that they can't be expected to track properly through the vibration and temperature extremes encountered in a car. How serious are these problems?

Pedro Diaz
Huntington Beach, Calif.

Not very. The high-frequency rolloff exhibited by some portable CD players is so slight and so far up that we doubt you would ever even notice it on music. A player designed expressly for the car should have better shock isolation than an ordinary portable, but the difference probably will be apparent only on strong jolts. Also, a car player is bolted to the chassis and therefore receives the full impact of any bump; a portable resting on the passenger seat will not be hit as hard and therefore will not need quite as much shock isolation. In short, a real car player probably will work a little better than a portable, but the difference may not be worth the additional cost to you.

VIDEO ON CD

RECENTLY I BOUGHT A PIONEER PD-6010 Compact Disc player. When I was still shopping, the salesman from whom I got the Pioneer told me that in a few years, video signals would be recorded on CDs and that only

players like mine with triple-beam laser pickups would be able to handle these signals and produce a picture. Is this true?

Randy Raia
Covington, La.

Not exactly. Provision has been made for putting video graphics onto Compact Discs along with the music, but the characteristics of the laser pickup won't matter any more than they do now. What you will need is a subcode output port on the player and a special decoder box.

BIAMP BENEFITS

RECENTLY I BOUGHT A PAIR OF BOSTON Acoustics A-400 loudspeakers, which have inputs for biampification. What, if any, advantages are there to biamping an already superb-sounding system?

Clay Hardy
Thomaston, Ga.

In a biamped system, the low-frequency drivers are powered by one amplifier, the high-frequency drivers by another. The main advantage is that clipping, say, the bass amp does not splatter distortion into the range handled by the upper-frequency amp. And if an electronic crossover is used between the preamp and the power amps, the demands placed on each amplifier are reduced, diminishing the probability that either will overload. Another advantage is that the total power available is increased, enabling the system to be played louder, but you could achieve the same end by using a bigger amp full-range. Unless you are clipping your amplifier fairly often, you probably don't need to consider biamping.

THE MATING GAME

I WAS VERY IMPRESSED WITH YOUR REVIEW OF the Shure V-15 Type V-MR phono cartridge [December 1984]. How about your choices for an ideally compatible turntable?

Anthony Aldridge
Forest Hills, N.Y.

Whatever that might be! In most cases, it is important that the tonearm's effective mass be well matched to the pickup's weight and compliance, to assure that the infrasonic arm/cartridge resonance occurs at neither too high nor too low a frequency. But the Shure's Dynamic Stabilizer brush assembly damps this resonance so completely that this is no longer a consideration: The cartridge should work well in any arm that can balance it properly and allow it to track at the required force. Beyond that, we would recommend simply that you look for the best performing turntable and tonearm you can find that provide the features you want at a price you can afford to pay. We see no reason to expect that there would be any magically synergistic combinations.

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



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R A N A I D A

THE DSP NUMBERS GAME

THE HULLABALOO RESOUNDING AROUND THE Compact Disc system has made it easy to forget what digital recording is all about. A digital recording, as produced by the CD system and the coming RDAT digital cassette format, is a series of *numbers* describing the instantaneous amplitude of an audio waveform. The French term for a digital recording, *enregistrement numérique*, reveals this fact a bit more easily. That the digits of a digital recording are in the binary system doesn't make them any less numerical than 10, 2.71828, or 3.14159. However, their binary nature does make them eminently suitable for manipulation by digital computers or, as is the case with several recent audio products, by microchips specifically designed to perform digital signal processing.

DSP, as it often is abbreviated, is the application of mathematical operations to data that numerically represent the output of a sensing device (such as an image or a sound). Usually DSP is used to extract information otherwise submerged in a mass of data, in order to transform the data into something more meaningful. Among the best-known examples of DSP are NASA's "computer-enhanced" photographs of the planets and their moons. Most of the DSP work in audio has been similar in intent: to make the garbled sounds of a cockpit voice-recorder more intelligible or, closer to home, to make the acoustic recordings by Enrico Caruso sound more lifelike (see James A. Drake's "The 'Real' Voice of Enrico Caruso," October 1976).

The advantages of DSP for audio are compelling. To alter the processing, it is necessary to change only the computer programs (software), not to build a new circuit—one machine can be made to do many things. Digital processing is precisely repeatable, with no differences in performance due to aging circuitry. And most important, the sonic quality of the result is limited only by the appropriateness of the computer program and the numerical precision to which the calculations are carried. Both of these can be optimized to produce very low levels of distortion and noise.

As if to balance out the advantages conferred by software, the major disadvantages of audio DSP concern hardware. Obviously, DSP must operate on digital signals. These in turn must come from rather costly analog-to-digital (A/D) conversion circuits. And to hear the results of DSP, the numbers must be turned back into an audio waveform—meaning, of course, a stage of digital-to-analog (D/A) conversion circuitry. Real-time, as-it-happens DSP requires advanced integrated circuit technology in order to obtain the necessary computing speed at prices affordable to consumers. Luckily, IC fabrication techniques have now reached this point. At present, home DSP units have only analog inputs and therefore must contain A/D and D/A converters, because many of the signals they handle come from analog sources. Eventually, however, home DSP components also will have digital inputs for a CD player or an RDAT deck, mak-

ing it possible to remain in the "digital domain" from the signal source until the signal reaches an analog power amplifier.

In mathematical terms, an audio DSP chip is not much more sophisticated than a typical four-function calculator. It just operates *much* faster. Yamaha's YM-3804 DSP integrated circuit, for example, executes one of the fundamental DSP operations (multiplying two numbers and adding the product to a third) in only 300 billionths of a second. Speed is important, because real-time audio DSP calculations must take place between samples. That is, when processing an audio signal, a DSP chip must perform its program in the period between one number from the A/D converter and the next (within 22.6757 millionths of a second for the CD system) in order for you to be able to hear the "finished" signal as it is generated. In that time, 75 multiply-add operations can be executed by the Yamaha chip. If more calculations are needed, as they often are, additional chips must be hooked up or faster integrated circuits used.

Even though audio DSP now is being performed by such special-purpose digital ICs as the one described above, the results often mirror familiar analog functions. Many analog audio processes have conceptually simple DSP equivalents. In fact, all audio DSP uses just the following basic operations:

- Changing the volume or amplitude of a signal is achieved by *multiplying* every sample by a fixed number. Just as in the analog world, a multiplication by 1 is unity (0-dB) gain, and a multiplication of every sample by 0.5 creates a 6-dB level reduction. Inverting a signal's phase is accomplished by making that fixed number negative. If a series of the input samples are multiplied by a series of different numbers and the output sample is the sum of those multiplications, the important process of *convolution* results.
- Signal mixing is a sample-by-sample *addition* of separate streams of numbers.

- To obtain a time delay, a DSP unit continually *stores* numbers in its memory but waits the required time before *reading* them out. The delay can be as short as one sample period or as long as the processor's memory capacity will allow. Long time delays with high audio quality are difficult to obtain by analog methods (such as bucket-brigade and charge-coupled device [CCD] chips).

All the rest of DSP builds from these fundamental actions. For example, a digital filter as found in a CD player is a purpose-built convolver. High-quality digital reverb, formerly an expensive function available only at the professional-audio level, uses time delays, filters, and mixing. All traditional analog signal processing can be performed digitally, usually with superior results. The whole field is just a game of numbers, of sophisticated uses for the arithmetic we all learned in grade school. Far from being a gamble, DSP's precision, accuracy, repeatability, and resulting sound quality make it a sure thing. You can bet on it as the future of sound processing. ■



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WEIGHT A MINUTE!

IT'S A SEDUCTIVE IDEA: TAKE ALL THE TEST RESULTS for any product, devise a grading system for each characteristic that will equate a rating of "perfect" (superb, champion, outstanding, or whatever) with the top value on a standardized scale (say, 1 to 10) and the lowest possible (or acceptable) performance with the minimum value, weight each variable on the basis of its importance, and add up all the numbers. Obviously, the highest number scored among competing products will represent the best performance. No need to wade through the fine print; no learning curve as you find out what the figures mean. Just one number to reckon with, and there you have the ultimate truth about every product so rated.

This is, in fact, the basic method used by some publications in reporting on tapes, recorders, and other products. There's usually a breakdown of the various characteristics that have been taken into account, and often the final ratings are good/better/best rankings rather than hair-splitting numbers, but the idea is the same. And the most confusing and invidious comparisons are avoided by the more responsible magazines by limiting any one test series to products that are at least roughly in the same class. But attractive as such a scheme might be, the simple answer it yields is almost guaranteed to be wrong.

When we first began testing blank tapes, I got a letter from two college students who thanked us for the information we offered but said that the job was unfinished as long as the data weren't assimilated, weighted, and returned as a single figure of merit for each tape. The students then took all the information in those reports, subjected it to such a process (with the help of a computer), and supplied a printout of the results. It was an interesting exercise, performed with care, knowledge, and integrity (which also can be said for many of the magazine reports that do likewise). But the results were meaningless.

Our data and comments actually justified the relative single-figure rankings the students obtained for about half the tapes on the list. But the other figures were all over the place, as I saw it, for a number of related reasons, with two of the very worst tapes scoring very high and several very good ones looking poor. What went wrong?

The most obvious clue was provided by those two "winners." Each failed what I would consider minimum high fidelity standards in some respect. I forgot what the shortcomings were, but at least one was a mechanical problem that was discussed in our text but evidently dismissed in the computer analysis as unquantifiable. The tapes' final rankings were inflated by high marks in categories that the students had heavily weighted—rightly so under normal circumstances, perhaps, but meaninglessly for tapes already out of the running, as I would say these were.

As I played with the figures, I noticed how, in some categories, a change too little to be of much sonic importance could jump the tape's ranking radically up or down. In particular, a small fraction of a

dB in either noise or headroom—differences slighter than one might expect in comparing two samples of the same brand or even two parts of a single cassette in some cases—produced a major rating change. Part of this was due to the intentional weighting, according to a rationale explained in the letter, but part of it was caused by unintentional duplication of data.

In our reviews of tapes, we evaluate three performance characteristics measured in the midrange: signal-to-noise (S/N) ratio, measured from DIN 0 dB down to the A-weighted noise floor; headroom, measured from DIN 0 dB up to the overload ceiling established by 3 percent third-harmonic distortion; and dynamic range, measured from the overload ceiling to the noise floor. Notice that the last equals the sum of the other two. Change any one, and you change a second one as well—and in the same direction (toward better or worse). This doubles the effect, which was already heavily weighted in both cases before being added to the total. Very interesting.

But even more interesting was a paragraph of our report that my correspondents hadn't read—or, at least, hadn't taken to heart. In it, I pointed out that if you aren't sure about tape headroom and how to use it, and thus ride gain on all tapes the same way, you should ignore the headroom rating and concentrate on finding a tape with a good S/N ratio. Conversely, if you regularly push each tape to its limit, running well into the red when the music and the medium allow, you should concentrate on the overall dynamic range. In other words, the importance of individual tape characteristics depends not only on objective performance considerations but on subjective or use-related ones as well. Here, in particular, you may ignore one of the "important" variables altogether, depending on how you set recording levels.

So you've got to be able to quantify every characteristic of interest to start with, and the scale on which you quantify it may have to be nonlinear to keep from magnifying insignificant differences in one part of the possible range of values or, conversely, failing to register preemptive differences as such elsewhere. But in any event, the best you can hope for with a single-figure approach is to match the priorities of one user or a closely defined group of users. For even a reasonably wide spectrum of users, there is no adequate substitute for the consideration of all the factors involved—one at a time and with respect to the users' own priorities.

When you read a report that tries to give you a single figure of merit, you almost invariably find a text that explains the ins and outs of the results encountered during testing, which at least offers the opportunity to point out how individual purposes may be served or compromised by particular performance characteristics. But I question how many readers absorb this part when a bottom line is there for the ogling. It's so easy to just go to that figure of merit (or demerit) and forget the rest. That's its attraction and its downfall. ■

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TEST REPORTS

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supplied by
Diversified Science
Laboratories.*

Home surround-sound processors have accounted for a substantial proportion of this year's most exciting new products, so we've put three highly sophisticated (and extremely interesting) models to the test: top to bottom, Shure's HTS-5000, Yamaha's DSP-1, and Sony's SDP-505ES. Also this month, we review the Sharp DX-620 Compact Disc player and Kyocera R-861 AM/FM receiver. Reports follow. ▶



PHOTOGRAPHS BY NICK BASILION

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Charlie Mingus

The Black Saint & The Sinner Lady

Sonny Rollins

On Impulse

Quincy Jones

The Quintessence

Count Basie

& *The Kansas City Seven*

Duke Ellington & Coleman Hawkins

Duke Ellington Meets Coleman Hawkins

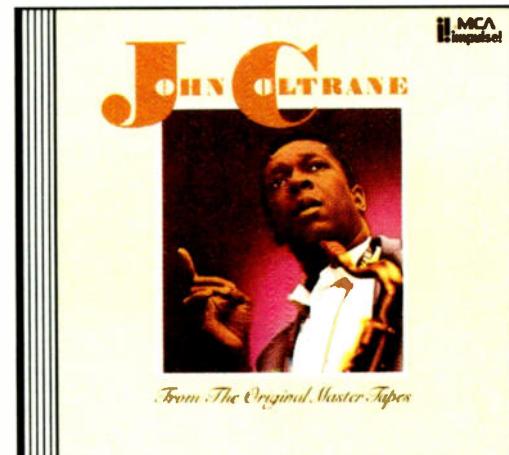
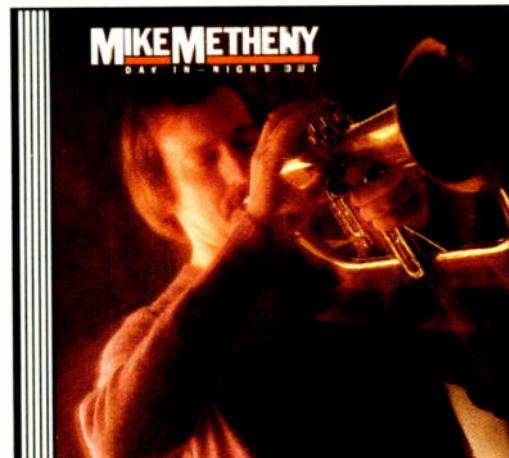
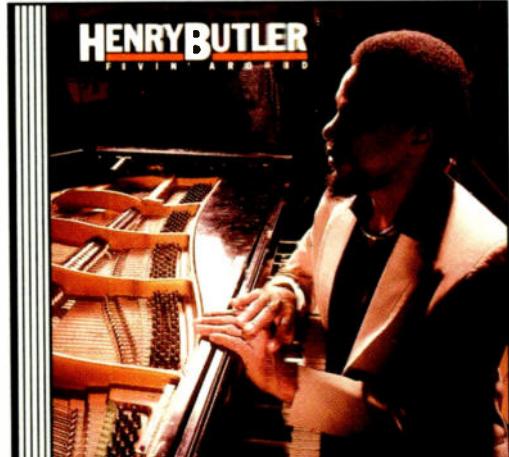
Ahmad Jamal Trio

The Awakening

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Yamaha DSP-1 Digital Sound Field Processor



DIMENSIONS: 17½ BY 2½ INCHES (FRONT), 11½ INCHES DEEP PLUS CLEARANCE FOR CONTROLS AND CONNECTIONS. **A.C. CONVENIENCE OUTLET:** ONE UNSWITCHED (200 WATTS MAX.). **PRICE:** \$850. **WARRANTY:** "LIMITED," TWO YEARS PARTS AND LABOR. **MANUFACTURER:** NIPPON GAKKI COMPANY, LTD., JAPAN; **U.S. DISTRIBUTOR:** YAMAHA ELECTRONICS CORPORATION, U.S.A., 6660 ORANGETHORPE AVE., BUENA PARK, CALIF. 90620.

FOR ALL THE FEATURES AND CONTROLS IT provides and for all the sophisticated frenzy of the digital computation it performs, the primary purpose of Yamaha's DSP-1 Digital Sound Field Processor is simply put: to generate around the listener the acoustical ambience of an actual music performance. This idea is not new, but the DSP-1 differs in concept and execution from all of its predecessors. The environments it creates through digital signal processing are more realistic than any that have come before because they are modeled after real places. To quote the instruction manual, "The DSP-1 is designed to reproduce the sound field experienced in a concert hall in a normal listening room by simulating sound reflections from all directions, based on actual measured data, using extra speakers surrounding the listener."

Encoded within a read-only memory (ROM) chip are early-echo and reverberation patterns of several performance spaces. The DSP-1 uses this information to process incoming sound to simulate those spaces. If, in the actual hall, a reflection off the back wall reaches the listener 50 milliseconds after the direct sound and at a slightly lower level, the DSP-1 will duplicate that reflection by attenuating the input signal, delaying it for 50 milliseconds, and then sending it out to ambience speakers behind the listener. What makes the DSP-1 special is that, in some functions, it will generate as many as

80 discrete echoes all around the listener: each surround or ambience speaker will receive a slightly different feed composed only of echoes of the original signal. Other functions, in addition to providing fairly widely spaced (in time and direction) early reflections, also supply the closely spaced and decaying recirculated reflections characteristic of a space's reverberation.

It's all accomplished by digital signal processing (see this month's "Bits & Pieces"). Inside the DSP-1 are three ultrasophisticated digital integrated circuits (ICs) specifically designed for this purpose. They are responsible for generating the complex set of echo patterns and for providing the tremendous control the user has over these patterns. To get standard audio signals into digital form for manipulation, the DSP-1 employs a 16-bit analog-to-digital converter (ADC) that operates on the sum of the input channels (except for the Dolby Surround processing, which must use the difference between the input channels). From this one signal, the DSP-1 generates four different ambience outputs, which are restored to analog form by 16-bit digital-to-analog converters (DACs). Throughout, the sampling rate is 44.1 kHz, just as in the Compact Disc system.

The DSP-1 is hooked up in the same way as many other signal processors, either between preamp and power amp (the optimum configuration) or in a tape monitor loop. (All connections to the unit are at line level and are made through gold-plated pin jacks.) But unlike most other such devices, it has three pairs of outputs, designed, ideally, to drive six loudspeakers. The main output simply duplicates the input signals and is fed to the closest pair of speakers in front of the listening position. Of the two pairs of sur-

round outputs, one is designed to drive a set of ambience speakers in front of the listener but more distant than the main speakers; the remaining outputs are for speakers behind the listener, preferably located no nearer than the main ones. It is not necessary for all the loudspeakers to match exactly (although a matched set of ambience speakers should enhance the effect somewhat), but whatever model is used on a left channel should also be used on the corresponding right channel.

Because a full DSP-1 setup requires having three stereo amplifiers available—a rare occurrence even at the HIGH FIDELITY offices—Yamaha has thoughtfully given the DSP-1's back panel a main-blend switch. This mixes the front ambience outputs with the unprocessed main outputs for driving a more traditional four-speaker surround set-up (two in front, two in back). For those of you who have very wide main-speaker separations or who are concerned with obtaining well-centered dialog from movie soundtracks, there are separate mono full-band and subwoofer outputs tapped from the main-channel signals.

Sixteen different processing functions

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OUTPUT AT CLIPPING (at 1 kHz)	
main channels	6.8 volts
center channel	1.5 volts
surround channels	2.6 volts*
MAXIMUM INPUT LEVEL (1-kHz clipping)	
	≥ 6.9 volts*
S/N RATIO (re 0.5 volt; A-weighted)	
main channels	97 1/4 dB
center channel	≥ 102 dB
surround channels (worst case)	73 1/2 dB
DISTORTION (THD; 20 Hz to 20 kHz; 2-volt output)	
main channels	< 0.01%
surround channels	< 0.01%**
FREQUENCY RESPONSE (main channels)	
	+0 - 1/4 dB, 15 Hz to 25.3 kHz
	+0, -3 dB, < 10 Hz to 86.8 kHz
CHANNEL SEPARATION (1 kHz; main channels)	
	73 3/4 dB
INPUT IMPEDANCE	
	50k ohms
OUTPUT IMPEDANCE	
main and surround outputs	980 ohms
center output, full-bandwidth	890 ohms
center output, low-mass	10,000 ohms

* Varies with program and frequency. These figures are for the Presence program.

* High frequency test tones (16 kHz and above) produced low level intermodulation products not included in the harmonic distortion figures. Worst case was a 24.11-kHz "birdie" 39.1 dB below the level of the 20 kHz test tone. The worst in band product was at 4.1 kHz, 50.1 dB below the level of the 20 kHz tone.

(quite appropriately called "programs" by Yamaha) are available in each of the DSP-1's two main processing modes, Acoustic Surround (for generating ambience) and Sound Effector (for special musical effects). The 16 Acoustic Surround programs are called Hall 1, Hall 2, Hall 3, Chamber, Münster (a cathedral), Church, Jazz Club, Rock Concert, Disco, Pavilion, Warehouse Loft, Outdoor Stadium, Presence, Surround 1, Surround 2, and Dolby Surround. The 16 Sound Effector programs (which we will not discuss here except to say that they are fun to explore and should be of special interest to would-be recording artists) are left-to-right delay, stereo echo, two flange programs, two chorus programs, stereo phasing, tremolo, symphonic (a type of tremolo), echo room, two pitch-change programs (each providing one octave up or down in semitone and hundredths-semitone steps), and four automatic panning programs (clockwise, counterclockwise, front-rear, and left-right). A large LED display on the front panel indicates the chosen program number, and a nifty two-line, 32-character alphanumeric LCD to the right shows its name.

There is more to most of the programs than meets the eye. Hall 1 and Hall 2, for example, each have two subsettings that generate early-reflection patterns for actual concert halls. These settings do not synthesize any reverberation because classical music, which is the form most suited for them, usually is recorded with enough natural reverberation to create the necessary sense of space. The encoded halls are the Berlin Philharmonic (home of the Berlin Philharmonic Orchestra), the Frankfurt Old Opera House, the Mozarthalle at the Konzerthaus Stuttgarter Liederhalle, and the Herkulessaal in Munich (home of the Bavarian Radio Symphony Orchestra). Yamaha's engineers, after revealing which setting is which hall, asked us not to tell you, but they may be ob-

vious when used, especially if you've seen pictures of the buildings. Hall 3 also has two subsettings: One simulates the sound heard onstage with the performers, and the other, Live Concert, is vaguely described as "round-shaped hall, with rich presence and surround effect with a full echo."

Surround 1 and Surround 2 are described in one Yamaha document (not the instruction manual, in which they are barely mentioned at all) as programs for music videos: "You are seated directly in the middle of the environment for a complete surround effect." Surround 1 has On Stage, Live Concert, and two Hall subsettings similar to those available from the Hall 1 and Hall 3 programs "but with central seating." Surround 2, Jazz Club, Rock Concert, Disco, and Outdoor Stadium all have subsettings called Live, Dynamite! (Yamaha's exclamation point), Spacious, and Reverse. As you will see, these names are just about as descriptive as any others Yamaha could have chosen.

Perhaps the most telling display of the power and versatility of digital signal processing is the huge variety of additional settings possible with the DSP-1. Not only is each of the programs quite different from the others in ambience effect, but in every case the vital parameters can be varied by the user away from the factory settings, with the results immediately audible and the altered values visible in the alphanumeric LCD. For example, with the Hall 1, Hall 2, and Hall 3 programs, you can change the apparent room size, its liveness, the initial delay between the main-channel sound and the processed sound, and the turnover frequencies of the applied high- and low-pass filters. For the Chamber, Münster, and Church programs, you can change the mid-frequency reverb time, the reverb level, and the ratio of high-frequency reverb time to the mid-frequency reverb time. The reverb time itself is settable between 0.3 and 99 seconds. For Dolby Surround decoding, which in this unit is simply the standard filter-delay-Dolby B configuration, the rear-channel delay can be varied between 15 and 30 milliseconds (the maximum amount that is sanctioned by Dolby Labs).

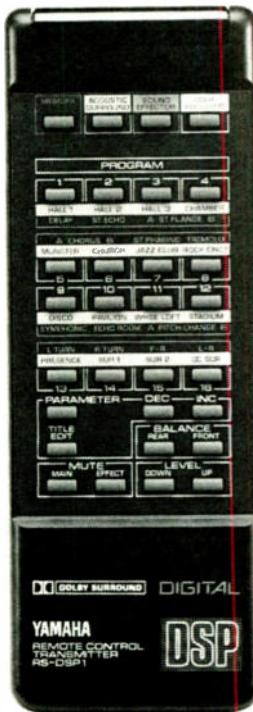
But that's not all! Once you alter a factory setting, you can save the changes in one of 16 memories. You can even give your new program a name in the alphanumeric display. We don't know how long the user-memory settings will last, but we wouldn't be surprised after all this to hear a figure of several years. Like any other self-respecting computer-controlled component, the DSP-1 will power up to the settings used when it was last turned off, whether or not they were ever formally entered in memory.

Mode and program selection, alteration of factory settings, new program memorization, and entry of new program names are all accomplished with the supplied infrared handset. The remote also governs rear/front balance and the level of the processed

sound (*not* that of the main signals) and separately mutes the main and ambience outputs (useful for hearing just what processing is going on). The other controls in the main chassis are a mix-level control for the front-panel mix-input jacks (used for blending another stereo signal—Yamaha mentions a musical instrument or microphone—with the main-channel signals for processing) and a tape-monitor mode selector with volume control. The DSP-1's back-panel tape-monitor jacks permit recording either the unprocessed main channels or a mixture of main and processed sound as well as processed or unprocessed monitoring of a tape signal. Finally, the back panel has a main-signal balance control and a main-signal output attenuator.

Traditional high-fidelity criteria and measurements tend not to be useful in the evaluation of devices like the DSP-1, whose effects can be easily heard but not readily quantified. The measurements listed are all quite good and represent performance superior to that of analog surround devices. The main signal path is truly untouched by processing, unless a four-channel setup is used. Only the A-weighted worst-case noise level for the processed output seems out of line, though in use nearly all the noise from the ambience channels originates in the input signal.

The most revealing measurements are scope traces of the echo patterns the DSP-1 generates from a single cycle of a 1-kHz tone. We cannot show the patterns for every program, but the ones we have selected display the variety that the DSP-1 can produce. All the photos are taken from the left-front ambience output (the other ambience outputs are all related but different) and repre-



THE WIRELESS HAND-SET FOR THE YAMAHA DSP-1 CONTROLS NEARLY ALL OF THE PROCESSOR'S FUNCTIONS, INCLUDING ADJUSTMENT OF PROGRAM PARAMETERS AWAY FROM THEIR FACTORY SETTINGS.

sent the first 200 milliseconds (20 milliseconds per horizontal division) after the original signal passes through the main channel. Although the patterns can be fully evaluated only by someone trained in architectural acoustics, they illustrate the incredible variety of reflections necessary to create a credible impression of an actual acoustical environment.

Measurements aren't the only things that can't describe the DSP-1's sonic performance: Words fail, too. This is one product that has to be heard to be believed. We have heard the DSP-1 operating in its full-blown, six-channel configuration both in Japan (at Yamaha's headquarters) and here in the U.S., but for our listening tests we hooked it up in the four-speaker arrangement most likely to be used at home, with the front speakers not matching the rear. Even with this less-than-optimum setup, we were mightily impressed by the palpable sense of space the DSP-1 generated, especially when the music synergistically matched the characteristics of the selected program. For classical music, folk, and non-electronic jazz or pop, there was at least one program or modified program, and frequently several, that produced an uncanny sense of being somewhere else listening to live music. The left-right front image remained unchanged, but sometimes increased greatly in depth (depending on the music and the program). Ambience appeared to come from all around the room and did not "pool" around the speakers. For electronic pop and related non-acoustic music, certain programs created an in-the-hall impression, while others simply gave a difficult-to-convey but very pleasant feeling of immediacy.

Don't get the impression that the programs are rigid functions specifically optimized for certain types of music. Classical chamber music frequently sounded better with the Jazz Club or Disco settings. Bruckner symphonies (as they always do) sounded more impressive in the Münster than in any of the concert halls. Disco music in the opera house wasn't bad either. Presence enhanced almost everything. The remote control allows you to switch instantly between programs and thus encourages (as we do) experimentation and exploration. Also encouraging on-your-own trial and error is the sparseness of the instruction manual, which, although long by conventional audio standards, is too terse for this quasicomputer of a component.

The DSP-1's only significant fault is not sonic but logistical: Neither the main chassis nor the remote handset provides any control of system-wide volume. Often, for best results, we found that different tracks on a recording (especially of pop music) required different overall volume settings, as well as different processing programs and new main-to-ambience balances. Yet the level up/down buttons on the handset regulate only the volume of the processed sound, not that of the main channels, and at a fairly slow

rate besides. If the DSP-1 is connected between a separate preamp and power amp—or between the pre-out and main-in jacks of an integrated amp or receiver—you can use the preamp's VOLUME as a master level control. Otherwise, even with a stripped-down, four-speaker setup, there is no way to change the overall level without adjusting two volume controls; with six speakers, three controls will need changing. And that's difficult without inadvertently altering the main-to-ambience ratio.

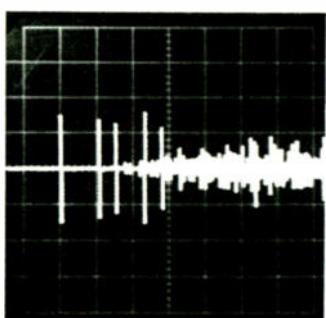
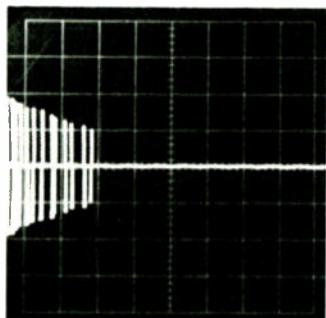
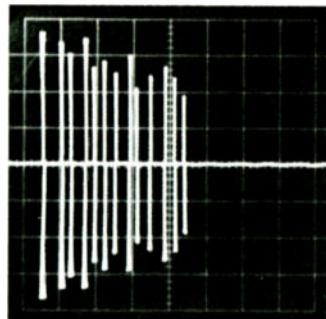
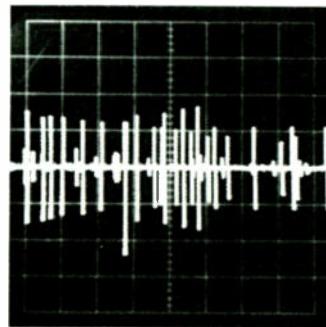
More important for some, the lack of a master volume control just about rules out the use of power amplifiers without level controls to drive the ambience speakers. Besides being unreachable in everyday use, the back-panel main-amplifier level-matching switch is insufficient as a balancing tool because it has only two positions (0 and -10 dB). Fortunately, the M-35 four-channel (bridgeable to two-channel) power amplifier that Yamaha recommends as a companion to the DSP-1 does have the necessary volume controls.

Given the display's usefulness and importance, it is unfortunate that the small alphanumeric portion of it is unreadable from across a room (the large red program numbers do remain visible, however). Perhaps the DSP-1's successor will send data back to a readout on its handset.

Our only other criticisms are that some of the programs come on too strong without modification and that some of the programs can be made to sound distinctly unnatural. For example, setting a few of them for very long reverberation times can result in obviously colored and artificial sound. Then again, long, uncolored reverberation "tails" are extremely difficult to engineer, even in actual concert halls and churches. The device can easily be made to give exaggerated echo or reverb effects by the wrong choice of program or by changing the parameters too far away from the factory settings. However, all these are not so much faults of the DSP-1 as of the uninformed user or demonstrator. It's always possible to get too much of a good thing.

When set up and operated properly, the Yamaha DSP-1 provides an unprecedented degree of you-are-there sonic realism for all types of music. And if you just want to have fun, it encourages an intense interaction with your audio system and the music that is both entertaining and educational. All told, the DSP-1 is a sound enhancer unmatched in versatility, ease of use, sound quality, and value, a worthy nominee in the competition for HIGH FIDELITY's Product of the Year Awards (see last month's "Currents"). It is easily 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." ■

(CONTINUED ON PAGE 26)



TAKEN FROM THE FRONT-LEFT AMBIENCE OUTPUT OF THE YAMAHA DSP-1, THESE OSCILLOSCOPE TRACES SHOW THE UNIT'S RESPONSE TO A SINGLE CYCLE OF A 1-KHZ SINE WAVE. FROM THE TOP, THE PROGRAMS ARE CHAMBER, SURROUND 1, JAZZ CLUB, AND MÜNSTER (CATHEDRAL). ON THE TIME SCALE USED (20 MILLISECONDS PER HORIZONTAL DIVISION), THE FIRST ECHO IN THE MÜNSTER ARRIVES ABOUT 40 MILLISECONDS AFTER THE INITIAL SOUND. NOTE ALSO THE MÜNSTER'S CLOSELY SPACED REVERBERATION ECHOES (RIGHT HALF OF TRACE).

Shure HTS-5000 Surround-Sound Decoder



DIMENSIONS: 17 BY 2½ INCHES (FRONT), 15¼ INCHES DEEP PLUS CLEARANCE FOR CONTROLS AND CONNECTIONS. **PRICE:** \$599. **WARRANTY:** "LIMITED," ONE YEAR PARTS AND LABOR. **MANUFACTURER:** SHURE BROTHERS, INC., 222 HARTREY AVE., EVANSTON, ILL. 60204.

THE "HTS" IN THE NAME OF SHURE'S FIRST surround-sound decoder tells it all. It stands for "home theater sound," which is exactly what the HTS-5000 is designed to provide—a re-creation, in your home, of a Dolby Surround theater experience. A number of other surround processors are available, but none that we know of goes to quite the lengths that the Shure does to reproduce the *full* sonic effect obtained in a well-equipped 35mm Dolby theater.

This extra effort is significant, since Dolby Surround is the de facto standard for high-quality theater sound. It is essentially a four-channel system: left, center, right, and "surround." In the 70mm Dolby format, the four channels are discretely recorded on magnetic stripes along the edge of the print. For 35mm, they are matrixed into two channels so they can be optically recorded onto the film's stereo soundtracks. When a 35mm Dolby master is transferred to a stereo videotape or videodisc, the encoded surround information is preserved, requiring only the proper equipment to extract and resuscitate it.

The Dolby matrix records center information equally, in phase and at a -3-dB level, on the left and right channels. The surround signal is band-limited to 7 kHz, compressed by a modified Dolby B encoder, and recorded out of phase on the two channels. In a 35mm Dolby theater, the process is reversed. Left and right channels are summed to extract the center channel; to derive the surround channel, they are "differ-

enced" (subtracted from one another), band-limited, and expanded by a modified Dolby B circuit. Left, right, and center signals are sent to their respective speakers behind and to the sides of the screen. The surround signal is delayed to ensure that the front-channel audio reaches the viewer first, and then it is sent to a number of speakers at the sides and back of the theater.

Unfortunately, once four channels are matrixed into two, there's no way to separate them completely. The matrix parameters determine the degree of crosstalk and the channels in which it occurs, but they cannot totally eliminate it. In theory, the Dolby Surround matrix provides infinite separation between left and right channels and between center and surround but only 3 dB separation between the center and either side and between the surround and either front side. These characteristics are deemed ideal for theaters because they keep dialogue (center front) from popping up in the back (surround).

If one sits in the center of the theater, the system works quite well. However, the closer you get to one of the speakers, the more you become aware of crosstalk into that channel. For this reason, theater Dolby systems use steering logic to augment interchannel separation artificially, a technique that can be quite effective in stabilizing the perceived sound field.

What distinguishes the Shure HTS-5000 from more typical home Dolby Surround decoders is the degree to which it preserves the full Dolby sound field. To carry the Dolby Surround logo, a decoder need conform only to the most basic of that system's specifications: derivation of the surround channel by differencing left and right channels, fil-

tering the result, running it through a modified Dolby B chip, and delaying the output by at least 20 milliseconds. Dolby does not make regeneration of the center channel or inclusion of steering logic to improve separation prerequisites for use of the logo. The Shure does both—and then some!

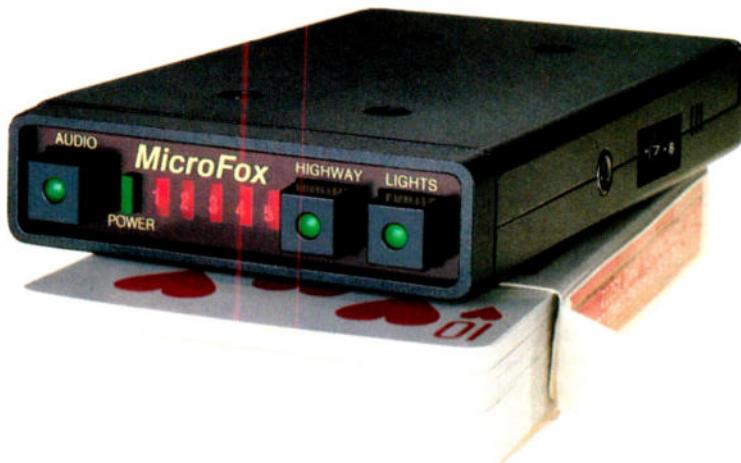
Fully deployed, the HTS-5000 generates six audio channels from the Dolby Surround source—left and right front, left and right surround, center, and subwoofer—and therefore calls for six channels of power amplification plus six loudspeakers (or six powered loudspeakers, one of which is a subwoofer). If you choose to "grow into" the system, you can omit the subwoofer, although it's useful for re-creating the gut-wrenching bass that's part of the movie experience.

You also can drop the center channel by flipping a back-panel switch to defeat the left/right/center steering logic and thus permit the left and right front speakers to create a "phantom" center. The problem with that is the problem with any phantom center for stereo TV: Unless the left and right front speakers are close to the screen (diminishing the stereo impact), dialogue tends to wander off the screen, which can be very disconcerting. The problem is particularly severe if you're sitting off-center. The hard center channel—especially with Shure's steering logic—really locks the dialogue to the screen (assuming the soundtrack was well recorded) and permits wide separation of the left and right speakers, which, in turn, greatly enhances the surround-sound effect.

The HTS-5000 gives you a choice of surround-channel delay of from 16 to 36 milliseconds in 4-millisecond increments. The

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OUTPUT AT CLIPPING (at 1 kHz)	see text
MAXIMUM INPUT LEVEL (1-kHz clipping)	≥ 3.0 volts
S/N RATIO (re 0.5 volt; A-weighted)	
main, center, & subwoofer channels	88 dB
surround channels	79.3/4 dB
DISTORTION (THD; 20 Hz to 20 kHz; 2-volt output)	
main channels	≤ 0.19%
FREQUENCY RESPONSE	
main channels	+0, -1/2 dB < 10 Hz to 10.3 kHz*
	+0, -3 dB < 10 Hz to 27.6 kHz
center channel	+0, -1/2 dB, 140 Hz to 11.4 kHz*
	+0, -3 dB, < 10 Hz to 28.4 kHz
subwoofer channel	3 dB at 80 Hz (12 dB octave)
surround channels	see text
CHANNEL SEPARATION (1 kHz; main channels)	74 1/2 dB
INPUT IMPEDANCE	53k ohms
OUTPUT IMPEDANCE	
main outputs	5,800 ohms
center output	5,400 ohms
surround outputs	6,000 ohms

*Into a low impedance, capacitive load, response will be flatter into a more typical load. See text.

idea is to ensure that the surround-channel sound reaches your ears at least 20 milliseconds after the main-channel sound. This helps you to localize the image properly. To determine the delay, you measure the distance from the closest front speaker to your listening position and from the closest rear speaker to your position (both in feet), subtract the latter from the former, add 20, and set the delay (in milliseconds) to the result.

When it comes to the surround channel, Shure does Dolby one better, at least for the home. Although only one surround channel is encoded in a Dolby Surround recording, it is reproduced in a theater by a number of speakers to the sides and rear of the audience, so that the sound is diffused over a wide area. Unless you're sitting very close to one of the speakers, you're unaware of the source—which is as it should be. But in your home, you normally would use only two surround speakers, making it much more likely that you'd hear the back speakers as sound sources in their own right.

Shure's Acoustic Space Generator is designed to reduce that possibility by creating a sort of synthetic stereo in the back (surround) channels by means of comb filters. However, unlike conventional comb-filter synthetic-stereo generators, which use complementary filters in the two channels to preserve the average power response of the original mono signal, Shure deliberately uses noncomplementary combs. The company reasons that the sound coloration produced by the asymmetric filters (only in the surround channel) is a small price to pay for a closer simulation of the diffuse surround-sound field generated by multiple speakers in the theater.

To bench-test the HTS-5000, Diversified Science Laboratories designed networks to simulate the action of a Dolby Surround encoder and "place" signals in the center and surround channels. (Shure's steering logic is very effective in preventing surround or center-channel output when using a left-only or right-only source!)

No output clipping level is reported because, in all cases, input clipping was the limiting factor. And even this is hard to pin down, since it depends on the channel in which the signal appears and, in the surround channel, on frequency.

The major limitation appears to be the surround-channel delay circuitry, for which Shure chose to use a delta-modulation scheme rather than PCM (pulse-code modulation) or an analog "bucket brigade." Delta modulation has better dynamic range and is more flexible than a bucket brigade and sidesteps PCM's aliasing problems and high cost. On the other hand, it is slew-rate-limited, since it encodes changes in signal level rather than the signal level itself. Thus, it has less headroom at high frequencies than at low and, in fact, the circuit in the HTS-5000 almost "misses" the first cycle of a 1-kHz tone burst entirely. Although initially this may seem worrisome, it's important to rec-

ognize that natural sounds have less energy at high frequencies than at low and that the response of the Dolby Surround channel is cut off at 7 kHz anyway. For its purpose, Shure's delay circuit is quite adequate.

On the positive side, A-weighted noise is admirably low for a signal-processing device of this complexity, and input impedance and maximum gain are more than adequate for any signal source we can think of. Distortion, too, is adequately low considering the variable-gain amplifiers (presumably connected with the steering logic) that the signal is passing through.

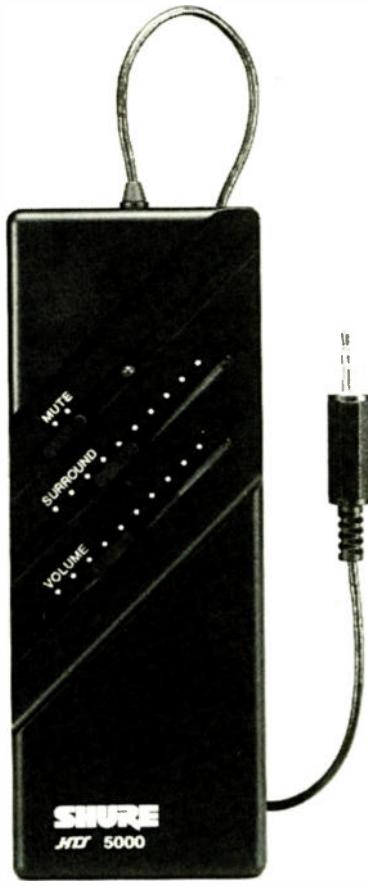
Output impedance is unusually high, however, which affects frequency response. The reported data were measured using the standard IHF load (10,000 ohms in parallel with 1,000 picofarads), which approximates worst-case conditions. If you use low-capacitance cables between the HTS-5000 and your power amplifiers and keep their length fairly short (especially to the front channels), you can expect much better high-frequency response than the data would suggest. (Longer cables to the back-channel amplifiers should present no problem since surround response is limited to 7 kHz.)

With a device like the HTS-5000, the true test is in the listening, and we liked what we heard very much. Except for occasional sibilant "spitting" in the surround channel, the back speakers never drew attention to themselves. Yet the surround effects are exceptionally good and remarkably subtle when called for. (For example, there's a scene in *Prizzi's Honor* in which the Don is having dinner with Charley Partanna while, in another room, music is playing. With the Shure, the dinner conversation never wanders from the screen, and the aria remains firmly anchored in the other room.)

Using the center channel to lock dialogue in place enabled us to use a wider separation between left and right front speakers than would otherwise have been practical. The results are outstanding, not only in the breadth of image, but also in the system's ability to place sound sources anywhere across the front stage or around, above, or behind the listener.

The HTS-5000 can be wired into a tape monitor loop on an integrated amp or receiver—in which case its monitor button and tape input and output jacks replace the connection that is lost—or it can go between preamp and power amps. Although it will synthesize pseudostereo from a mono source and ambience from ordinary stereo recordings, it is, first and foremost, a Dolby Surround decoder. And though there are aspects of the design we'd like to see changed—a wireless rather than wired remote control and an input level indicator that more accurately reflects high-frequency overload in the surround channel—we've yet to see another Dolby Surround processor that does its job as well or as thoroughly as this one.

(CONTINUED ON PAGE 31)



THE SHURE HTS-5000'S REMOTE-CONTROL HANDSET

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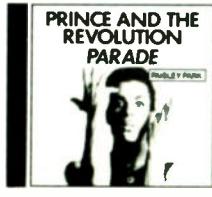
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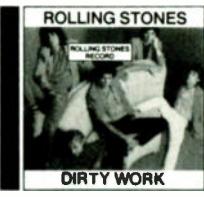
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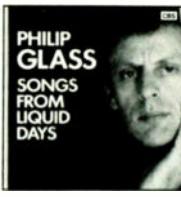
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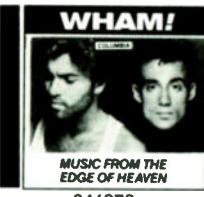
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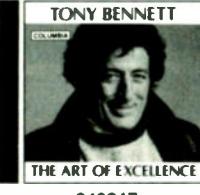
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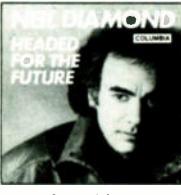
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338616. Miami Vice—Music From the Television Series. G. Frey: #1 You Belong To The City; many more. (MCA)

339903. The Cars—Greatest Hits. Tonight She Comes; Drive; more. (Elektra)

341263. Enoch Light & The Light Brigade—Big Bands Of The Thirties. Begin The Beguine; more. (Project 3)

322008. Linda Ronstadt & The Nelson Riddle Orch.—What's New. (Asylum)

323261. Lionel Richie—Can't Slow Down. All Night Long; Stuck On You; Hello; etc. (Motown)

340182. Philip Glass—Mishima. Original music from the film. [Nonesuch]

335547. Berlioz: Symphonie Fantastique. Barenboim, Berlin Phil. (Digital—CBS Masterworks)

331264. Bryan Adams—Reckless. #1 hit: Heaven; Run To You; etc. (A&M)

343160. Beethoven: Symphony No. 9 (Choral). Bruno Walter, Columbia Sym. (CBS Masterworks)

318089. Michael Jackson—Thriller. Billie Jean; The Girl Is Mine; etc. (Epic)

273409. Beethoven: Piano Sonatas. Vladimir Horowitz plays: Appassionata; Moonlight; Pathétique. (Columbia)

320499. The Police—Synchronicity. Winner of three Grammy Awards! (A&M)

341073. Steely Dan—A Decade of Steely Dan. Reeling In The Years; Hey Nineteen; more. (MCA)

337279. Plácido Domingo—Save Your Nights For Me. Love songs. (CBS)

288670-398677. Barry Manilow—Greatest Hits. It's A Miracle; Mandy; etc. (Counts as 2—Arista)

322024. Huey Lewis & The News—Sports. Bad Is Bad; Heart & Soul; etc. (Chrysalis)

336578-396572. Bach: Flute Sonatas—Rampal, flute; Pinnock, harpsichord, etc. (Counts as 2—Digital—CBS Masterworks)

314443. Neil Diamond's 12 Greatest Hits, Vol. 2. You Don't Bring Me Flowers (with Barbra Streisand); etc. (Columbia)

340760. Stevie Nicks—Rock A Little. Top 10 Talk To Me; I Can't Wait; title cut; etc. (Modern)

328740. Mozart: Piano Concerto No. 26 (Coronation); Rondos. Murray Perahia and English Chamber Orchestra. (Digital—CBS Masterworks)

219477. Simon & Garfunkel's Greatest Hits. El Condor Pasa; Bridge Over Troubled Waters; etc. (Columbia)

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Sony SDP-505ES Surround-Sound Decoder



DIMENSIONS: 17 BY 3½ INCHES (FRONT), 13 INCHES DEEP PLUS CLEARANCE FOR CONNECTIONS. PRICE: \$700. WARRANTY: "LIMITED," THREE YEARS PARTS AND LABOR. MANUFACTURER: SONY CORP., JAPAN; U.S. DISTRIBUTOR: SONY CORPORATION OF AMERICA, SONY DR., PARK RIDGE, N.J. 07656.

BEFORE PLUNGING INTO THE SUBJECT of just what makes this particular surround-sound decoder so special, we should mention that it performs its appointed task very well. This is evident both from the lab data and from our listening. It also is the very first consumer audio product based on digital signal processing technology.

When a signal comes into the Sony SDP-505ES, it immediately is converted to digital form. The encoding is 16-bit linear PCM (pulse-code modulation) with a 44.1-kHz sampling rate, just like that used for the Compact Disc. The resulting bit stream (ones and zeroes expressed as pulses of electrical current) then goes to the heart of the beast—an integrated circuit that can perform virtually any signal-processing function simply by manipulating the numbers, then send the result to a digital-to-analog converter for output to an amplifier. This chip is programmable, which means that it can be used for different purposes in different products. You could have a digital graphic equalizer, for example.

Such components surely will come, but Sony has wisely chosen to let the chip strut its stuff in an application that takes greater advantage of its remarkable capabilities. The SDP-505ES provides Dolby Surround processing for appropriately encoded videotape and videodisc soundtracks, decoding of matrix-type (SQ and QS) four-channel music recordings, two types of ambience enhancement for ordinary stereo recordings,

and ambience enhancement for mono material. Because all of these modes require four loudspeakers, Sony also has included a small stereo amplifier capable of producing a little more than 12 dBW (16 watts) per channel. Since the auxiliary speakers normally operate at a significantly lower level than the main pair, this should be quite adequate.

The SDP-505ES can be connected between a preamp and power amp or patched into a tape-monitor or external-processor loop. An input level control and three indicator LEDs are provided for matching the unit's sensitivity to the strength of the incoming signal. Apparently the control's purpose is to optimize tracking of the Dolby B noise reduction in the Dolby Surround mode; the LED indicators go out when you switch to any other mode. Once set, this control should seldom require adjustment. A surround output level control enables you to adjust the balance between main and auxiliary channels. (A built-in test-signal generator helps you get it right for the Dolby Surround mode.) Once you have set up the SDP-505ES, you should use its master volume control instead of the VOLUME on your preamp, amp, or receiver. Otherwise, you'll have to make frequent readjustments of the input and surround output level controls.

On the unit's back panel are gold-plated pin jacks for input, main-channel (front) output, auxiliary-channel (surround or "presence") output (in case you do want to use an amp bigger than the one built in), and center-channel output (for dialogue in the Dolby Surround mode or for a subwoofer). A slide switch above the center-channel jack enables you to choose high or low level, corresponding to gains of +12 and -4½ dB, respectively. Another slide switch inverts the

SIGNAL PROCESSOR SECTION

OUTPUT AT CLIPPING (at 1 kHz)

main channels	> 10 volts
center channel	≥ 4.2 volts
surround channels	3.7 volts

MAXIMUM INPUT LEVEL (1-kHz clipping)

	≥ 3.3 volts*
--	--------------

S/N RATIO (re 0.5 volt; A-weighted)

main channels	> 107 dB
center channel	85 dB
surround channels	≥ 71 dB

DISTORTION (THD + N; 20 Hz to 20 kHz; 2-volt output)

main channels	< 0.01%
surround channels	≤ 3.6%*

FREQUENCY RESPONSE

main channels	+0, -1/4 dB, < 10 Hz to 71.3 kHz +0, -3 dB, < 10 Hz to 284 kHz
center channel	+0, -1/4 dB, 12 Hz to 32.8 kHz +0, -3 dB, < 10 Hz to 116 kHz
surround channels	see text

CHANNEL SEPARATION (1 kHz; main channels)

INPUT IMPEDANCE	90 1/4 dB
-----------------	-----------

OUTPUT IMPEDANCE

main outputs	290 ohms
center output	1,000 ohms
surround outputs	100 ohms

POWER AMPLIFIER SECTION

OUTPUT AT CLIPPING (at 1 kHz; both channels driven)

8-ohm load	12 3/4 dBW (19 watts)/channel
------------	-------------------------------

HARMONIC DISTORTION (THD at 1 kHz)

at 12 dBW (16 watts)	0.049%
at 0 dBW (1 watt)	0.11%

SENSITIVITY (re 0 dBW)

	37 mV
--	-------

S/N RATIO (re 0 dBW; A-weighted)

	78 dB
--	-------

*Clipping level through the surround channels decreases at high frequencies, apparently because of preemphasis intended to reduce noise. Lowering the output to 1 volt maintains low distortion out to 20 kHz.

polarity of the main output in case this is necessary for correct phase matching with the auxiliary channels. There also are color-coded spring clips for two pairs of loudspeakers, which are switchable (A, B, or off).

This last is a thoughtful provision for

those who want to use all of the SDP-505ES's modes. Whereas the Dolby Surround, matrix four-channel, and two of the three ambience-enhancement settings require that the auxiliary speakers be in the back end of the room, Sony recommends that they be placed in front for the "presence" ambience-enhancement mode. We suspect most people will simply give up the presence mode, but for those who want it all, the ability to attach auxiliary speakers for both locations and switch between them at the flick of a finger is a big plus.

All of the processing modes involve delaying the auxiliary-channel signals. The amount of delay is independently adjustable for left and right channels in 0.1-millisecond increments from 0 to 90 milliseconds, except in the Dolby Surround mode, which has a maximum delay of 30 milliseconds. (Actually, that's about as much as you're ever going to want: Extremely long delays tend to sound artificial.) When you select a processing mode, its default delay flashes up on the readout panel. You can increase or decrease it with up/down buttons just below the display. Unfortunately, this is a very slow process—excruciatingly so if you want to make a large change. Moreover, there is no way to alter the delay for both channels simultaneously.

You have to creep to your destination on one, then repeat the journey on the other. But this is the unit's only significant shortcoming, and it can be partially remedied by storing your three favorite delays in the processor's memory, making them instantly available at the touch of a button.

From Sony's description, the SDP-505ES's Dolby Surround mode is a relatively complete but not too fancy implementation of the 35mm theater standard. The input signal goes straight through to the main stereo pair at the front of the room. For the back channels, the front-channel difference signal (left minus right) is filtered to remove frequencies above 7 kHz, delayed as much as 30 milliseconds, converted back to analog, and passed through a modified Dolby B noise reduction circuit. It does not appear that any steering logic is used to enhance separation, but as you can see from the data, the all-digital circuitry makes for cleaner processing than we are used to seeing from this type of device.

The "hall" surround mode is similar except that the Dolby B circuit is bypassed and the undelayed signal is mixed in with the delayed signal (in opposite phase for the left and right channels), presumably to give a sense of reverberation. Mono enhancement

(which Sony calls simulated) dispenses with both the filter and the Dolby circuit and makes some alterations to the mixing ratios. The presence mode is just a straight delay, intended to simulate the early wall and ceiling reflections in a concert hall.

We had no four-channel records on hand, so we did not do any listening to the matrix mode. Of the remaining selections, our favorites are Dolby Surround for appropriately encoded soundtracks and hall ambience for just about everything else. All work quite respectably, however, and we usually preferred any of them to straight, unprocessed stereo.

The SDP-505ES is state-of-the-art digital circuitry pressed into the service of a fine cause—another strong contender for HIGH FIDELITY's Product of the Year Awards. Dolby Surround and ambience enhancement (when done as well as they are here) provide a significant increase in sonic excitement and realism, which is what this business is supposed to be about. We would have liked remote control, but by leaving it and a few other fancy touches out while including the necessary extra amp, Sony has made it possible for you to put together a high-performance surround-sound system for less than \$1,000. A good deal, we think. ■

TEST REPORTS

Kyocera R-861 AM/FM Receiver

DIMENSIONS: 18 BY 5½ INCHES (FRONT PANEL), 14½ INCHES DEEP PLUS CLEARANCE FOR CONNECTIONS. **AC CONVENIENCE OUTLETS:** ONE SWITCHED (100 WATTS MAX.), TWO UNSWITCHED (100 WATTS MAX. TOTAL). **PRICE:** \$975. **WARRANTY:** "LIMITED," TWO YEARS. **PARTS AND LABOR. MANUFACTURER:** KYOCERA CORP., JAPAN; U.S. **DISTRIBUTOR:** KYOCERA INTERNATIONAL, INC., 7 POWDER HORN DR., WARREN, N.J. 07060-0227.

AN IMPOSING RECEIVER IN A NUMBER OF respects, the R-861 is the top model in Kyocera's Remote Control Adaptable Series. Any components in this series can be operated from a single RT-102 wireless remote via an RC-101 Remote Control Center (which receives the infrared signals from the RT-102 and relays them to the audio components) and, if you wish, as many as three RS-103 remote sensors (which receive the infrared signals in other rooms and are wired to the RC-101). The RT-102 remote provides source selection, volume control, tuning, and band selection, plus all basic cassette-deck and CD-player functions. It is thus one of the cornerstones on which you

can build a comprehensive all-Kyocera remote-control component system.

Let's begin with the R-861's back panel, which sports a number of unusual features. One is a yellow pin jack for interconnection to the remote control gear (which we did not test). There also are jacks for preamp-out and power-amp-in connections. Instead of jumpers (which are easy to misplace), Kyocera provides a switch that either bypasses or activates the jacks. An additional benefit of this arrangement is that you can leave a seldom-used processor attached to the jacks and switch it out of the circuit altogether in normal operation.

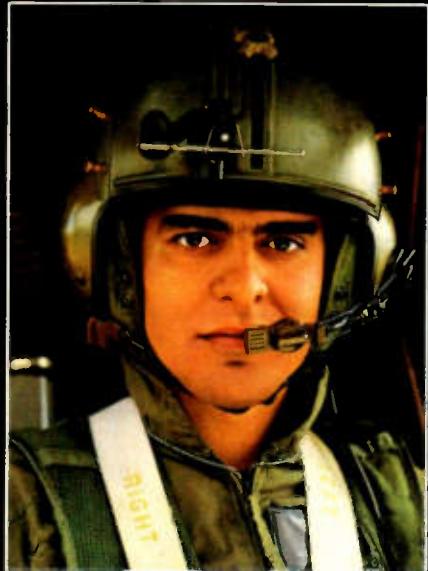
The power output terminals are marked for two speaker pairs and include rather lightweight spring clips for both plus banana jacks for the A pair. Actually, you can use all three sets of connections simultaneously (so long as the combined impedance doesn't fall too low), but the two A pairs will always be on or off together, depending on the front-panel speaker-switch positions.

Very unusual indeed for an imported tuner section is the FM antenna input: an F connector. It mates with the standard 75-ohm coaxial antenna (or cable) lead-in that is usually preferred for FM (as for TV) in this country. The receiver provides no 300-ohm connection (for twinlead); if that's all you have, you'll need an appropriate balun transformer/adapter. There are screw terminals for an AM antenna, and a loop antenna that attaches to the back of the receiver is supplied with it.

The front panel deploys the main operating controls in a handsome and easily assimilated rectangle set off toward the right end. At the extreme right are the source-selector buttons. They include two aux's: one subtitled for CD, one for video sound. Also in this group are the tape monitoring/dubbing controls for two decks. You can't record one source while listening to another, though you can dub, in either direction, while listening to something else. You also can monitor (CONTINUED ON PAGE 35)



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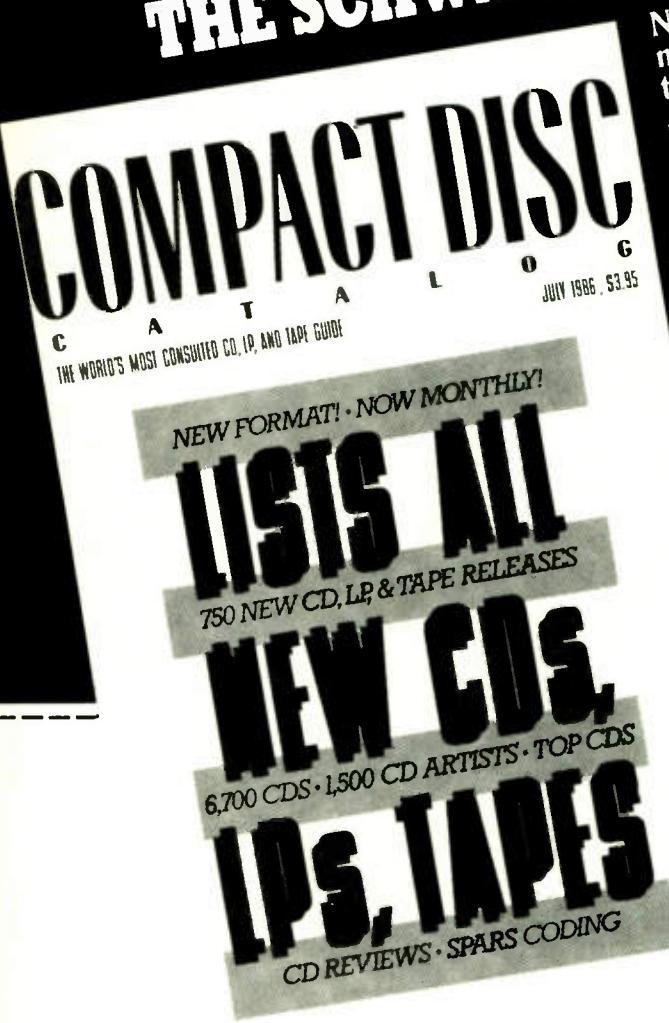


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(CONTINUED FROM PAGE 32)

either the source deck or the one making the copy while taping is in progress (something not all receivers permit), but the switching logic introduces a moment of silence at each transition, compromising A/B comparisons. For that, the monitor switching on the copying deck probably will work better.

Just to the left, the volume control is a slider with a smooth, positive feel. Next to it are the tuner controls: up-and-down tuning, band selection (FM or AM), an auto/manual tuning switch, and memory in the right column, with seven memory buttons (each of which can store one frequency from each band) in the left column. An internal battery preserves station memory during power failures or periods when the cord is disconnected. Manual tuning, which defeats interstation muting, progresses by half-channel (100-kHz) steps on the FM band, by full channels (10 kHz) on AM. As usual, a single tap moves tuning by one step; steady pressure advances it rapidly. Automatic tuning scans to the next receivable station in the chosen direction.

The left end of the control group is occupied by a readout panel that shows frequency, band, and other tuner information (plus power-amp peak overload). It includes a signal-strength "meter" consisting of five LEDs that trigger at 17½, 28½, 48, 56, and 66 dBf. These levels are too widely spaced and the on/off action too sharp to provide much help in determining the best possible antenna orientation, but they're better than what you get from the three-LED indicators on some competing receivers.

Additional controls are hidden behind a flip-down door along the lower edge of the front panel, with those relating to the FM section immediately below the main tuning controls. Among these are the real surprises of the design. One switch controls FM interstation-muting threshold, and therefore the sensitivity of the automatic-scan tuning—a fairly rare feature these days. Even more esoteric is the FM EQ switch, which alters the

(North American) standard 75-microsecond de-emphasis to 25 microseconds for correct reception (with an outboard decoder) of Dolby FM broadcasts.

Another switch in this group is for IF (intermediate frequency) bandwidth: "normal" or "narrow." The former actually is an automatic mode designed to sense strong adjacent stations and, when it does, reduce interference by narrowing the passband. A front-panel LED shows when this happens. Or you can choose the narrow mode manually to obtain its benefits (primarily, much greater selectivity) when the interfering station isn't strong enough to trigger the automatic switch. The usual trade-offs apply: Narrowing the IF bandwidth also raises distortion a little and nibbles 1 dB off the capture ratio.

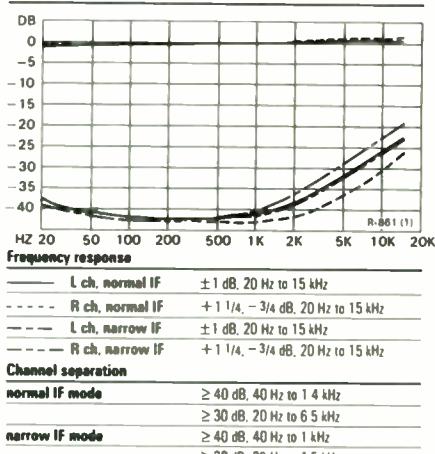
Overall, we were very pleased with the FM tuner section. Its sensitivity is a little short of championship class, but in a sense, this is partly attributable to the unit's switching flexibility. Some competing models introduce a little high-frequency blend—either fixed or in response to diminishing signal strength—which reduces noise and therefore improves sensitivity ratings. Instead, Kyocera builds in first-rate separation and then gives you a blend switch that reduces it to about 20 dB at 1 kHz, which is still enough to yield good stereo imaging. In consequence, its figures suffer even if the sound doesn't.

The mono/stereo switch, which often is included among the controls for the FM section and combined with the muting switch, here is independent and affects all inputs. The separation of these two functions makes it possible to combine muting with mono-only reception or, conversely, to listen in stereo to even very weak (and noisy) stations. At the right end of the subsidiary-controls panel are a loudness-compensation switch, one that determines whether the moving-coil head amp is switched into the phono section, and the balance control. On the other side of the tuner switches are those

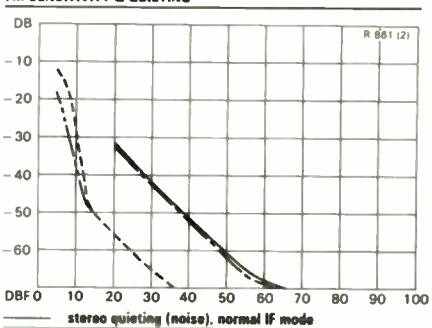
FM TUNER SECTION

Except as noted, data are for the "normal" IF-bandwidth mode.

STEREO RESPONSE & CHANNEL SEPARATION



FM SENSITIVITY & QUIETING



Stereo sensitivity (for 50-dB noise suppression)

normal	38 3/4 dBf at 98 MHz, with 0.35% THD + N (39 1/4 dBf at 90 MHz, 39 1/2 dBf at 106 MHz)
narrow	37 1/2 dBf at 98 MHz, with 0.54% THD + N (37 1/2 dBf at 90 MHz, 38 dBf at 106 MHz)

Mono sensitivity (for 50-dB noise suppression; either mode)

	15 dBf at 98 MHz
--	------------------

Muting threshold

normal IF mode	23 1/4 dBf
narrow IF mode	42 1/2 dBf
Stereo threshold	20 1/2 dBf
Stereo S/N ratio (at 65 dBf)	69 1/2 dB
Mono S/N ratio (at 65 dBf)	74 3/4 dB

CAPTURE RATIO		
normal IF mode		1 dB
narrow IF mode		2 dB
SELECTIVITY		
alternate-channel	normal IF	42 1/2 dB
adjacent-channel	normal IF	2 dB
normal IF mode	narrow IF	65 dB
adjacent-channel	narrow IF	12 3/4 dB
HARMONIC DISTORTION (THD + N)		
normal IF mode	stereo	mono
at 100 Hz	0.15%	0.15%
at 1 kHz	0.05%	0.04%
at 6 kHz	0.11%	0.07%
narrow IF mode	stereo	mono
at 100 Hz	0.60%	0.31%
at 1 kHz	0.43%	0.19%
at 6 kHz	0.32%	0.40%
STEREO PILOT INTERMODULATION		
normal IF mode		0.02%
narrow IF mode		0.21%
INTERMODULATION DISTORTION (mono)		
normal IF mode		0.02%
narrow IF mode		0.05%
AM SUPPRESSION		
normal IF mode		62 dB
PILOT (19 kHz) SUPPRESSION		
normal IF mode		87 dB
SUBCARRIER (38 kHz) SUPPRESSION		
normal IF mode		94 dB
AMPLIFIER SECTION		
RATE POWER		
normal IF mode		20 dBW (100 watts)/channel
OUTPUT AT CLIPPING (at 1 kHz; both channels driven)		
8-ohm load		21 dBW (125 watts)/channel
4-ohm load		22 3/4 dBW (190 watts)/channel
DYNAMIC POWER (at 1 kHz)		
8-ohm load		21 3/4 dBW
4-ohm load		24 dBW
2-ohm load		24 1/4 dBW
DYNAMIC HEADROOM (re rated power, 8-ohm load) + 1 3/4 dB		
HARMONIC DISTORTION (THD; 20 Hz to 20 kHz)		
at 20 dBW (100 watts)		≤ 0.016%
at 0 dBW (1 watt)		< 0.01%
FREQUENCY RESPONSE		
fixed-coil	+ 0, -1/2 dB, 18 Hz to 36 6 kHz	
moving-coil	+ 0, -3 dB, < 10 Hz to 114 kHz	
RIAA PHONO EQUALIZATION		
fixed-coil	+ 1/4, -3/4 dB, 20 Hz to 20 kHz + 4 3/4 dB at 5 Hz	R-861 (3)
moving-coil	+ 1/4, -1 3/4 dB, 20 Hz to 20 kHz -13 1/4 dB at 5 Hz	
SENSITIVITY & NOISE (re 0 dBW; A-weighting)		
aux input	sensitivity	S/N ratio
fixed-coil phone	14.7 mV	76 1/2 dB
moving-coil phone	0.24 mV	74 dB
fixed-coil phono	14 μV	72 1/4 dB
PHONE OVERLOAD (1-kHz clipping)		
fixed-coil phono		160 mV
moving-coil phono		9.3 mV
INPUT IMPEDANCE		
aux input	35k ohms	
fixed-coil phone	47k ohms, 150 pF	
moving-coil phone	90 ohms	
OUTPUT IMPEDANCE (to tape)		
from aux input		1,200 ohms
from tuner section		4,400 ohms
from phono section		970 ohms
DAMPING FACTOR (at 50 Hz; re 8 ohms)		
normal IF mode		110
CHANNEL SEPARATION (at 1 kHz)		
normal IF mode		46 1/2 dB
HIGH FILTER		
normal IF mode	-3 dB at 6.5 kHz	≈ 6 dB/octave
INFRASONIC FILTER		
normal IF mode	-3 dB at 21 kHz	≈ 12 dB/octave

for infrasonic and high filters and for defeating the three-band, semiparametric tone controls, whose six knobs also are in this area. At the extreme left end are the on/off switches for each of the loudspeaker out-

puts, plus a headphone jack.

The phono section itself is quite capable. Diversified Science Laboratories' measurements indicate that it is somewhat more sensitive than average (that is, it needs less input voltage to achieve standard output) and, correspondingly, offers somewhat less headroom and a slightly lower signal-to-noise (S/N) ratio than average, but not by significant margins. Response is quite flat through the midrange and treble (where both traces rise by about $\frac{1}{2}$ dB, relative to the output at 1 kHz); the fixed-coil response slopes off very gradually in the bass, while that for moving-coil pickups rises by about $\frac{1}{2}$ dB in the range around 50 to 60 Hz and rolls off more steeply below 30 Hz.

As usually is the case, both phono modes attenuate the range below 20 Hz, which helps control spurious, warp-induced infrasonic signals, though not by a great deal. More effective is the additional rolloff (at about 12 dB per octave) supplied by the switchable infrasonic filter. The high filter's gentler slope (about 6 dB per octave) is intended to soften intrusive hiss without seriously damaging any program highs and is reasonably successful (more so, in some cases, than the dynamic filters we've been encountering lately).

Loudness compensation is a matter whose ultimate arbiter, we believe, is individual taste. That said, we must admit that the behavior of the R-861's LOUDNESS strikes us as just plain strange. Relative to response at 1 kHz, the high treble is shelved upward by about 4 dB (depending on the volume setting), while the bass is pumped up by between 12 and 22 dB at 20 Hz (again, depending on the volume). We don't quibble about the minor treble boost (classical theory might call for more, whereas recent study suggests that none at all is needed), but to add as much as 22 dB in the extreme bass does give us pause, particularly since the test procedure doesn't go to volume extremes. But what really stumps us is that the effect increases with volume, which is opposite to how all the theories (and our ears) say it should work. Fortunately, the tone controls are flexible enough to give you just about any sort of loudness-compensation curve you might want, so you can just ignore the LOUDNESS function proper.

It's not strictly correct to call the tone controls a parametric equalizer, as Kyocera does, though they come close. A true parametric enables you to adjust each of three parameters (hence the name) independently: frequency range of the control band, degree of boost or cut within it, and the slope or sharpness of the band's skirts (technically, its "Q"). The R-861's controls permit only the first two of these adjustments, which is probably all to the good in a receiver. As we've pointed out in the past, parametrics have significant advantages over so-called graphic equalizers in the range of conditions they can correct smoothly (that is, with no ripple in the response curve) and

precisely, but at a price in both dollars and sense: Home users often make little sense of the controls and may never learn to set them appropriately.

Having only two parameters to juggle in each of the three control bands simplifies matters mightily. Each "control" comprises a pair of knobs: one for level, calibrated in detented 2-dB increments from -10 to +10 dB, and an undetented one for frequency. If you accidentally reach for the knob next to the one you intended, the presence or absence of detents clues you immediately—a nice touch. The bass frequency knob is marked at eight settings from 100 to 500 Hz. The lab data indicate that these are roughly the ± 3 -dB points at maximum boost or cut. The midrange knob has seven similar calibrations, from 500 Hz to 2 kHz, apparently reflecting center frequencies. The treble's eight markings range from 2 to 10 kHz—again, apparently intended as the ± 3 -dB points.

It would be naive to expect all of these calibrations to be spot-on their nominal values, though some are very close—in particular, those for the bass and treble boost/cut knobs. Though the eye, in looking over the lab's frequency traces, notes immediately that the other four controls are much less consistent, it is the ear that ultimately must pass judgment. Ours found them very effective, with a range far beyond what you get from conventional tone controls. For example, the continuously variable frequency adjustments are better than even multiple fixed turnover points in helping you zero in on solutions to EQ problems.

The amplifier section is a behemoth for a receiver. Rated at 20 dBW (100 watts) into 8 ohms, it can deliver 24 dBW (250 watts) into 4 ohms on musical peaks, and even more into 2-ohm loads. Distortion is very low—in part, according to Kyocera, because of the MOS-FETs (metal-oxide-semiconductor field-effect transistors) in the driver stage and the oxygen-free copper signal cables. Channel separation is not as wide as we're used to seeing (slightly less than 50 dB from the bass through the lower treble, dropping to 32 dB at 10 kHz), but it is still substantially better than is necessary for good stereo imaging. And all the remaining electrical measurements are par or better for this sort of equipment.

Even before we started our tests, we were taken by the R-861's solid good looks: From the wood-grain finish of the endpieces to the subtle pink cast in the anodizing to the organization and finish of the controls, this is a handsome receiver. But we are much more impressed by the fresh thinking that has gone into the design—especially the FM switching and three-band almost-parametric tone controls. Though one or two of the unit's maverick ways strike us as less endearing, they're in areas that count for relatively little and can even be ignored. Make no mistake, the R-861 is a fine receiver.

(CONTINUED ON PAGE 41)

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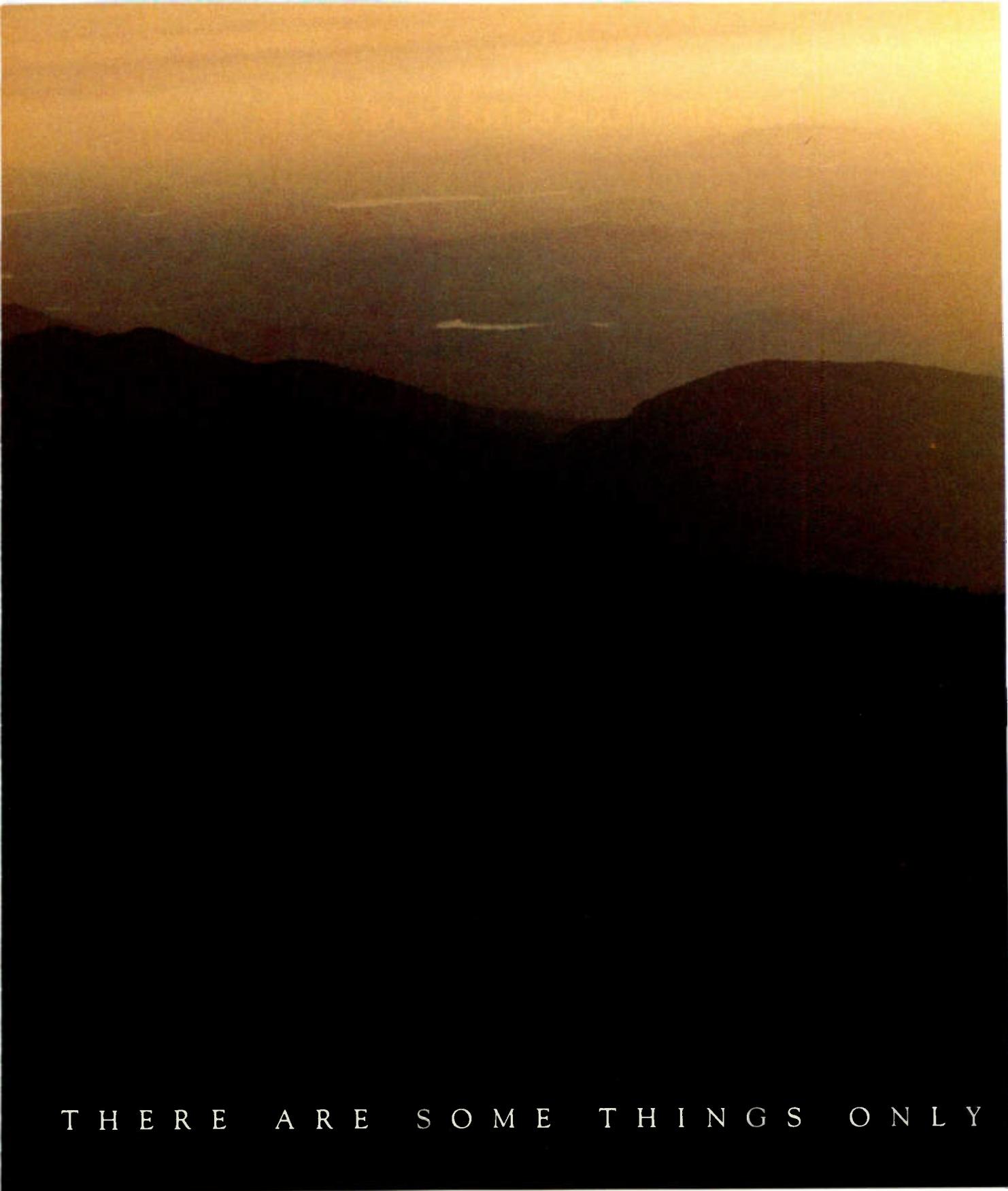


DENON

DESIGN INTEGRITY

*Suggested retail price.

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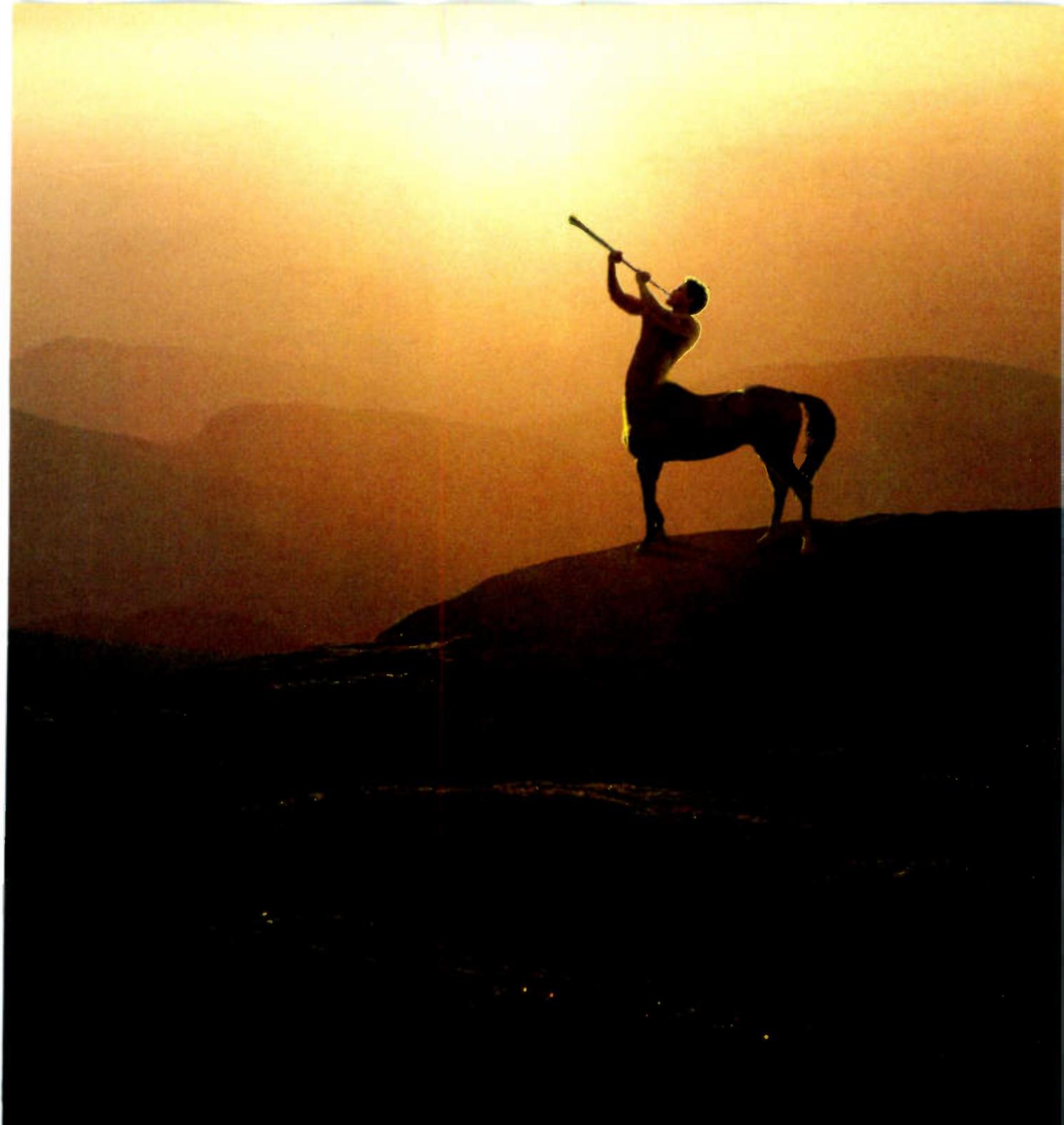


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texture and power of every musical composition. Carbon Fiber Woofers for soft passages that come across as dramatically as loud passages. A Polyimide Mid Range and Tweeter for rich, uncolored sound. And to coordinate these components for remarkably true-to-life sound, we delivered the "art of balance." Even our hand-crafted cabinets have been specially



C E R T A I N P E O P L E C A N H E A R .

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If you have an uncompromising ear, measure it against our new line of loudspeakers. And hear what others only imagine.

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**CHOOSE YOUR CASSETTE TAPE
AS CAREFULLY AS YOUR CASSETTE DECK.**



If you own a deck like one of these, you were obviously concerned with low wow and flutter, extended frequency response, smooth tape transport and wide dynamic range. When it comes to choosing cassette tape, why behave any differently?

Denon's new High Density HD8 formulation is the finest high-bias tape you can buy. Its "High Technoroum" dispersion and binding plus its metal hybrid formulation guarantee digital level performance on the widest range of cassette decks (including yours). You can keep an eye on things through Denon's new giant window. And enjoy your music knowing HD8 is guaranteed for a lifetime.

So how good is your cassette deck? With Denon HD8 it's better than you think.

DENON

Digital-ready tape from the first name in digital recording.

Sharp DX-620 Compact Disc Player



DIMENSIONS: 17 BY 3 INCHES (FRONT), 12 INCHES DEEP PLUS CLEARANCE FOR CONNECTIONS. **PRICE:** \$300. **WARRANTY:** "LIMITED," ONE YEAR PARTS AND LABOR. **MANUFACTURER:** SHARP CORP., JAPAN; U.S. DISTRIBUTOR: SHARP ELECTRONICS CORP., SHARP PLAZA, MAHWA, N.J. 07430.

SHARP'S DX-620 CARRIES A REMARKABLY modest price, considering what it offers. For example, it comes with a wireless remote handset that duplicates all of the front-panel controls and adds a keypad for direct entry of track numbers. With the keypad, or by stepping the player's display to the desired track numbers, you can program a sequence of as many as nine selections. And you can set the player to repeat the sequence or the entire disc.

Sharp has included the standard functions as well. You can use the seek/scan controls to jump forward or back to the beginnings of tracks (starting in PLAY), to step to whatever track you want (in STOP), or to scan quickly over the tracks with reduced output level (in PAUSE). Except in the programmed-play mode, when the display can be made to recall (CALL) the whole sequence in order, it will not register anything other than the track number and the elapsed time within it. This is the only respect (and it is a relatively unimportant one) in which Sharp has made an immediately noticeable compromise to hold down cost.

There is one wasted luxury, in our view, however: the headphone jack. Because it has no volume control, the loudness depends entirely on the recording and on the sensitivity of your headphones. Although the models we tried with the DX-620 produced what we'd consider a good level, the restriction to a single volume setting can be annoying. You're better off using a headphone jack on your amp or receiver.

ERROR correction is at least as good as the Philips test disc is capable of documenting—as it is for most of the players we've tested recently. The player can be jarred into mistracking, but that requires a fairly sharp impact and produces little distortion or noise as by-products. Program-induced distortion is somewhat greater than we're used to seeing in CD players (particularly at very low levels) but still not high enough to cause concern.

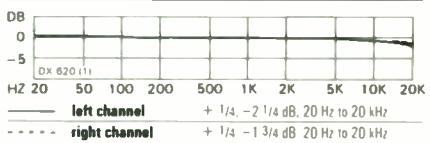
The only measurement from Diversified Science Laboratories that indicates an audible departure from theoretical perfection is the frequency response, which trails off gradually at the high end—more for pre-emphasized recordings than for those that need no de-emphasis—and rises very slightly in the bass, to a maximum of +1/4 dB at about 50 Hz. Most CD players do, indeed, achieve flatter response than this, though the DX-620's performance in this regard remains excellent relative to that of even the best tape decks and phono cartridges.

No clear consensus developed among our editors as to the audibility of any of these factors, however. By the nature of the medium, only the slightest of sonic differences are to be expected between CD players. Occasionally we have thought we detected a touch more sweetness in one model, a touch less in another (most likely because of the slight differences in their frequency responses). Some of our auditors considered the DX-620 to fall at the middle of the pack or perhaps a split-hair better than that; some leaned a bit in the other direction.

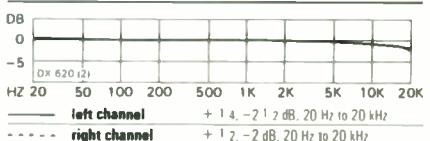
But the bottom line is that the Sharp DX-620 offers an excellent value in its field. If it is not among the best in absolute terms, it misses the mark by very little. And it's still among the least expensive. ■

All data were obtained using the Sony YEDS 7, Technics SH CD001, Philips 410 055 2, and Philips 410 056 2 test discs.

FREQUENCY RESPONSE WITHOUT DE-EMPHASIS



FREQUENCY RESPONSE WITH DE-EMPHASIS



CHANNEL SEPARATION (at 1 kHz)

93 dB

CHANNEL BALANCE (at 1 kHz)

± 1/4 dB

S/N RATIO (re 0 dB; A-weighted)

without de-emphasis 91 dB

with de-emphasis 93 dB

HARMONIC DISTORTION (THD + N; 40 Hz to 20 kHz)

at 0 dB ≤ 0.017%

at -24 dB ≤ 0.034%

IM DISTORTION (70-Hz difference; 300 Hz to 20 kHz)

at 0 dB < 0.01%

at -20 dB ≤ 0.014%

at -30 dB ≤ 0.016%

LINEARITY (at 1 kHz)

0 to -40 dB no measurable error

at -50 dB - < 1/4 dB

at -60 dB 1/4 dB

at -70 dB - 1/2 dB

at -80 dB + < 1/4 dB

at -90 dB + 6 1/4 dB

TRACKING & ERROR-CORRECTION

maximum signal-layer gap > 900 μm

maximum surface obstruction > 800 μm

simulated-fingerprint test pass

MAXIMUM OUTPUT LEVEL

line output 2.22 volts

headphone output 4.71 volts

OUTPUT IMPEDANCE

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headphone output 230 ohms

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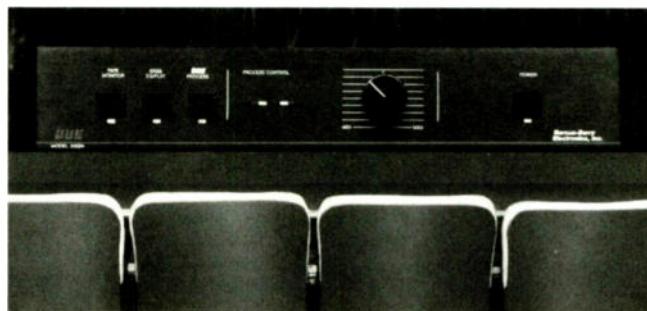
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Highlights of the Chicago Consumer Electronics Show

NEW PRODUCTS:

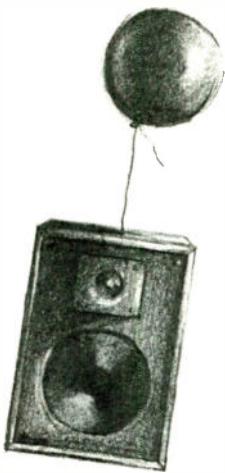
S U M M E R 1 9 8 6

The Summer Consumer Electronics Show, held last June in Chicago, offered some pleasant and exciting surprises. As with several preceding shows, the Compact Disc and video fields generated the greatest number of new products. But the most stimulating developments were in an area that previously was rather dormant: the control of stereo imaging. This thread ties together several of the major advances in loudspeakers, important developments in the new field of digital signal processors, and the intense interest shown in video surround sound and related technologies. Therefore, stereo imaging will be a recurring theme in next month's coverage of the CES video and car stereo introductions. For now, in the pages ahead, correspondents Robert Long and E. Brad Meyer will bring you up to date on the latest audio gear.

David Ranada

BY ROBERT LONG AND E. BRAD MEYER

ILLUSTRATED BY STEVE DININNO



LOUDSPEAKERS

FOR LOUDSPEAKER FANS, THE SUMMER CES WAS the best in many years. Rather than trying to list all the new models, we'll look at the most technically interesting ones. Outstanding among these are reasonably priced speakers embodying technology that was previously available only in high-end systems.

Acoustic Research's MGC-2 shares the basic design principle of the \$3,500-per-pair MGC-1 (test report, June) but not its complex and expensive enclosure. The MGC-2 achieves the same positioning of the main and secondary drivers as its predecessor in a simple, rectangular, floor-standing cabinet. A strip of light-colored wood is inlaid diagonally across the top of the cabinet, and when the strip is parallel to the back wall, the speakers are angled correctly. Each enclosure has a 12-inch woofer, two 4-inch midrange drivers, a titanium tweeter, and one side-firing 4-inch driver connected to the system's time-delayed ambience amplifier. The price of \$2,000 per pair includes image-enhancing electronics and ambience power amps identical to those for the MGC-1. Acoustic Research also showed the Connoisseur 50, a three-way bookshelf system officially characterized as a superior replacement for the now ancient AR-3a.

DBX introduced two small editions in its Soundfield series noted for stable stereo imaging over a wide listening area: the Soundfield

PICTURED BELOW: KEF 103/3 LOUDSPEAKER (TOP LEFT), CARVER AMAZING LOUDSPEAKERS (RIGHT), AND ACOUSTIC RESEARCH POWERED PARTNER LOUDSPEAKER (BOTTOM)

100 (\$900/pair) and the Soundfield 1000 (\$600/pair). Each system has a single woofer and midrange on an inward-facing panel, with extra tweeters (two in the 100, one in the 1000) mounted on the cabinet's front or outer sides.

KEF's new 103/3 shares with that company's much larger 107 its coupled-cavity bass loading and conjugate impedance matching, the latter being a crossover designed to make the speaker easier to drive. The system's price of \$1,390 per pair includes a modified version of the K-UBE electronic bass equalizer, which allows adjustment of bass contour, low-frequency extension, and damping. The new K-UBE also is included with the Reference 102 (\$790/pair), a 1-cubic-foot system that has usable bass down to 40 Hz and a midrange sensitivity of 92 dB.

Boston Acoustics showed two new models that emphatically break with that company's tradition of wide, flat cabinets: The T-830 (\$450/pair) and T-1000 (\$1,200/pair) are tower speakers that take up less than a square foot of floor space. Both are three-way systems with 1-inch dome tweeters; the T-830 has a single 8-inch woofer and a 3½-inch midrange, while the T-1000 has two 8-inch woofers and a 6½-inch midrange driver.

Altec Lansing, known best for its professional monitors, has sold its brand name for domestic speakers to another company, which introduced a line of five new Altec Lansing systems. The most sonically striking of these is the Model 301 (\$750/pair), a three-way acoustic-suspension system with a 10-inch carbon-fiber woofer, a 2-inch midrange, and a 1-inch tweeter of polyimide plastic coated with titanium.

The growing importance of video sound has kept speaker designers busy at the small end of the scale as well. One of the notable new compact models is the PSB's 30R (\$250/pair). It is approximately 8½ inches square by 15 inches high, with a sensitivity of 85½ dB and usable bass response extending to about 55 Hz.

Headphone manufacturer Koss introduced the Dynamite M-80 Plus. Costing \$179 each, the speaker is 12 inches high by about 5 inches square and contains two magnetically shielded 4½-inch woofers and a 1-inch tweeter. Sensitivity is about 92 dB. Klh's bid for the mini market is the 882 (\$320/pair), an eight-inch two-way whose eight-sided enclosure makes corner placement easy.

Acoustic Research has two new miniature speakers in identical triangular cabinets. One is the Powered Partner (\$340/pair), designed to connect to either a personal stereo or the line-level output of a TV receiver. Each cabinet contains a 4-inch woofer, a 1-inch tweeter, and a 15-watt amplifier with controls for volume and bass cut. An optional eight-D-cell battery pack will run one channel for three hours, or you can plug the speakers into the lighter socket of a car. AR's unpowered model is the Rock Partner, with an 8-inch woofer, a 1¼-inch tweeter, and a list price of \$250 per pair.

Technics applied its flat-diaphragm coaxial technology to two new magnetically shielded "near-field monitors" suitable for small-stereo or video installation. The SB-RX30 costs \$400 per pair, the SB-RX50 is \$800 per pair. For \$215



per pair, Parasound offers the CPI-440 Compact Perfect Image speakers, incorporating 4-inch polypropylene woofers reinforced with carbon fiber plus a 1-inch ferrofluid-cooled tweeter.

To obtain full-range sound, all these small speakers require at least one subwoofer. Typically, subwoofers are sold with an accompanying electronic crossover and power amplifier, as is Parasound's BPI-A60. The Parasound's crossover can be adjusted between 63 and 180 Hz to match it with different satellite speakers; the entire woofer system costs \$450.

For video systems, Triad offers the Bass Base, a combination TV stand, VCR cabinet, and subwoofer. It measures 14 inches high and contains an equipment cabinet 17½ inches wide by 9½ inches high plus a single woofer with a 70-watt amplifier. The Bass Base is available in black vinyl for \$260 or in oak or walnut veneer for \$300.

Cabinet resonance is a difficult and unpredictable complication for speaker designers; to keep the walls of the box from contributing to the sound, they have tried materials ranging from high-tech sandwiches of aluminum honeycomb to sand fillings and bricks and mortar.

Now B&W has come up with a simple, elegant, and lightweight method of construction called the B&W Matrix, which is said to suppress cabinet motion almost completely. The matrix cabinet is filled and braced with a three-dimensional lattice of perforated sheet steel, whose square interstices are filled with the foam required for internal acoustic damping. The traditional knuckle-rap test on the cabinet walls proves the efficacy of this technology, available in three new B&W systems, called the Matrix 1, 2, and 3. All have ferrofluid-cooled tweeters, impedance-matched crossovers, and a 24-dB-per-octave rolloff in the woofers. The first two are two-way systems intended for mounting on stands, and they sell for \$495 and \$695, respectively; the Matrix 3 is a three-way floor-standing system with an 8-inch woofer and costs \$995.

Another popular method of eliminating cabinet resonance—popular because it is virtually surefire—is to eliminate the cabinet. Many audiophiles favor flat-panel speakers (most of which are technically dipole radiators) for this and other reasons, despite one problem: Dipoles have trouble putting out loud low bass. Given this history, it is interesting to see dipolar subwoofers gaining acceptance. The Enigma bass system (\$2,495) is designed to go between a pair of Quad ESL-63 electrostatic speakers, matching their tonal and imaging characteristics while extending useful bass to below 30 Hz.

Celestion's new System 6000 subwoofers are especially unusual, comprising two concentric cone-type drivers spaced a few inches apart on panels (no enclosure) barely 14 inches square. Electronic equalization compensates for the 6-dB-per-octave bass rolloff inherent in the dipole design. Careful adjustment of both the distance from the nearest wall and the precise angle of the speakers, all calculated with the aid of computer room-simulation, produces a bass extension down to about 30 Hz and unusually even distribution of bass energy within the listening area. Celestion's Bill McGrane says the new subwoofer is "for audiophiles who want a bottom-



end kick without putting a refrigerator in their living room." The System 6000 incorporates a stand for Celestion's small, highly regarded SL-600 monitors and will also accept the company's less costly SL-6s. Complete with a pair of SL-600s, the system will sell in the U.S. for \$4,920.

Another flat-panel design with surprising bass response is the Amazing Loudspeaker from Carver Corporation. (Bob Carver has never been criticized for reticent product nomenclature.) Each panel, a striking black-laquered trapezoid, contains two vertical ribbon midrange/tweeters and six square flat-panel woofers driven by conventional coils. Target date for availability is this December; the projected price is \$1,500 per pair.

Mirage's M-1 (\$3,000/pair) represents yet another approach in tall (5 feet), wide (19½ inches), and fairly flat (9½ inches) loudspeaker design. The floor-standing unit is characterized by the company as a "bipole" radiator: It has tweeters and midrange drivers mounted on both the front and back, but the rear drivers are driven in-phase with the front—unlike a dipole, in which the back wave is out-of-phase. Both 8-inch woofers are mounted on the speaker's front.

One clear sign of the progressive recovery of the audio business is the wealth of new speaker designs in the middle and upper price ranges. JSE Corporation's Infinite Slope Model 2, named after its crossovers of 80 to 100 dB per octave, comes in oak, walnut, or glossy black lacquer for \$2,100 per pair. (Black lacquer seemed to be the high-fashion finish at this show; even JBL displayed a few models in glossy black.) Magnat's striking Magnasphere Beta and Gamma (\$1,590/pair and \$1,990/pair, respectively) both feature that company's spherical omnidirectional midrange and tweeter arrays atop pyramidal woofer cabinets.

Ohm Acoustics introduced its biggest Walsh-driver system, the Ohm Walsh 5 (\$4,800/pair). Claimed response extends from 25 Hz, which we verified *in situ*, to 25 kHz, which we could not, since our hearing doesn't extend that far. The

CELESTION SYSTEM 6000 SUBWOOFER WITH SL-600 TWO-WAY SPEAKER ATTACHED ON TOP (LEFT). AT RIGHT, MAGNAT MAGNASPHERE BETA AND GAMMA LOUDSPEAKERS.



CD PLAYERS (FROM TOP): PIONEER PD-5030, SHURE ULTRA D-6000, AND DENON DCD-1300



95-pound lead-lined cabinets have heavy-duty casters and come in several real-wood finishes.

Allison Acoustics showed its top-of-the-line Allison Ten. The cabinets resemble some of the company's past models in their floor-standing triangular-prism shape, but each of the two faces has two midranges vertically flanking two tweeters, to control vertical dispersion. One of the two woofers in each cabinet is mounted with the magnet outward to help cancel even-order harmonic distortion at high levels. The Ten comes with power-slope controls to adjust frequency balance and a remote-controllable image adjustment that varies the relative outputs of the inner and outer panels. One of the positions is said to achieve nearly perfect time-intensity trading to keep the stereo image stable from any position in the room. The Allison Ten will be available in December for \$4,000 per pair. It sounded very good.

The show's high-tech-visuals award goes not to the Magnaspheres mentioned above (which reminded some of the pyramid-eye symbol on the back of a one-dollar bill) but to the German MBL 100, a 2½-foot-tall speaker containing three drivers of progressively smaller size, each a shiny ribbed metal structure shaped roughly like a football on end. The top of each driver is clamped, while a magnet-and-coil assembly drives the lower end, pushing the sides outward and radiating sound equally in all horizontal directions. An accompanying amplified subwoofer of more conventional design covers the range from 30 Hz down to 18 Hz. The MBL 100s cost \$7,000 per pair, the subwoofer about \$2,000.

The honor (?) of being the most expensive new speaker at the show goes to the Waveform (from Waveform Research of Colborne, Ontario), whose price was rumored to be \$15,000 per pair when we first heard about it but ballooned in subsequent reports to \$17,000 and finally to \$22,000. The Waveform has a beautiful trapezoidal cabinet made of 2-inch-solid cherry with fluted front panels, Ceylon ebony and gold inlays, and a grille cloth of hand-woven Chinese

silk. Acoustic design is by Canadian Paul Barton (whose initials denote his own speaker company, PSB) and features a 15-inch ported woofer that must be driven by its own amplifier, two 6-inch lower midrange units above and below a 1-inch dome tweeter, and a ribbon supertweeter. Each cabinet weighs 210 pounds. The Waveforms' slight overall brightness at the CES was probably due to the bare-wall hotel room where we heard them; they were very smooth, with exceptional imaging and very good dynamics at all frequencies.

E.B.M.

HOME CD PLAYERS

THE COMPACT DISC IS STILL IN AN EXPLOSIVE growth phase. Worldwide player sales are expected to double to two million, with a total disc production of 45 million, in 1986. Compact Discs are being sold not only in your local record store and in shops devoted entirely to them but in video stores, some of which also have audio-disc rental programs.

The players themselves show a continuing trend toward the use of two- or four-times oversampling with full 16-bit decoding and digital filtering. Subcode outputs—for the still video pictures, opera libretti, and rock lyrics supposedly to be included on future CD releases—are currently found only on players in the \$400-and-up category, although graphics decoders have yet to be released in the U.S. And direct output of the digital bit stream, for connection to external decoders, signal processors, or tape recorders, is available only on the updated Sony CDP-650ES DII (\$1,300) and the Magnavox CDB-650 (\$430). By the end of the year, we should see delivery of the NAD 5300, which has both subcode and digital outputs, remote volume control (using a motorized potentiometer), switchable compression, image/frequency-balance enhancement, and error displays. Projected retail for the 5300 is around \$650.

E.B.M.



CD CHANGERS: TECHNICS SL-P16 (TOP) AND SONY CDP-C10 WITH MAGAZINE

CD CHANGERS

AS MANUFACTURERS PAY MORE ATTENTION TO the concept of disc changers, the idea, once tempting, of a standard multiple-disc magazine—for both the sale and storage of operas and musical anthologies—becomes less and less likely to be implemented. Today there exist incompatible holders with capacities of five, six, ten, 12, 50, or 60 discs apiece. The only magazine now used by more than one player is the ten-disc unit Sony developed for the Disc Jockey car model, which also fits the company's new table-top CDP-C10 (\$800).



NAKAMICHI OMS-7A MK. II (TOP) AND TECHNICS SL-P1200 CD PLAYERS

At the show, Technics displayed the latest version of its 50-disc changer, the SL-P16, now priced at \$3,000. Additional expansion units (SL-P16U, \$2,500 each) can be connected for a total capacity of 250 discs. Alpine will have a new trunk-mounted car player with a 12-disc magazine by the end of the year. The player's digital section is connected to the internal analog electronics by fiber-optic cable for better interference rejection.

E.B.M.

HIGH-END CD PLAYERS

WHILE STANDARD-ISSUE HOME CD PLAYERS are being offered by many manufacturers (Denon, Goldstar, Harman Kardon, Luxman, Marantz, NEC, Proton, Onkyo, Sansui, and Shure, to name just a few), several companies continue to sell more expensive models on the basis of special or proprietary technology. Nakamichi is using a "glitch free" digital-to-analog (D/A) converter to eliminate noise pulses in

the emerging bit stream, obviating the conventional sample-and-hold circuit. The converter appears in the OMS-7A Mk. II and OMS-5A Mk. II players (\$1,650 and \$1,375, respectively). A less elaborate version is found in the OMS-4A (\$995) and the OMS-3A (\$699).

Technics's new heavyweight professional player is the SL-P1200, with digital filtering and Class A preamplifier circuitry in both the sample-and-hold and output sections. There's a DJ-style cueing dial with 0.1-second accuracy, pitch control over a range of ± 8 percent, an autocue mode that seeks the first instant of music instead of just the track-start mark, and a subcode output. The chassis has two shock-mount suspensions and weighs more than 25 pounds; projected price is \$1,200.

Discrete Technology includes a set of its own special CD connecting cables with its LS-1 player (\$1,195). The unit has a volume-controlled output so that it can be plugged right into a power amp, eliminating the preamp and its cables from the signal path. Kinergetics introduced the KCD-20 (\$795), with built-in volume and balance controls for connection directly to a power amp. The player also has distortion-canceling circuits meant to compensate for the characteristics of the capacitors inside the D/A converter chip. Kinergetics claims the KCD-20 delivers improved imaging and depth over rival players.

And finally, there's a CD player for tube fanciers. All the analog audio sections of the California Audio Lab's Tempest use tubes—even the high-frequency de-emphasis circuit. The Tempest also boasts Sidereal Akustic capacitors, Tiffany connectors, OFC linear-crystal wiring, and a price of \$1,895. The Californians have yet to go all the way, however. Perhaps it's because a tube-based realization of the purely digital portions of a CD player would require several thousand tubes and would be more suitable as a home heating system than as an audio component. E.B.M.

(CONTINUED ON PAGE 48)



TWO PORTABLE CD PLAYERS WITH
BUILT-IN AM/FM RADIOS (BELOW):
PANASONIC SL-NP20 (TOP) AND
SONY D-77 DISCMAN



PORABLE CD PLAYERS

THE OVERALL AREA OF A CD PLAYER CAN'T shrink below the present 5 inches square without exposing the rotating disc to potential harm. So the new models get thinner, like Technics's SL-XP5 (\$300), which is 5 inches square by only 1 inch high. It comes with a battery pack good for five hours of play and an AC adapter (a car adapter, the SHCDC-7, is optional and costs \$40). The new SL-XP8 (\$350) is the same size but contains a built-in AM/FM tuner with eight presets in each mode. Sister company Panasonic's versions are the SL-NP10 (\$300) with programmable play and the SL-NP20 (\$350) with built-in AM/FM tuner.

Sony's offerings in the portable tuner/CD-player category are the D-55 and D-77 Discman units. The D-77 (\$370) has an AM/FM stereo tuner built into its lid and comes with AC power supply, battery pack, headphones, and an automotive power adapter; the D-55 (\$330) offers FM only, a different battery pack, and no car adapter.

Citizen—yes, the watch company—has entered the portable CD player market with the CDP-120, featuring 16-track programmability, an AC adapter, and two headphone jacks. Price is \$250; battery pack, carrying case, and car adapter are optional.

E.B.M.

CD DUBBING

CURRENT PLANS FOR THE RDAT (DIGITAL cassette) format include the prohibition of direct digital recording at the 44.1-kHz sampling rate used for both CDs and the upcoming prerecorded digital cassettes. If, as seems to be the case, most dubbing of CDs is done by the discs' owners for personal use in cars and portable players, this piracy-prevention scheme will be relevant only to tape-to-tape copying. Present technology allows just analog dubs, but these

MONSTER CABLE DISCUS ATOP
PARASOUND CDD-940 COMBINATION
CD-PLAYER/TAPE DECK



will be much simplified by two new combination CD-player/cassette decks. One is Teac's AD-7, whose 15-cut programmable-play mode includes the automatic insertion of four-second pauses in the tape for programmable tape players. The cassette deck has Dolby B, Dolby C, and DBX noise reduction, and the entire unit sells for \$999. Parasound's CDD-940 combination has Dolby B, Dolby C, and HX Pro, and its target retail price is \$450.

Neither of the previous combination models offers switchable dynamic compression, but DBX has finally modified its line of dynamic-range expanders to include compression specifically for dubbing CDs to cassette for portable or automotive use or just for listening at low overall levels without losing the soft passages. The 1BX-DS single-band expander is \$279, and the three-band 3BX-DS is \$500. Both also contain the image-enhancing and dynamic-impact-recovery circuits introduced in DBX's DX-3 CD player a year ago.

E.B.M.

CD ACCESSORIES

ACCESSORY MAKERS CONTINUE TO BRING forth new disc and lens cleaning kits, special connecting cables, and other gadgets. Monster Cable has two different disc-shaped "stabilizers" that sit on top of a rotating CD to damp vibrations; these are claimed to improve laser tracking and minimize the audible effects of error correction. The Discus (\$30) is made of black anodized aluminum, and the heavier Discus Plus (\$40), for those whose players can take the extra mass, is black-painted brass.

Lately, there has been talk about establishing a cartridge-like replacement for the standard jewel box for use in both home and car players. For now, a new development in storage is Nagaoka's CD case. It is 35 percent thinner than the jewel box and has a soft, ribbed polypropylene bottom that's double-hinged to present the disc easily to hand when opened. The new boxes cost \$4.95 for a package of three.

E.B.M.

ANALOG RECORD PLAYERS

IT'S PROBABLY SEVERAL YEARS TOO SOON TO count the analog turntable out of the picture entirely. But one officer of a company that reintroduced a turntable into its line after a hiatus of many years confessed that the move had come a bit too late, as the turntable business "is in a very steep decline right now." As an omen of things to come, in some midsize rack systems offered at CES, Compact Disc players were standard and turntables were extra-cost options.

What new units there were tended to reflect either special-purpose design—like Revox's B-291, a \$725 turntable that comes with ±10-per-

cent speed variation and a separate autostarting fader for disco use—or duplication of the convenience features of CD players. One of the latter type is the Technics SL-J33, a straight-line tracker offering automatic disc-size sensing and speed selection, programmed play of selected cuts, and autorepeat, for \$200.

Many high-end audiophiles still love vinyl best; for them there were several interesting new entries. Designer William Firebaugh introduced the Well-Tempered turntable to go with the arm of the same name. It's a belt-drive model whose motor is prevented from cogging with both electrical and mechanical damping, the latter achieved by mounting the motor in a 12-pound lead brick that "provides an effective inertial reference." The platter is acrylic and comes with a record-clamping system; turntable and arm together cost \$1,250. A six-pound platter also combining acrylic plastic with lead is part of what may be the world's most expensive direct-drive table, the Taurus Morning Dew (\$3,000 less arm).

The influence that the CD has been having on the audio business was never more evident than in the show's most-talked-about record-playing system, one whose "stylus" never touches the record. Audiophiles and sound archivists have for years thought about ways to play back analog discs without wearing them out, but the technical problems behind any noncontact playing method are considerable. The pits that carry the information in a CD are tiny, but low-level, high-frequency sounds on an LP are tinier still—even smaller than the wavelength of laser light. At the same time, eccentricity and warps cause an LP's groove to go through extraneous motions many times larger than a CD player ever needs to handle.

Despite these difficulties, the Finial Technology Laser Turntable (its official title) actually seems to work. Due out in the fall at a projected price of \$2,500, the turntable plays records with a pair of lasers, one for each groove wall. The Finial people weren't saying anything about how it's done, but the principle is probably interferometry, which can provide the necessary resolution from otherwise-too-large light wavelengths.

The prototype shown to the editors of *HIGH FIDELITY* was a rather massive, front-loading affair. Inside were a considerable number of precision hand-machined parts, a large circuit board filled with a 16-bit microprocessor and its associated circuits, and a smaller circuit board containing the laser and servo drive circuitry and a pre-amplifier with built-in RIAA equalization (its line-level output plugs directly into a system's auxiliary input). We weren't told, but it looks like the tracking calculations are performed digitally, with the servos driven by digital-to-analog (D/A) converter circuits. The Finial's speed is continuously variable between 30–50 rpm; a forthcoming model will run from 10–100 rpm to accommodate the playing of everything from 16½-rpm transcriptions to 78s. The unit also offers programmed play of individual bands, audible cueing, and a button to hold the laser carriage stationary—the manufacturers dubbed this mode, imitating a stuck groove, "auto skip". On the whole, the device appeared to be considerably

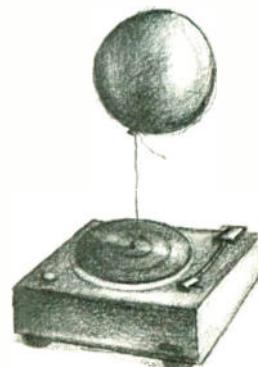


overbuilt, which is probably as much a reflection on the aerospace-engineering background of its creators as it is an attempt to get a working machine.

Claimed frequency response is flat to within about 1 dB at 20 kHz. Although we heard no attenuation of the highs, we also didn't have a chance to play anything like soft violins, whose upper overtones would be the hardest things for such a system to resolve. One complication arose during the demonstration: Unless the discs were cleaned with a record-washing machine immediately before playing, crackles and pops sometimes intruded. Discs treated with fluid cleaners or preservatives like LAST may have noise problems as well. Nonetheless, the company has already received eager inquiries from sound archives and from collectors whose holdings are worth many times the Finial's price. On the basis of our private audition of the unit, it sounds good enough to deserve the attention of dedicated audiophiles, too.

E.B.M.

FINIAL TECHNOLOGY LASER TURN-TABLE (TOP, ABOVE) AND REVOX B-291 TURNTABLE



BASIC ELECTRONICS

DON'T LOOK FOR RADICAL INNOVATION THIS season in the look or performance of new electronic components. Though there are a lot of new models, and some are very attractive, most simply uphold existing styling and circuit-design trends. Black faceplates have come to be for home entertainment what gray flannel suits once were on Madison Avenue; if you want anything else, you may be out of luck. Prices are somewhat higher this season because of the dol-

lar's loss in exchange rate against key currencies (particularly the yen), but that goes almost without saying. And remote controls appear to be *de rigueur* in all but the lowest price groups, but that, too, seemed almost a foregone conclusion even before we got a look at the new entries.

Many companies are going with single-remote schemes for related equipment (say, a receiver control that also governs key CD-player and cassette-deck functions) or with proprietary system controls that involve a sensor in a central component, hard-wire plug-in control links between units, and (often) multiroom control options. Epitomizing this present thrust, perhaps, is B&O's Beosystem 5500, officially announced just after the summer CES. The remote control functions are centered in the Beomaster 5500 re-



company to offer an adapter for stereo FM (based on the wrong stereo system, as it turned out). The hyphenless company is no relation, but it too is a maverick.

Art Powers, its founder, has been an audio dealer and, as such, has struggled with the problems of building in multiroom home systems with standard components. Madison Fielding products—which include standard electronics plus a variety of remote control options—are specifically designed for this use. Systems can accommodate as many as seven sound sources (only an FM tuner is included in the line) and as many as 16 rooms. The components themselves can be flush-mounted (they don't have any protruding knobs, since all controls are on the remote) and come in four colors: gold, stainless steel, copper, and black.

Two names that have remained very much with us in other fields are reappearing in full-line system electronics: AR and Nakamichi. Both offer remote controls. Of the two, the Nakamichi series is the more electronically ambitious. That company has been moving back into electronic components (having introduced models that evidently were too individualistic to attract a sufficiently large following some years ago) with separates, including two amplifiers that employ the Stasis circuit technology developed by Nelson Pass, founder of Threshold.

Now Nakamichi has incorporated it in the SR-3A (\$599) and SR-2A (\$449) receivers, both of which also contain many sophisticated circuit elements. The moderate power ratings of 45 and 30 watts (16½ and 14¾ dBW), respectively, belie the Stasis topology's ability to deliver clean-sounding signals at high volume levels, according to Nakamichi. Also new is what the company calls the "ultimate preamplifier": the CA-7A Control Amplifier (\$2,195). It isolates the logic and audio circuits from each other by using a separate toroidal power transformer for each (with a separate winding and rectifier for the moving-coil head amp); power, logic, and audio lines are shielded from one another, as are the two audio channels' circuitry. In addition, each audio stage has its own regulator to insulate it from the supply demands made by other stages, and the logic circuits use optical control links to minimize the possibility of audio contamination.

AR's dignified (if limited) line of fine but moderately priced electronics disappeared years ago, much to the regret of many audiophiles. The company is planning a comeback with products that, though much more modernistically styled, seek to emulate the values of the earlier group. Plans—and prices—were still somewhat tentative at the time of the show, but they included three receivers (40 watts [16 dBW], \$380; 60 watts [17¾ dBW], \$600; 100 watts [20 dBW], \$800), two integrated amps (40 watts [16 dBW], \$340; 60 watts [17¾ dBW], \$430), a preamp (\$360), a tuner (\$370), a power amp (\$780), and a CD player (\$490).

The preamp or integrated amps can be controlled through the tuner's remote; only the most modest of the receivers will not be remotely controllable. The styling, which angles the main panel for easier visibility and hides seldom-used controls for sleekness, is consistent

TECHNICS SA-590 REMOTELY CONTROLLABLE RECEIVER WITH EQUALIZER (TOP, REAR), YAMAHA T-BS AM/FM TUNER, AND PROTON D-940 RECEIVER

ceiver (\$1,659), which treats the Beocord 5500 bidirectional cassette deck (\$899), Beogram CD-50 Compact Disc player (\$999), and Beogram 5500 tangential turntable (\$439) as essentially "black box" outboards. Such information as track number (whether on tape, CD, or LP) is relayed by the receiver to the portable Master Control Panel 5500 for remote display as well as remote control. A number pad on the MCP permits direct access, even to FM or AM frequencies (in addition to the usual scan). In other rooms, the Master Control Link 2-A, which can be flush-mounted in a wall, receives and transmits information passing between the MCP and the Beomaster 5500.

Among the manufacturers talking most volubly about whole-system approaches are Luxman, Kyocera, Pioneer, and Technics, though the words "remote control" appear in the headlines of hundreds of press handouts—at least a third of those I picked up in the weeks surrounding the show. But among all those remotable components one name particularly struck me: Madison Fielding. Old-timers will remember Madison-Fielding (with the hyphen) as the first

throughout the line. The appearance of an all-AR system can thus be unusually handsome, but the look of the components, despite their charcoal gray finish, might be too distinctive to mix well with other brands.

Also in dark gray, but with startling touches of bright red plastic trim, are units in NAD's Monitor series. The styling generated heated comments pro and con. However, those who don't like the trim can have it their way too, since the plastic inserts are removable. The Model 3300 integrated amplifier (\$500-550) is rated at 75 watts (18½ dBW), but it incorporates the company's Power Envelope technology, enabling 500-watt (24½ dBW) peak outputs into 2-ohm loads. Output-current capacity is reported to be greater than 40 amperes. Topping off the company's introductions is the Model 7600 remote-controlled FMX receiver, rated at 150 watts (21¼ dBW) but capable of putting out whopping 1,000-watt (30-dBW) peaks into 2-ohm loads. At \$1,398, the price is also more hefty than we are used to seeing from this source.

Tandberg's TPA-3026A High Current power amp (\$1,595) is designed as a sibling to the TPA-3016A. Both eliminate all negative feedback for minimum transient distortion. The new model is rated at 30 amperes per channel, with 150 watts (21¼ dBW) into 8 ohms via a MOS-FET output stage said to eliminate the need for protection circuitry that can degrade performance. Also planned for later this year is the TR-3080A High Current receiver (\$1,595), rated at 80 watts (19 dBW) per side. Like other Tandberg products, it employs discrete internal components—rather than ICs—for maximum signal purity, according to the company.

Notable among separate amplifiers are the Revox B-242, at 200 watts (23 dBW) per side (price not yet available), and the Carver M-1.0t (\$549), which has essentially the same rating—actually 201 watts, which splits hairs, particularly in light of the dynamic power claim of 350 watts (25½ dBW) into 8 ohms. Quad has added two amps using its "current dumping" feed-forward circuit topology. The 606 (\$995) is rated at 130 watts (21¼ dBW) and the 306 (\$595) at 50 watts (17 dBW).

Luxman's newest flagship integrated amps are both hybrid models (termed the Brid Series) that use FETs in the early amplification stages, twin triode tubes as drivers, and MOS-FET output stages. So far, there are two models: the LV-105 (\$700) and LV-103 (\$600), rated at 80 watts (19 dBW) and 50 watts (17 dBW), respectively. One power transformer drives the tubes' heaters, another the audio circuitry itself. Both employ Luxman's Duo-Beta circuitry, as do four new integrated amps of conventional solid-state design.

Pioneer is restyling the Elite Series of high-end units to set it apart from the company's regular component line. The C-90 preamp (\$800) handles video as well as audio inputs, including switching for video recording with a variety of sources. Three power transformers are used—one for each audio channel and one for the video circuits—and separate grounds for audio and video further inhibit interference between them. The companion M-90 power amp (\$900) is rated



NAKAMICHI CA-7A PREAMPLIFIER (TOP), TANDBERG TPA-3026A POWER AMPLIFIER, AND QUAD 306 POWER AMPLIFIER

at 200 watts (23 dBW) into 8 ohms, 750 watts (28½ dBW) into 2 ohms. It has a separate CD input for those who want their digital sound with minimum analog-circuitry intervention.

Also a notable feature of Pioneer's introductions is the insistence on black faceplates, which haven't been the company's style until now. Many components will be available only in black, like Henry Ford's Model T. Harman Kardon also is making its entire line—new introductions and holdover models alike—available in black, though all can be bought in the traditional champagne finish as well.

There are of course many introductions from all the major companies that lack the surprise quotient of those we've already discussed. Scott, Yamaha, Onkyo, Technics, and others each have many additions. Nikko's recent reorganization suggests that more new products may be originating there, though the only official introduction at the moment is the NR-1020 receiver (price not yet available), rated at 100 watts (20 dBW) and equipped to handle video sound as well as straight audio.

If you tuned in back in April, you know that the CBS FMX system for enhanced FM-station coverage and reception was a hot topic at last winter's CES. Its status remains quo: NAD is the only company presently offering FMX decoding in receiving equipment—using discrete parts. Others, notably Apt, are awaiting the integrated circuits designed for the purpose before going into production, considering prohibitive the cost either of long-term commitment to discrete parts or of revising their tuners to include the IC once production has begun.

In the meantime, we hear less than encouraging comments on an FMX test run by Chicago classical superstation WFMT during the CES. The system at the station was set up by technicians from the CBS Technology Center, so it can be assumed to have been operating properly. But apparently many radios receiving WFMT were not. Complaints of poorer reception

flooded the station as soon as the FMX encoder was, without announcement, put on line. CBS has said that old tuners, without the now-standard phase-locked circuitry, could suffer added distortion (similar to increased multipath) in receiving an FMX broadcast, particularly if they're in need of a tune-up. Perhaps that sort of radio and receiver is in wider use, in portables and car stereos especially, than the system's promoters imagined. The broadcasts *did* sound quite fine—very low background noise—when decoded by NAD's FMX equipment. At any rate, it's probably still too early in the game for all of FMX's bugs to have been eradicated, so we'll have to keep a careful eye (and ear) on where this development leads.

R.L.

AUDIO SIGNAL PROCESSORS

SONY AND YAMAHA BOTH ARE POINTING THE WAY to the future with audio signal processors that convert analog signals to digital for processing, then return them to the analog domain. When digital signal sources are commonplace, the first step (A/D conversion) won't be needed, but electronics that save analog signal stages for the final output alone are still some distance off. The Sony is the SDP-505ES surround-sound processor (\$700), which uses the digital processing to create a highly adjustable delay line. Yamaha's DSP-1 offers considerably more. For details on both of these components, see their test reports in this issue.

Yamaha also has a more conventional analog surround processor in the SR-50 (\$279), which includes back-channel amplification. A new company (to me, at least) is Shigatsu, of Bend, Oregon. (There's a switch: an American audio manufacturer with a Japanese-sounding name.) The remote-control ESP-7 (\$595) is a six-channel Dolby Surround processor—the only way to go for true movie-theater Dolby video sound, according to the company. Fosgate, a pioneer in Dolby Surround processors for the home, has upgraded its Model 3601 to a Series II version (\$549, plus \$75 for an optional remote control). Owners of the original version can obtain Series II circuit updates, including an additional year of warranty, for \$85. NEC, Akai, Kenwood, and others also have added Dolby Surround processors.

DBX has four processors, including the 224X-DS (\$299) rack-mount tape noise reduction unit with simultaneous stereo encode and decode. The company's latest dynamic-range processors are the 1BX-DS (\$279) and 3BX-DS (\$499). Among the suggested applications are compression of the CD medium's dynamic range for recording purposes—and reexpansion on playback. Both include an ambience control. In addition, there's a new DBX bass-recovery device, using what the company calls digital processing to resynthesize subharmonics lost in conventional recording: the Model 120X-DS (\$299).

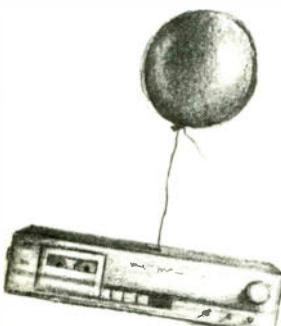
There are, as usual, many graphic equalizers. I noticed ten-band models from Yamaha, Marantz, and Parasound. Nikko has one with 12 bands, the EQ-550 (price not yet available). Technics has two with seven bands; the more luxurious is the SH-8046 (\$270), with storage for four stereo pairs of response curves. But the most spectacular equalizer at the show was the one that uses the least high technology: the Audio Palette, which is a six-band stereo device from Cello, Ltd., a high-end company. The unit is incredible not only for its direct attack on the anti-tone-control philosophy propounded by many purists but also for its construction. Eschewing the equalizer-on-a-chip integrated circuits used by most new Japanese units, the Cello device is composed of about 4,000 parts, mostly matched resistors and capacitors hand-wired into very classy multiposition rotary switches. Even IC operational amplifiers are avoided: The Audio Palette contains 48 separate discrete-component Class-A amplifier stages. This kind of ultrasolid, handmade construction is a throwback to the early 1960s, and the price (\$7,500, with a separate, multipurpose power supply going for \$1,250) befits a device that may well become the family heirloom. But it does seem to do the job well. The rotary switches offer more easily repeatable settings than the typical slider controls, and the dynamic range is given as 100 dB, a figure surpassing that obtained from many single-chip equalizers.

R.L.

CASSETTE EQUIPMENT

FTHE NEWS IN ELECTRONICS IS THAT THERE isn't much news, the news in tape decks is that there's practically none. Of the 162 products given a CES Design and Engineering Award at this show, only one is a home cassette deck, the much-deserving Nakamichi CR-7A. And the two most striking developments in the field are bad news, at least to some. First, there was considerable consternation in some quarters about a recently introduced congressional bill calling for a "taping tax" of 5 percent on all single-well decks and an astounding 25 percent on all dubbing units. Second, but of less universal interest, B&O finds that there isn't enough demand to justify continued production of its Beocord 9000. If you've been putting off buying one until you just happen to have the required funds lying around loose (in the \$2,000 bracket), now's the time to visit your friendly neighborhood savings and loan; there are still some decks left at dealers.

The reason I make a fuss about the 9000 is, above all, its automatic tape-matching and metering system. It not only determines correct settings of bias, recording equalization, and sensitivity to make best use of the specific tape you've inserted but also measures midrange headroom and adjusts accordingly the sensitivity of the equalized meters. To a greater degree than in



any other deck I know, therefore, the 9000's meter readings always mean the same thing no matter what tape you're using and regardless of the signal's spectrum. A few high-ticket decks from some of the small Japanese electronics giants make valiant stabs at self-control, but none goes quite as far as the Beocord 9000. End of discussion.

Meanwhile, B&O still has a nifty model in the automatic-reverse Beocord 5500 (\$899), announced as part of the Beosystem 5500 (see "Basic Electronics") shortly after the CES ended. The deck is mounted in a drawer, which opens to expose the cassette well and controls. It is equipped with Dolby HX Pro headroom extension and Dolby B and C. Use of the Dolby noise-reduction modes also records indicator-code tones when you begin recording; on playback, the deck reads these codes and automatically switches to the correct playback mode. Recording level can be set automatically or manually. The guide system is said to keep the tape path uniform for correct playback azimuth.

Next, perhaps, in order of overall surprise value, is Aiwa's announcement that its quick-reverse bidirectional dual-transport AD-A70 (\$595) can play 22½ hours of continuous music. Transport A holds five tapes—playing or recording a total of 7½ hours, with C-90 tapes—and can be programmed for repeat play as many as three times to obtain the claimed duration. In addition, the second transport will play or record bidirectionally. Either can be programmed for automatic recording, Transport A yielding as many as five programs, each on its own tape.

The top model of three Teac dual-transport introductions, the W-660R (\$599) also is an automatic-reverse model. So are two of Technics's announced dual-transport decks. The RS-T80R (\$485) will record continuously on both sides of the two tapes. With repeats of two C-90s, the two wells can be programmed for a total of 24 hours of music—longer than that afforded by the Aiwa, but running 3 hours (as opposed to 7½) before the first repeat.

Pioneer, among the first to extend playing time with dual autoreverse transports, has two new models; the CT-1370WR (\$450), which comes with a remote control handling all major functions, can record uninterruptedly for three hours. Marantz and H. H. Scott also have new dual models. All of the decks mentioned to this point offer both Dolby B and C noise reduction. The Pioneer CT-1270WR (\$260 without remote control) adds DBX.

Among Dolby-only models, the K-222 (\$299) and K-142 (\$229) are Yamaha's first dual-transport decks. Three single-well models also have been introduced by the company. Luxman's three include two autoreverse decks, both with DBX in addition to Dolby B and C. The K-106 (\$550) has Dolby HX Pro as well. Harman Kardon has added three medium-price models to its line. Of Onkyo's three introductions, two are in the Integra Series. The company's three-head TA-2058 (\$480) includes Dolby B, C, and HX Pro; Automatic Accubias tape matching; and a real-time counter. Rotel also has a deck with HX Pro, the RD-870 (\$499). Technics's top single-transport machine is the autoreverse RS-B29R



(\$295). Sansui's entry is the quick-reverse D-505R (\$369).

Teac's seven announced single-well models include three moderate-price autoreverse decks, two of which offer DBX. Of the unidirectional decks, the most impressive is the three-head V-770 (\$469), with Dolby HX Pro and bias adjustment. But the most capabilities are incorporated in the AD-7 (\$999): a programmable autoreverse recorder/player with Dolby B and C and DBX and a built-in *Compact Disc player*. For dubbing, there's synchro-start (a common feature among dual-transport decks), but the CD player has its own output as well so that the entire unit can function in a stereo system as if it were two separate components. Parasound offers a similar unit, the CDD-940, but without DBX. Even so, these machines will probably get the record companies all hot and bothered!

All told, as you can see, there are some worthy entries but few that can be called innovative. There may be a very good reason: Company after company either wants to talk about DAT (digital audio tape) or decidedly wants *not* to talk about it. Those in the first group seem to be saying that it will come soon enough, and they want us to be aware that they are among the DAT movers and shakers. Those in the second group seem to want the bloom to disappear from the CD market before they commit time, energy, money, and engineers to yet another program format.

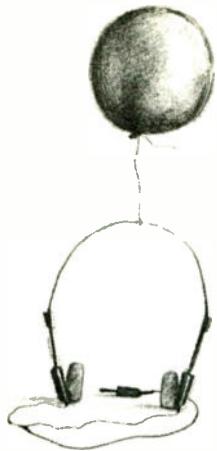
Whether any of these companies really wants DAT to come is another matter. Opinions vary all the way from "Digital is the magic word—just watch our dust when DAT arrives" to "Who needs it?" In the meantime, I suspect, bets are being hedged. This is not the time to look for adventurous, limited-market technological mavericks among analog cassette decks when so many eyes could be turned toward a new format by the beginning of next year.

R.L.

(CONTINUED ON PAGE 54)

CLOCKWISE FROM TOP LEFT: B&O BEOCORD 5500 CASSETTE DECK, DBX 1BX-D5 DYNAMIC-RANGE PROCESSOR, LUXMAN K-106 AUTOREVERSE CASSETTE DECK, AND CELLO AUDIO PALETTE EQUALIZER





MISCELLANEOUS ACCESSORIES

THIS COULD BE THE YEAR OF THE CORDLESS headphones. You may recall that at the previous CES, Sennheiser, an old hand at making infrared wireless equipment, introduced a 3-ounce model specifically designed with stereo TV in mind, incorporating the SI-2 transmitter (\$145) and the HDI-2 receiver/headset (\$149). Now Koss has announced its first model, called the Kordless (\$150). It consists of a JCK/200T infrared transmitter that plugs into the headphone jack of any stereo (or mono) equipment and a JCK/200S receiver/headset powered by a 9-volt battery rated at 50 hours of continuous use. On/off and volume controls are supplied on the headset, which is a full-size, 10-ounce model comparable in design to Koss's Pro-4X Plus wired headset.

Among new accessories from Recoton is the Spliceomatic kit (\$50), intended to simplify splicing of damaged $\frac{1}{2}$ -inch videotapes. It even includes a pair of one-size-fits-all gloves so that you won't get finger oil on the tape's oxide side, which causes dropouts. Memtek has improved its Memorex Safeguard System VHS head cleaner (\$16). Discwasher has done likewise with its audio cassette cleaners, combining the Perfect Path Cassette Head Cleaner with the Capstan Pinch Roller Cleaner to create the System II (\$10). Bib's disposable model (good for two cleanings, with built-in fluid dispensing) is the Two-Shot, for \$1.79. Also a wet cleaner for audio cassettes, Nagaoka's Wash Up Four (\$12) is now available through the Japanese company's new North American importer, Angstrom.

If your stereo system combines equipment that takes standard connectors with models having DIN jacks, you may find the needed adapters in the Ora Electronics line—which is called Auto Spec because the adapters are intended chiefly to solve these difficulties in automobile installations. They may be easiest to find at dealers that carry Blaupunkt, Alpine, Kenwood, Sony, Sansui, or other car-stereo brands that rely on DIN connectors. But don't let that deter you from looking up what you need for home systems.

A couple of furniture systems at the show caught my eye. Custom Woodwork and Design has come up with the Projection Screen Cabinet System (\$850) for discreetly storing screens for front-projection monitors. You can either closet a curved screen behind optional flipper doors (\$400) or take advantage of the system's flat screen that rolls down in front of a bookcase (an optional bookcase insert is available for \$300).

Talwar's furniture designs also offer a host of features you won't find elsewhere—from built-in (and, optionally, line-noise-filtered) AC-power strips with master on/off switches to a whisper fan for forced-air cooling and thumbscrews that simplify removal of the cabinet back for access to the system connections. Marble tops can be vibration-isolated to hold a turntable. Custom fin-



ishes are available, and Talwar will even refinish your speakers to match, if necessary. All this doesn't come cheap (say, \$1,500 for a well-equipped highboy), but if you're interested and can find no dealer representing the company, write Talwar at 311 West Point Terrace, West Hartford, Conn. 06107.

R.L.

BLANK TAPE

TAPES, DESPITE THE PUBLIC RELATIONS BUILDUP for RDAT, remains an analog medium in the home (VCRs with digital adapters aside). At CES, TDK did exhibit samples of its prototype digital cassettes—just as it did its 8mm samples before entering that market—but probably only to proclaim its prominence in the field. Dolby Laboratories has been equally vigorous in demonstrating Dolby SR (Spectral Recording—see June "Currents") as a way of achieving digital-like specs with analog tape, but that's not going to be a home system within the foreseeable future.

Meanwhile, TDK last spring announced improved SA and SA-X Type 2 formulations. The latter is said to be exceptionally low in noise and to have achieved a major advance in reduction of bias noise, in particular. Indeed, the revised SA-X is claimed by a TDK white paper to have "the lowest noise level of any tape in the world." Furthermore, the company says that "unless there are improvements made in the noise levels of tape decks, we have reached the limits of noise reduction by this technology [continued refinement of magnetic particles]." Maybe now is the logical time for DAT's debut.

More recently, TDK introduced two new cassette shells and a new tape formulation. The C-Thru shell, currently available only with TDK's standard Type 1 AD tape and designated AD-S, is made of a special rigid, vibration-damping plastic to control mechanical resonances. The new formulation, a Type 4 metal, is a spin-off from the company's work with 8mm tapes and employs an improved Finavox magnetic particle. It is loaded in another antivibration shell, this time constructed in two layers, with a new hub design and a dual-spring pressure pad. The designation for this tape/shell combination is MA-X.

Fuji has upgraded its cassette tapes based on the Beridox ferricobalt particle to FR-I Super (for "normal" bias) and FR-II Super ("chrome" bias). Sony, too, has upgraded its formulations across the board. The top Type 2, UX-Pro, is loaded in a shell with ceramic tape guides and an improved pressure-pad design. Improvements are claimed as well for Maxell XL-S and MX cassettes.

In addition to upgrading its F-I, JVC has introduced two new cassette formulations: UF-I and UF-II. UF-I is the premium ferric, F-I the relatively inexpensive one in this lineup. In videotape, JVC has upgraded its barium-ferrite magnetic particle to improve its Super HG and HG Super grades and added Super Pro to its VHS-C (TC-20) cassette line.

R.L.

SUMMER CLEARANCE



EDITED

BY

GEORGIA

CHRISTGAU

AND

TED

LIBBEY

AS A CHANGE OF PACE, HOW ABOUT A COLUMN OF twofers? For example, Rick Nelson's *Memphis Sessions* (Epic FE 40388) and *Motown Remembers Marvin Gaye* (Tamla 6172 TL), both posthumous issues of previously unreleased material. According to Rose Clayton's *Memphis Sessions* liner notes, "Elvis [Presley] said if James Dean could sing, he would probably sound like Rick Nelson." To which I politely respond, "So what?" I expected more from this relatively minor artist, but for my own reasons: His "Travelin' Man" and "Garden Party" are acute accounts of one Hollywood child-star's innocence and cynicism, respectively. *Memphis Sessions* reflects Nelson's penchant for rockabilly, but by alternating ballads and rockers, it inadvertently reveals his major limitation: a Velveeta-smooth voice that distinguishes itself only on the slow stuff. Rerun those old *Ozzie and Harriet* epilogues for an accurate picture of Ricky(y) the rocker—strictly a celluloid fantasy.

Marvin Gaye's duet with Kim Weston on *Motown Remembers*' "Baby (Don't You Leave Me)" syncopates sweetly, and "The World Is Rated X" is one of his more idiosyncratic sexual/political metaphors. Plus, Gaye is casually, charmingly indifferent on "That's the Way It Goes," and he makes clear, in the lyrics of "Baby, I'm Glad That Things Worked Out So Well," that the title is a lie. These disparate '60s outtakes will put David Ritz's *Gaye* biography, *Divided Soul*, on my reading list, but the sum of them hardly equals the star's 1982 *Midnight Love* comeback. And why should it, except that with this third posthumous Gaye release, I'm starting to wonder if there is an equivalent to *The Basement Tapes* in the vaults.

Now for two follow-ups: the Ramones' *Animal Boy* (Sire 25433-1) and Rick James's *The Flag* (Motown 6185 GI.). After we raved about the Ramones' *Too Tough to Die* (see Crispin Sartwell's review, February 1985), I hate to admit it, but these Queens, New York, locals are beginning to bore me. That's because *Animal Boy* narrows their image down to a caricature. The tracks on this album are one-dimensional, predictable—except for "Hair of the Dog" and the brilliant "My Brain Is Hanging Upside Down (Bonzo Goes to Bitburg)." (Last year's controversial 12-inch of that song, unavailable here except as an import, was released immediately after said Bonzo's equally controversial European trip.) Most irritating of all is the litany of "African" grunts that introduce "Ape-man Hop," reducing this seminal group to an aural Flintstones.

Rick James is depressed. *The Flag*'s "Painted Pictures" preaches futility, "Slow and Easy" struts with pretentiousness, and "Rick's Raga" noodles aimlessly. The antidrug "Free to Be Me," the red-black-and-green "Freak Flag," and "Funk in America/Silly Little Man" are decent enough—funk tracks with clout. James must have wanted *The Flag* to be the "multi-million-selling pleaser" Havelock Nelson forecast in his September 1985 review of the artist's *Glow*. Keep trying, Rick.

Georgia Christgau

PREVIEWING THE LP PREVIEW

IT'S THAT TIME AGAIN . . . TIME FOR HIGH FIDELITY'S exclusive preview of the forthcoming year's classical recordings. In this issue we list the new LPs that are scheduled to appear in retail stores as winter approaches. Next month we bring you the Compact Discs. The news this year—though it should come as no surprise to readers of these pages over the past few months—is that for the first time, the number of new CDs is expected to equal or surpass the number of new LPs. But before you hear the tolling of some dreaded bell, I quickly add: The margin is close. That's why this month's preview carries the title "Vinyl Survives!"

Of course, it's not just vinyl, but vinyl and cassette that make up the listing. And cassette shows no sign of weakening on the retail front, despite the rapid development and growing selection of truly portable Compact Disc players. All that can be said for the LP, however, is that it has proven its viability for another year, partly because limited CD production capacity has stalled some labels' plans to phase out the vinyl disc and partly because certain repertory is simply not going to sell well enough to make CD release profitable in these days of tight CD supply. By the time you read this, CD sales figures for many major classical labels will have effectively reached parity with LP figures.

Noteworthy this year is the trend toward polarization of the repertory. The big international labels appear to be less willing than ever to take chances on unconventional works or unfamiliar composers. However, the small domestic labels, especially Bridge, Laurel, Orion, New World, and CRI, seem more determined than ever to probe the unexplored corners of the literature. Nonesuch, which is not really a small label, has provided a certain degree of leadership in this area. Pro Arte, also not a small label, has pretty much abandoned its commitment to any but the most commercially safe of composers. With the larger labels, it is a rare release that departs from the beaten path; fortunately, Erato is still offering an alternative.

Every effort has been made to insure the accuracy of our preview listings. The fact that a recording appears on the list does not, however, guarantee that it will be released in the coming months—only that as of press time, this was the intention of the label or its distributor. Please note the following use of abbreviations, alone or in combination, in this year's preview. For performing forces: Ac (Academy), C (Chamber), Ch (Choir, Chorus), E (Ensemble), F (Festival), O (Orchestra), Op (Opera), P (Philharmonic), Qn (Quintet), Qr (Quartet), R (Radio), S (Symphony), and St (State), or their foreign-language equivalents. For production and packaging: Where known, the number of records in multidisc sets is given in parentheses at the end of a listing; other parenthetical symbols are d (digital), h (historical), l (live), m (mono), and r (domestic reissue). Initials and first names appear only as needed. *Ted Libbey*

CHALLENGING DESIGN.

HOW BOB CARVER CREATED A NEW MAGNETIC FIELD AMPLIFIER WITH THE SOUND CHARACTERISTICS OF A \$3000 MODEL, SATISFIED SOME OF THE WORLD'S MOST HIGHLY TRAINED AUDIO EARS... AND HOW YOU CAN OWN HIS DESIGN FOR UNDER \$500.

Bob Carver's newest Magnetic Field Amplifier is sending shock waves through the staid audiophile world. Because it won a challenge that no other amplifier designer could even consider.

The M-1.Ot was judged, in extensive listening tests by one of America's most respected audiophile publications, to be the sonic equivalent of a pair of legendary, esoteric mono amplifiers which retail for over five times as much.

A DESIGN FOR THE CHALLENGE OF MODERN MUSIC REPRODUCTION.

Before you learn the fascinating details of Bob Carver's unprecedented feat, let's consider the final product of that challenge. An amplifier design which stands on its own merits in any case, with astonishingly high voltage/high current output and exclusive operation features. An amplifier for the demands of compact digital discs, VHS Hi-Fi and other wide dynamic range playback media.

THE M-1.Ot:

- ◊ Has a continuous FTC sine-wave output conservatively rated at 200 watts RMS per channel into 8 ohms from 20Hz to 20kHz with no more than 0.15% THD.
- ◊ Produces 350-500 watts per channel of RMS power and 800-1100 watts peak power for transients. (8 ohms and 4 ohms respectively).
- ◊ Delivers 1000 watts continuous sine wave output at 8 ohms in bridging mode without switching or modification.
- ◊ Employs Bass Phase Inversion circuitry that can essentially double current output at low frequencies.

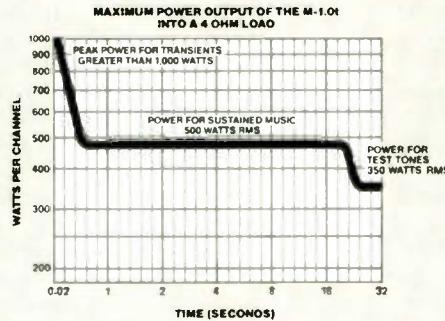
- ◊ Has a -110dB signal-to-noise ratio and no need for noisy external fan, making it exceptionally quiet.
- ◊ Includes elaborate safeguards including DC Offset and Short Circuit Power Interrupt protection.
- ◊ Is capable of handling unintended 1-ohm speaker loads without shutting down.
- ◊ Uses a power display capable of 1 millisecond peak response time and instant warning of clipping.



Accurate to as little as 1dB, the M-1.Ot's 2-color power meters respond within a millisecond of a transient impulse, identify momentary clipping and serve notice of protection circuit activation.

POWER FOR THE CHALLENGES OF MUSICAL WAVEFORMS.

The rating differences between the M-1.Ot's FTC and Carver's continuous



The Carver M-1.Ot delivers massive power at all important output levels.

RMS power reserves represent Bob's insistence that electronic designs should address real world problems. He reasoned that the M-1.Ot must excel at

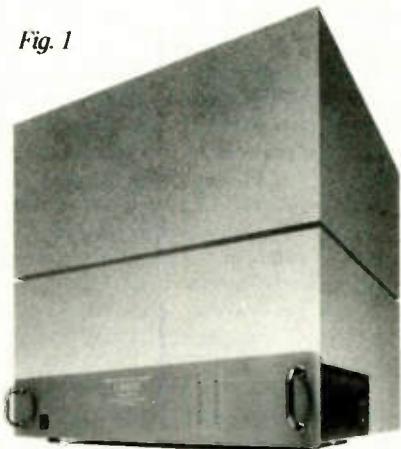
reproducing those types of power waveforms that are most essential to music's stunning impact and realism.

First there are the instantaneous peak transients – the sudden individual attacks of each musical note which demand a tremendous amount of amplifier power. While these waveforms last less than 1/100 of a second, they form the keen edge of musical reality.

Next come combinant musical crests of demand from multiple instruments and their harmonics. These longer-term power demands usually come and go in less than a second, yet can tax all but the most powerful amplifier.

Thus, even at 8 ohms and at extremely high output current levels, the Carver M-1.Ot not only delivers over 800 watts of peak power for momentary musical transients, but can provide over 350 watts RMS of long-term power for demands lasting up to 20 seconds. More power, more current and more voltage than any other comparably-priced amplifier.

Fig. 1



Two distinctively different approaches to sonic excellence.

THE MAGNETIC FIELD AMPLIFIER VS. CONVENTION.

Audiophiles, critics and ultimately other manufacturers have accepted

the wisdom of Bob Carver's innovative approach to delivering power in musical terms. Yet only Carver has so elegantly translated theory into practice.

Figure 1 shows the new Carver M-1.Ot Magnetic Field amplifier. It weighs 20 pounds and runs cool to the touch. Behind it is the outline of the pair of legendary mono amplifiers you'll read more about below. 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 ultimate secret lies in the patented Magnetic Field Coil (figure 2) employed in the Carver M-1.Ot. 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

Fig. 2



A single Magnetic Field Coil supplants traditional heavy power supplies.

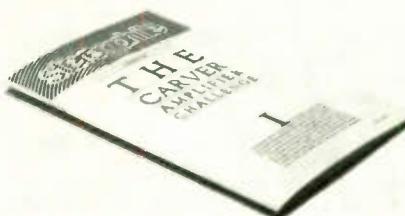
is a design capable of simultaneous high current and high voltage. A compact cool-running design that fills your room with sound, not bulk.

CARVER'S GREAT AMPLIFIER CHALLENGE.

On the merits of its enviable specifications and features alone, the M-1.Ot could easily have become another industry benchmark of power, accuracy and economy.

But Bob is never satisfied. He felt that his fifth Magnetic Field Amplifier design should be even more remarkable.

So last year, he made a bold offer to the editors of *Stereophile Magazine*, one of America's most respected audiophile publications. He claimed that he could make special modifications to his new amplifier design which would enable it to sound EXACTLY like any high-priced, esoteric, perfectionist amplifier (or amplifiers) the editors could choose.



Moreover, his design work would not happen in his Lynnwood, Washington laboratory, but in a motel room near *Stereophile*'s offices in New Mexico. And would match the M-1.Ot's final sound to any contender in 48 hours!

As the magazine put it, "If it were possible, wouldn't it already have been done? Bob's claim was something we just couldn't pass up unchallenged."

Out of respect, ethics (and even a little bit of awe), neither *Stereophile Magazine* nor Carver will divulge the name of the legendary "world class" mono vacuum tube amplifiers that were selected as the M-1.Ot's contender.

Suffice to say that what transpired in the next 48 hours is high fidelity history. It makes great reading in *Stereophile*, Vol. 8, No. 6, or in the reprint we'll send you on request.

MUSIC IS THE FINAL PROOF.

The *Stereophile* evaluation team was admittedly skeptical ("We wanted Bob to fail. We wanted to hear a difference").

They drove both amplifiers with some of the finest components in the world. Through reference speakers that are nothing short of awesome.

But it was their ears and 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."

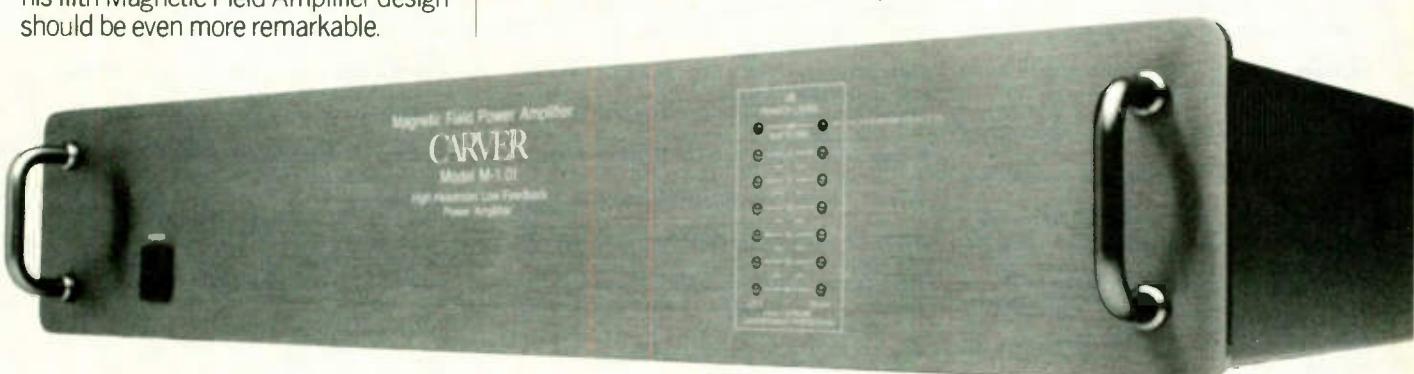
The inquiring audiophile can't help but wonder if M-1.Ot production models will sound as good. Ask the man who designed it. "I promise they will sound exactly the same. And just as good. In fact, I stake my reputation and that of our company on it."

SHARE THE CHALLENGE AND THE VICTORY.

The real winner is you. Because you can own world class, superlative electronics at reasonable prices by visiting your nearest Carver dealer. Compare the new M-1.Ot against any and all competition. Including the very expensive amplifiers that have been deemed the M-1.Ot's sonic equivalent. But even if you can't make that comparison, you won't be surprised when the M-1.Ot lives up to every other claim made in this ad.

What you will be surprised at is just how affordable this much power, musicality and accuracy can be.

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 RMS power, 1000 watts into 8 ohms. Noise, -110dB IHF A-Weighted. Frequency Response, +0.3dB 10Hz-100kHz. Slew Factor, greater than 200. Weight, 20 lbs. Finish, light brushed anthracite, anodized.



CARVER

Corporation, PO Box 1237, Lynnwood, WA 98046

POWERFUL

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750 upcoming LP and cassette releases from more than 65 labels

SURVIVES!

For some background on this year's LP and cassette preview, an explanation of the abbreviations used, and comments on a few of the trends reflected in the listings, see Ted Libbey's "Medley."

ACANTA (Germany) (distributed by German News)

Beethoven: *Fidelio*, Konetzni, Seefried, Rall, Schöller, Alsen; Vienna StOpO, Böhm (m). *Fritz Wunderlich: Arias and Songs* (m).

RAUCHEISEN EDITION

Grieg Lieder (m, h). *Liszt Lieder* (m, h). *Reger Lieder* (m, h). *Schubert Lieder* (m, h). *Schumann Lieder* (m, h). *Weber Lieder* (m, h). *Wolf Lieder* (m, h).

AMON RA (distributed by Qualiton Imports)

Beethoven: *Sextet; Octet*. Classical Winds. **Scarlettis:** Harpsichord Sonatas. Cole. *John Playford's Popular Tunes*. The Broadside Band.

ANGEL EMI

Adam: *Le Postillon de Longjumeau*. Aler, Anderson; Fulton (d).

Bartók: *Concerto for Two Pianos, Percussion, and Orchestra; Sonata for Two Pianos, and Percussion*. K. Labeque, M. Labeque; City of Birmingham SO, Rattle.

Beethoven: *Complete Piano Trios*. Perlman, Ashkenazy, Harrell (d).

Beethoven: *Symphonies Nos. 1, 5*. Philadelphia O., Muti (d).

Beethoven: *Symphonies Nos. 6, 7; Overture to the Creatures of Prometheus*. BBC SO, Toscanini (h).

Beethoven: *Symphonies Nos. 6, 8*. London PO, Tennstedt (d).

Berlioz: *Roméo et Juliette*. Norman, Aler, Estes; Philadelphia O., Muti (d).

Bernstein: *Fancy Free; Facsimile; On the Town; Candide Overture*. St. Louis SO, Slatkin (d).

Bizet: *L'Arlesienne (complete)*. Toulouse O., Plasson (d).

Copland: *Symphony No. 3; El salón México; Danzon Cubano*. Dallas S. Mata (d).

Hendel: *Alcina*. Auger; Spitalfields F., Hickox.

Haydn: *Nelson Mass; Paukenmesse*. Dresden SO, Marriner (d).

Haydn: *Symphonies Nos. 102, 104*. English CO, Tate (d).

Mahler: *Symphony No. 8*. London PO, Tennstedt.

Messiaen: *Turangalila*. City of Birmingham SO, Rattle.

Mozart: *Concerto*. Iris, Battle; RPO, Previn.

Mozart: *Piano Concertos Nos. 24, 27*. Zacharias; Dresden SO, Zinman (d).

Mozart: *Symphonies Nos. 35, 31*. St. Martin's AC, Marriner (d).

Puccini: *Madama Butterfly*. Callas, Gedda; La Scala O&Ch, Karajan (r).

Puccini: *Ode to St. Cecilia's Day*. Taverner Consort, Parrott (d).

Ravel: *Mirrors*. Stravinsky: *Petrushka*. Prokofiev: *Sonata No. 7*. Toradze.

Ravel: *Orchestral works*. Royal PO, Previn (d).

Rossini: *Il barbiere di Siviglia*. Callas, Gohdi; Philharmonia O., Galliera (r).

Saint-Saëns: *Symphony No. 3; Danse macabre; Le rouet d'Omphale*. Orchestre National de France, Ozawa (d).

Schubert: *Trout Quintet*. Leonskaya; Alban Berg Quartet.

Sibelius: *Symphonies Nos. 3, 7*. City of Birmingham SO, Rattle.

Strauss, J.: *Die Fledermaus*. Popp, Domingo, Baltza, Brendel; Munich RO (d).

Strauss, R.: *Also sprach Zarathustra; Till Eulenspiegel*. London PO, Tennstedt (d).

Tchaikovsky: *The Nutcracker*. Royal PO, Previn (d).

Verdi: *Otello*. Domingo, Richarelli, Diaz; La Scala, Maazel.

Villa-Lobos: *Bachianas Brasileiras, Nos. 1, 5, 7*. Hendricks; Royal PO, Bátiz (d).

Wagner: *Operatic Arias*. Behrens; Munich R., Schneider.

Art of Tito Schipa.

Carols from Kings College, Cambridge.

Plácido Domingo: Vienna, City of My Dreams. English CO, Rudel.

Kirsten Flagstad Sings Wagner (h).

Kraslens Encores. Perlman, Sanders (d).

Opera Recital. Baltza; Munich RSO, Zedda (d).

The Record of Singing, Vol. 4.

Twenty Seraphim tape issues will be added to the catalog this month, and 10 Angel Master Series releases will appear in October.

Angel Records, 1750 N. Vine St., Hollywood, Calif. 90028.

ARABESQUE

Brahms: *Piano Quartets*. Cantilena Piano Qr.

Dvořák: *Quintet for Double Bass and String Quartet*. Karr, Portland Qr.

Dvořák: *Slavonic Dances* (org. version for piano, four hands). Balsam, Raps.

Eggers: *Introduction and Allegro; Sevenade; Chanson de Nut*. English CO, Menuhin.

Friml: *Chansonne*. Eastman-Dryden O., Hunsberger.

Haydn: *Nelson Mass*. Banchetto Musicale, Pearlman.

Horberg: *The American Girl*. Eastman-Dryden O., Hunsberger.

Hummel: *Piano Sonatas (complete)*. Hohson.

Christmas Eve. Robert DeCormier Singers and E. DeCormier.

All recordings are Direct Metal Mastered.

Arabesque Recordings, 1995 Broadway, New York, N.Y. 10023.

ARIEL RECORDS

(distributed by Fonodisc International)

Gounod: *Faust (highlights)*. **Verdi:** *Aida (highlights)*. Yeend, Cassel; New York City Center OpO, Halasz (a, h).

Herbert: *Orange Blossoms (highlights)*; *The Only Girl (highlights)*. MacRae, Warenkjold; Dragon (a, h).

Redgers and Hart: *Dearest Enemy (highlights)*. **Donaldson:** *Whooper (highlights)*. Macrae, Farrell, Cantor; Dragon (a, h).

Schwarzkopf: *Revenge with Music (highlights)*. **Youmans:** *Through the Years (highlights)*. MacRae, Connor; Dragon (a, h).

Maurice Chevalier and Jeanette MacDonald: *Three Classic Film Musicals (Love Parade; Love Me Tonight; One Hour with You)* (a, h).

An Evening with Cole Porter. Merman, Raitt, Wright, Nero, Voorhees (a, h).

Prima Donnas on Broadway. Swarthout, Farrell, Munsell, Kirsten, Pons (a, h).

Rare Romberg: Highlights from Rosalie; Nina Rosa; East Wind. MacRae, Benzell, Connor; Dragon (a, h).

Romberg Conducts Romberg (a, h).

Tonight We Sing (soundtrack). Pinza, Pearce, Peters, Melba (soundtrack). Munsell (a, h).

AUDIO SOURCE

See Lyrix, Phonic, Rene Gailly.

Audiosource, 1185 Chess Dr., Foster City, Calif. 94404.

BIS

(distributed by Qualiton Imports)

Händel: *Dixit Dominus; Concerto grosso in G minor, Op. 6, No. 6*. Von Otter, Martindelo; Stockholm Bach Ch, Drottningholm Baroque E., Öhrwall.

Sibelius: *Kullervo Symphony; The Origin of Fire; Sandels; March of the Finnish Cavalry; Have You Courage?; War Song of Tyraeus; Academic March; Finlandia*. Mattila, Hyyninen; Laurlin Ystävä Male Ch, Gothenburg SO, Järvi (2).

Sibelius: *Pohjola's Daughter; Rakastava; Tapola; Impromptu*. Gothenburg SO, Järvi.

Sibelius: *Symphony No. 7*. Kuolema; *Night Ride and Sunrise*. Gothenburg SO, Järvi.

Stenhammar: *Serenade, Op. 31*. Gothenburg SO, Järvi.

The Burlesque Trombone: Music by Rabe, Serocki, Bernstein, Chopin, Pöntinen, and others. Lindberg, Pöntinen.

Flute and Harp: Music by Doppler, Badings, Naderman/Tulou, Mozetich, Aitken, Goodman.

The Magnificent Organ of St. Lambert Church, Holland: Old Spanish and French Organ Music. Oortmerssen.

Piano Music by Satie. Pöntinen.

Swedish Radio Symphony Orchestra—50 Years Recordings from 1928–1979.

The Virtuoso Harp: Music by Fauré, Tournier, Dussek, Flagello, Salzedo, Prokofiev, Goodman.

BONGIOVANNI
(distributed by Qualiton Imports)

Astori: *Symphony in F minor*. **Clampi**: *Concertos for Violin, Strings, and Continuo**. Indigo. Negri; Menotti*.

Bach: *St. Mark Passion*. Hellmann, Sutkowski; Warsaw ChOp, Bok (2).

Bellini: *Adelio e Salvini*. Gustavsson, Lander, Tobiasson, Morling, Johnson (2, l).

Catalani: *Dejanice*. Garaventa, Basto, Barbato, Massis, Zardo; König (3, l).

Rossini: *Quatre mendiants et quatre hors d'oeuvres*. Bavaj.

Schoenberg: *Variations on a Recitative*, Op. 40. **Tunillo**: *Antica preghiera*; *Larvatus Prodeo*. **Guillou**: *Toccata for Organ*. Turrini.

Simonetti: *Piano Concerto; Quadrilles*. **Banchieri**: *Canzone Nos. 1, 3, 11**. Guidetti; Jotti. Ferrara Conservatory Brass E*.

Giuseppe Campra: *Opera Arias*; *Primo Zambruno*: *Opera Arias* (h, m, r).

Rinaldo Grassi: *Opera Arias* (h, m, r).

Great Baritones (1900–1920s): *Bellantoni, Montesanto, Bonini* (h, m, r).

Great Baritones (1900–1920s): *Pini, Corsi, Corradi, Parva* (h, m, r).

Aureliano Pertile: *Opera Arias* (h, m, r).

Giuseppe Valdengo: *Unpublished Arias* (h, l, m, r).

BRIDGE

Carter: *The Vocal Works (1975–1981)—A Mirror on Which to Dwell*; *Syringe*; *In Sleep, In Thunder*; *Three Frost Songs* (1980 version). Speculum Musicae.

Machover: *Nature's Breath; Spectres Parisiens**. Prism CO, ASKO E of Amsterdam*, Black, Eötvös*.

Wuorinen: *Violin Variations*; *Fantasia*; *The Long and the Short*; *Six Pieces*. Hudson, Wuorinen.

American Pianists Series, Vol. 1: *Aleck Karis Plays Works by Chopin, Carter, and Schumann* (cassette only).

American Pianists Series, Vol. 2: *Lambert Orkis Plays Works by Crumb and Wernick*.

New Music with Guitar, Vol. 4: *David Starobin Plays Works by Kurtág, Kolb, Norgård, Reynolds, and Machover*.

A Slavic Sampler with Guitar. Starobin.

Bridge Records, G.P.O. Box 1864, New York, N.Y. 10116.

CAMBRIA

Blandi Chamber Works.

Piano Music of Florence Price. Waites.

Selected Vocal Works by Elinor Remick Warren. Gibson (d).

Cambria Records, P.O. Box 374, Lomita, Calif. 90717.

CBC

Frankel: *Symphony in D minor*. Vancouver SO, Akiyama (d).

Rachmaninoff: *Piano Concerto No. 1*; **Dohnányi**: *Variations on a Nursery Song*. **Litolff**: *Scherzo*. Ozolins; Toronto SO, Bernardi (d).

Shostakovich: *Violin Concerto No. 1*. Stakjy; Toronto SO, Davis (d).

Tchaikovsky: *Romeo and Juliet*; *Francesca da Rimini*; *Capriccio Italien*. Vancouver SO, Barshai (d).

A Tribute to Pavlova: Works by Glazunov, Tchaikovsky, Rubinstein, Minkus, Delibes, Drigo, Adam, and Saint-Saëns. Quebec SO, Streathfield (d).

Music by Canadian and American Composers: Works by Barber, Copland, Cogliano, Coulthard, Diamond, Griffes, Herber, Ives, Komorous, McDougall, Prevost, Ridout, and Willan. CBC Vancouver O, Bernardi (2, d).

Beethoven: *Piano Concertos (6)*. Kuerli; Toronto SO, Davis (3, d, cassette only).

Canadian Broadcasting Corporation, P.O. Box 6400, Station A, Toronto, P.Q. M5W 1E6 Canada.

CBS MASTERWORKS

Beethoven: *Sonatas for Piano and Violin*, Vol. 2: Nos. 5–8, 10. Istomin, Stern (2).

Beethoven: *Piano Concertos Nos. 1, 2*. Perahia; Concertgebouw O, Haitink.

Dvořák: *Cello Concerto*; *Waldecksruhe*; *Rondo*, Op. 94. Ma; Berlin P, Maazel.

Giedron: *Fedora*. Marton, Carreras, Kincses, Gregor; Hungarian R&TVSO&Ch, Patané (2).

Glass: *Einstein on the Beach* (highlights). Philip Glass E.

Glass: *Satyagraha* (highlights).

Haydn: *Symphonies*, Vol. II: Nos. 60, 63, 66, 67, 68, 69. L'Estro Armonico, Solomons (3).

Mahler: *Symphony No. 3*. Baltsa; Vienna P, Maazel (2).

Mozart: *The Complete Piano Concertos*, Vol. I: Nos. 1–6, 8, and K. 107. Nos. 1–3. Perahia; English CO (3).

Mozart: *Sonatas and Variations for Flute and Keyboard*. Rampal, Ritter.

Rodgers and Hammerstein: *South Pacific*. Te Kanawa, Carreras, Baughan, Patinkin; Ambrosian Singers, London SO, Tunick.

Puccini: *Arias*. Marton; Bavarian RSO, Patané.

Puccini: *Turandot* (highlights). Marton, Carreras, Ricciarelli; Vienna StOpO, Maazel.

Tchaikovsky: *The Nutcracker*. Royal PO, Thomas (2).

Children's Songs. Rampal, André.

Glenn Gould: *Bach*, Vol. 5, *The Toccatas* (2).

Liberace.

The Glenn Gould Legacy, Vol. 4: *Works by Berg, Hindemith, Krenek, Prokofiev, Schoenberg, Scriabin (3)*.

Music of William Walton.

CBS Masterworks, 51 W. 52nd St., New York, N.Y. 10019.

CENTREDISCUS

Evangelista: *Clos de vie**. **Georges**: *Voice Intimist*. **Rosa**: *Treppenmusik**. **Viviers**: *Pour Violin et Clarinette*. Grinhauz*. Dumouchel*. M. D. and Y. Parenti; Les Événements du Neuf E, Vaillancourt; Société de Musique Contemporaine du Québec, Garant* (d).

Canadian Music Centre, 20 St. Joseph St., Toronto, P.Q. M4Y 1J9, Canada.

CLAVES

(distributed by Qualiton Imports)

Bach: *Goldberg Variations*. Dähler.

Debussy: *Works for Piano*. Antonioli.

Fauré: *Quintets for Piano and Strings*, Opp. 89, 115. Fauré Q of Rome.

Kremmert: *Concertos for One and Two Clarinets*. Friedli, Pay; English CO, Pav.

Mendelssohn: *Works for Cello and Piano*. Starck, Eschenbach.

Mozart: *Works for Piano, Four Hands*. Duo Crommelynck.

Rossini: *Flute Quartets (4)*. Graf, Carmina Tr.

Works for Clarinet Quartet. Music by Albinoni, Farkas, Harder, Tischhäuser, Tomasi, and others. Swiss Clarinet Players.

Schoeck: *Unter Sternen*. Fischer-Dieskau, Höll.

CONSORTIUM

See GSC, Laurel Record.

Consortium Recordings, 2451 Nichols Canyon, Los Angeles, Calif. 90046–1798.

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Poulenc: *Le Bal masqué*; *Le Bestiaire*; *Trio for Piano, Oboe, and Bassoon*; *Sextet*. Allein; Nash E, Friend. **Scarlatti**, D.: *Keyboard Sonatas*. Black.

Walton: *The First Shoot*. **Tippett**: *Festal Brass with Blues*. **Britten**: *Russian Funeral Music for Brass and Percussion*. **Ireland**: *A Downland Suite*. London Collegiate Brass, Stobart.

CRI

Blitzstein: *Piano Concerto*. **Pickert**: *Keys to the City Piano Concerto**. Barrett, Pickert*. Brooklyn P, Foss (a).

Breit: *Canto*; *Concert Etude*; *Cantares*; *Moments*. Netherlands RSO (a).

Brennick: *Wir weben, wir weben*; *String Quartet No. 2**. Musical Elements, Asia. Alexander Qr* (a).

Cohen: *Quintet for Clarinet and Strings*. **Cory**: *Aperatures, Profiles*. Karis, Flax, Atlantic Qn (a).

Collinst: *String Quartet*; *Piano Works**. Manhattan Qr, Johannsen* (a).

Costilene: *Cantic apelor taru* (Song to the Rivers of My Country); *Jubilus*; *Comme des longs nuages*. Bucharest RSO (a).

Davidovsky: *Shir ha shirim*; *Romancero**. Bryn-Julson; Parnassus, Korf. Syzygy New Music E, Livingston* (d).

Kelbi: *Toccata*; *Apello*; *Soundings*. Kipnis, Gottlieb, E Intercontemporain (a).

Rand: *Symphony No. 4*. **Dicks**: *Adagio*. Cleveland O (a, l, Direct Metal Master).

Schwartner: *Music of Amber*. **Ivey**: *Solstice*. Washington Contemporary Music Forum (a).

Siegmeister: *Ways of Love**; *Langston Hughes Songs**. **Bazelon**: *Piano Works*. Williams*, Mandel*, Maximilien* (a).

Sue Ann Kahn, flute: *Works by Luening, Rochberg, Schickele, Rieger* (d).

Music from Eastman: *Works of Wilder and Blank* (a).

Carole Terry, harpsichord: *Works by Albright, Cowell, Persichetti, and Rorem* (a).

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CRYSTAL

Allanbrook: *Commencement Exercises*; *Night and Morning Music*. **Houssenstamm**: *Ensembles for Brass Quintet*. **Ettori**: *Sonic Sequence*. Annapolis Brass Qn.

Bloch: *Second Sonata for Violin and Piano*. **Gamov**: *Sonata for Violin and Piano*, Hartt.

Hindemith; **Saint-Saëns**: *Sonatas for Bassoon and Piano*. **Bach**: *Suites*. Weisberg.

The Brass Ring: *Music by Gregson, Henze, Hindemith, Leclerc, and Lutoslawski*.

James Campbell, clarinet; **John York**, piano; *Music by Finzi, Hindemith, Lovreglo, and Weintraub*.

Alice Miller Chapel Brass Ensemble: *Music by Bach, Brahms, Strauss, Wagner, and others*.

Anthony Plog, trumpet: *Music by Campo, Hindemith, Petras, Plog, and Tull*.

Mer Rimon, horn: *Music by Desidai, Mathis, Reinhardt, Singaglia, and Tchaikovsky*. Rimon; Israel P, Amos.

Thomas Stevens, trumpet: *Music by Antheil, Bernstein, Davies, Stevens*.

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DELL'ARTE

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Beethoven: *Sonatas*. Petri (h, l, m).

Fauré: *Cello Sonatas* (2). Wyrick, Wild (d).
Mozart: *Piano Concerto No. 20*. Petri; R Beromünster O, Schmid (1957 broadcast).
Prokofiev: *Piano Concerto No. 1*; **Shostakovich:** *Six Preludes and Fugues from Op. 87*. Richter; Czech P, Ancerl (a, h).
Toscanini Conducts (h, l, m).

DEUTSCHE GRAMMOPHON

Bach: *English Suites Nos. 2, 3*. Pogorelich (d).
Bach: *Orchestral Suites* (4). Musica Antiqua Köln (d).
Beethoven: *Late String Quartets*. Melos Qr (3, d).
Beethoven: *Missa solemnis*. Cuberli, Schmidt, Cole, Van Dam; Vienna Singverein, Berlin PO, Karajan (2, d).
Beethoven: *Piano Concertos Nos. 1, 2*. Argerich; Philharmonia O, Sinopoli (d).
Beethoven: *Piano Sonata No. 11; Kurfürsten Sonatas* (2). Gilels (d).
Beethoven: *Piano Sonatas Nos. 5, 10, 19, 20*. Gilels (d).
Beethoven: *Piano Sonatas Nos. 30, 31*. Gilels (d).
Copland: *Symphony No. 3; Quiet City*. New York P, Bernstein (d).

Dobussey: *La Mer; Prélude à l'après-midi d'un faune*.
Ravel: *Daphnis et Chloé*, Suite No. 2; *Pavane pour une infante défunte*. Berlin PO, Karajan (d).

Elgar; Vaughan Williams: *Instrumental Works*. Orpheus CO (d).
Fauré: *Requiem*; **Ravel:** *Pavane pour une infante défunte*. Philharmonia O, Giulini (d).

Frank; Debussy; Ravel: *Sonatas for Violin and Piano*. Mintz, Bronfman (d).
Grieg: *Symphonic Dances; Lyric Suite; Norwegian Dances* (2). Gothenburg SO, Järvi (d).

Haydn: *Symphony No. 94; Sinfonia concertante*. Vienna PO, Bernstein (d).
Mahler: *Symphony No. 2; Lieder eines fahrenden Gesellen*. Plowright, Fassbaender; Philharmonia O&Ch, Sinopoli (2, d).

Mahler: *Symphony No. 7*. New York P, Bernstein (2, d, l).
Mahler: *Symphony No. 9*. Concertgebouw O, Bernstein (2, d, l).
Mozart: *Don Giovanni*. Ramey, Tomowa-Sintow, Baltsa, Battle, Furlanetto, Winbergh, Malta, Burchuladze; Berlin PO, Karajan (4, d).

Mozart: *Eine kleine Nachtmusik; Divertimentos*, K. 131, 240a. Orpheus CO (d).
Mozart: *Piano Concertos Nos. 15, 22*. R. Serkin; London SO, Abbado (d).
Mozart: *Symphonies Nos. 25, 26, 27*. Vienna PO, Levine (d).

Mozart: *Symphonies Nos. 30, 31, 32*. Vienna PO, Levine (d).
Mozart: *Violin Concertos* (5); *Rondos* (2); *Adagio*. Perlman; Vienna PO, Levine (3, d).

Mussorgsky: *Pictures at an Exhibition*. **Ravel:** *La Valse; Boléro*. Berlin PO, Karajan (d).
Ravel: *Orchestral Works*. London SO, Abbado (d).

Schubert: *String Quartets Nos. 10, 13; Quartettsatz*, D. 703. Hagen Qr (d).
Schumann: *Symphony No. 2; Cello Concerto*. Maisky; Vienna PO, Bernstein (d).
Schumann: *Violin Sonatas Nos. 1, 2*. Kremer, Argerich (d).
Sinopoli: *Lou Salomé* (suite); *Chamber Concerto*. Popp, Carreras, Planes; Stuttgart RSO, E. Intercontemporain, Sinopoli (d).

Strauss, R.: *Annie auf Naxos*. Tomowa-Sintow, Baltsa, Battle, Lakes, Prey; Vienna PO, Levine (3, d).
Strauss, R.: *Four Last Songs; Die heiligen drei Könige; Selections from Capriccio*. Tomowa-Sintow; Berlin PO, Karajan (d).

Verdi: *La Forza del destino*. Plowright, Baltsa, Carreras, Bruson, Burchuladze; Philharmonia O, Sinopoli (3, d).
Wagner: *Preludes and Overtures; Siegfried Idyll*. New York P, Sinopoli (d).

Webern, Schoenberg: *Works for Strings*. Litwin, Griffiths, La Salle Qr (d).
Agnes Baltsa Sings Greek Songs (d).
Vladimir Horowitz: *The Studio Recordings 1985. Works by Liszt, Scarlatti, Schubert, Schumann, Scriabin* (d).
Mariachi Songs from Mexico. Araiza (d).

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DYNAMIC (distributed by Qualiton Imports)

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Rossini: *24 petits riens*. Mezzana.
Arias and Madrigals. Music by Caccini, Kapsberger, Frescobaldi, Sigismondo d'India. Barazzoni, Volta.
Guitar Duo "Bini-Sebastiani". Music by Breuwer, Sor, Giuliani, Company.

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Bach: *Preludes and Fugues*. Alain (d).
Berlioz: *L'Enfance du Christ*. Vaqn Otter, Rolfe-Johnson, Bastin, Van Dam; Monteverdi Ch, Lyon OpO, Gardiner (2, d).

Berlioz (arr. Liszt): Harold in Italy. Caussé, Duchable (d).

Borodin; Glinka; Tchaikovsky: *Opera Arias*. Vishnevskaya; O National de France, Rostropovich (d).

Charpentier: *De profundis; Cecilia virgo et marty*. Musica Poliphonica, Devos (d).

Chausson: *Le Roi Arthur*. Zylis-Gara, Quilico, Windbergh; O National de Paris, Jordan (d).

Debussy: *Khama; Jeux; Le Martyre de Saint-Sebastien*. Rotterdam PO, Conlon (d).

Enescu: *Symphony Concertante for Cello and Orchestra* (premiere); *Suite No. 3*. Ormezowski; Monte Carlo PO, Foster (d).

Falla: *Nights in the Gardens of Spain*. **Albéniz:** *Iberia*. Argerich; O de Paris, Baroenboim (d).

Franch: *Beatiudes*. Le Brun, Berbié, Jefles, Randall; Ch of R France, O National de Paris, Jordan (d).

Golupp: *The Fall of Adam's* (premiere). Zampieri, Schmiege, Rigacci, Palacio; I Solisti Veneti, Scimone (2, d).

Gossec: *Requiem*. Ghent Madrigal Ch, Musica Polyphonica, Devos (2, d).

Händel: *Tamerlano*. Ragin, Robson, Argenta, Chance; English Baroque Soloists, Gardiner (3, d).

Leclair: *Scylla et Glaucus*. Yakar, Brown, Crook, Merritt; Monteverdi Ch, English Baroque Soloists, Gardiner (d).

Liszt: *Christus. Valente, Lipovsek, Krause, Lindroos*; *Bratislava PCh*. Rotterdam PO, Conlon (3, d).

Liszt: *Organ Works*. Alain (d).

Liszt: *Les Preludes; Mephisto Waltz; Procession nocturne*. Rotterdam PO, Conlon (d).

Magnard: *Quartet* (premiere). Via Nova Qr (d).

Mendelssohn: *Paulus*. Kenny, Balley, Schaefer; O&Ch of Lisbon Gulbenkian Foundation, Corboz (3, d).

Milhaud: *Jacob's Ladder; La Cheminée du roi René*. Tr of Paris, Soloists of R France (d).

Pondorecki: *Cello Concerto* (premiere). Rostropovich; Philharmonia O, Penderecki (d).

Prokofiev: *Symphonies Nos. 1, 7, O National de France*. Rostropovich (d).

Prokofiev: *Symphony No. 5, O National de France*. Rostropovich (d).

Prokofiev: *War and Peace*. Vishnevskaya, Miller, Petkov, Ghuselev, Gedda, Paunova; Ch of R France, O National de France, Rostropovich (4, d).

Ravel: *Arias with Piano; Arias with String Quartet*. Ameling, Jansen, Viotti Qr (d).

Ravel: *Daphnis et Chloé; Rhapsodie espagnole; Le Tombeau de Couperin*. O de la Suisse Romande, Jordan (d).

Ravel: *L'Enfant et les sortilèges*. Alliot-Lugaz, Raphanel, Michael, Huttonlocher, Garcisan, Sénechal; O de la Suisse Romande, Jordan (d).

Ravel: *L'Heure espagnole; Don Quichotte à Dulcinée*. Quilico; Nouvelle P, Jordan (d).

Ravel: *Piano Concertos* (2); *Tzigane; Shehérazade*. Amoyal, Duchable, Yakar; O de la Suisse Romande, Jordan (d).

Rossini: *Hermione* (premiere). Gasdia, Zimmermann, Palacio; Monte Carlo PO, Scimone (3, d).

Roussel: *Bacchus et Ariane; Suite in F*. O de Paris, Dutoit (d).

Roussel: *Symphonies Nos. 1, 3*. O National de France, Dutoit (d).

Roussel: *Symphonies Nos. 2, 4*. O National de France, Dutoit (d).

Saint-Saëns: *Quartets Nos. 1, 2* (premiere). Viotti Qr (d).

Schubert: *Sonata in B flat; Impromptus* (2). Pires (d). **Schumann:** *Kreisleriana; Faustasia; Blumenstücke*. Dalberto (d).

Stravinsky: *Symphony in Three Movements; Jeu de cartes*. Rotterdam PO, Conlon (d).

Tchaikovsky: *Rococo Variations*. **Dvořák:** *Cello Concerto*. Rostropovich; Boston SO, Ozawa (d).

Tchaikovsky: *Souvenir de Florence; Serenade for Strings*. Berne Camerata (d).

Tchaikovsky: *Symphony No. 6*. Boston SO, Ozawa (d).

Telmann: *Taffelmusik*. Amsterdam Baroque O, Koopman (d).

Van Wassenbergh; Pergolesi: *Concerti grossi*. Amsterdam Baroque O, Koopman (d).

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Rossini: Stabat Mater. Liculescu, Jaques, Zamfir, Krause; Elans O&Vocal E, Crispini.
Tchaikovsky; Rachmaninoff: Songs. Diakov, Podic.
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Musica of Lawes and Jenkins. Oberlin Consort of Viols.

GERMAN NEWS

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Handel: Act, Galatea e Polifemo. Kirkby, Thomas; London Baroque, Medlam.

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Philipps: Keyboard works. Buckley.

Ravel: Complete Orchestral Works, Vol. 1. O National de Lyon, Baudo (2).

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Liszt: Piano Concerto No. 2; Totentanz. Ranki; Hungarian StO, Kovacs (d).

Pergolesi: La seria padrona. Farkas, Gregor; Capella Savaria, Nemeth (d).

Verdi: Macbeth. Cappuccilli, Kovats, Sass, Kelen, Bandi, Pitti, Zadori, Mate, Gáti, Toth; Hungarian RO&Ch, Gardelli (3, d).

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Flagello: *Sonata for Violin and Piano; Declamation for Violin and Piano; Other Works*. Fodor, Portney, Pierce, Hess, Braccali, Paul Price Percussion E.
Haydn: *Piano Trio in E flat; String Quartet in C**. Western Arts Trio; Pro Arte QR*.
Levit: *Piano Trio No. 3*. Western Arts Trio.
Martin: *Eight Preludes for Piano*. V. Jochum.
Mendelssohn: *Variations and Scherzo*, Op. 81. Pro Arte QR.
Micheletti: *Piano Trio No. 2* (premiere). Western Arts Trio.
Morrow: *The Birth of the War God; The Canticle to Brother Sun; And the Cloud Will Break*. Western Wind Vocal Group.
Mozart: *Adagio and Fugue in C, K. 546*. Pro Arte QR.
Persichetti: *Six Sonatas for Harpsichord* (premiere). Comparone.
Rimsky-Korsakov: *Piano Trio in C sharp minor*. Western Arts Trio.

Rossini: *Prelude from Chronicle of 9; Concerto Grossino, I; A Gentle Musick*. Jerusalem S. Amos.
Rossati: *String Quartets Nos. 1, 2*. Pro Arte QR.
Schrader: *Lost*. Atlanta. Schrader.
Turina: *Trio No. 1*. Western Arts Trio.
Van Dieren: *String Quartets Nos. 1, 2*.
Webern: *Langsame Satz; Six Bagatelles for String Quartet*, Op. 9. Pro Arte QR.
 Western Arts Trio, Vols. 8, 9, 10: *World Premieres of Trios by Boroff, Castillo, Scharf, Ding Shande, Smart*.

LONDON

Bach: *Well-Tempered Clavier, Book II*. Schiff (2, d).
Beethoven: *Piano Concertos* (5); *Choral Fantasy*. De Larrocha; Berlin RSO, Chailly (3, d).
Beethoven: *Quartets*, Opp. 127, 135. Fitzwilliam QR (d).
Berlioz: *Les Nuits d'été*. **Franck; Chabrier; Bizet;** **Fauré; Debussy:** *Songs*. Souzay, Baldwin (d).
Berlioz: *Roméo et Juliette; Symphonie triomphale et funèbre*. Krause, Quivar, Cupido; Montreal SO, Dutoit (2, d).
Bellini: *Norma*. Caballé, Sutherland, Pavarotti, Ramey; Welsh National OpO, Bonynge (3, d).
Bernstein (arr. Croes): *West Side Story*. **Weill (arr. Purser):** *Kleine Dreigroschenmusik*. Philip Jones E. (d).
Bruckner: *Symphony No. 9*. Chicago SO, Solti (d).
Chopin: *Songs*. Söderström, Ashkenazy (d).
Dvořák: *Serenades*. London PO, Hogwood (d).
Dvořák: *Symphony No. 9*. Cleveland O, Dohnányi (d).
Gershwin: *An American in Paris; Cuban Overture; Rhapsody in Blue; Lullaby*. K. Labeque, M. Laubeque; Cleveland O, Chailly (d).
Grieg; Schumann: *Piano Concertos*. Bolet; Berlin RSO, Chailly (d).
Handel: *Messiah* (arias). Te Kanawa; Chicago SO, Solti (d).
Handel: *Rodelinda*. Sutherland, Ramey; Welsh National OpO, Bonynge (d).
Haydn: *Symphonies Nos. 95, 104*. London PO, Solti (d).
Haydn: *Symphonies Nos. 96, 101*. London PO, Solti (d).
Liszt: *Eine Faust-symphonie*. Jerusalem; Chicago SO&Ch, Solti (2, d).
Liszt: *Transcendental Etudes; Consolations*. Bolet (d).
Massenet: *Manon* (ballet). Royal OpO, Bonynge (d).
Mozart: *Die Entführung aus dem Serail*. Gruberova, Battle, Winbergh, Zendik, Talvela, Quadflieg; Vienna P&StOpCh, Solti (2, d).
Mozart: *Piano Concertos Nos. 8, 9*. Ashkenazy; Philharmonia O (d).
Mozart: *Piano Concertos Nos. 18, 20*. Ashkenazy; Philharmonia O (d).
Mozart: *Piano Concertos Nos. 24, 26*. De Larrocha; CO of Europe, Solti (d).
Mozart; Beethoven: *Quintets for Piano and Winds*. Lupu; Ensemble (d).
Mussorgsky; Rimsky-Korsakoff: *Orchestral Works*. Montreal SO, Dutoit (d).
Pekörper: *Piano Works*. Roge (d).
Prokofiev: *Symphony No. 5; Dreams, Op. 6*. Concertgebouw O, Ashkenazy (d).
Puccini: *Tosca*. Te Kanawa, Aragall, Nucci; National PO, Solti (2, d).
Rachmaninoff: *The Bells; Three Russian Songs*. Troitskaya, Karczynski, Krause; Concertgebouw O, Ashkenazy (d).
Rachmaninoff: *Piano Concerto No. 2*. **Addinsell:** *Warsaw Concerto*. Ortiz; Royal PO, Atzmon (d).
Rachmaninoff: *Piano Concerto No. 3*. Ashkenazy; Concertgebouw O, Haitink (d).
Rachmaninoff: *Works for Cello and Piano*. Harrell, Ashkenazy (d).
Rimsky-Korsakoff: *Orchestral Works*. Philharmonia O, Ashkenazy (d).

Rodrigo: *Concierto de Aranjuez; Fantasia para un gentilhombre*. Castelnueve-Tedesco; Concerto No. 1. Fernandez; English CO, Martinez (d).

Schubert: *Sonata in B flat; Wanderer Fantasy*. Ashkenazy (d).
Schumann: *Arabeske; Papillons; Symphonic Etudes*. Ashkenazy (d).
Schumann: *Carnaval; Fantasie*. Bolet (d).
Scriabin: *Piano Sonatas Nos. 1, 4, 6; Pieces, Op. 51*. Ashkenazy (d).

Shostakovich: *Cello Concerto No. 2*. **Bloch:** *Schemolo*. Harrell; Concertgebouw O, Haitink (d).
Shostakovich: *Piano Quintet; Seven Poems; Élégie; Polka*. Söderström, Ashkenazy, Fitzwilliam QR (d).

Strauss, R.: *Don Quixote; Dance of the Seven Veils (Salome)*. Harrell; Cleveland O, Ashkenazy (d).
Stravinsky: *Firebird; Fireworks; Scherzo fantastique*. Montreal SO, Dutoit (d).

Stravinsky: *L'Histoire du soldat; Renard*. London Sinfonietta, Chailly (d).
Stravinsky: *Rule of Spring; Four Norwegian Moods*. Cleveland O, Chailly (d).

Stravinsky: *Symphony No. 1; Scherzo fantastique*. Detroit SO, Dorati (d).
Tchaikovsky: *Orchestral Works*. Chicago SO, Solti (d).
Tchaikovsky: *Orchestral Works*. Montreal SO, Dutoit (d).

Tchaikovsky: *Piano Concerto No. 1*. **Dohnányi:** *Variations on a Nursery Tune*. Schiff; Chicago SO, Solti (d).
Verdi: *Ada*. Chiara, Pavarotti, Dimitrova, Nucci, Burchuladze; La Scala O&Ch, Maazel (3, d).
Villa-Lobos: *Etudes; Preludes*. **Ginastera:** *Sonata*. Fernandez (d).
Zemlinsky: *Die Seejungfrau; Psalm 13*. Berlin RSO, Chailly (d).

Baroque Horn Concertos. Tuckwell; St. Martin's Ac, Brown (d).
Jorge Bolet Encores: Works by Chopin, Debussy, De Schlözer, Godowski, Mendelssohn, and Moszkowski. Kyung Wha Chung, violin; Virtuoso Violin. Moll, piano (d).

Philip Jones Ensemble: Grand Marches (d).
Mostly Mozart, Vol. 5: Mozart, Handel, Bach (arr. Busoni). De Larrocha (d).

Joan Sutherland (Silver Jubilee recording): Arias by Bellini; Donizetti; Meyerbeer; Rossini; Verdi. Welsh National OpO, Bonynge (d).
Kiri Te Kanawa: Christmas Songs. English ChO, Davis (d).

London plans additional releases in its cassette-only "Opera Gala" series of extended-play compilations. Also, a new series, "Jubilee ADRM," will appear, featuring significant recordings from London's analog archive that have been digitally remastered for release at mid price.

OISEAU-LYRE

Bach: *Cantatas Nos. 80, 147*. Bach E, Rifkin (d).
Bach: *Cantatas Nos. 106, 131*. Bach E, Rifkin (d).

Beethoven: *Symphony No. 3*. Ac of Ancient Music, Hogwood (d).
Handel: *Athalia*. Sutherland, Kirkby, Roll-Johnson, Bowman, Thomas, A. Jones; Ac of Ancient Music, Hogwood (2, d).

Mozart: *Serenades*, K. 375, 388. Amadeus Winds (d).
Mozart: *Symphonies*, K. 16a, 45a, 167. Ac of Ancient Music, Hogwood (d).

Music from Holy Week. Schola Antiqua (d).
Rafael Puyana, harpsichord: Virtuoso Spanish Music (d).

ARGO

Handel: *Organ Concertos*, Op. 4. Hurford; Amsterdam ChO, Rifkin (d).

Hindemith: *Sonatas for Organ Nos. 1, 2, 3*. **Kreutzer:** *Toccata française*. **Distler:** *Vier Spielstücke*. Hurford (d).

Baroque Organ Works. Hurford (d).

Baroque Organ Works. Hurford (d).
Holy, Holy, Holy. Kings College Ch (Cambridge); Cleobury (d).
London Records, 810 Seventh Ave., New York, N.Y. 10019.

LYRINX (distributed by Audio Source)

Dvořák: Symphony No. 9, O des Jeunes de la Méditerranée; Tabachnik (a).
Vivaldi: Concertos for Flute (3); Sinfonia; Violin Concerto. Mation; E. Strumentale di Venezia (a).

MD + G (distributed by German News)

Burgmüller: Piano Sonata in F minor. **Schumann:** Piano Sonata in F sharp minor. Maruko (d).
Denisow: Sonatas for Flute and Guitar. Meisen, Evans (d).
Dupré: Organ Works. Schroeder (d).
Hummel; Beethoven: Sonatas. Ginzel, Richter (d).
Lachner; Rheinberger: Sonatas for Piano, Four Hands. Piano Duo Keilhack (d).

MOVE (distributed by Fifth Continent)

Cage: *Trio*; *Dreyfuss: Trio*; *Sebastian the Fox*. **Pistoni:** Three Pieces, Op. 1. **Sutherland:** *Trio*. **Weiss:** Petit suite. Concentus E (d).

MUSIC BROADCASTING SOCIETY OF NEW SOUTH WALES (distributed by Fifth Continent)

Boyd: Red Sun; Cloudy Mountain. **Banks:** Three Episodes for Flute and Piano. **Hanson, R.:** Sonata, Op. 10. **Plusht:** Chu No Mai. Flute Australia.
Chopin: Polonaises; Mazurkas; Nocturnes. Fenyo.
Crumb: Eleven Echoes of Autumn (Echoes I); Night Music. **Rechberg:** Contra mortem et tempus; Dialogues. University of N.S.W. E.
Josquin: Missa de Beata Virgine; other works. CCH of Sydney University.
Schubert: Piano Sonatas in F sharp minor, F major. Costantino.

MUSICAL HERITAGE SOCIETY

Albinoni: The Birth of Aurora. Anderson, Zimmerman, Klare, Browne, Yamaj; I Solisti Veneti, Scimone (2, d).
Beethoven: Quartets for Piano and Strings, WoO 36, No. 3; Op. 16. An die Musik (d).
Beethoven: Symphonies Nos. 1, 3, 4, 8. Chicago SO, Solti (3).
Bernstein: Songs for Voice and Piano (complete). Alexander, Crone (d).
Brahms: Symphonies (4); Tragö Overture; Academic Festival Overture. Chicago SO, Solti (4).
Bush: Works for Soloists, Chorus, and Orchestra. Robins, Bradley Griffiths, MacIntyre; Cardiff Polyphonic Ch&O, Jones (d).
Debussy: Preludes, Books 1, 2. Haimovsky (2, d).
Dvořák; Doppler: Works for Chamber Ensemble. O of St. Luke's (d).
Egert: Overtures. Scottish National O, Gibson.
Fauré: Nocturnes (13); Pièces breves, Op. 84. Crossley (2).
Franch: Prelude, Chorale, and Fugue; Prelude, Aria, and Finale. Hancock (d).
Handel: Fireworks Music; Water Music (suite); Amaryllis (suite). Royal PO, Menuhin (d).
Mozart: Così fan tutte (arr. for winds). Amadeus E. Aronowitz, Amadeus Qr.

Poulenc: Complete Music for Wind Instruments and Piano. Arner, Routch, De Peyer, Simenauer, Glickman, Robison, Wadsworth (2, d).

Proutier: Canticum Trum Puerorum; Five Motets. Various performers.

Puccini: *Messa di gloria*. Carreras, Prey; Ambrosian Singers, Philharmonia O, Scimone (d).

Rameau: Harpsichord Suites in A minor, E minor. Pincock.

Reichert: Wind Quintets, Op. 91, Nos. 1, 2. Ars Nova Wind Qn.

Saint-Saëns: Symphony No. 3. Rawsthorne; London PO, Bátiz (d).

Scarlatti, A.: Sinfonia di concerto grosso (12). I Musici (2, d).

Schubert: Sonata in B flat; Impromptus Nos. 2, 3; Allegretto. Goldsmith (d).

Scriabin: Piano Sonata No. 3. Rutstein.

Scriabin: Symphony No. 3. Concertgebouw O, Kondrashin.

Sibelius: Symphonies Nos. 1, 2; Finlandia; Romance. Gothenburg SO, Järvi (2, d).

Tchaikovsky: Piano Concerto No. 1. Argerich; Royal PO, Dutoit.

Telemann: Sonatas for Various Wind Instruments.

Kelber, Sous, Linde, K. Alfing, H. Alling, Stüttner, Tarr.

Thomson: Piano Works. Helin.

Art of the Bassoon: Works by Farago, Almenraeder, Schubler, Andriessen, and Van Praag. Grossman, Collier; Wind E.

The Buffalo Guitar Quartet Performs Music by Dowland, Bull, Bach, Mozart, and Brahms (d).

Carillon Music: Christmas Carols Arranged for Carillon. Myhre.

Christmas Collection. King's College Ch.

Concertus Musicus: Renaissance Christmas Music.

Courtly Trumpet Ensemble Music by Bibar, Diabelli, Kelver, and Speer. Bengt Eklund's Baroque E, Tarr. Douglas Fairbanks Narrates Animals, Fish, and Prehistoric Monsters Do the Strangest Things (2, cassette only).

Famous Adagios. Works by Barber, Grieg, Khachaturian, Mascagni, Rachmaninoff, Satie, and Schmidt. Monte Carlo PO, Foster (d).

Famous Waltzes by Weber, Ivanovici, Komzák, Josef Strauss, Lanner, Zehrer, Lehár, and Rosas. Vienna Volksoper O, Bauer-Theussl (2).

The Liltin Banshee: Traditional Arts and Dances for Celtic Harp. E. Monger, Billinge, McLeod, G. Monger (d).

Music Box Christmas (d).

Music of the Middle Ages. Songs of the Troubadours and Trouvères; Music of the Minnesingers and Bands-men. Members of the Walther von der Vogelweide CCh; Studio der Frühen Musik, Binkley (4).

Solid Brass. Music by Bach, Holst, Vaughan Williams, and others. Solid Brass (d).

Stabat Mater: Music from the Eton Choirbook. The Sixteen, Christophers.

The Trumpet Kings Meet Joe Turner.

To Drive the Cold Winter Away: A Fireside Presentation of Music for Merrymaking Down the Ages. St. George's Canzona, Sotheott.

MUSICMASTERS

Bousset: Mountain Songs. **Fisk (arr.):** Works for Flute and Guitar. Fisk, Robison (d).

Gershwin: Piano Music. Veri and Janamis.

Mozart: Le nozze di Figaro (arr. for winds). Amadeus E. (d).

Telemann: Esercizi musicali. Aulos E. (2, d).

Paul Whiteman at Aeolian Hall Reenactment. Peress, Hyman, Davis (2, d).

Musical Heritage Society, 1710 Hwy. 35, Ocean, N.J. 07712.

NEW ALBION RECORDS

Curran: Era Ora; For Cornelius. Oppens, Rzewski, Curran.

Subotnick: The Key to Songs; Return. California EAR Unit, Subotnick.

New Albion Records, 584 Castro St., No. 463, San Francisco, Calif. 94114.

NEW WORLD

Babbitt: Piano Concerto. American SO, Wuorinen (d).

Carter: Variations for Orchestra; Piano Concerto. Oppens; Cincinnati SO, Gielen (a).

Carter; Machover; Melby; Shepp: Works for Violin. Le Dizes-Richard (d).

Chadwick: Symphony No. 2. **Parkert:** A Northern Ballad. Albany SO, Hegyi (d).

Eldridge: The Nifty Cat. Johnson, Pierce, Jackson, Bryant (a, r).

Palmer: Symphony No. 2. New York P, Mehta (d).

Perle: Piano Works. Boriskin (d).

Rechberg: Oboe Concerto. **Druckman:** Prism. Robinson; New York P, Mehta (d).

Schuman: Symphony No. 7. **Ballads:** Steel Symphony. Pittsburgh SO, Maazel (d).

Sessions: Symphonies Nos. 4, 5; Rhapsody for Orchestra. Columbus S, Bader (d).

Stravinsky: Serenade in A; Sonata (1924). **Wolpe:** Passacaglia; Pastorale; Form II: Broken Sequences. **Lieberson:** Five Bagatelles. P. Serkin (d).

New World Records, 701 Seventh Ave., New York, N.Y. 10036.

NIGHTINGALE (distributed by Open Sky)

Gene Austin: The Voice of the '20s.

James Melton: Begin the Beguine.

Arthur Tracy: The Street Singer: Always in Song.

NONESUCH

Adams: The Chairman Dances—A Foxtrot for Orchestra; Common Tones in Simple Time; Two Fanfares. San Francisco SO, De Waart (d).

Albert: Into Eclipse; Flower of the Mountain*. Gordon; Smithsonian Chamber Players, Kendall, Shelton; Y Chamber O, Schwarz* (d).

Bach: Harpsichord Music. Gibbons (d).

Bach; Beethoven; Mozart: Piano Music. Horszowski (d).

Beethoven: Sonatas for Piano and Cello. Bylsma, Bilsborrow (fortepiano) (d).

Brahms: Late Piano Music, including Opp. 76, 116, 119. Goode (d).

Larson: Water Music 1984. **Paulus:** Three Movements for Orchestra. Minnesota O, Marriner (d).

Reich: Early Works—Piano Phase; Clapping Music; It's Gonna Rain; Come Out. Steve Reich and Musicians (d).

Reich: Sextet; Six Marimbas; New York Counterpoint. Steve Reich and Musicians (d).

Schwartort: Distant Runes and Incantations; A Suddenly Rainbow; Sparrows. Shelton, Oppens; St. Louis SO, Slatkin (d).

Well: Theater Songs. Stratas; Y Chamber O, Schwarz (2, d).

Angus Kirkby: The Consort of Musicke. Thomas, Rooley (d).

A Balanchine Album: Stravinsky: Agon. Hindemith: The Four Temperaments. Tchaikovsky: Serenade; Emeralds (arr. Fauré). New York City Ballet O, Irving (2, d).

Chopin Recital. R. Laredo (d).

A Renaissance Christmas. Boston Camerata, Cohen (d).

World Saxophone Quartet: Original compositions.

World Saxophone Quartet Plays Duke Ellington (d).

John Zorn: Music of Ennio Morricone.

Nonesuch, 75 Rockefeller Plaza, New York, N.Y. 10019.

NORTHEASTERN

Christmas Antiphones: Works by Schütz, Praetorius, Bax, Scheidt, Pinkham, John Oliver Chorale.
Dish Rag, Possum 'N' Tatters, Fluffy Ruffle, and Other Rags by Women: V. Eskin.
Roland Hayes: Spirituals; Art Songs (3, h).

Northeastern Records, P.O. Box 116, Boston, Mass. 02117.

OPEN SKY

See Nightingale.

Open Sky Records, Meher House, 10735 Vernon, Huntington Woods, Mich. 48070.

ORION MASTER RECORDINGS

Bach: Partitas Nos. 1, 5, 6. Mann-Polk.
DeMarst: Desert Songs. **Hackbart:** Metropolis. Arizona St New Music E.
Onslow: Sonatas for Piano, Four Hands. Chinn and Brings.
Prokofiev: Sonata No. 2 for Violin and Piano. **Tchaikovsky:** Four Pieces. Tscitlin, Briskin.
Schuller: Schwartz! Piano Quartets. Atlanta Virtuosi.
Schumann: Fantasy. **Haydn:** Sonata in C. **Beethoven:** Sonata in E minor, Op. 90. Briskin.
Stanchinsky: Five Pieces. **Mendtner:** Sonata reminiscenza. **Rachmaninoff:** Piano Sonata No. 1. Feafanov.
Szymanowski: Piano Works. Barroll.
Tcherepnin: Sonatina in F minor for Timpani and Piano. **Beethoven:** Variations on a National Song.
Bartók: Hungarian Peasant Songs; Other Works by Chopin, Fauré, and Poulenc. Howat.
Torkanowsky: Piano Quartet. **Husar:** Variations. New England Piano Qt.

Cassettes Releases

Brahms: Trio in A; Sonata in D, Op. 78 (arr. for cello and piano). Beebe, D. Lewis, C. Lewis.
Flute and Guitar Works: Greenberg, Bogdanovich.
Orion Master Recordings, Inc., 5840 Busch Dr., Malibu, Calif. 90265.

OWL RECORDING

Direct Metal Mastered Releases

Adam: Forest Without Leaves. Arctic CO&Gh (d).
Bergert: Trio. **Wheeler:** Fantasy Dances. **Davidson:** March Detours; Furies of Complexity. Dinosaur Annex Musical E (a).

Real-Time Duplicated Cassette Release

Computer Music from the Stanford University Center for Computer Research in Music and Acoustics: Works by Jaffe, Chase, and Schottstaedt (d).

Owl Recording, Inc., P.O. Box 4536, Boulder, Colo. 80306.

PHILIPS

Bach: Six Partitas. Steuerman (2, d).
Beethoven: Diabelli Variations. Arrau (d).
Beethoven: Piano Concerto No. 4; 32 Variations, WoO 80. Arrau; Dresden StO, Davis (d).
Beethoven: Symphony No. 6; *Consecration of the House* Overture. St. Martin's Ac, Marriner (d).
Chabrier: Dukas; Saint-Saëns; Glazeborn: Horn Concertos. Baumann; Gewandhaus O, Masur (d).
Gluck: Iphigénie en Tauride. Montague, Aler, Allen, Massis; Monteverdi Ch, Lyon Op O, Gardiner (2, d).
Haydn: Nelson Mass. Hendricks, Lipovsek, Araiza, Meven; Bavarian RSO, Davis (d).

Lutoslawski: Cello Concerto; Concerto for Oboe and Harp. Schiff, U. Holliger, H. Holliger; Bavarian RSO, Lutoslawski (d).

Lutoslawski: Symphony No. 3; *Les Espaces de sommeil*. Fischer-Dieskau; Berlin PO, Lutoslawski (d).

Mozart: Symphonies Nos. 31, 35. O of 18th Century, Bruggen (d).

Schubert: Winterreise. Fischer-Dieskau, Brendel (2, d).

Sopher: Die letzten Dinge. Shirai, Lipovsek, Prochka, Holle; Sudfunk Ch, Stuttgart RSO, Kühn (d).

Strauss, R.: Lieder. Norman, Parsons (d).
Wagner: Wesendonk Lieder. **Borillo:** Les Nuits d'été. Baltsa; London SO, Tate (d).

Bernstein by Boston. Boston Pops, Williams (d). Philips Records, 810 Seventh Ave., New York, N.Y. 10019.

PHONIC

(distributed by Audio Source)

Rameau: Works for Harpsichord. Cogen (a).

PREMIER RECORDS

(distributed by Fonodisc International)

Arlon: Americano Suite; Songs from Stage and Screen. Kaye, Howard (d).

Berlitz: The Music Box Revues. Soloists and O of the Premier Theater (d).

Gershwin: Patter Songs (d).

Herbert: Babes in Toyland (complete). Soloists, Ch&O of the Eastman School of Music (2, d).

Lane: Lerner's Huckleberry Finn. Eight songs from unmade film production. **Wellis:** **Anderson:** "Raft on the River" (five songs from unfinished stage play). Soloists, chorus, and instrumental ensemble (d).

Classical Music by Hollywood Composers (d).

Rags and Other Riches. New York Jazz E (d).

Really Romberg: Unusual Theater and Popular Songs by Sigmund Romberg. Soloists; O of the Premiere Theater E (d).

Symphonic Jazz: Works by American Composers. Soloists; New York Jazz E (d).

Symphonic Sousa (d).

Maryanne Telese, soprano: Let My Song Fill Your Heart: A Remembrance of the American Concert Song. Howard (d).

The Paul Whiteman Aeolian Hall Concert: A Re-creation. Soloists; New York Jazz E (2, d).

PRO ARTE

(distributed by Intersound)

Bach: Goldberg Variations; Italian Concerto. P. Serkin (2, d).

Beethoven: Piano Concertos Nos. 3, 4. Sherman; Czech PO, Neumann (d).

Beethoven: Piano Concerto No. 5. Sherman; Czech PO, Neumann (d).

Beethoven: Piano Sonata No. 29 (Hammerklavier). P. Serkin (on modern piano); d.

Brahms: Piano Concerto No. 1. P. Serkin; Atlanta SO, Shaw (d).

Brahms: Piano Concerto No. 2. P. Serkin; Atlanta SO, Shaw (d).

Brahms: Violin Concerto; Academic Festival Overture. Silverstein; Utah S (d).

Chopin: Nocturnes; Ballades; Fantasies (selections on modern piano). P. Serkin (d).

Dvořák: Overtures. Houston SO, Comissiona (d).

Dvořák: Slavonic Dances, Opp. 46, 72 (complete). Houston SO, Comissiona (d).

Dvořák: Violin Concerto; Serenade for Strings; Serenade for Wind Instruments. Utah SO, Silverstein (d).

Ellington: Works. **Gershwin:** Overture to *Girl Crazy*. Rochester PO, Kunzel (d).

Gershwin: An American in Paris. **Copland:** Our Town (suite). **Bernstein:** On the Town (excerpts).

Ives: Central Park in the Dark. Utah SO, Silverstein (d).

Gershwin: Concerto in F (arr. Grofé); Three Preludes. Sherman; O of St. Luke's, Schuller (d).

Grieg: String Quartet. **Gershwin:** Lullabye. **Puccini:** Chrysanthemum. Phil Arte Qr (d).

Liszt: Sonata in B minor; Don Giovanni Fantasy. Sherman (d).

Mozart: Clarinet Quintet. **Weber:** Introduction, Theme and Variations. Gigliotti, Phil Arte Qn (d).

Mozart: Eine kleine Nachtmusik. **Haydn:** Serenade. Schubert: Quartet in E flat. Cleveland Qr (d).

Mozart: Sonatas, K. 570, 576; Rondos. P. Serkin (d).

Mozart: Violin Concerto No. 5; Piano Concerto No. 19; Rondo in A. P. Serkin, Silverstein; Rochester PO, Silverstein (d).

Schumann: Symphonies (4). Houston SO, Comissiona (d).

Tchaikovsky: String Quartets (complete). Cleveland Qr (2, d).

Tchaikovsky: Violin Concerto; Serenade for Strings; Andante Cantabile. Utah SO, Silverstein (d).

Tchaikovsky: Waltzes. Houston SO, Comissiona (d).

Vivaldi: Bassoon Concertos (4). Miller; St. Mary's C Players, Marriner (d).

Christmas Favorites on the Paramount Theater Organ (d). Marches on the Paramount Theater Organ (d).

Music from Great Films on the Paramount Theater Organ (d).

The Music of Richard Rogers: Lagoon, All Points West, Ghost Town, and selections from Carousel, Oklahoma, and The Sound of Music. Rochester PO, Kunzel (d).

Orchestral Marches. Houston S, Comissiona (d).

Sabre Dance: Orchestral Dances by Brahms, Grieg, and others. Houston SO, Comissiona (d).

Syncopated Clock and Other Favorites by Leroy Anderson. Rochester Pops, Kunzel (d).

Violin Encores. Silverstein (d).

PROTONE

Cassette Releases

Martinu: Violin Concerto No. 2. **Piston:** Violin Concerto No. 1*. Kaufman; French National O, Bigot. London SO, Herrmann* (a, h).

Toch: Sonata No. 2; Quintet, Op. 64. Toch, Kaufman Qr (a, h).

Double Exposure—Saxophone. Woods, V. Moroso, Rocciano, V. Moroso (a).

Music for Flute and Piano by Copland, Piston, Dello Joio, and Muczinski. Padorr, Swearingen (a).

Protone Records, 970 Bel Air Rd., Los Angeles, Calif. 90077.

QUALITON IMPORTS

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Grieg: Concerto in A minor. **Rachmaninoff:** Rhapsody on a Theme of Paganini*. Rubinstein; RCA SO, Chicago SO*, Wallenstein, Reiner* (r).

Mussorgsky: Works. London SO, Abbado (r).

Tchaikovsky: Capriccio Italien. Dallas SO, Mata (r).

Tchaikovsky: Sleeping Beauty. Philadelphia O, Oramandy (r).

Vaughn Williams: *Pastoral Symphony*. London SO, Previn (r).

Wieniawski: *Concerto in D minor*. **Lalo:** *Symphonie espagnole*. Heifetz; RCA S, Solomon, Steinberg (r).

RCA RED SEAL.

Beethoven: *Piano Concertos (5)*. Ax; Royal PO, Previn.

Beethoven: *Sonatas in F minor, Op. 57; in E flat, Op. 31, No. 3*. Edelmann.

Brahms: *Piano Works*. Rubinstein (2, r).

Brahms: *Serenade No. 1*. St. Louis SO, Slatkin (d).

Chopin: *Piano Works*. Rubinstein (3, r).

Chopin: *Sonata in B minor; Polonaise-fantaisie; Mazurkas*. Edelmann.

Corigliano: *Pied Piper Fantasy*. Galway, Eastman Philharmonia, Effron.

Dvorák: *String Quartet, Op. 51*. **Kodály:** *String Quartet, Op. 10*. Guarneri Qr.

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Schumann: *Liederkreis; other songs*. Hagegård, Schubach.

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Stravinsky (arr. Tomita): *The Rite of Spring*. Tomita.

Enrico Caruso: The Complete Caruso, Vols. 1, 2, 3 (b, m). James Galway: *Christmas Album*.

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Mompou: *Complete Piano Works*. Huybreghs.

Servais, A.F.: *Souvenir de Spa*. **Servais, J.:** *Quartet*. Adrien François Servais E.

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Berwald: *Septet in B*; *Piano Quintet in C minor*. Consortium Classicum (d).

Khachaturian: *Gretchaninoff:* *Cello Concertos*. Thomas; Bamberg S. Thomas (d).

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SUMMER SOUNDTRACK SPECIAL

BY NDAH ANDRÉ TRUDEAU

BARRY:
Out of Africa.

Studio ensemble, Barry. John Barry, prod.
MCA MCAD 6158 (D).

THERE ALWAYS HAS BEEN A MINIMAL SIDE TO John Barry: His ability to squeeze the maximum number of minutes out of a minimum of musical ideas has long been unequaled. Until recently, Barry's saving grace was a quirky ear for timbre and an unerring sense of when to spotlight that slightly off-center instrument in the texture. (The harpsichord in *Thunderball* and the timpani in *Zulu* come quickly to mind.) But the last few exercises of his pen have devolved to a succession of tried-and-by-now tired gestures. *Out of Africa*, alas, is no exception to the trend. Those same overlapping, repeated phrases are here, as is that high solitary melody over slowly undulating unison bass figurations. A brief spark of the old Barry can be heard in the cue titled "Karen's Journey/St. Yawé," where a dissonant undercoating adds bite to a sequence punctuated by ominously insistent drums. The rest of the original sections of the score fall back upon that patented m.o.r. Not one of Barry's best and certainly not Oscar caliber. And considering that this Compact Disc runs a modest 33:31, why couldn't MCA have played out the slow movement of Mozart's Clarinet Concerto in full, instead of fading it after two minutes and forty-nine seconds?

JONES:
The Color Purple.

Studio ensemble, Jones. Quincy Jones, prod.
QWest 25389-1 (D, 2). (2).

THIS HANDSOMELY PRODUCED AND PACKAGED two-record set of music from *The Color Purple* proves to be too much of a good thing. For what was obviously an artistic love feast, soundtrack veteran Quincy Jones put together an all-star studio orchestra to record this pleasant mix of blues, jazz, spirituals, rags, and African music. Just about everything one would anticipate is here. But four sides of it (even if the vinyl is colored purple) reveals how little variety really is present and even brings to mind cynical thoughts about



"THE COLOR PURPLE" COMPOSER QUINCY JONES: IT HAS ALL THE RIGHT INGREDIENTS, BUT THIS LOVE FEAST IS OVERDONE.

how calculating all this oh-so-sweet sentiment is. Unfortunately, Jones has taken literally Steven Spielberg's commandment: Give the audience exactly what it expects.

JARRE:
Enemy Mine.

Munich Studio Orchestra, Jarre. Maurice Jarre, prod. Varèse Sarabande STV 81271 (A). VCD 472.

ARE YOU FAMILIAR WITH THE TELEVISION commercial in which peanut butter collides with chocolate to form something new and better? This score is a lot like that... only for peanut butter, substitute a dill pickle. In *Witness*, Maurice Jarre created a highly evocative electronic score, revealing a new expressive dimension to his talent. But in *Passage to India* he showed how thoroughly banal his conventional orchestral writing has become. Now, in *Enemy Mine*, he presumes to mix some marvelously effective electronic sounds with the kind of cliché-ridden instrumental cues he seems to compose with his ears closed. Twenty years ago, in films such as *The Train* and *Is Paris Burning?*, Jarre's perky Gallic style was fresh and enjoyable. The amount of change in that style over the years has been imperceptible, and the lack of change excruciating. A disappointment.

GOLDSMITH:
The Blue Max.

Studio ensemble, Goldsmith. Jerry Goldsmith, reissue prod. Varèse Sarabande VCD 47238 (A).

GOLDSMITH:
Planet of the Apes.

Studio ensemble, Goldsmith. Arthur P. Jacobs Productions, prod. Project 3 PRD 5023 (A).

GOLDSMITH:
Runaway.

Jerry Goldsmith, prod. Varèse Sarabande VCD 47221 (D). STV 81234. CTV 81234.

YES, VIRGINIA, THERE SOMETIMES IS JUSTICE IN the world! A trio of recent CDs pay homage to the film music mastery of Jerry Goldsmith, representing scores that span a 20-year period. For the 20th Century Fox film of 1966, *The Blue Max*, Goldsmith called upon a full symphony orchestra to create a soundtrack that wisely eschewed Straussian opulence in favor of a more transparent and sharp-edged American style, one given to occasional bursts of Respighi-like brilliance. The two prior LP releases of this score were founded on the composer's quarter-inch, two-track reference tape. For this newest incarnation of the music, audio man Len Engel was able to use the original multitrack masters, and in the process, he restored some hitherto unreleased cuts, combined the powerful Dies Irae-based passacaglia (previously presented as two separate cuts) into a single potent movement, and matched all the cues to Goldsmith's original titles. The result is an outstanding achievement, not to be missed.

Something of Goldsmith's virtuosic flexibility is revealed in his work on Fox's 1968 film, *Planet of the Apes*. Here his palette is reduced to the bare essentials. The score is a stunning triumph of texture and expressiveness. Conventional instruments are called upon for unconventional sounds. The French hornist, for instance, is instructed to play without mouthpiece for one section, and in another, the bass clarinetist just clicks the keys. There are no electronics in the

piece. With a total time of 25:43, this CD isn't cheap, but the anonymous producers have effectively eliminated the bothersome hiss of the long-out-of-print LP and allowed this powerful score to speak for itself. A major reissue. Find it. Buy it.

Curiously, the only purely electronic score of the three under consideration is also the most overtly romantic and conventional-sounding. Tri-Star's 1985 *Runaway* used a futuristic world of robotics gone bad to spin a rather old-fashioned yarn. Goldsmith's 100-percent-synthesized score constantly reaches for old-fashioned effects and the result is neither/nor: effective neither as an electronic work nor as a traditional one. A clear miss, but when the miser is someone like Goldsmith, the results are still worth a listen.

SHIRE:
Return To Oz.

London Symphony Orchestra, Shire. David Shire, prod. Sonic Atmospheres 113 (D).

THIS IS AN AMBITIOUSLY ORCHESTRATED symphonic score that is surprisingly melancholic in mood. David Shire handles an orchestra of Mahlerian size with plenty of dexterity and a remarkable amount of moderation. He shuns any sweeping Romantic gestures and concentrates instead on each individual moment of the score, creating music of a sophistication and depth rarely encountered in the "hear it once and forget it" world of film soundtracks. A solid addition to Shire's small but impressive discography. Performances, pressing, and recorded sound are uniformly excellent. Don't let this one get away.

TANGERINE DREAM:
Legend.

Tangerine Dream. (With songs by Jon Anderson and Bryan Ferry.) Tangerine Dream, prods. MCA 6165 (D). ☎

GOLDSMITH:

Legend.

Studio ensemble, Goldsmith. Jerry Goldsmith, prod. Moment 100 (D). (Distributed by International Book & Record Distributors, 40-11 24th St., Long Island City, N.Y. 11101.)

MOVIEGOERS WHO CATCH RIDLEY SCOTT'S *Legend* overseas after they have seen it here may justifiably wonder if they haven't seen two different films. The fact is, they have. *Legend*, as released in this country, sports a score largely by the German techno-pop group Tangerine Dream (Yes's Jon Anderson and Roxy Music's Bryan Ferry also contribute songs) and runs 95 minutes. The version screened beyond these shores is 140 minutes long, with music by Jerry Goldsmith. The reason for the two *Legends* lies with the teen-market mentality of Universal City Studios, which obviously wanted a more commercial product than was delivered from abroad.

Goldsmith's *Legend* is a superb evocation of a story he describes as "a fairy tale in an enchanted forest, with fairies and goblins

and unicorns . . . and good and bad." His music springs from a single vision of the fantasy, and with characteristic economy of effect, he creates an unforgettable score that occasionally approaches the ecstatic heights of Ravel's *Daphnis et Chloé*. Though the title songs for Tangerine Dream's soundtrack are strongly commercial efforts, the bulk of the album is a disconcertingly disconnected series of cues. Judged against Tangerine Dream's past work, *Legend* has a hasty, imitative quality that does not represent the group at its best.

I realize that they call it show business and not show art, but this is one business decision that resulted in a clearly inferior product. That's where the process failed.

MANSFIELD:
Year of the Dragon.

Studio ensemble, Mansfield. Varèse Sarabande STV 81266 (A). ☎

DAVID MANSFIELD IS ONE OF THE NEW NAMES filling soundtrack lists today. He has provided an interesting film score for Michael Cimino's Chinatown version of *The Godfather*. Drawn smoothly from the common currency of film tracks, the score, though not very innovative, does ring true in the atmosphere of its setting. The scope is at times symphonic, at times pop-oriented. Spiced at moments with the poignancy of a Ennio Morricone melody, at others with the ominous electronics of a John Carpenter work, *Year of the Dragon* offers a worthy low-key, offbeat addition to the urban-cop genre. Sound and pressing are excellent.

HORNER:
Cocoon.

Studio ensemble, Horner. James Horner, prod. Polydor 827 041-2 (D). ☎

THE TRICK WITH A JAMES HORNER soundtrack is to guess what composers he was listening to before he sat down to write the score. Here the list includes Bernard Herrmann (especially the terraced crescendos in *Journey to the Center of the Earth*), John Williams (*E.T.*), and James Horner (*Star Trek II* and *III*). Once again, Horner has boldly gone where everyone else has gone before. Polydor's digital sound is crisp and clear.

GOLDSMITH:
The Secret of NIMH.

National Philharmonic Orchestra, Ambrosian Singers, Goldsmith. Jerry Goldsmith, prod. Varèse Sarabande VCD 47231 (A). ☎ STV 81169.

THIS FANTASY FILM CAME AND WENT WITHOUT a lot of fanfare. Fortunately, the music is with us still, thanks to the ever vigilant Varèse Sarabande. *NIMH* (based on Robert C. O'Brien's *Mrs. Frisby and the Rats of NIMH*) is Jerry Goldsmith's first score for a wholly animated film. His response to this intricate creation by a cadre of ex-Disney illustrators was to create a conventional symphonic piece that, although very modern-sounding, has an old-fashioned feeling to it. Portions echo Goldsmith's *Star Trek*, while a cue titled

"Escape from NIMH/In Disguise" could be updating Prokofiev's *Peter and the Wolf*. Fine performances by the National Philharmonic and Ambrosian Singers, equally fine transfers of analog originals to digital.

GOLDSMITH:
Rambo: First Blood, Part 2.

National Philharmonic Orchestra, Goldsmith. Jerry Goldsmith and Bruce Botnick, prods. Varèse Sarabande VCD 47234 (D). ☎ STV 81246. ☎ CTV 81246.

THIS FILM MUSIC BY JERRY GOLDSMITH WAS custom designed for CD. Its fascinating character is created from an adroit mix of conventional symphonic scoring, a wide range of electronics, and sounds squeezed out of the instruments and the electronics. Guided by an uncanny ear for timbre and color, Goldsmith masterfully layers these elements into a most distinctive soundtrack. I don't know how much of its subtleness can be heard on multiplex cinema sound systems. I do know that it's all here on this superbly transparent CD, graced by typically bravura performances from the National Philharmonic.

CARPENTER:
Halloween.

Carpenter. John Carpenter, prod. Varèse Sarabande VCD 47230 (A). ☎ STV 81176. ☎ CTV 81176.

SELDOM IN THE HISTORY OF FILM SCORING have so many films (*Halloween*, *Halloween II*, *Halloween III*) depended so much on so little music. Composer/director John Carpenter plugged his "minimalistic, rhythm-inspired score" into *Halloween* out of desperation. The result was an eerie, highly original soundtrack that eschewed the clomping monster chords perfected by Universal Studios in the '50s in favor of an incessant, mindlessly simplistic music that really did the job. It still sends chills up and down my spine, and I can't imagine anyone listening to it for pleasure—unless you have a fondness for wearing hockey masks.

CARPENTER:
Escape from New York.

Carpenter, Howarth, John Carpenter and Alan Howarth, prods. Varèse Sarabande VCD 47224 (A). ☎ STV 81134. ☎ CTV 81134.

THIS GENERALLY UNDERRATED ACTION adventure film set in an improbable future benefited in no little measure from a surprisingly imaginative score by its director and screenplay coauthor, John Carpenter. Using very simple motivic elements in often repetitive patterns, Carpenter (assisted by Alan Howarth) created an engaging electronic romp that rambles easily from Debussy to the blues. An attempt at vaudeville satire in the song "Everyone's Coming to New York" is the only miscalculation. Some tape hiss is audible, but generally the digital transfer of the original analog material is well done. A bit off the beaten track, perhaps, but worth seeking.



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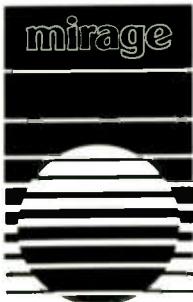
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IF YOU ARE LOOKING FOR MASSIVE ORGAN sound, you surely will find it here. The new Ruffatti instrument in San Francisco's Davies Hall makes a highly impressive sound, which has been vividly captured on this recording. But if you are looking for an idiomatic performance of the Saint-Saëns Symphony No. 3, in C minor (*Organ*), you will have to look elsewhere. Soloist Jean Guillou's interpretation is unimaginative, and the orchestral playing by the San Francisco Symphony under Edo de Waart is prosaic, often overwhelmed by the huge organ. The ten-minute Allegro from Widor's Organ Symphony No. 6, in G minor, is not a particularly attractive bonus. Even with it, the total playing time of this CD is minimal. Probably the finest CD to date of the Saint-Saëns *Organ Symphony* is Vanguard's with Sergiu Comissiona and the Baltimore Symphony. But I recommend that you wait until RCA releases the Charles Munch/Boston Symphony version, a near definitive performance magnificently recorded, soon to be issued on the label's 60-minute-plus CD series. Playing time: 44:39. (Philips 412 619-2.) R.E.B.



ELGAR CELLO CONCERTO, "SEA PICTURES"

THESE ARE EXTRAORDINARY PERFORMANCES by any standard. Jacqueline Du Pré's rendition of Elgar's Cello Concerto in E minor, Op. 85, is as close to definitive as one can get, while Janet Baker's singing of the *Sea Pictures* cycle is far superior to Yvonne Minton's later account for CBS. Sir John Barbirolli, a master of Elgar's music, directs the London Symphony Orchestra with an authority that speaks of total identification with the scores. These performances were originally recorded in 1965 but issued with different couplings on LP.

The sonics of the CD are all one could ask for, with depth, warmth, clarity, and a natural quality lacking on the majority of present-day digital recordings. This CD is coded AAD—that is, the original analog recording has not been digitally remastered, positive proof that such remastering is not a prerequisite for fine sound. Let us hope that EMI will issue other similar treasures from

its vast library. Texts are provided for *Sea Pictures*. Playing time: 53:38. (Angel EMI CDC 47329.) R.E.B.

BARTÓK, JANÁČEK, MOZART ENSEMBLE WORKS

THE ORPHEUS CHAMBER ORCHESTRA, a 26-member ensemble dedicated to expounding the virtues of performing without a conductor, strains the leaderless ethic to its limits in two recent recordings. The Bartók *Divertimento* presents a special challenge: Even with a conductor, its numerous tempo fluctuations, dynamic juxtapositions, and stylistic idiosyncrasies can pose problems. Here, Orpheus's reading is remarkable in every respect, conveying the rhapsodic variations of tempo and mood so essential to the music. In Bartók's *Romanian Folk Dances*, the ensemble's playing is witty and idiomatic, delightfully seasoned with the requisite rubatos. Janáček's *Mládí*, for wind sextet, is real chamber music and is performed with a delicacy and finesse not possible in the larger ensemble pieces. Playing time: 47:40. (Deutsche Grammophon 415 668-2.) R.E.B.

Mozart's Divertimentos No. 11, in D, K. 251, and No. 14, in B flat, K. 270, and the *Serenata Notturna* in D, K. 239, find him at his least substantial, but one would hardly guess that from Orpheus's probing performances. Throughout, the playing is exceptionally crisp, graced with airy, lightly articulated passagework. One suspects that Orpheus has learned something from Christopher Hogwood's approach to Mozart, so sharp are the players' articulations and so bracing their interpretations. Yet the lovely tempo hesitations and dynamic inflections are all their own, marks of real personality that are no small achievement in a conductorless ensemble. Playing time: 45:25. (Deutsche Grammophon 415 669-2.) K.R.S.

MOZART, HAYDN CONCERTOS: CHICAGO SYMPHONY, ABBADO

THIS CD IS A SHOWCASE FOR HORNIST DALE Clevenger, oboist Ray Still, bassoonist Willard Elliot, and trumpeter Adolph Herseth, four first-desk players of the Chicago Symphony Orchestra and each a brilliant soloist in his own right. Each plays his own cadenzas except for Still, who has incorporated into

his performance of Mozart's Oboe Concerto in C, K. 314, cadenzas written by his son, Thomas. Sonically this is one of the most successful of Deutsche Grammophon's recordings in Chicago. The generous playing time is an added bonus. Program annotation is minimal, and no information is given on any of the soloists, but each has held his CSO position at least two decades, Herseth dating back to 1948. (Additional selections: Mozart's Horn Concerto No. 3, in E flat, K. 447, and Bassoon Concerto in B flat, K. 191; Haydn's Trumpet Concerto in E flat.) Playing time: 69:06. (Deutsche Grammophon 415 104-2.) R.E.B.

BEETHOVEN SYMPHONIES: ANCIENT MUSIC, HOGWOOD

THIS PAIRING OF SYMPHONIES NOS. 1 AND 2 IS the beginning of a projected cycle of Beethoven symphonies performed on authentic instruments. Christopher Hogwood's Haydn-esque treatment of these works is vital, fast-paced, dynamic, and highly impressive, and his small instrumental ensemble plays with stunning precision, making it possible to hear detail often missing when these works are played by larger forces. Although it is difficult to imagine that the large-scale Beethoven symphonies will be as impressive in this "authentic" approach, it works for these two—if you don't mind your Beethoven on the fast side—and the recording is superb technically. Playing time: 59:21. (Oiseau-Lyre 414 338-2.) R.E.B.

SHCHEDRIN "CARMEN" BALLET: L.A. CHAMBER, SCHWARZ

MOST LISTENERS SEEM TO HAVE A LOVE-HATE relationship with the *Carmen* Ballet. I happen to be among those who don't: I love the piece outright. Written in 1968 by the then young Russian composer Rodion Shchedrin for his wife, Maya Plisetskaya, ballerina assoluta of the Bolshoi Ballet, the work created a sensation at its premiere. Scored solely for strings and a large assortment of percussion (including woodblocks, gongs, cowbells, bongos, temple blocks, and marimba), it is a vividly imaginative treatment of Bizet's familiar tunes.

Melodiya's world-premiere recording, with Gennady Rozhdestvensky and the Bol-

sho Theater Orchestra (originally issued on Angel and now available on *Odyssey* Y 34613, a budget LP), remains the definitive performance. Gerard Schwarz's Los Angeles Chamber Orchestra does not quite match the flair of the Bolshoi group and sounds small in comparison; Angel's 1981 digital recording, while exceptionally clear, is overly dry and surely not a bargain in playing time for a single CD. If you must have the *Carmen* Ballet on CD, you have no choice, but if you want to hear it at its best, seek out the *Odyssey* LP. Playing time: 42:16. (Angel EMI CDC 47198.)

R.E.B.

TCHAIKOVSKY FIFTH: CHICAGO SYMPHONY, ABBADO

ON AN EXCEPTIONALLY WELL-RECORDED CBS Masterworks single CD, Claudio Abbado and the Chicago Symphony Orchestra offer a performance of the Tchaikovsky Fifth Symphony that immediately goes to the top of the list. This surging, grippingly tensile rendition doesn't pull any tricks, but it pulls no punches either. Frankly, I find it completely impossible to criticize, except to say that in every measure it satisfies and exhilarates the ear and heart. This disc has an added bonus in its filler: the late tone-poem *The Voyevode*. For sheer far-out imagery, this spooky little work takes second place to none in the Tchaikovsky canon; the thematic material isn't much, but the composer's uncanny handling of it (including some audacious touches in the orchestration) is masterful. Again, Abbado and the CSO give a superlative performance—superseding by far any previous recording. Playing time: 56:19. (CBS Masterworks MK 42094.)

B.Z.

STRAUSS SONGS, OPERA EXCERPTS

FAMILIAR AND UNFAMILIAR MUSIC BY RICHARD Strauss is featured on this CBS Masterworks CD showcasing soprano Eva Marton, with the Toronto Symphony Orchestra led by Andrew Davis. In the former category, we have "The Dance of the Seven Veils" and the Final Scene from *Salomé*, the *Four Last Songs*, and the ubiquitous early song, *Zuegnung*. Davis does his best work in the *Salomé* excerpts, which are well paced and especially commendable for the transparency of the orchestral fabric. Marton's full-out singing of the *Salomé* finale hardly evokes that nasty-little-girl timbre Strauss requested (usually in vain), but on her own customary merits she delivers the goods excitingly. Her aggressive interpretation of the *Four Last Songs*, however, doesn't work with this autumnal music (neither does her sometimes excessive vibrato), and Davis's abrupt, blunted conducting here complements the singing all too well.

Things work out better in the suite that Clemens Krauss arranged from Strauss's penultimate opera, *Die Liebe der Danae*—a masterpiece that should be far better known than it is. A lovely potpourri, the suite should whet any listener's appetite, even

though it does not contain the finest music from the opera. But the chief interest of the disc may well be that it contains the world-premiere recording of *Mallow* (*Mallows*), that "last rose" Strauss dedicated to his favorite soprano, Maria Jeritza. This is a lovely song in a pensive mood, and although the text seems more perfumed than the music, the Straussian trademarks are there. Like *Zuegnung*, which precedes it on the disc, *Mallow* is performed with the piano accompaniment provided by Davis. In both, Marton's rather generalized performances are adequate, but little more.

All selections on this recording were taped at a concert in Toronto's Roy Thompson Hall; though the CD has admirable clarity throughout, the basic sound seems prevailingly shallow, glassy, and lacking depth of perspective. One can only hope that this isn't a completely accurate reflection of the Thompson Hall's reportedly good acoustics. Playing time: 60:22. (CBS Masterworks MK 42019.)

B.Z.

CHRISTOPHER PARKENING: BACH AND CONTEMPORARIES

THIS ANGEL COMPILATION REPACKAGES THE label's best-selling *Parkening Plays Bach* (1971) with six tracks from *Parkening and the Guitar* (1976) that offer a variety of guitar-arranged pieces by Bach's contemporaries, among them Handel, Scarlatti, and Couperin. Parkening's lucid versions of three preludes from *The Well-tempered Clavier* and the Gavotte from the Partita No. 3, in E major, have aged well, as have his readings of Robert de Visée's roguish *Giga* and Sylvius Weiss's Passacaglia. But the sound quality has not: Tape hiss, noticeable even at a moderate volume level, dates these analog recordings, digitally mixed and transferred to CD. Playing time: 55:36. (Angel CDC 47191.)

C.M.

SCRIBABIN FIRST SYMPHONY: PHILADELPHIA, MUTI

THIS IS A WELCOME ADDITION TO THE CD library, although it cannot be greeted without reservation. Scriabin's mystic, six-movement Symphony No. 1, ending with two soloists and a chorus singing in praise of art as the salvation of mankind, is colorfully orchestrated. While not as intense as much of Scriabin's later music, the score could not have been written by anyone else. It is filled with moments of shimmering, exotic beauty and magical effect.

The performance by Riccardo Muti and the Philadelphia Orchestra is impeccable, but I find the sonic quality of the recording disappointing. EMI's engineers have yet to find an ideal site for recording this orchestra, and while the sound here is mostly well defined, the bass is tubby and indistinct. It is the same sonic perspective heard on the conductor's recent Respighi trilogy, only not quite as brash. I hope that if Muti and the Philadelphians record the remainder of Scriabin's orchestral works, as was the origi-

nal plan, the sonic problems will have been solved so that we have a more natural, representative sound. Playing time: 50:39. (Angel EMI CDC 47349.)

R.E.B.

DVORÁK EIGHTH SYMPHONY: CLEVELAND, DOHNÁNYI

IT IS APPARENT FROM THE PERFECTLY PACED beginning of this performance of Dvorák's Symphony No. 8 by the Cleveland Orchestra and Christoph von Dohnányi that everything is going to be more than all right. In fact, it is hard to imagine a more straightforward, rousing, rollicking rendition of this non-neurotic, extroverted music. Though to my mind the Eighth is not as great as the Seventh or the Ninth, as heard here it will give great enjoyment and maybe even a moment's pause over its relative placement in the hierarchy of Dvorák's works.

The playing and sound are a pure joy. Though I have not yet heard the highly reputed Václav Neumann version on a Supraphon CD, I cannot think of a stronger case being made for this delightful music. Ditto for the accompanying *Sehrze Capriccioso*. Confirmed Dvorákians and newcomers, as well as audio fanatics, will be very happy with this release. Playing time: 49:06. (London 414 422-2.)

R.R.R.

KHACHATURIAN "GAYANE," "SPARTACUS" SUITES

CONSIDERING THE BRILLIANT RECORDING YURI Temirkanov made with the Royal Philharmonic Orchestra of Rachmaninoff's Symphony No. 2, I cannot help but feel a bit disappointed by this new release. The famous Adagio from *Spartacus* deserves a fine new recording and a performance that leisurely explores its sensuous beauty, but here the big climax is understated, the brass subdued. Other *Spartacus* excerpts are the *Bacchanale*, *Scene and Dance*, and *Victory of Spartacus*. The nine excerpts from *Gayane* (including the *Sabre Dance* and *Lezghinka*) are, most of them, lively dances, played with plenty of spirit. EMI's sound is a touch on the dry side; if any music could benefit from warm sonics, it is this. Playing time: 51:06. (Angel EMI CDC 47348.)

R.E.B.

BEETHOVEN NINTH SYMPHONY: CLEVELAND, DOHNÁNYI

THE CLEVELAND ORCHESTRA AND CHORUS ARE superb, but this is not a memorable performance of Beethoven's mighty Ninth Symphony. Indeed, this most grandiose creation sounds rather prosaic as conducted here by Christoph von Dohnányi. Tension, so important in the score, is lacking, as is any sense of exaltation.

The soloists are excellent, particularly tenor Siegfried Jerusalem, and Telarc's reproduction is an example of the company's best efforts: broad and spacious, natural in perspective. To Telarc's credit, there are nine index points in the *Ode to Joy*. Playing time: 66:23. (Telarc CD 80120.)

R.E.B.

(CONTINUED ON PAGE 72)

(CONTINUED FROM PAGE 71)

ELMAR OLIVEIRA: SELECTED VIOLIN ENCORES.

THE TITLE OF THIS ALBUM, *THE VIRTUOSO Violin*, is misleading. While a few of the pieces included are virtuoso display pieces, most are not, and this is hardly a collection to dazzle the listener with pyrotechnics. Featured are transcriptions or arrangements by some of the leading past masters of the violin, particularly Joseph Joachim (Brahms's *Hungarian Dances Nos. 5 and 7*) and Jascha Heifetz (Debussy's *Beau soir*, Drigo's *Valse bluette*, Gershwin's Three Preludes, and Sarasate's *Malagueña*). The original works included are Fuchs's *Jota*, Kroll's *Banjo and Fiddle*, Paganini's *Cantabile*, and Ravel's *Pièce en forme de habanera*. (Additional selections: the Paradis/Dushkin *Sicilienne* and the Suk/Ginold *Burleska*.)

The limited liner notes tell us nothing about the soloist, Elmar Oliveira. He is one of the rising young American talents, already well into a promising international career. In 1974 he won the Naumburg International Violin Competition; four years later he became the first American to win the Gold Medal in violin at the Tchaikovsky Competition in Moscow; and in 1983 he was the first violinist to win the coveted Avery Fisher Prize. His performances here are marked by commanding authority and a big, rich tone, with excellent accompaniments from Robert McDonald. The recording is

wonderfully natural, the solo violin well balanced against the piano. High quality here, although it is surprising that more music is not included. The rather limited playing time of 43:44 may be a deterrent to some collectors. (Moss Music Group MCD 10027.)

R.E.B.

MOZART DIVERTIMENTO, “EINE KLEINE NACHTMUSIK.”

EDUARD MELKUS AND THE VIENNA CAPELLA Academica uphold a musicalological insistence for correct performance practice through a contagiously joyful hour of music-making in Mozart's *Eine kleine Nachtmusik*, K. 525, and the Divertimento No. 10, in F, K. 247. Period instruments, proper ensemble size (five strings for the *Nachtmusik*, five strings and two horns for the Divertimento), and the luscious, at times larger-than-life, violin tone of Melkus serve the music well, simultaneously soft-sell any sort of didactic intent. Denon's extremely bright sonics, while mostly welcome, border on shrillness at several points in the *Nachtmusik*. Playing time: 52:17. (Denon C37 7808.)

C.M.

CINCINNATI POPS ORCHESTRA: FAVORITE OVERTURES.

INCLUDED IN THIS COLLECTION FROM THE Cincinnati Pops Orchestra and Erich Kunzel are Suppé's *Light Cavalry* and *Poet and Peasant* overtures as well as those to Auber's *Fra Diavolo*, Hérold's *Zampa*, Rezníček's *Donna Di-*

ana, Offenbach's *Orpheus in the Underworld*, and Rossini's *William Tell*. While the collection is generous in playing time, it has little to offer interpretively: These are timid, often untidy performances of little lilt or sparkle. And though Telarc's digital recording usually is exemplary, here the mix has given undue prominence to the bass drum, which overpowers just about all the other instruments. Playing time: 61:59. (Telarc CD 80116.)

R.E.B.

MOZART SACRED WORKS. LONDON SYMPHONY, DAVIS.

ALMOST AN HOUR OF MUSIC, BUT FROM 1971, and with no compelling reason for reissue. Even to market this as a Kiri Te Kanawa CD is misleading: She does sing the *Exultate, jubilate* (15:14) and is part of the vocal quartet in the *Vesperae solennes de confessore*, with a solo (5:11), but this is more a Mozart concert than a Kiri concert. Alas, Mozart is not too well served. Colin Davis leads the London Symphony Orchestra and Chorus with a raucous, somewhat overaggressive manner in the *Vespers* and the *Kyrie*, K. 341. His account of *Ave verum corpus* is very nice indeed, but the *Exultate* sounds rather more like a school exercise, and Te Kanawa's tone lacks purity here. She also does not sail above the music of the opening and closing pages, as, for example, Erna Berger always did. Playing time: 56:44. (Philips 412 873-2.)

B.W.

SCOTT JOHNSON

“John Somebody”] mirrors the subterranean rumble, the welter of voices and other overlaid sounds of the city, with the cries of superamplified guitars hovering like angels above the fray. It’s a compelling marriage of rock elements and classical formalism that doesn’t shortchange either.” —Robert Palmer, *N.Y. Times*

Nonesuch/icon (79133)



CAETANO VELOSO

“To the Brazilian people, he is a simple country boy from Bahia, the personification of *alegria*—of letting the good times roll. But his music is anything but simple. The best songs have the harmonic sophistication and the introspective dreaminess of the work of Erik Satie or Bill Evans, and their lyrics are poetry.” —*The New Yorker*

Nonesuch (79127)

KRONOS QUARTET

“A supercharged group of musical pioneers” (*L.A. Times*) performing works by Philip Glass, Conlon Nancarrow, Aulis Sallinen and Peter Sculthorpe—plus their most requested encore, Jimi Hendrix’ “Purple Haze.”

Nonesuch (79111)



**NONESUCH RECORDS.
STANDING APART FROM THE SLAGHEAP OF GUTLESS CONFORMITY.**

BACKBEAT

Producers Jimmy Jam and Terry Lewis: an annotated discography



ERIC PORTFOLIO ASSOCIATED

BY BARRY WALTERS

Auteurs of Soul

stars so much as star-makers. Almost everything the two have written, arranged, produced, and played on since their departure from the Time in 1983 has enjoyed major success on *Billboard's* charts for black singles, black albums, and dance singles. This year brought the team's first pop victories, with Cherelle and Alexander O'Neal's "Saturday Love," the S.O.S. Band's "The Finest," the Force M.D.'s "Tender Love," and especially Janet Jackson's "What Have You Done for Me Lately" and "Nasty" from *Control* [see Havelock Nelson's review of *Control* in our June issue]. In the world of black dance records that never cross over, Jam and Lewis have become more influential than their former boss and mentor, Prince. The J&L groove has become as recognizable and as emulated as Alfred Hitchcock's suspense, Martin Scorsese's paranoia, and Federico Fellini's flamboyance. While giving singers the leading roles, Jam and Lewis direct their musical mise-en-scènes with the unmistakable craftsmanship and artistry of soul auteurs.

Rock 'n' roll is like a book, whereas soul is like a movie.
Say what?

Rock culture is forged on the myth, or maybe the ideal, of the autonomous author. Bob Dylan and the Beatles changed our expectations by writing, playing, and singing their own music. Turning rock into a highly personal expression, independent singer-songwriters and self-sufficient bands created authenticity out of authorship.

The black pop industry is run more like the old Hollywood studios. Fewer renaissance men, more specialists. Each person has a role to play, each hoping that his or her contribution will become part of the whole hit sound. There are exceptions: Just as Hollywood allowed for an occasional do-it-yourselfer like Orson Welles, Motown nurtured Stevie Wonder and Minneapolis found Prince, but these multitalented prodigies are the ones whose careers most resemble rock stars' and whose audience snowballs to include whites.

James "Jam" Harris III and Terry Lewis aren't

from the Time in 1983 has enjoyed major success on *Billboard's* charts for black singles, black albums, and dance singles. This year brought the team's first pop victories, with Cherelle and Alexander O'Neal's "Saturday Love," the S.O.S. Band's "The Finest," the Force M.D.'s "Tender Love," and especially Janet Jackson's "What Have You Done for Me Lately" and "Nasty" from *Control* [see Havelock Nelson's review of *Control* in our June issue]. In the world of black dance records that never cross over, Jam and Lewis have become more influential than their former boss and mentor, Prince. The J&L groove has become as recognizable and as emulated as Alfred Hitchcock's suspense, Martin Scorsese's paranoia, and Federico Fellini's flamboyance. While giving singers the leading roles, Jam and Lewis direct their musical mise-en-scènes with the unmistakable craftsmanship and artistry of soul auteurs.

Back when they were in the Time, it wasn't this way. Prince created the group, originally a local Minneapolis band called Flyte Tyme, as a recepta-

Barry Walters writes about music and film for *The Village Voice* and other publications.

cle for the rhythm and blues skin he was shedding on his way to becoming a crossover rocker. But being Prince lackeys didn't satisfy this lineup of future funk all-stars: Jellybean Johnson on drums (now with the Family), Jesse Johnson on guitar (now heading his own Revue), Monte Moir on keyboards (third member of Jam and Lewis's studio band, the Secret), Jam on more keyboards, Lewis on bass, and lead gigo/vocalist Morris Day.

Setting the tone for all subsequent Time tracks with nine minutes of nonstop salaciousness, 1981's "Get It Up" (from *The Time*) pumps slowly but surely to climax, complete with unprintable chant. This solicitation, proposed by Day and co-singer Lewis, would seem, well, more anatomically correct coming from a woman. Jam and Lewis were to learn this lesson well as they went on to write many of their most successful songs for and about the opposite sex.

One of the first was a tune Lewis cowrote with Vanity 6, "If a Girl Answers (Don't Hang Up)." The Time are credited as "players" on all of *Vanity 6*, but it's striking that Lewis's bass is featured on this track more prominently than on any Time recording. The arrangement emphasizes the same suddenly accelerated skip in the bass line as that of "High Hopes," Jam and Lewis's initial extracurricular songwriting contribution for the S.O.S. Band. Produced by Ricky Sylvers and Gene Dozier, "High Hopes" has that glossy Shalamar sheen—yet in structure, it establishes the J&L method. A sparse vocal stretches few words over the course of several measures. Pauses between vocal phrases establish a sense of spaciousness, at the same time drawing attention to the instrumentation's gentle, undulating thrust. The bass dominates the rhythm's motion on the bottom, while a much-higher-pitched synthesizer steps up and down the scale. In the midst of it all, vocalist Abdul Raoul moves slowly, dramatically.

Ironically, it was Klymaxx's lackluster, preblockbuster *Girls Will Be Girls*, another album released in the fall of 1982, that changed Jam and Lewis's career irrevocably. After they missed a flight to a Time gig because they were working on the LP in the studio, Prince delivered the dynamic duo an ultimatum: Either work under my supervision or it's quittin' Time. They quit. Given the Time's formal and stylistic confines as the first of several Prince pet projects, it seems only logical that Jam and Lewis had to explore their talents with a few spin-offs of their own.

Their next contribution for the S.O.S. Band was also their first milestone. The song of summer 1983, "Just Be Good to Me" (from *On the Rise*) is achingly slow and seems slower. Like the groundbreaking down-tempo record of two summers previous, Taana Gardner's "Heartbeat," "Just Be Good to Me" has a stalking, solemn, devotional quality. This is music of an obsession so transfixing that it transcends secular ro-

Signature Sounds

JIMMY JAM AND TERRY LEWIS, prods.

THE TIME

The Time.

Warner Bros. BSK 3598; 1981.

What Time Is It?

Warner Bros. 23701-1; 1982.

THE S.O.S. BAND

On the Rise.

Tabu FZ 38697; 1983. (Distributed by CBS.)

Just the Way You Like It.

Tabu FZ 39332; 1984.

Sands of Time.

Tabu FZ 40279; 1986.

CHERRELLE

Fragile.

Tabu BFZ 39144; 1984.

High Priority.

Tabu BFZ 40094; 1985.

ALEXANDER O'NEAL

Alexander O'Neal.

Tabu FZ 39331; 1985.

FORCE M.D.'S

Tender Love.

Warner Bros. 28818-7 (7-inch single); 1985.

JANET JACKSON

Control.

A&M SP 5106; 1986.

mance. As the bass line descends, chord changes rise on almost every bar. The pleasurable, paradoxical effect is like walking up a down escalator: forever climbing, getting nowhere. Similarly, singer Mary Davis sees her emotional trap as a liberation—or at least tries to convince herself to see it that way. She has found herself hopelessly stuck on a womanizer straight out of the Time mold: "I'd rather have a piece of you/Than to have all or nothing," she reasons while spinning around, eventually becoming submerged in a whirlpool of monumental organ, guitar feedback, glockenspiel, and the most effective singalong "na-na-na-na"s since "Hey Jude."

One of the few lessons Jam and Lewis learned from the Time was the necessity of prolonged duration; they limited their *On the Rise* contributions to "Just Be Good to Me" and two other 12-inch-length tracks stretched over the first side. "For Your Love," hampered by a throwaway groove, is forgettable, but the ballad "Tell Me If You Still Care" gently pulses with the heartbeat of synthesized bass and several different

rhythm boxes ricocheting in syncopation from speaker to speaker.

Their next project was singer Cheryl Lynn's single "Encore" from her otherwise dippy *Preppie*. Pounding with little more than Lewis's bouncy bass, some electronic percussion, and Lynn's mischievousness, "Encore" proves that the pair can also succeed by keeping things stark and simple. "Bad Times (I Can't Stand It, Part 2)" the rap-less flip side of Captain Rapp's derivative diatribe, takes "Encore" a stomping step further. While Kimberly Ball blurts out, "I can't stand it!/You can't stand it! Is this the way our parents planned it?," tough synthetic percussions hiss, bang, and crash like the cult jams currently pouring out of Chicago's underground club scene, generating music that sounds like a garage-band equivalent of disco.

Much more refined are the four tracks Jam and Lewis produced for Change's 1984 chart-comeback LP, *Change of Heart*. Like the S.O.S. Band, the group had been a largely anonymous studio aggregate in need of a makeover. The face-lift worked, and the title track became Change's first hit in years. Then came Cherrelle's "I Didn't Mean to Turn You On." This and four other *Fragile* tracks were the first to include ex-Time white keyboardist Monte Moir. A polar opposite of the shackled "Just Be Good to Me," "I Didn't Mean to Turn You On" set another precedent: Its message is liberating, even feminist, coming from a woman, but sexist and smug from a man (as demonstrated by Robert Palmer's recent limp cover version on *Riptide*). Skipping through a singsong nursery-rhyme melody, Cherrelle knows she's not entirely innocent, but she'd like to be because her feminine charms have become a liability.

Jam and Lewis write the kind of song you need when you first fall in love, the one you hold on to for courage and comfort. On the S.O.S. Band's next album, *Just the Way You Like It*, Davis goes through the changes with steadfast determination; she's equally adept at becoming the sensible "Weekend Girl" or the near masochist in the title track. A thoughtful manifesto emerges from these pictures of women considering their sexual roles to figure out who they are.

If they hadn't been responsible for "Encore," Jam and Lewis would have been sued for cheating in Lynn's "Fidelity." This follow-up was such a flop that it incriminated the album it was designed to promote, *It's Gonna Be Right*. The one song that should have been a single, and a hit, is the title track. Bursting with the spunk of Lynn's earlier Luther Vandross production, "It's Gonna Be Right" begs to be segued into his similarly uplifting "Get It Right" by Aretha Franklin.

J&L turned in workmanlike hits for Thelma Houston on *Qualifying Heat* and Klymaxx on *Meeting in the Ladies Room*, but the record that delivered the duo from their creative (CONTINUED ON PAGE 87)

BACKBEAT
REVIEWS



TIERRA CALIENTE

VARIOUS ARTISTS:

**Antología del son de México
(Anthology of Mexican Sonos).**

Six discs, recorded in the field and compiled by Baruj Lieberman, Eduardo Llerenas, and Enrique Ramirez de Arellano. (6). Available as record or cassette sets or as individual records (Música Tradicional 1-6) from Down Home Music, 10341 San Pablo Ave., El Cerrito, Calif. 94530.

TO MOST AMERICANS, MEXICAN MUSIC MEANS mariachi or *Norteño*. Both feature close harmonies and pulsating guitars (often a *bajo sexto*, or bass-sounding 12-string), but the former is distinguished for us by its high, pinched trumpets, while the latter is marked by a swinging accordion. Mariachi we know primarily because Hollywood, apparently deciding that this was the indigenous music

most typical of Mexico, often used a bastardized version in movies. (Could this have happened because mariachi originates in Mexico's western states, where Californians frequently vacation?) *Norteño*, which comes from regions closest to our own borders, spilled into Texas's Rio Grande Valley in the Thirties, where it became known as *conjunto* and influenced western swing artists; more recently, it was a vital color in the palette of Chicano rock 'n' rollers from Los Angeles and San Antonio.

We draw a blank with the rest of Mexico's traditional music. With the recent rerelease of this six-record boxed set and its accompanying booklet in Spanish and English, we have a rare chance to do some catching up. First issued in the early Eighties, in Mexico,

the album won prizes and widespread recognition from critics and folklorists before dropping out of print. It was released in 1985 in this country by Baruj Lieberman, who traveled the outback to record these sides some 15 years ago.

The *son*, a product of Mestizo culture, doesn't refer to a particular style; the term is used to cover what Lieberman (in his notes to the album) calls a "supergenre," with three distinguishing characteristics. *Sones*, he says, are played almost exclusively on string and percussion instruments; the lyrics are made up of *coplas*, which are rhyming stanzas of four, five, or ten lines; and the music must be accompanied by dancers whose percussive steps "complement and emphasize the beat." After that, it seems that just

about anything goes.

Which would explain why the version of "Lq. malagueña" from the River Balsas basin is so different from the one recorded in the area around the Tepalcatepec River (which is what the Balsas becomes when it winds further southwest). The closest analogy for Americans would be with the folk musics made when this nation was the rural, agrarian society that Mexico still is. Though they

worked much the same musical turf, and often even sang the same songs, but with different lyrics (handed down orally), a blues guitarist from the Mississippi Delta had no tangible idea of what a blues guitarist from Texas sounded like, just as country fiddlers from Georgia and Kentucky were oblivious to each other. Yet their musics shared enough traits to be lumped together.

So, to a large extent, it is with *sones*, and

with other traditional music in preindustrial societies. The lyrics—which are translated in the booklet and deal with apocalypse, mystery, mayhem, tortured love, the supernatural, and politics and current events—derive from Spanish songs of the 15th and 16th centuries, but they have never stopped evolving, gaining a verse here and losing one there, lines being altered to fit a specific region or historical period.

Musically, *sones* from Veracruz tend to be lighter, more festive. Though all *sones* are polyrhythmic, these are more complex, which Lieberman suggests is due to Negro influence in the southeast plains of Mexico. Those from the Southwest—Tixtla, Costa Chica, and Istmo—have more of a flamenco flavor. Violinists from the Tierra Caliente (the "Hot Country," which includes Balsas, Tepalcatepec, Jalisco—home of mariachi—and Rio Verde) have the most in common with American country fiddlers.

But fully one third of this package is made up of *sones huastecos*, from the northeastern region named Huasteca and the eastern range of the Eastern Sierra Madre Mountains, and it's easy enough to see why these most captured the imagination of Lieberman. This is electrifying music, carried by heavily bowed fiddles and fluid, anguished singers who move easily from "normal" voices into chilling falsettos. Lieberman claims the *son huasteco* is commonly heard in the bars and brothels, which makes it the Mexican version of juke-joint music. It is indeed the funkiest stuff here; like early blues and country, the best of it is otherworldly and down-to-earth at the same time. But isn't that often claimed for all folk musics? More projects like *Antología del son de México* would make it easier to hear for ourselves.

John Morthland

THE 12 - INCH REPORT

City Heat

SUMMERTIME: WHEN CITY FOLK COOL OUT with the rarefied air from pumping speaker cones. This season, one of the records ruling is Paul Laurence's "Strung Out" (Capitol V 15224). A hard-hitting, antifreebasing tale, it struts and twists like a stripped-down "Billie Jean." The drum machine, pushed on by a bopping bass studded with airy percussion, taps hard, to the beat of a different program: Crack destroys lives.

A regulation Kashif groove—cold bass-and-drum bedrock sprinkled with lots of soft-cum-jolting synthesizer textures—buoys Johnny Kemp as he attempts to take his relationship higher in "Just Another Lover" (Columbia 44-5368). Along for the snake cruise (that tricky dance popularized by Janet Jackson's videos) is big-throated Audrey Wheeler, who finally gives in to Kemp's wish "to be the only one." This knockout tune begs for pop acceptance, but for now its beat belongs to the street.

Steamy as the pavement is E. G. Daily's "Say It, Say It" (A&M SP 12175), a sweet Madonna knockoff. Arranged and produced by Steve Bray and Jellybean Benitez (two of the Material Girl's ex-boyfriends), this come-on—"If you want my love, say it, say it"—is hotter than a red-lipped pout complete with licked finger. The rolling track, moved along by chicken-scratch guitars, firecracker percussion, and a bottom line tattered out typewriter-style, is another "Into the Groove" sharpened with bubbly horns. For dancing, "Say It, Say It" is a warm glide, and afterward its female vocal hook hangs on like a pleasant dream.

For harder times, there's "Bang Zoom! Let's Go Go!" (Select FMS 62269). A survivor from the Roxanne wars, the Real Roxanne juices up that Washington, D.C., thang in a hip-hop barrage decorated with busy scratching, pieces of producer Full Force's "Alice, I Want You Just for Me," other songs, and Bugs Bunny—Elmer Fudd banter. The coda is a genuine laugh riot: Bugs and Elmer run through "The Rabbit Kicked



ALMAURO/COURTESY SELECT

ONE ROXANNE WITH HOWIE TEE, HER DEEJAY: GO-GO JUICE

the Bucket," an original Looney Tune. The B-side, "Howie's Teed Off," pays tribute to deejay Howie Tee, who slices snippets of Grandmaster Flash's "Birthday Party" and the Dazz Band's "Disco Jazz" into this smooth kicker. It shouldn't be ignored. Neither should the Beastie Boys' "Hold It, Now Hit It" (Def Jam/Columbia 44-5369), a hardcore freestyle rap—just nutty fun broken up by loping calypso bits. White boys Mike D, King Ad Rock, and M.C. A eschew the messy, ill guitars of "Rock Hard" and "She's On It." Gone too are the vulgarities these former New York University students were notorious for; CBS sent them back into the studio to recut the original rhymes. But the romping whomp was and forever will be a mo' fo' ya. Amen.

Remember "Juicy Fruit"? Like their biggest hit, Mtume's appropriately titled "Breathless" (Epic 49-5385) smolders at midtempo as James Mtume and Tawatha Agee pop their thermostats for each other over salacious, elegantly layered rhythms unexpectedly interrupted by bright Emulator swipes. Safari noises and deep moans take the listener out of the concrete jungle and into a jungle paradise where, when the music stops, animal instincts take over and work into the wee hours of the morning. And the heat goes on.

Havelock Nelson

THE BoDEANS:

Love & Hope & Sex & Dreams.

○ T-Bone Burnett, prod. Slash/Warner Bros.
25403-1. □

COMING ON LIKE SOME SOUTH-OF-THE-border Sun session, the debut from Wisconsin's BoDeans makes you forget how trite and tiresome most American-heartland cow-punk has become. This is an album of decidedly simple pleasures, but what pleasures: puppy-love lyrics sung with Don-and-Phil earnestness, acoustic guitars scraping against electronics, riffs that recall Scotty Moore's solo on "Heartbreak Hotel." Yet the BoDeans aren't mere retro rockers. The galloping drums and Ritchie Valens-like guitars of "She's a Runaway" may kick things off like a thoroughbred busting out of its gate, but the lyrics—the story of Mary, who "got beat up one too many times" and then "shot her man down"—add a chilling touch that's anything but nostalgic.

American rock has lately become synonymous with empty-headed anthems and cowboy hats; the BoDeans, bless their hearts, have neither. The title of their album, taken from the Rolling Stones' "Shattered," mod-



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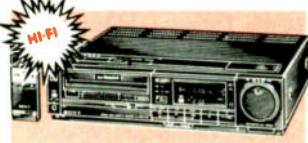
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estly sums up its Everyteen turf. Vocalists, guitarists, and primary songwriters Sammy BoDean (né Lanas) and Beau BoDean (a.k.a. Kurt Neumann) rarely get beyond heartache tribulations in their lyrics, but when Sammy pleads to his girl, "We won't need no wine/ We won't need no other stuff," his innocence and sincerity more than compensate. On the wistful shuffle "Lookin' for Me Somewhere," you can almost see him at a deserted railroad station near his hometown of Waukesha, searching into the distance for his dream girl.

But wistful teens have their cloying side as well, and the BoDeans are no exception. Their shortcomings include the use of "Bo-Dean" as a surname and the occasional pseudo-truck-driver guitar lick (à la "Honky Tonk Man"). And after repeated playings of this LP, the seams of producer T-Bone Burnett's most durable, rootsy clichés begin to show through: The guitar lead in "That's All," for instance, suspiciously recalls the title track of Los Lobos' *How Will the Wolf Survive?*, which Burnett also produced. But the recent Everly Brothers reunion albums ache for a tuneful nugget like "Angels" or "Say You Will," while most cowpunk records go hungry for anything with this much charm. If Los Lobos could have traveled back in time to play behind the Everlys, they might have made music that sounded like *Love & Hope & Sex & Dreams*. Now that's American rock.

David Browne

KATRINA AND THE WAVES:

Waves.

Katrina and the Waves, Pat Collier, and Scott Litt, prods. Capitol ST 12478. ☎

LAST SUMMER'S HIT "WALKING ON SUNSHINE" didn't box in Katrina and the Waves: Their second major-label LP, *Waves*, stretches the band's concept of pure pop. Song structures are tight, their arrangements sleek, and the band drives hard enough to give them some power. *Waves* is so catchy (where have I heard those chord changes before?) you'll be hooked by the melodies long before you figure out the words, even though Katrina Leskanich clearly delivers every syllable in a voice as big as Texas, her home state.

She also shuns skirts for jeans and seductive shimmies for athletic romps, playing guitar and performing like one of the boys. So why, when she tries her hand at songwriting on *Waves*, does she position women in the same dependent, dreamy-eyed corner that '60s girl groups did? In the lush yet crisp "Mr. Star," a fan equates falling in love with her idol with the desire to be like him. Leskanich belts the soulful "Stop Trying to Prove (How Much of a Man You Is)" convincingly, but that just makes the stereotypical lovers—she's scrubbing the floor and he's demanding his grub—more irritating. "Love That Boy," with a spunky melody reminiscent of Blondie and harmonies (dubbed in by Leskanich) mimicking the Bangles, is a cutesy teen pursuit that masks female sensuality with passive innocence.

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Madonna is refreshing by comparison.

It's the men in the band who push Katrina to get tough. Bassist Vince De La Cruz (who, like Leskanich, migrated from Texas to London, where they fell in with the other two Waves) offers "Money Chain," a sharp indictment of materialism that soars from the first guitar wa-wa, which somehow sounds remarkably fresh. "Sleep on My Pillow," a bittersweet lullaby about love's passing, never loses momentum or lapses into sappiness. Approximating Motown, guitarist Kimberly Rew's "Is That It?" stacks blaring horns and an aggressive organ against a bitter lovers' quarrel; you can almost hear the door slam when Leskanich yells her final bye-bye. "Lovely Lindsay," which cleverly strings a series of clichés quoting everything from "Ticket to Ride" to "Tarzan and Jane," is a hard-rocking, hard-loving woman's anthem.

Yet in one important way, Rew (formerly of the Soft Boys, the underground British band that kept '60s psychedelic pop alive during punk's brief reign) steps into the background: He relinquishes the songwriting monopoly he held on the Waves' first three independent LPs, the last of which was remixed and redistributed as the group's 1985 Capitol debut. Now that Leskanich has claimed her share, maybe she can find a statement to match her emphatic vocals. Or maybe she already has, and I just can't dig it.

Rosemary Passantino

STEVE EARLE:

Guitar Town.

Emory Gordy, Jr., and Tony Brown, prods. MCA 5713. ☎

STEVE EARLE IS A CARD-CARRYING COUNTRY artist who knows instinctively how to rock 'n' roll. That sets him apart from the growing ranks of blue-jeaned, guitar-wielding singer-songwriters making newfangled old-fashioned music the other way around. Earle, who starts with the roots and works his way up, saunters between genres in a de-

ceptively casual manner that's as ingenuous as it is assured.

As a Nashville-based songwriter, he's considered cover-worthy: Waylon Jennings, for example, recorded "The Devil's Right Hand" for *Will the Wolf Survive?* As an artist, he has been harder to pigeonhole and difficult to capture on record; on "Nothin' but You," "Squeeze Me In," "What'll You Do About Me?," and "Little Bit in Love," four singles released by Epic in 1984, he was cast in a rockabilly mold. Earle's discipline as a writer gives *Guitar Town* shape and clarity because the singer, possessed of a nonchalant Texas twang, is defined by his songs. The album's homespun dramas of small-town losers, Music City-bound dreamers, and hard-working people forced to work even harder are more than familiar. But the plainspoken country storyteller in Earle makes his tales seem as vivid as if they're being told for the first time, and the rock 'n' roller in him lends them an edge.

Guitar Town mirrors mainstream populist pop without surrendering its own subtler character. In the hands of a Bruce Springsteen (to name one of the well-knowns to whom Earle is being compared), "Goodbye's All We've Got Left" would be a clap-along romp not unlike "Glory Days," accent on rollicking organ; Earle's content to swing the song in a sly, understated way. Played by a John Cougar Mellencamp (to name another, who in fact is already covering the title track in concert), the riffs that bend and sigh in "Fearless Heart"—thanks to tandem pedal-steel and electric guitar—would be chiming, anthemic, and rigid.

The enthusiasm of pop cognoscenti has prompted Earle's current label to promote him as the latest, and next greatest, in a series of American-made rockers. But he's not copping this year's attitude. On *Guitar Town*, Earle sounds like a guy who really knows his country—the music and the place.

Michael Hill

PETER GABRIEL:

So.

Daniel Lanois and Peter Gabriel, prods. Gefen GHS 24088. ☎

PETER GABRIEL IS INTERESTED IN ALL FORMS of artistic expression, as is made clear in his fascination with the visual arts and his part in forming WOMAD (World of Music, Arts, and Dance), among other things. When Gabriel was frontman for Genesis, he inhabited a variety of characters—everything from flower to lawn mower. But when he went solo in 1975, he began to realize that simplicity is one of the most difficult things to achieve in life.

We find in *So* a man walking toward simplicity, making his music more universal without losing his identity. The rhythms of Indian, Brazilian, Senegalese, Nigerian, and other cultures are represented. The percussionists especially, thanks to Gabriel's gift for synthesis, unite the experience and technique of their primitive art with his electron-

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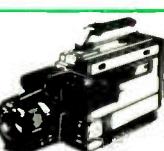
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ics, each song resulting uniquely. Gabriel works more with textures than with solos, and like a weaver he gathers each pattern in his loom, creating music that's full of precious details.

Regarding lyrics, we can divide the album roughly in half. As their titles indicate, "We Do What We're Told (Milgram's 37)," "Don't Give Up," "Red Rain," "That Voice Again," and "Mercy Street" deal with social and subconscious pressures we all experience. The other three songs have an up feeling—although if his luck changes, the protagonist of "Big Time," a satire about ambition, may wind up like the guy in "Don't Give Up," which reveals the insecurities and despair of the common man.

I particularly like "In Your Eyes," a song that talks with and of love. It ends with the scatting of Senegalese vocalist Youssou N'dour, whose voice becomes an element of the rhythm as the lyrics reach their plenitude and leaves us yearning for more. "In Your Eyes" also reminds us that Gabriel is a child of the '60s who believes in love and hope and protests against conformism. Pay attention to references in other tracks, too: a 12-string, Byrds-style guitar in "That Voice Again," the backup singers and the brass section led by Wayne Jackson of the Memphis Horns in "Sledgehammer," and the dedication of "Mercy Street" to poet Anne Sexton.

The first time I heard *So*, I wondered if Gabriel hadn't forced himself, in the wake of ex-Genesis colleague Phil Collins's pop success, to make a more commercial record. But as he described it recently, the transition evolved naturally out of his own artistic needs. *So* embraces the simplicity of pop without sacrificing Gabriel's diversity and complexity.

Marcel T. Dumont

THE SUBURBS:

The Suburbs.

◎ Robert Brent, prod. A&M SP 6-5123. □
ON "SUPERLOVE," THE OPENING TRACK from the Suburbs' self-titled A&M-debut album, guitarist/vocalist Beej Chaney immediately places the Minneapolis quintet in a sociological as well as musical context. "In the '60s there was acid, the love was intense," recalls Chaney in '50s beat-poet-style recitation. Too drunk to remember anything from the '70s, he's now "moved into space," questing for the evolutionary "superlove" of the title over a pumping keyboard and horn undercurrent straight out of "Lady Madonna."

Such up-front declarations may well be what's necessary to prevent this decidedly off-center band—which recorded for Minneapolis's underground label Twin Tone during its formative punk period—from slipping through the cracks of a major label, as happened tragically two years ago with its brilliant *Love Is the Law* on Polygram. Now, however, thanks to the currently vogue 'Minneapolis sound' production of Robert Brent (Prince's drummer Bobby Z) the



COURTESY OF A&M

MINNEAPOLIS'S SUBURBS: NERVOUS BUT HOPEFUL

'burbs not only have something to say, they also have a commercially proven musical format in which to say it.

The Suburbs derive from psychedelic and funk sources, but they have little else in common with Brent's boss. Their music articulates an inward nervous tension and acts as a matrix for the barely controlled frustrations and desires of lyricists Chaney and Chan Poling; every track seems in danger of boiling over into chaos. That they never do reflects the group's understanding and mastery of balanced musical composition.

"Superlove," for example, upheld by two-note horn punctuations, descending fanfares, and sparse keyboard figures, is ironically bisected by Poling's understated piano break. The ballad "Heart of Gold"—in which desperate but hopeful neohippie Chaney quits his job to hitch cross-country with his girl—builds from a simple repeated synth/guitar block broken up only when guest Dusty Cox interjects a jazzy sax solo. The other songs on *The Suburbs* share a similar sense of structure; in each, phrases and solo bits interrelate with both logic and surprise.

Nowhere is this more apparent than in the brisk closer "Want That Girl," delivered by Poling in a more grounded but still speedily neurotic keyboard ramble. Beginning with a sprightly run that alludes to the singer's sense of romantic wonder, the cut shifts dramatically to a pressurized swirl of keyboard and guitar and the singer's overwhelming passion. But somehow, after a scorching guitar solo, a mariachi-style horn brings the tune—and album—home. This time, I hope the record company follows along.

Jim Bessman

BEAUSOLEIL:

Allons à Lafayette.

Michael Doucet and Chris Strachwitz, prods. Arhoolie 5036.

BEAUSOLEIL LEADER MICHAEL DOUCET IS A folkie, and (for once) I mean nothing pejorative when I use that word. He has a scholar's archival knowledge of Cajun music and seems to be nearly as well versed in other Southern roots forms. In addition, he is a skilled, soulful fiddler. He brings head and heart together to create French music unlike anything else coming out of Louisiana.

This is an acoustic album of traditional songs. Doucet and band don't cover the old

versions so much as they break them down and reassemble them. They take liberties with strict Cajun forms, but in doing so they extend rather than obliterate those forms. It's a self-conscious process, sure, but what distinguishes Beausoleil from most groups that attempt this sort of thing in this as well as in other folk-oriented idioms is that their music reeks of neither stiffness nor forced conviviality. In other words, these guys don't sound like folkies.

So Sonny Landreth's dobro runs in "Pauvre Hobo" ("Poor Hobo") give the sound a jaunty swing that's appropriate even though there hasn't been anything like it in Cajun music for more than 30 years. Michael's brother David consistently turns in fat, rolling guitar lines that could have been cribbed from a c&w blues 'n' boogie man like Doc Watson or Merle Travis—except David has reshaped them so convincingly that their antecedents are beside the point. The interplay between Michael's fiddle and Erro Verret's accordion creates the swirling textures of traditional waltzes and two-steps, but with a little more kick. And when singer/fiddler Canray Fontenot sits in on "Les Blues a Canray" ("Canray's Blues"), the result is an otherworldly combination of zydeco and country blues. The group can be loose and even a little frayed on something like "Mon Vieux Wagon" ("My Old Wagon"), but it can pick tunes like "Pauvre Hobo" and "Johnny Can't Dance" with speed and clarity.

Beausoleil is named after a leader of the failed 18th-century Acadian resistance movement. Doucet is of that generation of young (thirtyish) Cajuns who learned American ways before they went back and discovered their own heritage. Based on this music, I'd say he has the best of both worlds.

John Morthland

AARON NEVILLE:

Orchid in the Windstorm.

◎ Joel Dorn, prod. Passport/Jem PB 3605. □

AARON NEVILLE:

Make Me Strong.

Allen Toussaint and Marshall E. Seahorn, prods. Charley CRB 1111.

AARON NEVILLE'S ANGUISHED, STRAINED VOICE has made him a favorite of soul fans since 1960, when his debut single "Over You" dented the r&b charts. His steamy piano playing, both as a session man and in several seminal ensembles with brothers Art, Cyril, Charles, and Ivan, have earned him plaudits from rock critics and fans. Thus while the Neville Brothers appear on *Saturday Night Live* and get booked for the Statue of Liberty 100th-anniversary festivities, Aaron's solo endeavors are projects for tiny independent labels and foreign companies who import reissues back to us.

Make Me Strong, a collection of late '60s and early '70s singles previously available only through diligent probing of collector's auction lists, and *Orchid in the Windstorm*, a six-song EP featuring remakes of '50s classics, demonstrate Neville's vocal mettle

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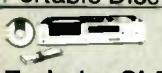
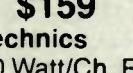
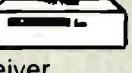
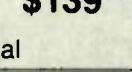
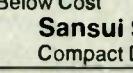
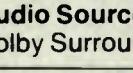
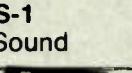
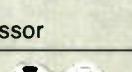
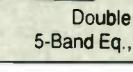
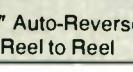
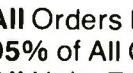
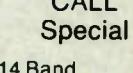
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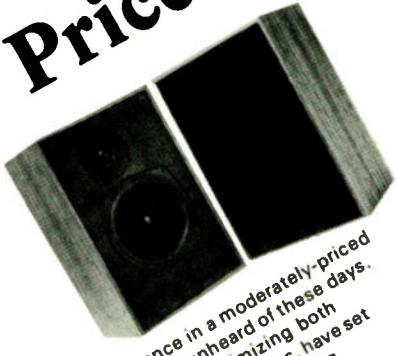
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while revealing his almost total lack of commercial appeal. His weary, bluesy inflection, absence of nuance or sophistication, and unvarying approach indicate his emphasis on feeling over technique. *Orchid in the Windstorm*'s minimal production values are appalling at times; the brothers' backup on "For Your Precious Love" can be heard only when you boost the treble on your receiver and shut down the bass. Yet folk who enjoy hearing crunching, gutbucket wailing or throaty, sobbing moans will be charmed. Neville's eerie vocal combines quite effectively with David Newman's authoritative tenor sax solo on "Pledging My Love," and overall, *Orchid in the Windstorm* is a good, if flawed, representation of his prowess.

Most of the songs on *Make Me Strong* weren't big or even mild hits; several hardly qualify as misses. But there are some instances where the wit and savvy of principal writer Allen Toussaint deftly frames tidy tapestries for Neville to exploit. He turns in a growling, furious performance on the title track, pleads and sighs with intensity on "All These Things," and defiantly seeks a confrontation on "Hercules." The finest tune, "Cry Me a River," accents Neville's fiery temperament, and "Mojo Hannah" emphasizes his more humorous side. Some brutally bad decisions were made to include, for example, versions of David Gates's "Baby I'm A Want You" and Joe South's "The Greatest Love," both of them unfocused and insipid. And an inferior second take of Neville's epic "Tell It Like It Is" comes complete with pancake-flat work from the horn section. But the best moments on *Make Me Strong* offer a captivating, erratic singer more concerned with expressing the passion in his soul than perfecting the technique necessary to reach anyone except true believers. —Ron Wynn

JOURNEY:

Raised on Radio.

● Steve Perry, prod. Columbia CK 39936. ○

JOURNEY:

Infinity.

● Roy Thomas Baker, prod. Columbia CK 34912. ○

JOURNEY:

Escape.

● Mike Stone and Kevin Elson, prods. Columbia CK 37408. ○

GROWING UP, I DIDN'T PAY MUCH ATTENTION to Journey. That's good; it would've been a drag being on life support so young. Instead I sweated it out with groups who stayed true to a rebel attitude. Journey exploits heavy metal's song structure and axe grind. But stunning flash doesn't necessarily guarantee fire-breathers, and its sound—homogeneously arranged arena rock with feel-good, greeting-card lyrics—doesn't get me up bucking my neck, twanging my imaginary six-stringer. Around since 1973, these twerpers have sold a ton of records, though. Their fans probably fell in love with lead singer Steve Perry's looks and mistook Journey's paranoia and trifling for sincerity.

So *Raised on Radio*'s title track and "Positive Touch," with their stabs at kickiness, came on me from behind. They bounce rather than try to rock. Produced by Perry for the first time, the group is finally abandoning that confusing fusion of pop drone and metal excess. Gone forever (I hope) are those grating, Queen-like harmonies of the earliest LPs. Jonathan Cain's piano pushes more now, and there's less of Neal Schon's guitar. Giving the people what they want has always been Journey's motto; in 1986, not really rocking is commercial, so the transition seems logical. No such luck for 1978's *Infinity* and the following year's *Evolution*, which always were and still are softer than a Downy-rinsed towel.

If you're a high-tech sucker and can get past the pretty anthems, these Compact Discs aren't bad. *Infinity* and *Evolution*, state-of-the-art when they were recorded, betray noticeable hiss throughout, shortcomings on the top end, and shallow spatial depth. But thanks to smart equalization, there's a combo-like sparseness decorating Perry's honey throat (he ought to be singing soul). Besides being better music, *Raised on Radio* is a better CD. Mixed by Bob Clearmountain, the sound is like a shot of down-home whiskey. Everything from Schon's perky guitar to the cavernous drumming of Larrie Londin, the replacement for Steve Smith (who flew the coop the same time bassist Ross Valory did), is rendered with sharp, biting presence. I almost like Journey after listening to this mix.

Havelock Nelson

JAZZ

CHARLIE PARKER:

Birth of the Bebop.

○ Stash ST 260. Bernard Brightman and Will Friedwald, prods. (611 Broadway, New York, N.Y. 10012.)

THERE MUST HAVE BEEN SOME GOOD REASON for the union's recording ban of 1942-44, but all it's remembered for today is the fog it lay on bebop's early days, leaving no trace of the seminal protobop big bands of Earl Hines and Billy Eckstine and their featured soloists Charlie Parker and Dizzy Gillespie. By 1945 Bird and Diz were ripping through the technical obstacle courses of "Salt Peanuts" and "Shaw Nuff" like old pros, but what did these guys sound like during the blackout?

Even though its title is a bit of a come-on, since the majority of the tracks date from the late '40s and the '50s, *Birth of the Bebop* provides some important behind-the-scenes clues. The pay dirt is five cuts from 1943 that feature Parker on his big-band horn, the tenor sax. One of them, "Sweet Georgia Brown," which was recorded in Room 305 at Chicago's Savoy Hotel during an Eckstine tour (seminal enough for you?), has Bird jamming with Gillespie and bassist Oscar Pettiford. Surprisingly, it's Gillespie who sounds more fully formed and at ease with

the bop elements that are creeping into his approach. Parker holds back, sticking to familiar tonal and rhythmic ideas borrowed from his boyhood idol Lester Young. This isn't the risk-taking, on-the-edge saxophonist who would emerge two years later. Parker is inventive but cautious; Gillespie provides the fireworks. Too bad that apart from his sharp interplay on a brief "Indiana," Dizzy is absent from the rest of the '43 tracks.

"Three Guesses," a swing pastiche, has Parker still indebted to past masters, but "Boogie Woogie" shows that that phase was coming to a close. Ambling along in a Kansas City groove, Bird suddenly erupts with a fully developed bop run that's like seeing into the future. "Embraceable You" is a real oddity, with Parker playing along to a Hazel Scott piano-solo recording. If the rhythmic shifts that would make his later ballad playing so arresting aren't quite evident, the heightened lyricism is. To be honest, the gripping, instantly compelling draw of mature Parker is here only in bits and snatches. The pleasure received is cerebral: You get a full picture of his early technical proficiency and stylistic leanings, but you have to make all the leaps of faith yourself.

Three years later Parker became "gunslinging" Bird, armed with an alto and ready to wipe out the competition. A 1946 "Sweet Georgia Brown" from a California jam session with Gillespie and Don Byas is pure fire;

"Billie's Bounce" and "Drifting on a Reed"—both with Miles Davis and Roy Haynes, recorded in 1950 at what sounds like a frat party—come close. The final three tracks are examples of Bird the voracious and commandeering jammer. Sitting in with the Chet Baker Quartet at the University of Oregon in 1953, a year and a half before his death, Parker is a live wire prodding electric playing from Shelly Manne, Jimmy Rowles, and the normally sedate leader. Ecstatic performances like these help you understand how the collector/detectives who track down this stuff have become Parker junkies. A taste of vintage Bird, no matter what the year, only leaves you wanting more.

Steve Futterman

JOHN CARTER: *Castles of Ghana*.

John Carter and Jonathan F. P. Rose, prods.
Gramavision 18-8603-1.

BECAUSE THE CLARINET HAS ALWAYS BEEN peripheral to modern jazz, post-Bird clarinetists have been either multi-instrumentalists or brave souls who, by choosing to play this particular instrument exclusively, risk novelty status. John Carter began as one of the former and became one of the latter, establishing his individuality by playing not merely in the post-Bird but in the post-Ornette idiom. While teaching in California in the '60s and '70s (arriving from that unlikely

spawning ground of the avant-garde, Fort Worth, Texas), he co-led an experimental quartet with trumpeter Bobby Bradford; their albums were critically praised but little heard. More recently, Carter was featured to advantage on the two-volume *Clarinet Summit* (India Navigation IN 1062 and 1067; see July review of Vol. 2). Now, devoting himself full-time to composing and performing, he has launched an ambitious project, a five-part series titled *Roots and Folklore: Episodes in the Development of American Folk Music*. *Dauwhe* was the first installment (Black Saint BSR 0057; see August 1983 review); *Castles of Ghana* is the second.

Played by an octet, *Castles* highlights Carter's gifts as a composer/arranger. Only twice does he step forward for an extended improvisation: a lively free jazz exchange with Marty Ehrlich on bass clarinet on "Conversations" and an impressive stretch on "Capture." For the most part, this LP is a programmatic work. The "castles" of the title refer to North African trading posts that, by the 16th century, had become slave pens, holding, prior to their exportation, the victims of dealings between certain African chiefs and European slave-traders. Carter has devised themes that are often poignant, sometimes ominous; the solos, especially those of trombonist Benny Powell and violinist Terry Jenoure, frequently suggest the turbulent feelings of the people caught in

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that volatile period.

The storytelling qualities of the music can be quite precise. The middle section of "Evening Prayer" sounds like a forest at night, where just-discernible prayerful sounds emerge from the palpably anxious stillness. Carter's solo on "Capture" is all poised alertness, then flight. It isn't always clear, though, how a piece fits into his overall theme: One would like to know, for instance, whom the urgent, cascading dialogue of "Conversations" represents and why their voices are framed by a bluesy riff with hints of early jazz.

But that's a quibble. *Castles* is an exciting and often rather beautiful work; Carter's skill in coaxing a variety of colors from the octet while adhering to his decidedly somber subject is impressive. And if this record is any sign of the quality of the *Roots and Folklore* series, then the clarinetist, in his sixth decade, is about to achieve the recognition that has so far eluded him.

Richard C. Walls

ASTOR PIAZZOLLA:

Live.

© Astor Piazzolla and Götz A. Werner, prods.
American Clave 1005.

NEW YORK DEMANDS ITS EXOTICA FIX, AND tango looks like this year's model. Hot on the heels of Broadway's song and dance extravaganza *Tango Argentino* comes Astor Piazzolla: composer, bandleader, bandoneón (button accordian) virtuoso, and, since the mid-1950s, Argentina's favorite musical upstart. But at his coming-out performances this spring, Piazzolla and his Quintet Buenos Aires trashed both the high- and low-art expectations of his audience through sheer musicality and excellence.

Live doesn't reproduce the rapture of those shows, but it gives a good picture of the quintet's tart, exacting sound. Although I'm no devotee of traditional tango, I can hear how Piazzolla has altered the form: Nothing "traditional" could come off this weird. The lush Euro-Latin melodies and dramatic rhythms are in place, but they are merged with twisted time signatures, edgy dynamics, discordant harmonies, jazzlike improvisations, classical compositional ploys, and jarring tonal effects. The result is kaleidoscopic, passionate art music.

The heart of the quintet's personality is in its leader's detailed arrangements, although you have to look hard behind *Live*'s logy mix to decipher them. Piazzolla isn't afraid to mix up the instrumentation (violin, bass, piano, electric guitar, bandoneón); players reel off careening unison passages or spin romantic interludes only to later find themselves pitted against one another, producing dissonant sound blocks. Unorthodox effects—slapping, pounding, and scraping instruments—are also encouraged. Rhythmic and melodic chores are constantly being reassigned, charging the music with unpredictability.

If I had never heard the quintet live I'd have few complaints, but I've been spoiled.

Missing from *Live* are bigger chunks of Piazzolla's remarkable bandoneón—an instrument that seems limited only until he coaxes expressive solos from it—and the group's sweeping, sonic grandeur when it really cooks. The tango craze may not last out the summer, but at least it has established Piazzolla. His music deserves a long and hyperactive life.

Steve Futterman

ART TATUM:

20th Century Piano Genius.

Richard Seidel, reissue prod. Emarcy 826 129-
© 1 (2). (2).

NO PIANIST HAS HAD A GREATER IMPACT ON other musicians than Art Tatum has. Some have found him literally stunning. Legend has it that Coleman Hawkins discovered his legato tenor-sax style overnight after hearing Tatum for the first time. When Fats Waller saw Tatum seated among his fans one night, he called out from the stage, "God is in the house!" And many younger bebop pianists express their awe. Tommy Flanagan, for example, told me that Tatum's description of his playing in a Detroit bar as "very nice" is one of the greatest compliments he has ever received.

Tatum had prodigious technical abilities, carefully nurtured in thousands of hours of practice, and an unrivaled harmonic imagination. Endlessly inventive, he was also a good deal of fun, as these recordings, made for the most part at a 1955 Hollywood party, amply demonstrate. These 26 tunes have never been previously issued, unedited, in one package. The 23 that were released by 20th Century Fox were cut, at times trivially—to edit a comment by Tatum or someone in the audience—and at times drastically: "Jitterbug Waltz," as first heard on record, was half the length it is here, and it contained an awkward splice. These are some of Tatum's finest performances, recorded well on an excellent piano. They deserve to be heard in full.

20th Century Piano Genius catches the artist in an informal mood, playing requests and fooling around. After claiming he has forgotten "Without a Song," Tatum produces an unaffected, flowing rendition that's a highlight of this set. He introduces "Danny Boy" with sentimentally strummed chords, then builds to some disturbingly dissonant ones. He interjects a few bars of "Nobody Knows the Trouble I Seen" into his "Body and Soul," approaches "September Song" with intimations of melodrama that he dispels in a swirl, and produces an astounding series of harmonic variations with his left hand during the last chorus of "Someone to Watch Over Me," while playing the melody chastely with his right.

Some critics have objected to Tatum's nearly obsessive use of decorative scales. There's little to complain about here. Every cut contains passages no other pianist would have thought of and few could imitate. Any one interested in jazz piano should own *20th Century Piano Genius*.

Michael Ullman



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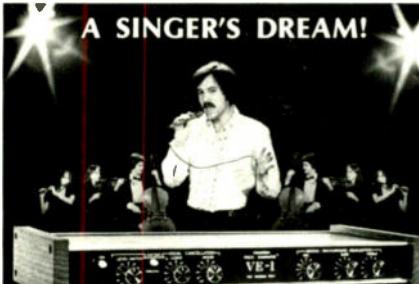
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Auteurs of Soul

(CONTINUED FROM PAGE 74)

slump and proved Moir's abilities as a ballad noir writer and producer was the one they made for their former Flyte Tyme colleague Alexander O'Neal. Further testimony to the new black male vulnerability emphasized earlier in '85 albums by Vandross, Freddie Jackson, and Glenn Jones, *Alexander O'Neal* put the ballads up front to showcase an eager-to-please, belting crooner. Despite O'Neal's plea for a girl who's "Innocent," this initial single capitalized on radio programmers' familiarity with co-star Cherrelle with a slicked-up, but no less sleazy, rehash of "Get It Up," even though it thoroughly misrepresented the album.

Before '85 was over, three Jam and Lewis productions were released to hibernate for a couple months and then take over the radio the following spring. "The Heat of Heat" from Patti Austin's *Gettin' Away with Murder* was their first production to employ real strings. Boldly arranged by Lee Blasky, the strings add dissonance, drama, and doubt rather than sweetness—but don't pick up John Morales and Sergio Munzibai's remixed, extended, overdubbed, and generally mauled 12-inch single expecting to hear them. "The Heat of Heat" remains superior and ironically more danceable on the LP.

It was only a matter of time before Jam and Lewis figured out how to give themselves (and the Force M.D.'s) their first pop Top Ten hit. "Tender Love" does without the bogus hip-hop beats and vocal imitations that plague the M.D.'s' other work. Its sweet street-corner harmonies couldn't have been further away from the groove-band sass of J&L's former group. But the masterpiece came in the form of soap opera, the swaying "Saturday Love" by Cherrelle and O'Neal from *High Priority*. O'Neal's soaring vocal on the second verse still forces me to pause and marvel, while Cherrelle's one-note days-of-the-week recitation reminds me of Douglas Sirk movies like *Magnificent Obsession* that exaggerate the mundane to surreal extremes. Cherrelle's voice has opened up emotionally and physically. Again, the major subject is the politics of gender: how a woman handles herself with men who either dog her around or bark up the wrong tree. On the rocking funk of "You Look Good to Me," she becomes the desiring voyeur who calmly contemplates the difference between love and lust, decides she's feeling the latter, and then unashamedly celebrates it. More often than not, the message is, I've had enough of you, and I want more from someone else.

This is also the focus of Janet Jackson's *Control*. Jackson prefaces the album by explaining, "This is a story about control—my control." She then goes on to flaunt her independence, tearing assunder our assumptions on how Michael's youngest sister should behave. His songs are implicitly

about power, hers are explicit and much more aggressive: Don't expect Janet to "Beat It." But she can be just as ambiguous. When she says "Nasty boys don't ever change," we never learn if she means to complain or command. Does she like them, or what?

Janet shares production credits on almost every cut and even plays things like "synthesized bells"—presumably to make sure that if she's not as in control as the title track endeavors to make clear, she has more input than most J&L centerpieces. At the very least, she seems to have a firm reign over her backing tapes. The moment "Control" stutters to a halt, she commands, "Gimme a beat!" and "Nasty" obeys. On "You Can Be Mine," she asks, "Can I hear that line one more time?"—of course you can, it's already recorded! The synths and acoustic guitars even take on the role of persistent lovers as the album concludes with "Funny How Time Flies (When You're Having Fun)," and Janet pleads "Stop . . . stop!" Like Cherrelle, she uses Jam and Lewis to give her *Control* authority, while J&L use Janet to mask their auteurism.

The S.O.S. Band's *Sands of Time* makes no proclamations but merely washes over you, like Steve Reich's *Music for 18 Musicians* in a languid soul groove. As with previous efforts, there are lots of big electronic toys playing very small parts yet beating with a human pulse: Minimalism reaches for maximum sensual effect. As can also be expected, there's the usual cross-pollination between old and new records. But the high quality of the two self-produced band compositions is a first. Unlike the afterthought filler on the second sides of *On the Rise* and *Just the Way You Like It*, "The Time Lover" and particularly "Do You Still Want To" sound like they belong, as does Moir's work on *Alexander O'Neal*.

Equally adept at adventure, comedy, and romance, Jam and Lewis have directed black musical melodramas through more sensuous scenarios than any other production pair. And if all goes as scripted, they'll have sent their first white group, the Human League, back to England with more than Minneapolis souvenirs. Jam, Harris, and Moir also plan to break out from behind the scenes to record an album under the Secret moniker. As others emulate their sound—Nick Martinelli with *Loose Ends* and *52nd Street*; Stock, Aitken, and Waterman with *Princess*; and Loni Simmons with *Yarborough and Peoples*—to make robust, occasionally outstanding records, the team will have to invent new ways of saying things to maintain their end of the dialogue. But as long as they create work as well conceived as "Saturday Love," *Control*, and *Sands of Time*, Jam and Lewis will keep the black pop plot twisting. ■

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