

# Stereo Review<sup>®</sup>

INCORPORATING HIGH FIDELITY<sup>®</sup>

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## POWER!

A Practical Guide  
to Amplifier Ratings

## FAST SEARCH

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Next CD Player



Hafler XL600

**LABORATORY TESTS**  
Altec Lansing Speaker  
System, Sansui Integrated  
Amplifier, and More

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# What The B



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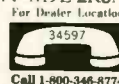
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# Paradigm



**Cover**

For tips on how to evaluate the specifications for components like the Hafler XL600 power amplifier, see page 42.

Photograph by Jook P. Leung

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# Stereo Review

INCORPORATING HIGH FIDELITY®

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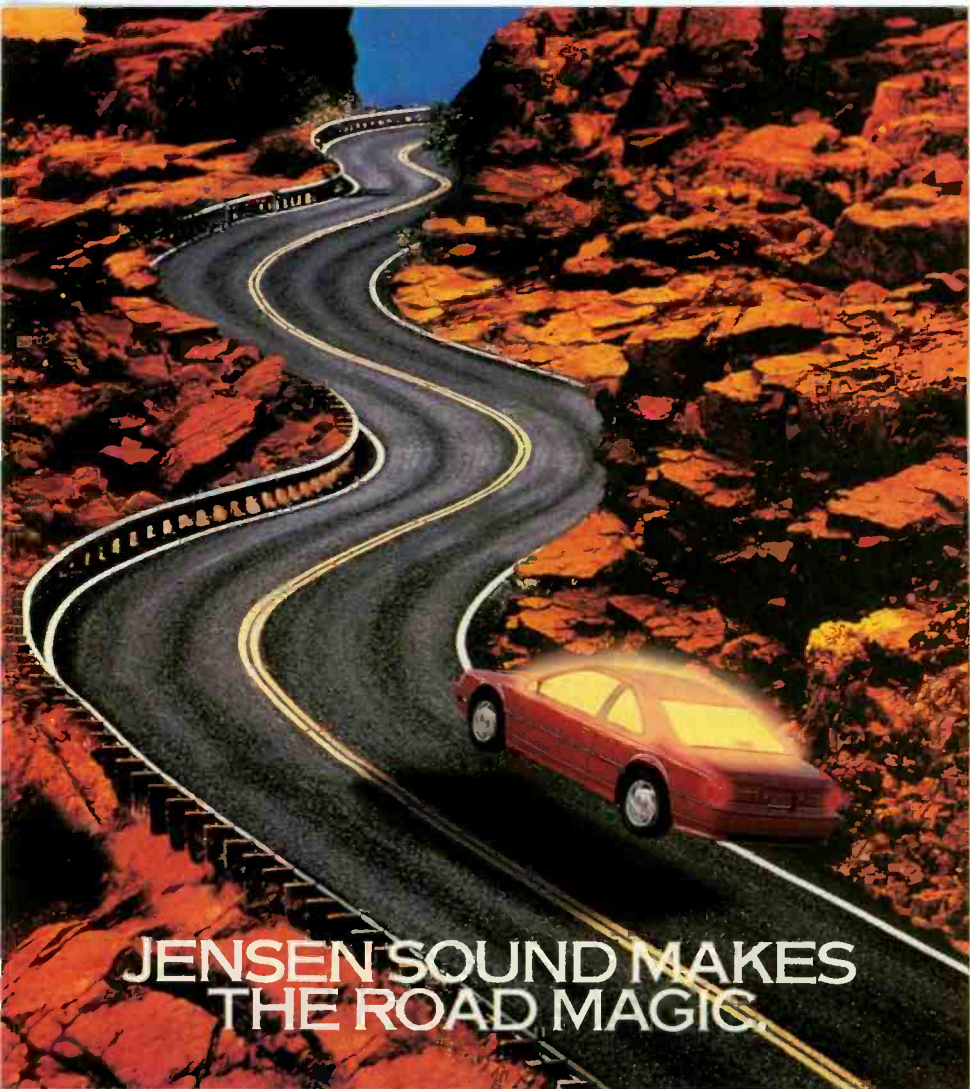
"If you're lucky, you get to shake hands with Arnold Schwarzenegger" • *by Mark Fleischmann*

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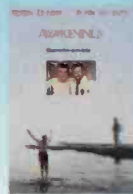
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THIS PAGE IS TOO SMALL. WHICH BRINGS US TO PLAN B.

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1800 GTi  
shown here  
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FULL-FREQUENCY SPEAKERS. THIRTY-TWO DROP-IN

PIECES. SO IF YOU'D LIKE TO UPGRADE TO SOMETHING

REALLY HOT, TEST DRIVE THE WHOLE JBL LINE. (IF YOU'D JUST

LIKE TO GET TO FIRST BASS, PICK UP THE 1800GTi.)



# LETTERS

## Nip 'n' Tuck

Ken Pohlmann's September "Signals" column, "Nip 'n' Tuck," put a radar-lock on the authenticity issue as it affects artistic performance. Today's focus on high technical perfection, spurred by advances in audio and video, may lead to a kind of inferiority complex in performers. They may feel that their performances must be artificially enhanced, whether dubbed, doubled, or lip-synched, to create an accepted look and sound, at the expense of authenticity.

PETER VAN RIJSBERGEN  
Novato, CA

I was extremely happy to see Ken Pohlmann point out that technological "tricks" permeate every aspect of the recording field, not just those that are readily visible or audible. Like Mr. Pohlmann, I am doing the same kind of editing in writing this letter as do those who splice and dice the music we all listen to today. The only remedy: Go to a club, see a show, experience it live. But

who knows? The same thing is probably going on there, too!

GREGORY N. POLLETTA  
Waterbury, CT

I don't feel that musicians "cheat" listeners by implementing various studio editing techniques to record their material. Rather, given the plethora of high-tech equipment for cutting, pasting, editing, and creating music, I *expect* them to record with such tools.

Musicians are artists—they should use whatever means are available to express themselves. If that entails enhancing a recording so that the final version is pleasing from beginning to end, then so be it. Indeed, it's when a musician could have improved a recording but chose not to that I feel cheated.

RICHARD STUART  
Vashon, WA

In September's "Signals," Ken Pohlmann said that "at best, smash recording artists like Paula Abdul, Milli Vanilli, and Vanilla Ice are clearly much better dancers than musicians." Where does

he get off putting Paula Abdul in the same category as Milli Vanilli and Vanilla Ice? True, she is a dancer, but she is also a singer, actor, and all-around entertainer. I suggest that before Mr. Pohlmann judges Abdul again, he pick up her latest CD, "Spellbound," and listen to her sweet vocals. He may never think of Paula Abdul as just a dancer again.

KEVIN SCHWAB  
Cincinnati, OH

## MAS DCC-1

Julian Hirsch is to be commended for his in-depth and complete analysis of the numerous features of the MAS DCC-1 Digital Control Center in July. Unfortunately, the frequency-response measurements published in the review are not representative of our product. I strongly suspect that you received a miscalibrated unit. We would like very much for STEREO REVIEW to test another sample to confirm its performance in this respect.

MEL SCHILLING  
Music & Sound Imports  
Huntingdon Valley, PA

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**SONY**

Music & Sound Imports supplied Hirsch-Houck Laboratories with a second DCC-1, whose frequency response proved exceedingly flat—within 0.3 dB from 20 to 20,000 Hz. We agree that the response error recorded for the original unit, which was surprising in view of its other measurements, probably was the result of a sample defect rather than a design flaw.

## DAT Deterioration?

My local dealer told me that recordings on digital audio tape deteriorate after a few plays, to the point where analog cassettes sound superior. Is this true? If so, do DAT's suffer any deterioration if they are rerecorded?

LOGAN SMITH  
Cape Girardeau, MO

Although a digital audio tape, like any other tape, will eventually deteriorate, there should be no audible falloff in fidelity after "a few plays"—or many plays. The same goes for rerecording a tape over and over. The longevity of a DAT should be comparable to that of an analog cas-

sette. The main difference is that changes in the sound quality of a DAT will tend to be abrupt rather than gradual.

## Johnnie Johnson

In reviewing Johnnie Johnson's album "Johnnie B. Bad" in September, Steve Simels stated that it was his "first-ever solo album." It isn't. I own an album by Johnson titled "Blue Hand Johnnie," Pulsar Records PUL 1002 (pressed on blue vinyl), that I purchased a few years ago in St. Louis.

JAMES BIEDERT  
Laramie, WY

Steve Simels replies: Perhaps what you have is a small private-label production, as Johnson lives in St. Louis. In any case, "Johnnie B. Bad" is his first-ever major-label solo album.

## Corrections

The cover-photo caption on page 3 in the September issue failed to identify the speaker stands in the picture. They were



from Sanus, 3178 Ryan Lane, Little Canada, MN 55117; (612) 482-1019.

Also, the suggested retail price for the Altec Lansing System 3 three-piece speaker system was misstated in September's article on "The Sub/Sat Solution," page 45; it is \$600. And the correct price of the Sparkomatic STW-800 Bass Cannon in October "New Products," page 9, is \$89.99. □

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Ozzy Osbourne	No Rest for the Wicked	44215	Bob James	Touchdown	33594
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Ted Nugent	Ted Nugent	33692	Placido Domingo	Perhaps Love	32743
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0006



## You Should Hear The Latest Dirt.

### Dots Will Echo

The trio Dots Will Echo plays flat-out, high-octane New Jersey garage band rock and roll.

The producer of their new CD, ironically, is purist Will Ackerman founder of Windham Hill.

So at first it is jarring to hear him say, "I wanted to throw 'dirt' into the pristine digital recording process. This is not a concert grand being heard in Symphony Hall. It's three scrapping rockers trying to be heard above the drink orders. My first concern was re-creating in the studio the raw ambience of a bar. A small room with smoke."

He close-miked the drum kit to get the punch of the snare and kick drum. He let Berry severely overdrive his guitar amps,

capturing the warmth and ensuing distortion with digital accuracy. He let in the electronic hiss, which resembles tape hiss, from the synthesizers—the kind of electronic distortion you typically hear at a live performance.

The resulting mix puts you on a bar stool at the Bitter End.

Filled with solid hooks, "their music combines intellect and hormones," says Ackerman. "And I think this new High Street Records release nails it."

Visit a Boston Acoustics dealer and listen to Dots Will Echo on a pair of HD10 loudspeakers.

Music this good should be heard on speakers this good.



Dots Will Echo is: Nick Berry, guitar and vocals; Bob Albanese, bass and synthesizers; Steve Meltzer, drums.

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# NEW PRODUCTS



## Audio Electronics Systems

The AES-.5 full-range in-wall speaker (left in photo) was designed to be used with the AES-4 in-wall subwoofer (right). Each satellite has a 5¼-inch polypropylene woofer and a 2¼-inch ferrofluid-cooled tweeter with an on-board thermal-protection circuit and five-way binding-post connections. Frequency response is rated as 70 to 20,000 Hz, and recommended amplifier power is 10 to 50 watts rms per channel. The AES-4 dual-voice-coil subwoofer uses a 6 x 9-inch polypropylene cone and includes a crossover network to divide program signals between it and the satellites. Frequency response is rated as 28 to 90 Hz, and recommended amplifier power is 10 to 100 watts rms. Both speakers are 8 inches wide and 11¼ inches high; mounting depth is 3½ inches for the AES-.5, 3¾ inches for the AES-4. Prices: AES-.5, \$100 each; AES-4, \$295 each. Audio Electronics Systems, Dept. SR, 22 Parsons Dr., Swampscott, MA 01907-2930.

## JBL

The L7 is the flagship of JBL's new L Series of loudspeakers. The four-way tower system has a 1-inch, pure-titanium dome tweeter, a 5-inch mineral-filled polypropylene upper-midrange, an 8-inch high-polymer-laminate lower-midrange, and a 12-inch sidemounted woofer whose cone is made of Aquaplas. The speaker's narrow front baffle is said to optimize sound dispersion in the middle- and high-frequency ranges. Bandwidth is given as 30 to 27,000 Hz, sensitivity as 91 dB. Nominal impedance is 8 ohms. Crossover points are at 200, 900, and 4,000 Hz. Recommended maximum amplifier power is 400 watts. Dimensions are 9½ x 45½ x 17½ inches. Finish is a black-ash veneer. Price: \$925 each. JBL, Dept. SR, 240 Crossways Park West, Woodbury, NY 11797.



## Onkyo

The Onkyo TA-207 is a three-motor, three-head cassette deck with a closed-loop, dual-capstan transport. It has an isolated transformer and a low-impedance linear-switching power supply. Features include Dolby B and Dolby C noise reduction, Dolby HX Pro headroom extension, a bias-adjustment con-

trol, forward and reverse music search, a switchable FM-multiplex filter, and a peak-hold function for recording CD's. The TA-207 is supplied with a remote control and is compatible with Onkyo's Remote Interactive system. Price: \$530. Onkyo, Dept. SR, 200 Williams Dr., Ramsey, NJ 07446.



## Sanyo

Sanyo's CPM510 five-disc carousel CD changer features thirty-two-track programming, random play, intro-scan, continuous play, and repeat of one or all tracks of a disc. The CPM510 plays 3-inch discs without an adaptor. Technical features include an eight-times-over-sampling, 18-bit digital filter and dual 16-bit digital-to-analog converters. A remote control is included. Price: \$200. Sanyo, Dept. SR, 21350 Lassen St., Chatsworth, CA 91311.

# NEW PRODUCTS



## Kenwood

Kenwood's KA-V9500 audio/video integrated amplifier features Dolby Pro Logic circuitry with normal, wide, and phantom center-channel modes. It also uses digital signal processing to recreate six sound fields: arena, jazz club, stadium, discothèque, cathedral, and movie theater. A digital parametric equalizer is built in. The KA-V9500 delivers 90 watts each to the main front speakers and 45 watts each to one or two center speakers

and two rear speakers. It also has a line output for a separately powered subwoofer. There are six audio and six video inputs and outputs, with switching for easy dubbing. The supplied system remote control is preprogrammed to operate many Kenwood components and can learn control codes for other models. Price: \$1,499. Kenwood, Dept. SR, 2201 E. Dominguez, P.O. Box 22745, Long Beach, CA 90801.

## Bishop Plastics

The Bishop Plastics Clear Series of CD and component racks, made of  $\frac{3}{8}$ -inch clear acrylic, interlock for stacking. Open in front and back to prevent heat build-up, the component racks measure  $17\frac{1}{2}$  inches wide inside,  $18\frac{1}{4}$  inches outside,  $14\frac{1}{2}$  inches deep, and  $4\frac{1}{2}$ , 5, or 6 inches high. The company recommends that racks be at least  $\frac{1}{4}$  inch taller than the components. The CD rack, which can hold forty-two discs, measures  $6\frac{1}{8}$  inches high and deep and  $18\frac{1}{4}$  inches wide (outside). A base unit (shown at bottom) is recommended for stabilization of stacks more than 3 feet high. Custom sizes are also available. Price: \$30 for each module. Bishop Plastics, Dept. SR, 2065 Bascomb Carmel Rd., P.O. Box 1123, Woodstock, GA 30188; (800) 786-9851.



## Pioneer

Pioneer's PD-M650 six-disc magazine-type CD changer incorporates an eight-times-oversampling digital filter and a 1-bit digital-to-analog converter with noise shaping, which is said to eliminate nonlinearity and zero-crossing distortion. The rigid honeycomb chassis was designed to protect the laser pickup and disc drive from external vibration. The player can automatically adjust output levels from each loaded disc to provide a uniform preset level for recording, and a time-fade edit function enables users to fade out selected tracks auto-

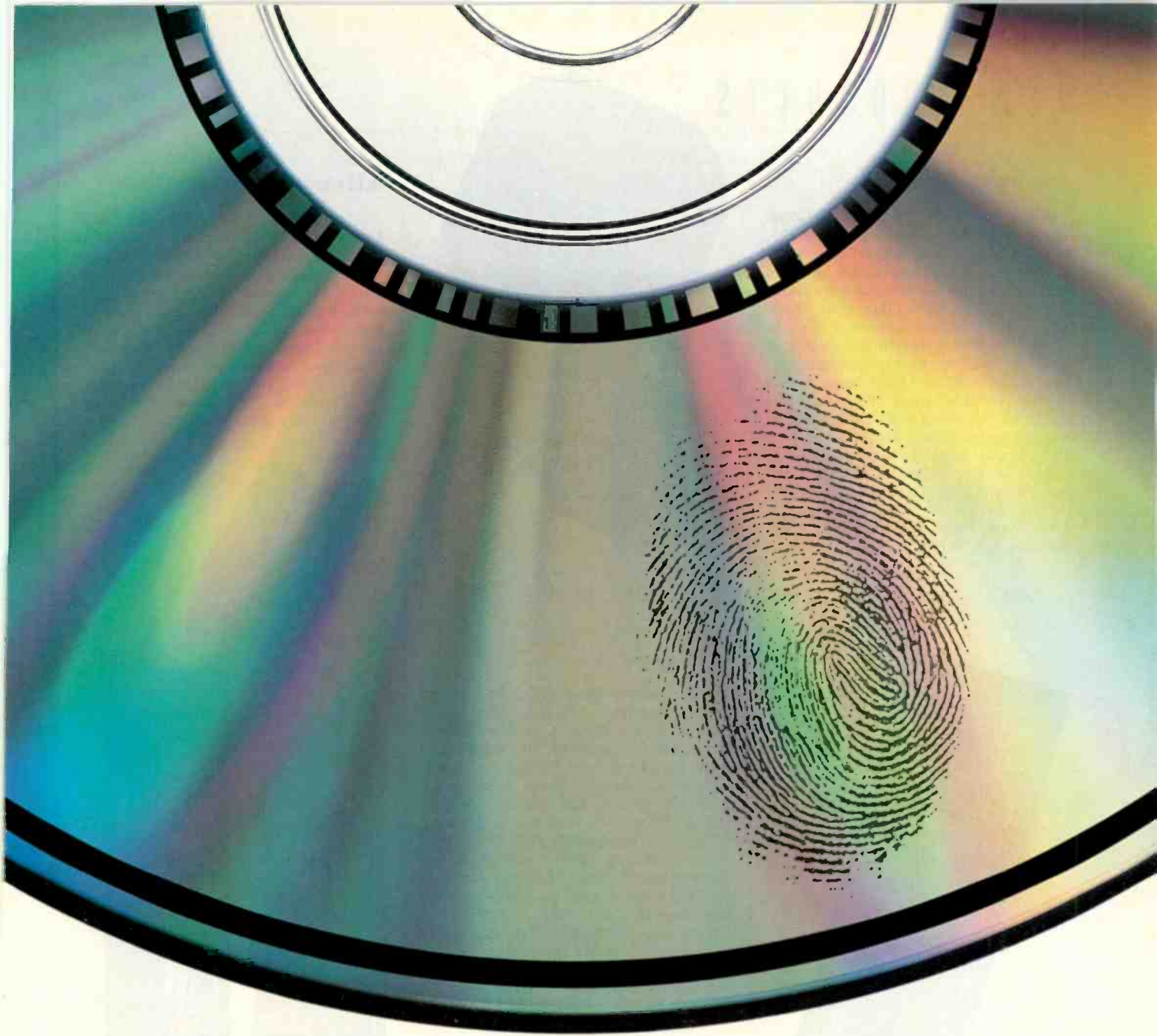
matically. The CD-Deck Synchro function pauses a tape in a compatible recorder while the player searches for the next programmed track. The display features message prompts to help users operate the player. Disc information such as programmed and deleted tracks can be stored for as many as twenty magazines, which can be classified according to the type of music and identified as such on the display. Price: \$440. Pioneer Electronics, Dept. SR, 2265 E. 220th St., P.O. Box 1720, Long Beach, CA 90801-1720.

## Earthquake



Earthquake's PA-4030 multichannel car power amplifier is rated at 30 watts each for four channels into 4 ohms or 45 watts each for four channels into 2 ohms and 90 watts each for two channels into 4 ohms. Tone controls offer 18 dB of boost or cut at 40 Hz and 12 dB at 20,000 Hz. Total harmonic distortion is given as 0.02 percent and signal-to-noise ratio as

96 dB. Other features include a pulse-width-modulation power supply, metal-oxide-semiconductor field-effect transistors (MOSFET's), and protection against short-circuits, thermal overload, and DC overload. The PA-4030 measures  $9 \times 2\frac{3}{4} \times 10$  inches. Price: \$495. Earthquake, Dept. SR, 1418 E. 3rd Ave., San Mateo, CA 94401.



## EVEN IF SOME OF TODAY'S MUSIC IS DIRTY, THAT SHOULDN'T STOP YOU FROM LISTENING TO IT.

The Technics SL-PC705 5-Disc Top Loading CD Changer is designed to prevent skipping over a piece of music, even if the disc is off center, warped, or dirty.

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problem. Available on all new Technics component CD players, it reads every disc individually. So the SL-PC705 recog-

nizes imperfections that threaten to disrupt the music, and helps circumvent the defect. Together with Technics' MASH\* Digital-to-Analog Converter you can be sure that virtually every nuance of the music is faithfully reproduced.

After all, what you listen to is up to you. The new line of Technics CD players and changers makes sure that you hear the music exactly as it was performed.



\* Technics developed the world's first MASH type DAC. MASH technology was invented by NTT (LSI Labs). MASH is a trademark of NTT



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# NEW PRODUCTS

## Alphasonik

Alphasonik's D Series of car loudspeakers includes (from top) the D-265, D-250, and D-240, all with integral grilles, heavy-duty construction, damped paper cones, and a nominal impedance of 4 ohms. The 4-inch dual-cone D-240 has a rated frequency response of 55 to 22,000 Hz, power-handling capacity of 60 watts, and 1 $\frac{1}{16}$ -inch mounting depth. The 5-inch coaxial D-250 has a 1-inch tweeter, rated response of 45 to 22,000 Hz, power handling of 80 watts, and 2 $\frac{1}{2}$ -inch mounting depth. The two-way, 6 $\frac{1}{2}$ -inch coaxial D-265 can handle 100 watts, is rated for 35 to 22,000 Hz, and has a 2 $\frac{3}{8}$ -inch mounting depth. Prices (per pair): D-240, \$69; D-250, \$160; D-265, \$175. Alphasonik, Dept. SR, 701 Heinz Ave., Berkeley, CA 94710.



## Allen Products Co.

Allen Products Co.'s Headliner CD Tower compact disc rack, made of a tubular-steel frame with anodized-aluminum backing, stores up to two hundred CD's. Its shelves are tilted to make it easier to read CD titles. The 51 $\frac{1}{2}$ -inch-high stand, which comes assembled, is 12 inches square at the base. Price: \$299 (California residents add 7 percent sales tax) plus \$12 shipping. Allen Products Co., Dept. SR, 279 S. Beverly Dr., Suite 1188, Beverly Hills, CA 90212.



All product information is provided by the manufacturers and does not represent the results of tests or evaluations by STEREO REVIEW. Suggested retail prices were current as of press time but are subject to change without notice.



## Universal

The Universal VX-6 remote control can learn the functions of as many as six different infrared remotes. There are thirty-two color-coded buttons, and five LED's indicate the status of the learn, send, and delete functions as well as warn of errors and low battery charge. A memory back-up circuit stores programmed information while the four AAA batteries are being changed. The VX-6 measures 6 $\frac{3}{4}$  x 2 $\frac{3}{8}$  inches. Price: \$49.95. Universal Security Instruments, Dept. SR, 10324 S. Dolfield Rd., Owings Mills, MD 21117.

## MB Quart

MB Quart's Quart Two bass-reflex loudspeaker has a 1-inch titanium-dome tweeter and a 6 $\frac{1}{2}$ -inch woofer with a butyl-rubber surround. Its seven-element crossover uses high-grade Mylar capacitors; the crossover point is at 2,800 Hz, with 12- and 18-dB-per-octave slopes. Frequency response is given as 42 to 32,000 Hz, sensitivity as 88 dB, and power handling as 80 watts. Nominal impedance is 8 ohms. The black-finished cabinet comes with injection-molded, nonresonant end caps, removable spikes, and heavy-duty, five-way, gold-plated binding posts. Dimensions are 8 $\frac{1}{4}$  x 28 $\frac{1}{2}$  x 9 $\frac{1}{2}$  inches. Price: \$499 a pair. MB Quart Electronics, Dept. SR, 25 Walpole Park S., Walpole, MA 02081.





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## CN URD THIS SNTNCE?

**O**f course you can read this sentence, thanks to the fact that much of written English is redundant—thus, it is easy to compress the data involved. If we ran short of paper to make magazines, it would be entirely possible to print articles in a fraction of the space. Although purists might scream in horror at the idea, there is no question that in the future data compression will become standard practice in virtually any application where information is stored or transmitted. And that includes audio.

Don't worry. STEREO REVIEW won't be printed in pidgin English on the backs of postcards, and recordings of Beethoven won't be limited to every fourth note. The beauty of data compression is that when properly handled, the information conveyed is relatively unaffected. You see, the aim of data compression is to reduce the amount of data used without significantly degrading the message represented by the data. This is accomplished by examining the message and eliminating redundant or extraneous data and packaging the remaining data in a more efficient way.

When it comes to audio recordings, there is considerable opportunity to reduce the bulk of the data because we are able to perceive only a fraction of the sound represented by a recorded signal. For example, it has been estimated that 73.4 percent of the sound in

# SIGNALS

by Ken C. Pohlmann

a Mozart wind-ensemble performance is inaudible.

Both the Digital Compact Cassette (DCC) and Mini Disc (MD) formats will use data compression. The MD, for example, uses an adaptive-transform algorithm to reduce the data rate by nearly four-fifths, from 1.41 megabits per second to 300 kilobits per second. The system identifies the audio components that are audible and encodes them as efficiently as possible by assigning bits as needed according to the amplitude of the signal to be recorded. Inaudible material is discarded. The trick is knowing which data can be safely discarded.

To solve that problem, psychoacoustic models of the ear are used to specify the dynamics of hearing and the parameters of the signal the ear is sensitive to. For example, sound below a certain amplitude cannot be detected; in particular, very low and very high frequencies are not audible unless their amplitude is relatively high. Only tones whose amplitudes are above the threshold of audibility at their frequencies can be heard.

Amplitude masking also plays a major role in audio data compression. Depending on their relative amplitude, soft (but otherwise audible) tones are masked by louder tones at nearby frequencies (within 100 Hz at low frequencies). A loud tone shifts the audibility threshold in its frequency range upward, masking the nearby softer tone. Because the softer tone is now inaudible, it need not be coded. Also, as the overall sound level increases, the ear's sensitivity decreases, shifting the threshold curve upward.

Similarly, temporal pre-masking and post-masking take place. A louder tone appearing just before a softer tone (within 3 milliseconds) or after it (within 200 milliseconds) will mask the softer tone. Stereo itself presents opportunities for data reduction because of the considerable redundancy between channels. Using signal analysis of the diverse and dynamically changing psychoacoustical cues in a sound, inaudible components can be removed with little or no sonic degradation.

The success of an audio data-compression system depends on the acuity of an individual's auditory perception, which is often difficult to assess, par-

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ticularly because listeners can learn over time and sharpen their acuity. Success also depends on the type of audio program being processed.

So how good is audio data compression? It can be very good, or very bad, depending on the algorithm used. For example, if I were to compress a 16-bit recording by simply discarding 12 bits, it would sound slightly worse than an Edison wax-cylinder recording. On the other hand, if my encoding/decoding algorithm were more sophisticated, you might never hear the compression. I recently played a series of compressed and uncompressed recordings to a group of college musicians—people with keen ears indeed—and no one (including myself) could hear any difference between 16-bit uncompressed recordings and the same recordings compressed by a factor of four.

**The aim of data compression is to reduce the amount of data used without significantly altering the message it represents.**

Based on that and other critical listening tests, it seems that compression ratios of 4:1 or perhaps more using an adaptive-transform coding method hold great promise for high-fidelity audio recording. But that is just the beginning. Other compression algorithms are rapidly being developed. For example, the modified discrete-cosine transform used in the proposed MPEG-1 standard video-coding algorithm enables pictures coded at 165 megabits per second to be reduced to 1.2 megabits per second, a compression ratio of 140:1. But that's kid's stuff compared to algorithms still being researched. The hot item now is wavelet-transform coding, which can achieve unprecedented video-compression ratios—with extremely high quality. Can wavelet encoding be applied to audio signals? It looks promising, but we'll have to wait N C. □

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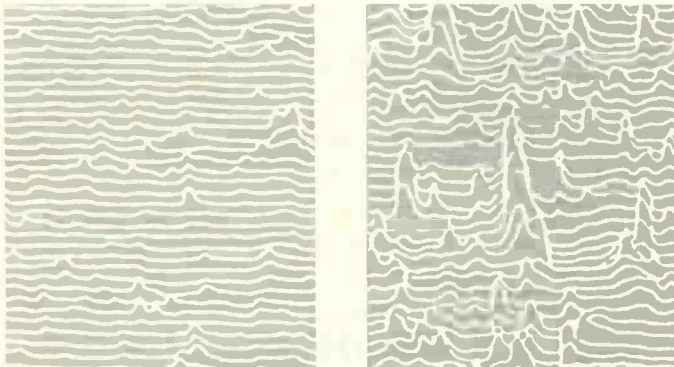
# THE SCIENCE BEHIND MAX



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Maxell XLII-S achieves new highs in Maximum Output Levels, offers wider dynamic range, along with significant reductions in AC Bias Noise and Modulation Noise. This is an all-new Maxell audiotape formulation capable of blowing you away like never before.

We started from scratch, creating



Smooth Side. Rough Side.  
Maxell dual-surface base-film reduces tape jitter.

XLII-S from the base-film up. In fact, the base-film is unlike anyone else's and our patent on it is pending.

We call it "dual-surface base-film." One side is smooth, the other rough. The smooth side provides the sound and the rough side provides a stable, non-sticky ride through the tape deck's transport mechanism with the least possible tape jitter.

Excessive tape jitter causes phase deviation which results in echo "shading."

Musically, this would make the violinists in a symphony orchestra sound as though they were strolling around the stage instead of sitting still. You don't want gypsy violinists wandering through your symphony.

The standard magnetic coating



A powerful reason for trying Maxell XLII-S.

on nearly all audiotapes today consists of gamma ferric oxide particles.

But standard wasn't what we were shooting for when we developed XLII-S. Instead, we harnessed a higher energy magnetic particle we call Black Magnetite. It has 13% greater magnetic power and is a major contributor to the outstanding MOL of this new tape.

Another is the superior dispersion technique we employ in placing the Black Magnetite particles onto the tape.



# MAXELL'S BLOW-AWAY SOUND.

During manufacture, some tapes are run through a magnetic field and the magnetic particles adhere to the film in a willy-nilly, helter-skelter pattern—similar to the arrangement you'd find on the end of a magnet if you dunked it into a bowl of metal filings.

At Maxell, we use a unique and complex process called "multi-orientation." Simply stated, it allows us to place smaller, Black Magnetite particles onto the tape in greater density, in near perfect alignment. The result is a smoother, more uniform coating which produces less AC Bias Noise.

Finally, there's a newly engineered cassette shell that doesn't merely house the tape. It *contributes* to the tape's outstanding performance.

Through the use of a new composite material—a blend of ceramic and polymer resins—we created a *high resonance-damping cassette shell*. More rigid and weightier than standard

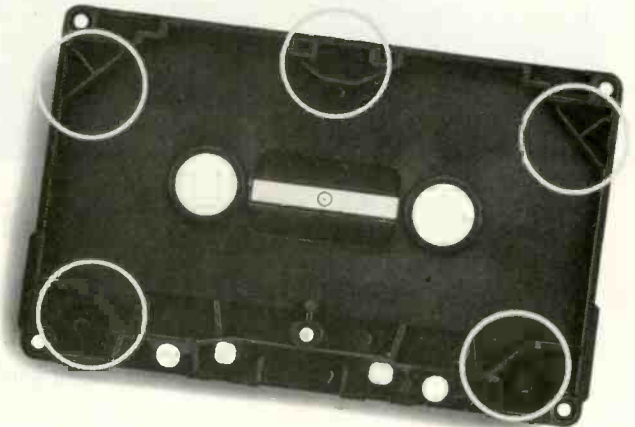
cassettes, it reduces modulation noise and helps maintain phase accuracy. Also, by making the window smaller, we were able to improve the cassette's overall structural integrity, building in five support points instead of the standard three.

All in all, we think you'll find that Maxell XLII-S is the finest High Bias audio cassette available today.

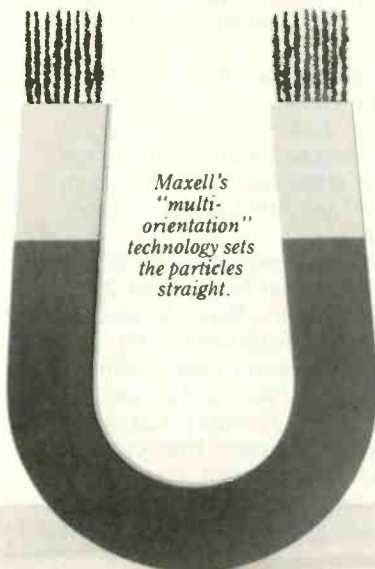
Make it your first choice for program material that demands the highest standards of performance. Buying anything less is like knowingly setting out to take your music to the min.

IEC Tape Specifications				
Tape Selector Position		Unit	IEC II High (CrO <sub>2</sub> ) XLII-S 100	
Physical Properties	Backing Material-		Dual Surface Tensitized Polyester Base Film	
	Tape Width	mm	3.81	
	Coating Thickness	μm	4.5	
	Total Thickness	μm	11.0	
	Yield Strength	N	5.5	
Magnetic Properties	Breaking Strength	N	10.5	
	Magnetic Material	—	Black Magnetite	
	Coercivity	kA/m (Oe)	58(720)	
	Retentivity	mT(Gr)	190(1900)	
Electro-acoustic Properties	Squareness	—	0.90	
	Optimum Bias		dB +1.0	
		315 Hz	dB +0.5	
	Sensitivity	6,300 Hz	dB +1.5	
		12,500 Hz	dB +3.0	
		16,000 Hz	dB +4.5	
		Output Uniformity at 315 Hz	dB	0.3
	Output Uniformity at 8 kHz	VU	0.4	
	Dynamic Range	315 Hz	dB	65.5
		10 kHz	dB	57.5
	MOL (Maximum Output Level)	315 Hz	dB	+6.0
		10,000 Hz	dB	-2.0
AC Bias Noise		dB	-50.5	
Erasing Effect		dB	70	
Print-Through		dB	51	

The XLII-S Performance Story.



XLII-S vibration-damping cassette shell has five support points for increased rigidity and durability.



Maxell's "multi-orientation" technology sets the particles straight.



TAKE YOUR MUSIC TO THE MAX.

# TEST REPORTS



## Sansui AV-7000 Audio/Video Integrated Amplifier

Julian Hirsch, Hirsch-Houck Laboratories

**S**ANSUI'S AV-7000 is a full-featured surround-sound A/V integrated amplifier whose video functions consist largely of signal-switching features. It has two sets of rear-apron video and audio input and output connectors for components such as a TV set and VCR, plus two more sets of inputs for a videodisc player and another video source. One set of the input connections can be switched to duplicate jacks on the front panel to simplify playback from a camcorder.

There are also provisions for connecting an external video processor (used to modify the appearance of the picture) and an output for driving a video monitor. All video signal connections provide both phono-type composite-video jacks and S-video jacks.

The AV-7000's audio facilities include five channels of amplification (for front, center, and rear speakers in a surround-sound system) and a choice of six surround modes as well as normal two-channel stereo operation. In addition to Dolby Pro Logic decoding circuits, there is a Dolby 3 Stereo mode that "folds over" the surround channels into the two regular stereo speakers while still feeding the center channel to one or two center speakers. If the center speaker has limited low-frequency capability, the system can be set to send center-channel frequencies below 100 Hz to the left and right front speakers.

The other surround modes are identified as Natural, Stadium, Hall, and Matrix. According to the instruction manual, the Natural mode is designed for use with sources containing a rich

echo component, and Stadium provides the sense of space experienced at outdoor concerts and sports events. Stadium is also the only one of the surround modes that provides output to the rear speakers from monophonic sources. The Hall mode, as its name implies, is intended to simulate the effect of a typical concert-hall environment. Matrix provides an unmodified signal to the front speakers, with a delay of the same signal fed to the rear speakers.

The audio-only inputs are identified as phono, tuner, CD, Tape 1/DAT, and Tape 2/Monitor. The selected source can be recorded on either tape deck, and tapes can be dubbed from Tape 1 to Tape 2 (but not in the other direction).

The AV-7000's amplifiers are all rated to drive 8-ohm loads, from 20 to 20,000 Hz, with less than 0.02 percent total harmonic distortion (THD). The left, right, and center front amplifiers are all rated at 70 watts output and the rear amplifiers at 35 watts per channel.

The AV-7000's three front-channel amplifiers have separate preamplifier outputs and main-amplifier inputs joined by removable jumpers on the



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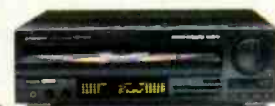
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back panel. This simplifies using external amplifiers for greater power capability or to drive multiple speaker systems. There is also a line-level mono output, controlled by a front-panel knob, for driving a powered subwoofer.

All the input selectors and surround-sound selectors are pushbuttons, but most of the other controls are

full-size knobs, clearly marked and easy to use. Across the bottom of the panel are bass, midrange and treble tone controls, level controls for the mono output and the input to the surround circuits, and a channel-balance knob. A video recording selector switches the program source to be recorded on a VCR connected to Video 1 or Video 2. The large volume knob,

with a red LED serving as its pointer, is at the right of the display window. It is motor driven in remote operation.

Other pushbuttons switch the front speakers off and on, engage the video-processor loop, and switch the Video 3 inputs to their front-panel jacks. The CD DIRECT button, usable only with the CD input, bypasses all tone controls and signal-processing circuits, connecting a CD player through the volume control directly to the front-channel power amplifiers.

The display window in the upper center of the panel shows the selected source in large letters and numerals and the status of other controls in smaller letters. To its right, two pairs of buttons control the levels of the rear and center channels; the relative settings (from +15 to -50 dB in 1-dB steps) are displayed in the window while the adjustment is being made. Another pair of buttons performs a similar function for delay time, which is adjustable in 1-millisecond (ms) steps from 0 to 100 ms except in the Dolby Pro Logic mode, where the range is limited to 15 to 30 ms by Dolby licensing requirements. The specific delay set for each surround mode is retained in memory until changed. The remaining front-panel features are the headphone jack (carrying only the front-channel program) and the large power pushbutton. In its off setting, a small red LED shows that the amplifier is in a standby mode, from which it can be turned on or off by the supplied remote control.

In addition to the many line-level input and output jacks, the AV-7000's rear apron has three pairs of speaker-output binding posts, which accept only stripped wire ends (banana plugs cannot be used). The center-channel amplifier's output can be routed to one or two speakers, and an adjacent switch adapts it to the different load impedances presented in these two modes. A pair of jacks enables the AV-7000 to tie a compatible Sansui cassette deck and CD player to its remote control. There are three AC outlets, one switched.

The AV-7000's remote controller duplicates virtually all the operating functions of the amplifier and has buttons dedicated to compatible Sansui components. In addition, it can learn the commands for components from other manufacturers, making it an ef-

## FEATURES

- Dolby Pro Logic decoding with Dolby 3 Stereo mode
- Digital signal processing to simulate four different acoustic environments
- Audio inputs for phono, tuner, CD, and tape, plus audio channels of all video sources
- Inputs for four video sources, two with recording outputs; Video 3 inputs duplicated on front panel
- All video input/output circuits have both composite and S-video connectors
- Video-processor loop
- Video-monitor output
- CD Direct mode bypasses all signal-processing circuits
- Bass, midrange, and treble tone controls
- Video recording source selector
- Center- and rear-channel levels adjustable relative to main front-channel level
- Delay times of surround outputs adjustable
- Line-level mono output (level adjustable from front panel)
- Front-panel headphone jack
- Outputs for main front, rear, and one or two center-channel speakers
- Separate preamplifier outputs and main-amplifier inputs for main front and center channels
- Three AC outlets, one switched
- Supplied system remote control duplicates all operating functions and can control compatible Sansui components; programmable to control other components

## LABORATORY MEASUREMENTS

All figures for main front channels only, except as specified.

**1,000-Hz output power at clipping:** 88 watts into 8 ohms

**Clipping headroom** (relative to rated output): 1 dB

**Dynamic power output:** 120 watts into 8 ohms, 200 watts into 4 ohms, 255 watts into 2 ohms

**Dynamic headroom** (8 ohms): 2.34 dB

**Maximum distortion** (20 to 20,000 Hz into 8 ohms): 0.05% at 20 Hz and 70 watts

**Frequency response:** +0, -1 dB from 20 to 20,000 Hz; CD Direct, +0, -0.23 dB from 20 to 20,000 Hz

**Sensitivity** (for a 1-watt output into 8 ohms): CD, 18 mV; phono, 0.35 mV

**A-weighted noise** (referred to a 1-watt output): CD, -79.5 dB; phono, -75.6 dB

**Phono-input overload** (1,000-Hz-equivalent levels): 147 to 157 mV from 20 to 20,000 Hz

**Phono-input impedance:** 48,000 ohms in parallel with 170 pF

**Tone-control range:** 100 Hz,  $\pm 5.5$  dB; 1,000 Hz,  $\pm 6.5$  dB; 10,000 Hz,  $\pm 8$  dB

**RIAA phono equalization error:** +0.04, -0.8 dB from 20 to 20,000 Hz

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fective system remote control. The Sansui AV-7000 measures 17 inches wide, 17¼ inches deep, and 6¼ inches high, and it weighs 32 pounds. Price: \$1,000. Sansui USA, Inc., Dept. SR, 1290 Wall St. W., Lyndhurst, NJ 07071.

## Lab Tests

Our measurements were limited to the AV-7000's audio functions, and then to only the main front channels except for clipping-level power measurements of the center channel. All three front channels clipped at about 88 watts into 8 ohms, corresponding to a clipping headroom of 1 dB. We also drove 4-ohm loads briefly, measuring a clipping level of 106 watts. Dynamic power output into 8 ohms was 120 watts, indicating a dynamic headroom of 2.34 dB. Into 4 and 2 ohms, respectively, dynamic power was 200 and 255 watts.

The 8-ohm power output versus frequency at a constant distortion of 0.1 percent was 88 watts from 400 to 10,000 Hz, decreasing to 84 watts at 20,000 Hz and 68 watts at 20 Hz. Into 4 ohms, the output was 106 watts from 2,000 to 3,000 Hz, dropping to 100 watts at 20,000 and 60 Hz and to 82 watts at 20 Hz.

The total harmonic distortion plus noise (THD + N) of one front channel into 8 ohms at the rated 70 watts was 0.044 percent over virtually the full audio range. The distortion at 1,000 Hz reached its minimum of 0.01 percent at 85 watts, just before clipping occurred. A spectrum analysis of the 1,000-Hz output distortion showed about 0.006 percent (excluding noise) at 1 watt and 70 watts output.

Frequency response through the CD Direct input was very flat (within 0.1 dB) from 10 to 10,000 Hz, falling to -0.5 dB at 30,000 Hz and -3.5 dB at 100,000 Hz. Even through the normal CD input, which included the tone controls and considerable internal circuitry in the signal path, the response was +0, -0.2 dB from 70 to 20,000 Hz and -1 dB at 20 Hz.

The bass and treble tone controls affected only the frequency ranges below 200 Hz and above 2,000 Hz, and the midrange control affected most of the range between 100 and 10,000 Hz, though its maximum effect was much less than that of the other controls.

The RIAA phono equalization was

also very accurate, varying +0.04, -0.4 dB from the standard response over a range of 26 to 20,000 Hz. Phono-input impedance was 48,000 ohms in parallel with 170 picofarads. The phono stage overloaded at about 150 millivolts (referred to 1,000 Hz) over the range of 20 to 20,000 Hz.

The amplifier's input sensitivity for a 1-watt reference output was 18 millivolts (mV) through the CD inputs and 0.35 mV through the phono input. Its corresponding A-weighted noise levels, referred to 1 watt, were -79.5 and -75.6 dB.

## Comments

Despite its apparent complexity, the Sansui AV-7000 was very easy to install and operate (we used it in a four-speaker surround-sound system). Its controls proved to be logically placed, and their operation quickly became intuitive.

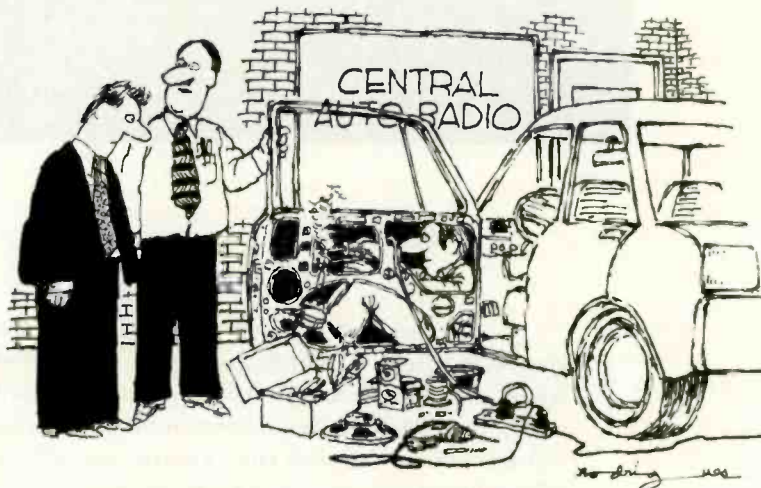
All we had to do to appreciate the signal-processing features was to push the buttons and listen. The differences between the several modes were plainly audible, and—as with most digital signal processing (DSP) components—one can get almost as much fun out of varying their parameters as from the subsequent listening.

The instruction manual was quite complete, and some time reading it would be well spent. All DSP components we have used call for some experimentation to achieve the best results, but almost any of their simulated environments is likely to be an im-

provement over ordinary two-channel stereo. The AV-7000 was no exception to this rule.

Using the AV-7000's programmable remote control proved an unexpected pleasure. Most devices intended to provide complete system control are impossibly cluttered and illogically laid out. The remote control supplied with the AV-7000 was easily the best we have used so far. About half of its buttons are duplicates of the amplifier's controls, identical in marking as well as function. The other buttons, in several logical groupings, are designed to operate a compatible Sansui tape deck, CD player, tuner, and equalizer, and no doubt they would be easy to control with this handset.

The real surprise came when we tried to program the controller for a totally different CD player, several years old and not of Sansui manufacture. The process was so quick and foolproof that within a few minutes we had the CD player at the beck and call of the AV-7000's remote control, which was even easier to use for this purpose than the one that came with the player. Memorizing commands from the CD player's remote took no more than a couple of seconds each and never required a second try (in sharp contrast to most "learning" remotes we have used in the past). Overall, using the AV-7000 was an unalloyed pleasure. Its straightforward operation, strong performance, and versatility make it a fine value among today's A/V amplifiers. □



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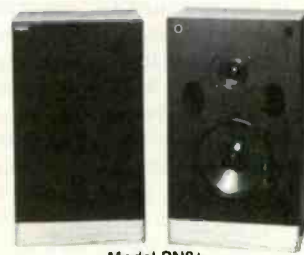
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## Altec Lansing Model 508A Loudspeaker System

Julian Hirsch, Hirsch-Houck Laboratories

**T**HE Altec Lansing Model 508A is a three-way acoustic-suspension speaker system constructed in the popular tower format. Its ruggedly built, rigid wooden cabinet is attractively finished on all visible surfaces in walnut veneer. The cabinet measures 40½ inches high and 11 inches square, plus an additional inch of depth for the removable grille. Each speaker weighs almost 60 pounds.

The frequencies below 750 Hz are radiated by two 8-inch woofers with carbon-fiber cones. Middle frequencies are handled by a 2¼-inch polyimide-and-titanium dome driver, and there is a second crossover at 3,500 Hz to a 1-inch polyimide/titanium dome tweeter. The drivers are vertically aligned and mounted flush with the front panel for minimum boundary diffraction. The two gold-plated multi-

way binding posts near the bottom of the rear panel, which also accept single or dual banana plugs, are recessed and angled for easy cable connection.

Altec Lansing specifies the impedance of the Model 508A as 6 ohms, its sensitivity as 90.5 dB, and its bandwidth as 24 to 22,000 Hz. The system is designed for use with power amplifiers rated from 125 to 250 watts per channel. Price: \$1,100 a pair. Altec Lansing Consumer Products, Dept. SR, Milford, PA 18337.

### Lab Tests

We placed the two Altec Lansing 508A speakers about 9 feet apart and 3 feet out from the wall behind them. As usual, we measured the room response with the microphone about 12 feet in front of the left speaker, on its forward axis, and approximately 30 degrees off the axis of the right speaker. The speakers were driven one at a time with a sine wave that was warbled over a one-third-octave range as it swept slowly from 20 to 20,000 Hz.

The curves for both speakers, plotted automatically on a single sheet of logarithmic chart paper, followed similar trends but usually had opposite narrow-band variations over most of the frequency range. We averaged the curves visually to produce a single room-response curve. The room's high-frequency absorption characteristics had been determined previously with the aid of carefully calibrated reference speakers, and we applied the resulting response correction at frequencies over 10,000 Hz.

Although this technique gives a reasonably good indication of a speaker's overall energy output into the listening space, room-boundary effects make it invalid at frequencies below a few hundred hertz. For this part of the spectrum, we measure the woofer output separately, with the microphone placed very close to the center of the cone. The resulting plot gives us the woofer's anechoic response, which we splice to the room curve to derive a corrected, averaged composite frequency response for the speaker.

In this case, the bass-response curve closely matched the portion of the room curve between 80 and 500 Hz, resulting in a believable composite response curve over the full audio range. Its shape correlated well with what we heard from the speakers and



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showed that the Model 508A's output was flat within  $\pm 2.5$  dB from 130 to 20,000 Hz. The output rose slightly at lower frequencies, by an additional 3 dB between 60 and 100 Hz, and fell off at 12 dB per octave below 60 Hz. Overall, the variation was  $\pm 4.5$  dB from 35 to 20,000 Hz.

The speaker's measured sensitivity was even higher than rated, producing a 92.5-dB sound-pressure level (SPL) at 1 meter with a 2.83-volt input of full-range pink noise. Minimum system impedance was about 4.5 ohms between 100 and 200 Hz, with a maximum of 14 ohms at 55 Hz and between 600 and 700 Hz. Over most of the audio range the impedance was 6 ohms or greater, justifying the speaker's 6-ohm rating.

We measured bass distortion with the microphone close to one of the woofers. The constant input level of 2.12 volts corresponded to the signal that would create our reference 90-dB SPL. With that input, the woofer's distortion was between 0.5 and 1 percent from 50 to 300 Hz, rising to the range of 1.8 to 2 percent from 400 to 700 Hz. Distortion rose smoothly at lower frequencies, to 2.5 percent at 40 Hz, 4.6 percent at 30 Hz, and 6.5 percent at 24 Hz.

We measured the system's high-frequency horizontal dispersion both on its forward axis and 45 degrees off it. The two curves began to diverge slightly above 6,000 Hz, reaching a 5- or 6-dB difference at 10,000 Hz and showing a large difference above 15,000 Hz.

Our measurements indicated that the true (acoustic) crossover between the woofers and the midrange driver was closer to 500 Hz than the rated 750 Hz. The crossover to the tweeter could not be detected.

As might be expected from its driver complement, the Altec Lansing Model 508A had an impressive power-handling ability. Feeding 100-Hz single-cycle bursts, our amplifier clipped at 1,190 watts into the speaker's 4.6-ohm impedance with no audible signs of distress from the speaker. Similar results were obtained at 1,000 and 10,000 Hz, with maximum levels of 655 and 820 watts, respectively.

## Comments

The Altec Lansing Model 508A projects an aura of quality even before

it is connected to a music system. The cabinet finish and workmanship are noteworthy, and it is one of a limited number of loudspeakers whose appearance is not at all degraded by removing its grille. The interior of the cabinet is obviously well braced and stiffened, since rapping any part of it with the knuckles produced a sound like rapping a block of concrete.

But the only real proof of a speaker's performance is in the listening,

## The Altec Lansing 508A generated low-distortion, room-filling output down to the vicinity of 30 Hz.

and here the Model 508A lived up to expectations in full measure. Its overall sound quality was smooth and balanced, covering the full audio range without obvious emphasis or insufficiency. With certain program material (notably male announcers' voices on FM radio) there was a trace of warmth associated with the slightly emphasized output in the octave below 100 Hz. On the other hand, when the program contained any *real* bass content, the two woofers made themselves heard (and felt) in a way that cannot be matched by the many good speakers whose lower limits are around 50 Hz. The Model 508A could generate low-distortion, room-filling output down to the vicinity of 30 Hz, and its high sensitivity does not place unreasonable demands on the driving amplifier.

Considering its size, the Model 508A is somewhat unusual in sounding as good at a 2-foot distance as at 15 feet. The contributions of its four drivers were so smoothly blended that it was impossible to localize each one audibly at distances greater than a few inches. This quality probably has little importance to most listeners, but it serves to demonstrate the successful integration of the system into what is effectively a single sound source.

The Altec Lansing 508A is an excellent combination of first-rate sound, attractive styling, and reasonable size. We found nothing in its physical or acoustic characteristics that merited criticism.

Janet Jackson's Rhythm Nation (A&M) 72386

**Trixter** (Mechanic/MCA) 61594

**Black Box: Dreamland** (RCA) 84063

**Prince: Graffiti Bridge** (Paisley Park) 34107

**Traveling Wilburys, Volume One** (Warner Bros.) 00711

**Def Leppard: Pyromania** (Mercury) 70402

**Sinead O'Connor: I Do Not Want What I Haven't Got** (Chrysalis) 33512

**George Benson/Count Basie/Orch.: Big Boss Band** (Warner Bros.) 13519

**All The Best Of The Lovin' Spoonful: (Buddah) 10012**

**Dwight Yoakam: If There Was A Way** (Reprise) 64310

**Anne Murray: You Will** (Capitol) 73232

**Bobby Brown: Dancel...Ya Know It** (MCA) 73660

**Daryl Hall & John Oates: Change Of Season** (Arista) 00543

**Debbie Gibson: Anything Is Possible** (Atlantic) 24815

**Charlie Parker: Bird/Original Recordings** (Verve) 01044

**Tom Petty: Full Moon Fever** (MCA) 33911

**Gershwin, Overtures/McGilinn** (Angel) 70391

**Madonna: I'm Breathless** (Sire) 00572

**Best Of Bad Company: 10 From 6** (Atlantic) 60321

**Bruce Hornsby & The Range: A Night On The Town** (RCA) 63689

**Raffi: Evergreen** (MCA) 10492

**Peter, Paul & Mary: Flowers & Stones** (Gold Castle) 64074

**The King And I/Original Cast** (MCA) 64020

**The Alarm: Standards** (I.R.S.) 24765

**The Duke Ellington Orchestra: Digital Duke** (GRP) 63356

**Paul Simon: Graceland** (Warner Bros.) 72315

**Fine Young Cannibals: The Raw And The Cooked** (I.R.S.) 01068

**Lita Ford: Stiletto** (RCA) 63893

**Styx: Edge Of The Century** (A&M) 74498

**Pebbles: Always** (MCA) 11001

**Kane Roberts: Saints & Sinners** (DGC) 53619

**Madonna: The Immaculate Collection** (Sire) 54164

**Jasmine Guy** (Warner Bros.) 54384

**AC/DC: Back In Black** (Atlantic) 13772

**Mark Chesnutt: Too Cold At Home** (MCA) 24819

**Megadeth: Rust In Peace** (Capitol) 11053

**Quincy Jones: Back On The Block** (Warner Bros.) 64116

**The Cure: Mixed Up** (Elektra) 74190

**Deee-Lite: World Clique** (Elektra) 52050

**Nell Young: Ragged Glory** (Reprise) 34621

**Slaughter: Stick It To Ya** (Chrysalis) 42308

**Boogie Down Productions: Live Hardcore Worldwide** (Jive) 44584

**Replacements: All Shook Down** (Warner Bros.) 83585

**The Oak Ridge Boys: Unstoppable** (RCA) 64423

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**The Go-Gos: Greatest Hits** (I.R.S.) 50315

**Tears For Fears: The Seeds Of Love** (Fontana) 33653

**Marty Stuart: Tempted** (MCA) 70976

**Anita Baker: Compositions** (Elektra) 00921

**Soul II Soul: Vol. II: 1990-A New Decade** (Virgin) 00567

**Chick Corea Akoustic Band: Alive** (GRP) 10721

**Best Of Robert Palmer: Addictions** (Island) 10819

**Jesus Jones: Doubt** (SBK) 44654

**Pump Up The Volume/Sdtk.** (MCA) 44606

**Huey Lewis & The News: Sports** (Chrysalis) 44448

**Bob Marley: Legend** (Island) 53521

**Eagles: Their Greatest Hits 1971-1975** (Asylum) 23481

**R.E.M.: Out Of Time** (Warner Bros.) 24762

**Kentucky Headhunters: Pickin' On Nashville** (Mercury) 24740

**Damn Yankees** (Warner Bros.) 14852

**Lynyrd Skynyrd: Skynyrd's Inneryds** (MCA) 01150

**Whitney Houston: I'm Your Baby Tonight** (Ansta) 10663

**Pat Benatar: Best Shots** (Chrysalis) 44319

**Clint Black: Put Yourself In My Shoes** (RCA) 24690

**Jimmy Buffett Live!: Feeding Frenzy** (MCA) 24853

**Metallica: ...And Justice For All** (Elektra) 00478

**The Bonnie Raitt Collection** (Warner Bros.) 00569

**Marcus Roberts: Alone With Three Giants** (Novus) 54397

**Too Short: Short Dog's In The House** (Jive) 54304

**Jeff Lynne: Armchair Theatre** (Reprise) 00803

**John Denver's Greatest Hits** (RCA) 13777

**Best Of The Doobie Brothers** (Warner Bros.) 43738

**Dirty Dancing/Sdtk.** (RCA) 82522

**ZZ Top: Afterburner** (Warner Bros.) 64042

**Keith Sweat: I'll Give All My Love To You** (Elektra) 51603

**Vince Gill: When I Call Your Name** (MCA) 63474

**Skid Row** (Atlantic) 01038

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**The Lynch Mob: Wicked Sensation** (Elektra) 11076

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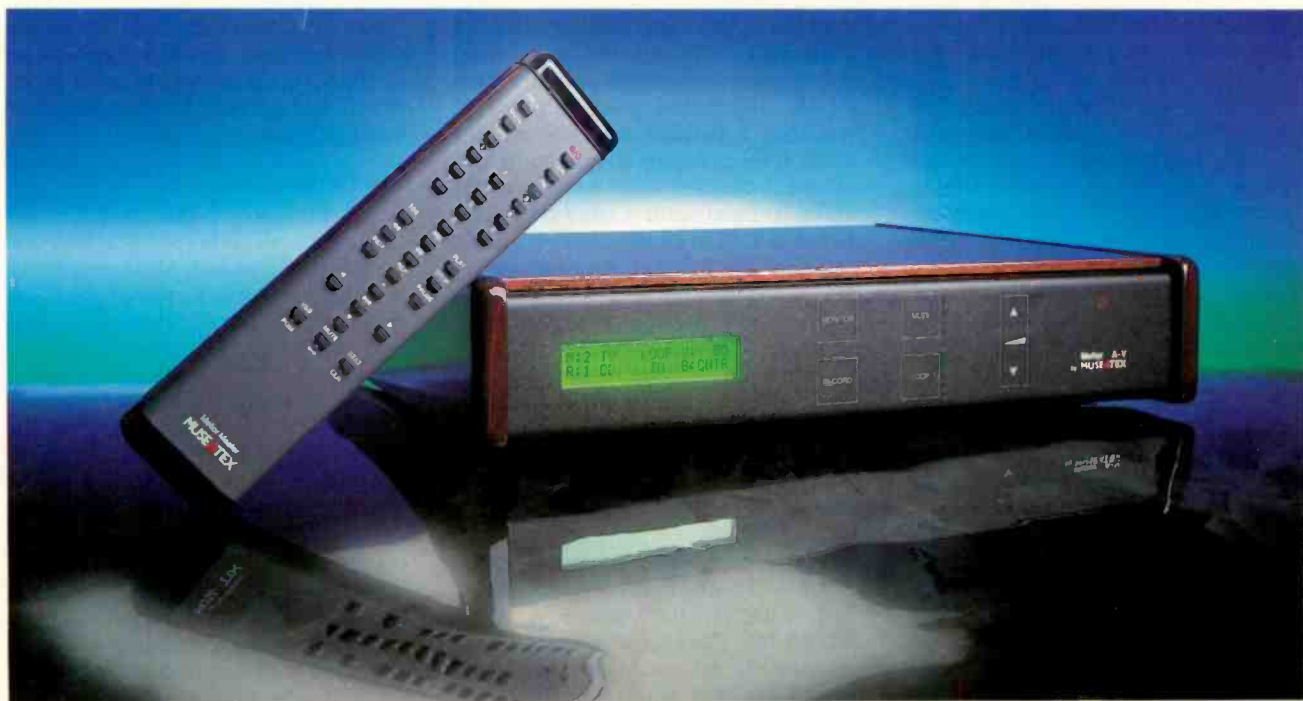


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# TEST REPORTS



## Museatex Melior A/V Control Center

Julian Hirsch, Hirsch-Houck Laboratories

**T**HE Melior Audio/Video Control Center from Museatex Audio is a unique product from a company known for unconventional and innovative audio components.

There is little in the external appearance of the Melior Control Center that could give a clue to its function. Its simple dark-gray panel has a small LCD window but no knobs or other visible controls, and it is framed by a handsomely finished wooden cabinet.

A closer look reveals panel markings, barely visible against the dark surface, reading MONITOR, RECORD, MUTE, and LOOP plus up and down arrows. These imply some sort of audio control function, but the purpose of the unit is still not obvious. That question is finally answered by the rear apron, which is filled with signal connectors, including four pairs of audio inputs with stereo RCA-type phono jacks (all of the audio inputs and outputs use standard phono connectors), two sets of stereo audio/video

inputs with S-video jacks, and two sets of audio/video inputs with phono jacks for composite-video connections. There are four sets of tape-recording outputs, two audio only, one with audio connections plus an S-video jack, and one for audio and composite video. In addition, the unit has a switchable, audio-only external-processor loop.

There are two pairs of audio output jacks and both S-video and composite-video output jacks. The unit also has MIDI (musical-instrument digital interface) input and output jacks, for interconnection with a Melior Multi-Room system or with certain electronic musical instruments, and a power-output jack for use with an optional external phono-preamplifier module.

The Melior Audio/Video Control Center is aptly named, for control is its sole function. While it is intended to be used as a preamplifier, its gain is small and it offers none of the frequency-response adjustments commonly found in preamplifiers. Its only

purpose, aside from volume and balance control, is selecting and channeling audio and video program sources to the desired listening/viewing or recording devices. To this end, it not only provides for a wide range of signal formats but is designed to preserve the purity of audio and video signals to the utmost degree.

All signal control and switching is done by solid-state circuits, with no mechanical switches or controls in the signal path. Audio and video signals are completely isolated from each other, with separate power supplies and thorough shielding. Volume is adjusted in imperceptible half-decibel steps over a range of more than 60 dB.

Most of the Melior A/V Control Center's functions can be operated from its handful of barely visible front-panel controls by pressing the yielding plastic-covered panel in the indicated squares, but the power can be turned on or off only from the remote unit, which also operates *all* of the many control and programming functions.

When the power is turned on, the display window shows which sources have been selected for listening, which for recording, and the current settings of the volume and balance adjustments. Although the inputs and recording outputs are numbered from 1 to 8, the unit can also be programmed

# TEST REPORTS

(through its remote control) to display an alphanumeric ID up to four characters long for each selection.

In addition to its programming functions, the remote control selects the listening and recording sources, sets volume and balance, selects muting, and switches the external-processor loop. Buttons on the remote step the display through a series of volume and balance settings. The Control Center can also be programmed with a balance setting and up to four volume settings for each input source.

The Museatex Melior A/V Control Center measures 14½ inches wide, 13½ inches deep, and 3 inches high, and it weighs 14½ pounds. Price: \$2,200 including a dedicated remote control (not shown); the system Master Remote shown in the photo is \$100 extra; optional phono-preamplifier module, \$500. Museatex Audio, Inc., Dept. SR, 6605 Thimens, Ville St. Laurent, Quebec H4S 1W2, Canada.

## Lab Tests

We tested only the audio functions of the Melior A/V Control Center. The

manufacturer's specifications for its video section include an excellent signal-to-noise ratio (S/N) of better than 48 dB, differential gain and phase of less than 5 percent, and 100 percent black-level retention thanks to its use of direct-coupled video switching circuits. Its bandwidth is rated at 6 MHz, which is well in excess of the 4.2 MHz required for full broadcast-resolution NTSC video.

The unit's sensitivity at maximum gain was 0.28 volt input for a 0.5-volt output. Its A-weighted S/N was 86 dB referred to 1 volt. Its input-overload level (and output-clipping level) was 5 volts, more than sufficient for any normal program source. The balance control had a range of only  $\pm 2$  dB in steps of 0.2 dB.

Frequency response was flat within  $+0.1$ ,  $-0.5$  dB from 10 to 100,000 Hz and  $+0.05$ ,  $-0.03$  dB from 20 to 20,000 Hz. Channel separation was a uniform 70 dB across the full audio band from 20 to 20,000 Hz. The 1,000-Hz harmonic distortion (including noise) was 0.04 percent at 2.5 volts output. A spectrum analysis of the

1,000-Hz harmonics at a 1-volt output showed a series of odd harmonics up to the fifteenth or higher, with levels from 0.003 percent down to less than 0.001 percent.

## Comments

The Museatex Melior A/V Control Center met all of its specifications that we were able to test. Most impressive was that in such key characteristics as frequency response, channel separation, distortion, and noise it was essentially of "CD quality." In other words, it should not audibly, or even measurably in most cases, degrade the sound of a good CD player and a well-made disc.

We were equally pleased with its silky smooth operation. With one tiny exception, all of the signal-control actions took place in complete silence, both electrical and mechanical. When a program was selected, it faded in smoothly over a period of a couple of seconds. The default volume level, to which any selected program rises at first, is well below normal listening levels but quite audible. There is thus no risk of being blasted by a sudden high-level burst of sound.

The "tiny exception" referred to above concerns the muting action. When the unit was either muting or unmuting, the transition was accompanied by a faint click, a quite negligible sound but one that stood out because of the *total* silence of every other operation.

A useful feature of the Melior Control Center is that its two pairs of line outputs are in opposite phase. This enables the user to bridge any stereo amplifier to form a mono amplifier of roughly twice its stereo power rating, simply by driving its two inputs out of phase and connecting the speaker across the "hot" sides of the amp's two output channels.

The Melior Audio/Video Control Center left us with nothing to fault and much to admire. It is hard to imagine a more ideally designed or attractive control unit for a high-quality audio or audio/video system. The component is truly minimalist in its basic concept, but a system worthy of it should have little need of filters, tone controls, or the like. It is also unlikely that many people will outgrow its switching capabilities, or even use them fully. A very elegant piece of work.

## FEATURES

- Eight high-level inputs, four audio and four audio/video; two A/V inputs use S-video socket
- Two sets of audio line outputs, inverting and noninverting
- Two video outputs, one with S-video socket
- Four tape outputs, two audio, two audio/video; one A/V output with S-video socket
- External-processor loop
- Two MIDI sockets for interface with Melior Multi-Room system or electronic musical instruments
- Power socket for operating Museatex phono-preamplifier module
- Remote control for all functions, front-panel control of major functions
- Isolated audio and video circuits with separate power supplies
- LCD window shows operating status; display programmable to show name of each input source
- Volume adjustable in 0.5-dB steps
- Channel balance adjustable over  $\pm 2$  dB in 0.2-dB steps

## LABORATORY MEASUREMENTS

**Output level at clipping:** 5 volts

**Sensitivity for a 0.5-volt output:** 0.28 volt

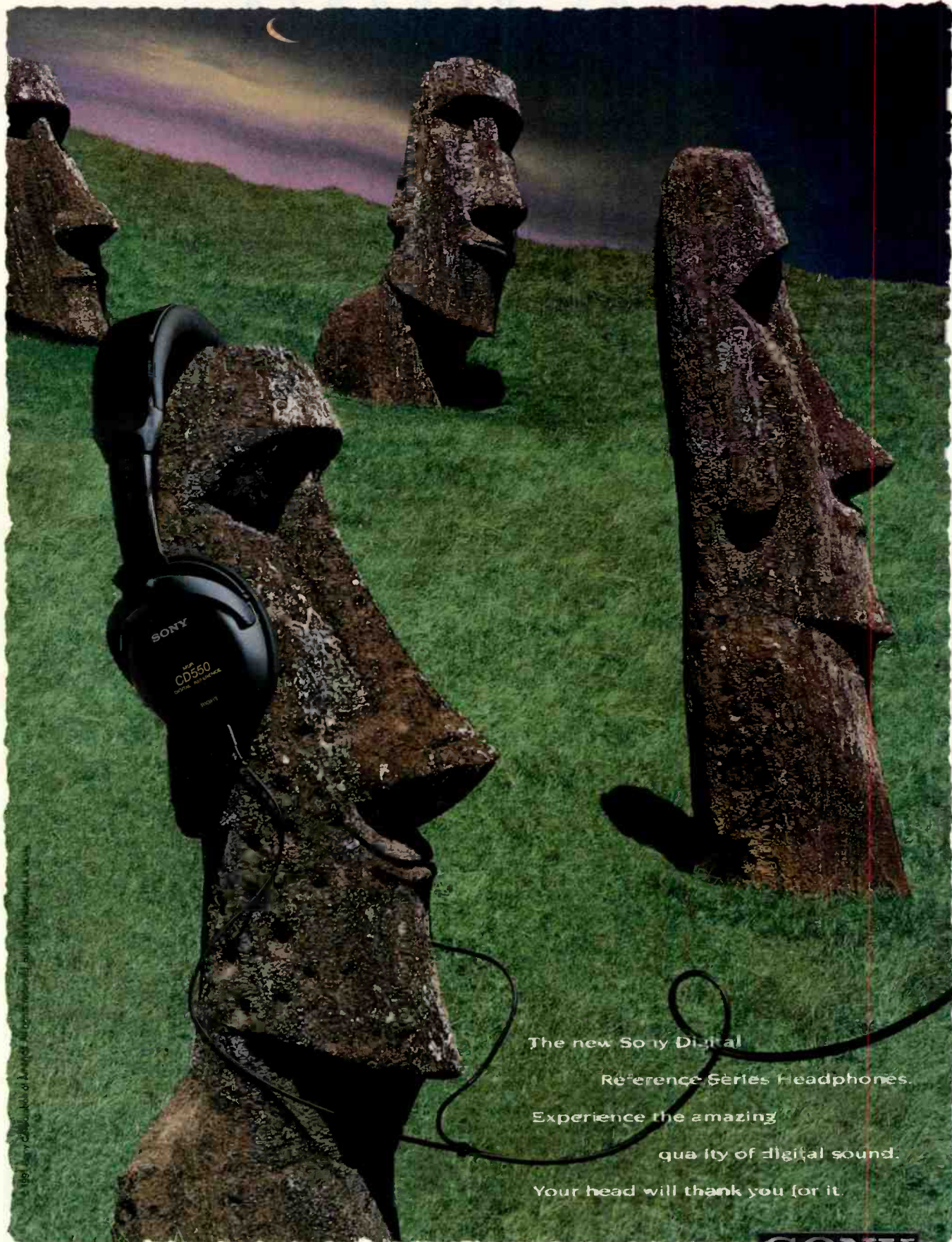
**A-weighted noise** (referred to a 0.5-volt output):  $-86$  dB

**1,000-Hz distortion (THD + N):** 0.04% at 2.5 volts

**Frequency response:** 20 to 20,000 Hz  $+0.05$ ,  $-0.03$  dB

**Channel separation:** 70 dB from 20 to 20,000 Hz

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# TEST REPORTS



## Cambridge SoundWorks Ensemble II Speaker System

Julian Hirsch, Hirsch-Houck Laboratories

**C**AMBRIDGE SOUNDWORKS, in the few years since its entry into the ranks of high-fidelity speaker manufacturers, has earned a reputation for above-average sound quality at below-average prices. It was also one of the first audio manufacturers to market its products directly from the factory to the customer, with a thirty-day full-refund return privilege. Cambridge SoundWorks products come with all necessary hardware and ample connecting cables (additional lengths are available at no charge if needed), and there is a toll-free phone number to use if problems or questions arise.

Cambridge SoundWorks speakers are designed by Henry Kloss, a co-founder of Acoustic Research and KLH and founder of Advent and Kloss Video. His expertise in speaker

design has typically been applied to providing the best sound for the price, and Kloss designs include many loud-speaker classics.

The first Cambridge SoundWorks product was the Ensemble, a subwoofer/satellite system with two small satellite speakers and two bass modules (instead of the usual one). Several other speaker systems have joined the Ensemble, the most recent being the Ensemble II. Its satellites, essentially identical to those of the original Ensemble, are 8½ inches high, 5¼ inches wide, and 4½ inches deep and are attractively finished in gray Nextel with nonremovable metal grilles. Each satellite is a sealed acoustic-suspension enclosure containing a 4-inch cone driver and a 1¼-inch cone tweeter. On the back of the cabinet are spring-loaded connectors that accept

stripped wire ends and a keyhole slot for mounting the speaker on a wall, although it is also suitable for stand or shelf mounting. Despite the small size, each satellite weighs a hefty 5 pounds.

Instead of the two "subwoofers" of the original Ensemble, the Ensemble II has a single bass unit containing two compartments and two 6½-inch woofers. In concept it is similar to the bass modules of several other three-piece speaker systems. The Ensemble II's woofers operate in a single acoustic-suspension chamber, which is coupled to a second chamber that radiates into the room through two 2-inch holes on one end of the cabinet. The bass module, finished in matte black, measures 16 x 13½ x 7¾ inches and weighs 18 pounds.

Since each part of the Ensemble II contains its own crossover filter, the bass module has only two pairs of spring-loaded connectors, and the components for each channel of the system can be wired in parallel in any sequence. This wiring flexibility, combined with the inclusion of 100 feet of connecting wire with the system, encourages experimentation with placement of both the satellites and the bass module. Operating only at frequencies below about 150 Hz, the bass unit cannot be located by ear and can be placed behind or under furniture as well as in the open.

Cambridge SoundWorks does not provide any technical specifications with the Ensemble II other than the information that it can be operated satisfactorily with amplifiers capable of delivering from 25 to more than 100 watts per channel. The company also points out that the Ensemble II's sound is virtually identical to that of the original Ensemble when the original system's separate woofers are placed next to each other in the room.

The price of the Ensemble II system is \$399 plus shipping charges. Cambridge SoundWorks, Dept. SR, 154 California St., Suite 1025, Newton, MA 02158; (800) 252-4434.

### Lab Tests

For measurements and listening, we placed the Ensemble II satellites on 26-inch stands about 3 feet in front of a wall and 8 feet apart. The bass module was on the floor midway between the satellites, with its ports facing into the room. We measured the room re-



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# TEST REPORTS

sponse with the microphone about 12 feet in front of the left speaker, driving the channels one at a time with a sweeping warble-tone sine wave. The response measurements of the two channels were averaged to create a single curve, whose high-frequency portion (above 10,000 Hz) was corrected for the known absorption properties of the room.

The bass module's response was measured separately, with the microphone at a port opening to eliminate room interaction. We overlaid the bass-response curve with the room curve to form a single composite frequency-response curve.

The Cambridge SoundWorks Ensemble II's room response was exceptionally flat above 500 Hz, varying only  $\pm 1.5$  dB from there to 20,000 Hz. The bass module had the characteristic "double-humped" response of a double-tuned resonant-circuit band-pass filter. Its output peaked at 50 and 120 Hz, with a minimum between 70 and 80 Hz, and fell off steeply outside its passband, at about 30 dB per octave below 50 Hz and 24 dB per octave above 140 Hz.

The bass curve spliced unambiguously to the room curve, resulting in an overall composite response that dipped to its minimum at 170 Hz and had a maximum at 270 Hz, with a peak-to-valley ratio of about 8 dB. Beyond those limits the curve was very uniform, and the overall response, even including the variations, was a very good  $\pm 4$  dB from 42 to 20,000 Hz. The rise at 270 Hz may have resulted from room interaction, but the dip at 170 Hz seems to be an effect of a gap between the satellites' lower limit and the bass module's upper limit.

System impedance was less than 8 ohms from 55 to 1,000 Hz and below 5 ohms from 110 to 700 Hz. We would consider 4 to 6 ohms to be a reasonable impedance rating for the Ensemble II. Its sensitivity was 87 dB sound-pressure level (SPL) at 1 meter with an input of 2.83 volts of pink noise. Woofer-distortion measurements at 4 volts input, corresponding to our standard 90-dB SPL reference output level, produced readings between 0.5 and 2 percent from 200 to 90 Hz, rising to a maximum of 10 percent in the 40- to 60-Hz range. A spectrum analysis of the bass module's output at 100 Hz and 4 volts input showed predomi-

nantly second and third harmonics, with a total rms distortion of 1.56 percent.

The satellite's high-frequency dispersion was satisfactory, but a 45-degree off-axis response measurement showed a substantial drop in output (6 to 12 dB) between 6,000 and 10,000 Hz, where it briefly returned to the on-axis reading before the normal fall-off above 12,000 Hz. This effect appeared to be related to diffraction from the enclosure edges and the metal grille (we could not remove the grille to verify our suspicion). Group delay varied over a 0.3-millisecond range between 3,000 and 25,000 Hz.

The Ensemble II showed itself capable of handling very high short-term input levels without serious distortion. In fact, at a 100-Hz test frequency the woofers accepted a 1-cycle input of 900 watts into their 5.5-ohm impedance (at which point the driving amplifier clipped) without reaching the limits of their mechanical suspensions. Of course, the module's sharply restricted passband prevented most harmonics of the driving signal from leaving the enclosure, but in any event no harsh rasping sounds could be heard. The satellite drivers also were not bothered by the amplifier's maximum output at 1,000 or 10,000 Hz, which was in the 500- to 900-watt range.

## Comments

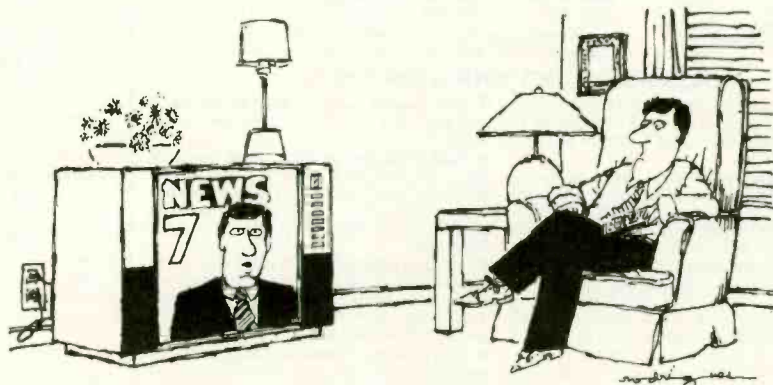
The sound of the Cambridge SoundWorks Ensemble II was notably smooth and balanced, without any obvious emphasis or lack in any part of the audio range. In fact, there was

nothing in its sound that suggested the size of its components. It could be played as loud as a reasonable listener might wish without giving a clue to its three-piece configuration or its low price.

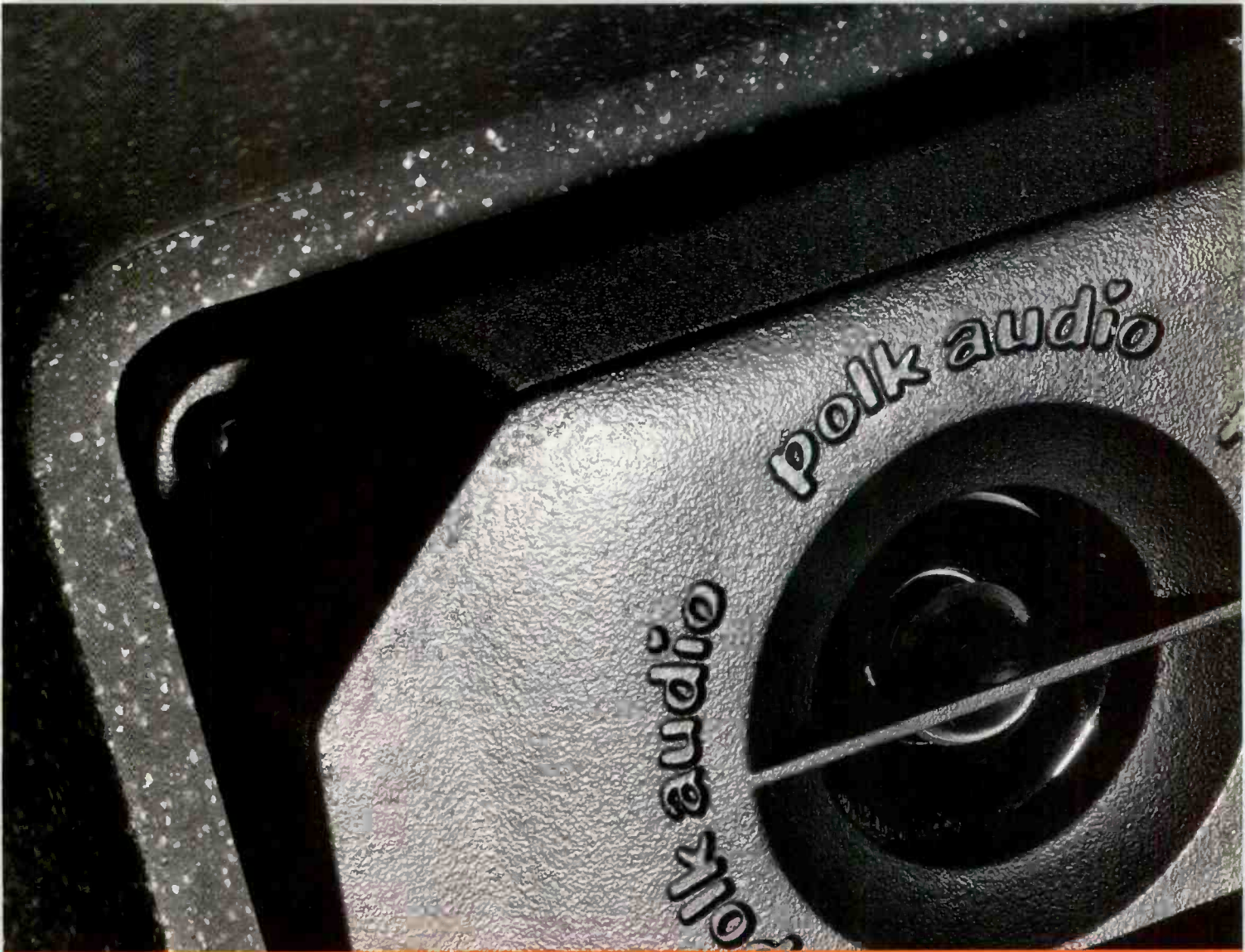
No one expects a \$400 speaker system to fully match the sound of one costing several times as much, but it is a fact that not all expensive speakers produce a sound quality commensurate with their price tags. The Ensemble II, however, like its companions in the Cambridge SoundWorks lineup, performs so far beyond its price and size class that it can be compared only with much larger speakers at substantially higher prices.

It must be said that there are other three-piece speaker systems that surpass competitively priced standard speakers (this format has shown itself to be one of the most effective and versatile speaker configurations). The Ensemble II is appreciably cheaper than its competitors, however, yet in our opinion it can hold its own against any of them in overall performance.

Perhaps the closest we can come to describing its overall sound quality is to say that it was well balanced across the full audio range and had a dry, tight character. There was no trace of upper-bass boom or artificial heaviness in male voices. Although the Ensemble II cannot compete in the lowest octave with larger systems, or perhaps fill a very large room with natural-level orchestral music, it represents an outstanding value for the average person who may be looking for a good music system at an affordable price. □



“... The governor today signed the bill making the 6DJ8 dual triode the official state vacuum tube.”



Sound as big as life...



## Listening in the 90's

Today people have become more and more space conscious. Many apartment dwellers don't want to give up valuable floor space for large speaker systems. Others who are planning a surround sound or home theatre system simply don't have the room for more speakers in their listening rooms or hesitate to commit the floor or wall space to a good sounding pair of speakers.

Until now, serious music lovers have had little, if anything, to choose from that would produce a large, bigger-than-life sound in a small, compact size. Systems that fit one's space requirements have been woefully disappointing in sound quality.

### The RM 3000 Three Piece System

Polk's engineers had determined long ago that there were indeed certain technical advantages in

sonic performance.

The small satellites can be located on shelves, mounted on a wall or placed on their own floor stands. They are very attractive and yet small enough to be hidden from view if desired.

The RM 3000 subwoofer is also small enough to sit behind your furniture and can be used on its side to fit into tight spaces. And since it is beautifully finished, it can be used as a piece of furniture.



*The RM 3000's satellites measure 7"H x 4 1/4"W x 5 3/8"D and are available in black matrix, gloss black piano or paintable white. The subwoofer is 12 1/2"H x 20"W x 12 1/2"D and is available with black wood grain sides and a black, mar-resistant top.*

### The Legendary Sound of Polk

In the tradition of Polk Audio, Matthew Polk and his team of engineers were determined to make the RM 3000 sound better than any other speaker of its type.

Initial reactions have been filled with superlatives including Julian Hirsch of *Stereo Review* magazine who says, "...they sound excellent...spectral balance was excellent—smooth and seamless."

## ...from speakers small enough

small speaker systems. Both high and mid frequencies could be faithfully reproduced with superior transient response and dispersion characteristics, and the convenient, more flexible placement of small enclosures within the listening area could create an ideal sound stage. Unfortunately, reproducing the life-like, full body of the lower frequencies could not be achieved in a truly compact enclosure.

Polk's RM 3000 replaces the traditional pair of speakers with three elements, two compact midrange/tweeter satellites and one low frequency subwoofer system. This configuration makes it easy to properly and inconspicuously place the system within your listening room while offering superior

Behind all these accolades is an impressive technical story.

### The Technical Side

The big sound of the RM 3000 is due, in part, to the unique arrangement of the tweeter and midrange elements. This "time aligned system" delivers the high and mid frequencies at precisely the same instant. The result is a clear, lifelike and expansive presentation.

The cabinet materials selected for the satellites are over four times as dense as typical enclosures. The black matrix finish is a non-resonant polymer aggregate (FOUNTAINHEAD®). The gloss black piano and paintable white finishes are rigid ABS

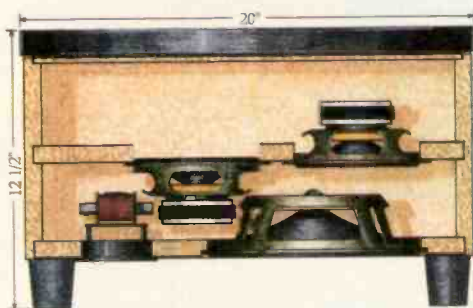


*Polk's RM 3000 Center Channel Speaker System easily fits into your home decor.*

## to live with.

surrounding a mineral filled polypropylene inner cabinet. Polk engineers have all but eliminated any "singing" or resonating of the satellite enclosure. You hear the effortless, free sound of a much larger system.

Most subwoofer systems look alike on the outside, but the Polk is worlds apart on the inside. Utilizing twin 6 1/2" drivers coupled to a 10 inch sub-bass



*For deep, well defined bass, Polk uses twin drivers coupled to a sub-bass radiator. Normally, one subwoofer system is used for both channels. For those desiring even greater low frequency performance, a second subwoofer can be added, one fed by the left channel, the other by the right channel.*

radiator, the bass is tight and well defined. There is no tuned port to create "whistling" or "boominess" of the bass frequencies.

### You Have To Hear It To Believe It

You really won't believe how good the RM 3000 sounds until you hear it. We invite you to your nearest authorized Polk dealer for a demonstration. You'll hear sound as big as life...from a speaker you can live with.

You'll hear the next generation of loudspeakers.



# polk audio

The Speaker Specialist®

5601 Metro Drive, Baltimore, MD 21215 (301)358-3600

A photograph of a Hafler XL600 stereo amplifier. The device is dark-colored with a textured surface. It is shown from a side-on perspective, with the front panel visible. The background is a vibrant, glowing orange and red, suggesting a fire or a high-temperature environment. The lighting creates a dramatic effect, highlighting the contours of the amplifier. The text "Hafler XL600" is printed in white on the front panel, appearing twice. The top instance is on the upper section, and the bottom instance is on the lower section. The overall composition is artistic and emphasizes the product's design and branding.

**Hafler** XL600

**Hafler** XL600

# UNDERSTANDING AMPLIFIER SPECIFICATIONS

**T**HE purpose of performance specifications is to define what a product does (or is supposed to do). That is difficult in the case of loudspeakers, but the electronic components of a hi-fi system (amplifier, tuner, CD player, tape deck, and so forth) produce simple electrical signals that can be analyzed to extreme precision and in an almost endless variety of ways with today's computerized test equipment. Even so, technical specifications for such components—amplifiers, especially—are often discount-

PHOTO BY JOOK P. LEUNG

**BY JULIAN HIRSCH**

ed because they do not indicate how the equipment *sounds*, which certainly is a key question where audio is concerned.

It is true that specifications seldom reveal anything about how an amplifier will sound, at least under normal operating conditions, mainly because modern amplifiers rarely exhibit any sound of their own unless they are driven beyond their design limits (into clipping, for example). Used as intended, they are almost always sonically neutral devices. Specifications are still valuable, however—for determining an amplifier's operational limits, its compatibility with other components, and, thereby, its suitability for use in one's system, as well as for spotting the odd amplifier that may *not* be an accurate reproducer.

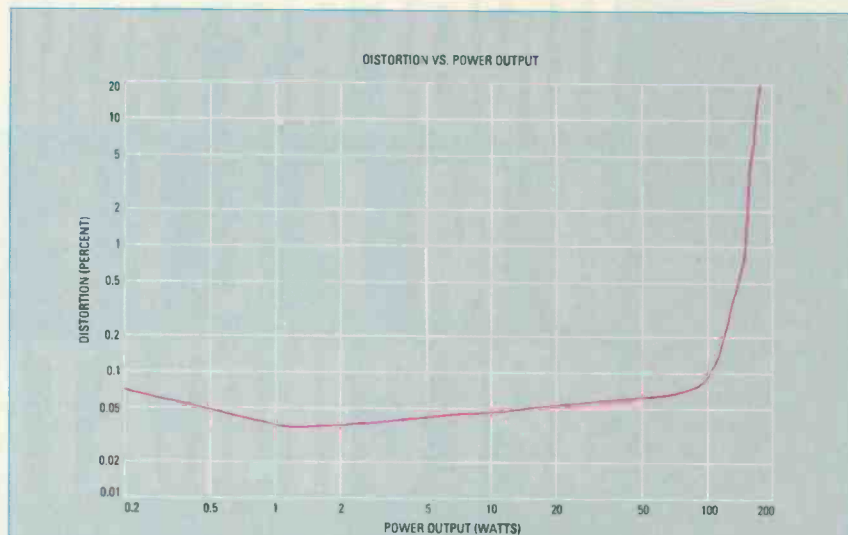
The primary specifications of an amplifier designed for use in a home audio system are its power output, frequency response, sensitivity, distortion, and noise level. For the specifications to be meaningful, measurements should be made in accordance with accepted standards. Almost all amplifiers intended for sale in this country are rated according to the EIA (Electronic Industries Association) Standard RS-490.

Though not so defined or stated in any test specification, each of the basic characteristics has a possible, but not necessary, relationship to the sound of the system. Even if the nature of this relationship seems obvious, it is usually very different from a layman's expectations.

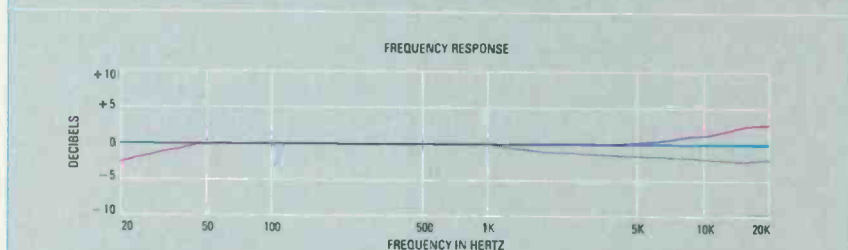
## Power Ratings

Consider an amplifier's power rating, which is closely analogous to an automobile's horsepower rating (one horsepower equals 746 watts). A powerful engine *may* make a car faster (but not necessarily), or it *may* give it more rapid acceleration, but these results ultimately depend on the gear ratios of the drive system. A high horsepower rating may, and usually does, provide a combination of speed and rapid acceleration, but most of the time the engine will be required to deliver only a small fraction of its maximum power as the car moves at normal highway speeds or in city traffic.

The same situation exists in a hi-fi system. A 200-watt amplifier obviously can put out far more power than a 20-watt amplifier. Thus, we would expect it not to sound louder, but *to be able* to play louder without distorting, and it probably could do that in most cases. Not in all cases, though. If the



**Distortion versus power output for a typical 100-watt power amplifier. Note the sharp rise in distortion after the amplifier reaches its power limit and goes into clipping.**



**Three possible frequency-response plots for an amplifier. The flat blue line is the ideal and is typical of modern amplifiers with tone controls and filters defeated. The treble attenuation shown by the gray response curve covers several octaves and would be audible to a critical listener as a mild dulling of the sound. The red trace indicates slightly larger response deviations, but only at the extreme top and bottom of the audio range, where they will be less obvious to the ear.**

200-watt amplifier is driving speakers having an 80-dB sensitivity rating and the 20-watt amplifier is driving speakers rated at 90 dB sensitivity, their maximum loudness will be equal; if the 20-watt amplifier is driving speakers with a 93-dB rating, it will play louder than the bigger one.

In actual use, however, we are no more likely to play our systems at full power than we are to drive our cars at maximum throttle. Most listening is done at levels requiring an output of a watt or less from the amplifier, and it will seldom exceed 5 or 10 watts in any home environment. So we must conclude that equating amplifier power with listening volume is not a valid basis for judging amplifiers, with exceptions for special cases such as lis-

tening to rock music at close to its "normal" level (that of a live concert).

So why be concerned about power? There are several good reasons why a powerful amplifier is likely to be more satisfactory in some situations than a lower-power model. The logarithmic nature of human hearing requires a much higher power level to make the sound seem a little louder. Doubling the power produces a barely noticeable increase in volume; a tenfold increase only doubles the apparent volume. Speaker sensitivities vary widely, and a speaker that is easy to drive with a 100-watt amplifier may be disappointing with a 20-watt amplifier. Within reason, "more is better," and these days amplifier power is an inexpensive commodity.



Dynamic headroom is a measure of how much additional power (above its normal continuous-output rating) an amplifier can deliver for a short period. As currently defined, dynamic power is measured for a period of only 20 milliseconds (one-fiftieth of a second), expressed relative to rated continuous power. If a 100-watt amplifier can deliver 200 watts during a 20-millisecond tone burst, it has a dynamic headroom of 3 dB. It is also likely to be less expensive than an amplifier that can deliver 200 watts for extended periods. For most people, a moderately powerful amplifier, rated at 50 to 100 watts per channel, that has a dynamic headroom rating of 2 or 3 dB would be a more sensible purchase than a more costly 200-watt amplifier with little or no dynamic headroom.

The rationale for a high dynamic headroom is based on the transient nature of music (or speech, for that matter). The peak levels of most music programs are considerably higher than their long-term average levels. An amplifier whose steady-state power is enough to handle those peaks without clipping (distorting) will use only a fraction of its capability most of the time. It will thus be unnecessarily hot, heavy, wasteful of power, and expensive compared with an optimally designed high-headroom amplifier.

## Distortion

What about distortion? Distortion is defined as any change in the waveform of a signal between the input and output of an amplifier or other component. By this definition distortion may include noise (hiss or hum), but noise arises from different causes than *non-linear* distortion and is not directly related to signal level, nor does it affect the sound in comparable ways.

Nonlinear distortion creates harmonics (multiples) of the signal frequency in the amplifier output. Depending on specific circumstances, it can be heard as harshness, fuzziness, or (in small quantities) merely as a vaguely uneasy quality that disappears if the cause is removed. Distortion usually increases with signal level, but some kinds (notably "crossover" distortion) are more bothersome at low levels.

Distortion is usually expressed as a percentage of the total signal power or level. Frequently it is measured together with noise and hum, despite their very different audible effects, and lumped into a single figure called total harmonic distortion plus noise (THD + N). Alternatively, the levels

# BASIC AMPLIFIER SPECIFICATIONS

Specification	What It Means	What to Look For
<b>Power output</b>	The maximum continuous undistorted power (usually given in watts) that an amplifier can deliver into a specified load impedance (usually 8 ohms).	In general, the more the better. Requirements can vary widely depending on speaker sensitivity, room size and acoustics, the type of music, and the desired volume level. Power must be doubled to achieve a noticeable increase in loudness and multiplied by ten to get a subjective doubling in loudness.
<b>Dynamic headroom</b>	The amount, in decibels (dB), by which an amplifier can exceed its maximum continuous output in short bursts.	More is better. Because music typically demands the greatest power on brief peaks above its average level, an amplifier with 3 dB of dynamic headroom will often perform almost as well as it would if it were capable of twice as much (3 dB more) continuous output.
<b>Distortion</b>	Spurious output generated by the passage of a signal through an amplifier. For example, harmonic distortion consists of multiples of the signal frequency.	Lower is better, though complex music can mask surprisingly large amounts of distortion. Anything less than 0.1 percent is almost certain to be inaudible on music.
<b>Signal-to-noise ratio (S/N)</b>	The ratio, in decibels, of the output level from a standard test signal to the output level with no input signal.	Electronic noise normally consists of hiss and hum. The less noise (and thus the higher the S/N), the better. An A-weighted S/N of 75 dB is usually adequate, and 90 dB or better is excellent.
<b>Frequency response</b>	The amount, in decibels, by which output level varies across the range of audio frequencies when the input signal level is held constant.	The smaller the variation the better. With modern technology, any decent amplifier should exhibit almost perfectly flat response (no deviation) within the audio band.



*Professional type, balanced output jacks are grounded, and shield the signal against noise.*

In airline pilots, brain surgeons, and CD players, steadiness is a pretty fundamental requirement.

In the case of our newest CD player, the Elite® PD-75, its rock-solid stability has rocked the world of music lovers and audio critics. As the reviews have rolled in and the

Next, the stable platter, by supporting the entire area of the CD disc, minimizes wobble and chatter.

A wobbling disc presents a difficult target for the laser, while a chattering disc creates resonance, distorting the signal, which distorts the sound.

Another problem for CDs is gravity. Spinning above the laser pickup and supported only in the center, the



## { HOW A CONCEPT CALLED THE STABLE PLATTER TURNED THE CD UPSIDE DOWN. }

awards have been bestowed, it is apparent that the standard for CD players has been advanced dramatically. Behind this success lies a principle that Elite has brilliantly exploited: The mechanical elements of a CD player are just as critical to its quality as its electronic components.

The first significant innovation to come out of this insight is at the heart of the PD-75. The stable platter.

Two basics of physics—mass and inertia—combine to make the stable platter an obviously superior platform to support a disc spinning at high velocity.



*The Elite PD-75 Compact Disc Player. Its elegant urushi finish reflects technical elegance within.*



*An advanced linear drive motor moves the laser pickup with smooth speed and precision.*

disc sags microscopically. Which to a laser beam is significant degradation.

But on the Elite CD platter, the disc is turned upside down—that is, label down, information side up. The disc lies firmly clamped to a solid surface.

Meanwhile, the laser pickup reads the disc's digital code from above, where it is immune to dust settling on the laser optics.

We invite you to bring your favorite CD to an Elite dealer and demonstrate the advantages for yourself. Give that disc an audience on the PD-75 for what one critic called



“a dimension of sound that you have never heard before.”

And usher in a new era of stability.

of the individual harmonics alone can be measured, combined, and converted to an equivalent percentage of the signal power (THD).

Years ago, amplifier distortion figures were commonly as high as several percent. They still are for the lowest-price amplifiers, but not for any that would be considered for use in a hi-fi system. In general, THD or THD + N figures of up to 2 percent at rated power output are not audible with complex program material, such as orchestral music, which masks a surprising amount of distortion. Up to a point, the lower the distortion, the better, but distortion of less than 0.1 percent is unlikely to be audible under any but contrived circumstances. Since the harmonic distortion of most of today's hi-fi component amplifiers, even in the low price brackets, is typically less than that figure, it is likely that most of their harmonic-distortion ratings are insignificant in terms of providing a reason to choose one model over another. It is also worth noting that some of the highest distortion specifications in today's amplifiers will be found among the very expensive "high end" vacuum-tube models.

## Frequency Response

Frequency response is another specification that, although important, is hardly worth the overemphasis it receives in some quarters. Ideally, an amplifier's response should be "flat"—in other words, it should deliver the same output level over a wide range of frequencies when driven with a constant-amplitude input signal. There are different schools of thought as to how wide that range should be. Some hold that an amplifier's response should extend far beyond the audio range, normally considered to be 20 to 20,000 hertz (cycles per second). Amplifiers favored by this group may have a low-level response extending to 1 megahertz, well into the AM broadcast band. No normal signal sources or speakers come close to such a bandwidth, but that does not shake the faith of the wide-band school.

Most designers, however, prefer to roll off amplifier response somewhere above 20,000 Hz and below 20 Hz. It is axiomatic that a wide-band system is more susceptible to interference and noise from broadcast stations and other sources of radio-frequency (RF) energy. Extending the bandwidth significantly beyond the range of human hearing can only add noise to the program. Below 20 Hz a similar situation

exists, although the rumble and feedback problems of record players (which mandated the use of low-end cutoff below 20 Hz or so) are mostly a thing of the past in this digital age.

Within the audio band, however, it is important that the response be as uniform as possible. Although the best speaker ever made is hopelessly irregular in its response compared with any ordinary amplifier, it is still desirable to start with a uniform, full-range signal bandwidth. Even minor response variations can be heard, especially at middle frequencies, and since it is easy to make a flat-response amplifier, there is no excuse for not doing so. If a nonflat response is desired for some reason, the necessary alterations can be made with tone controls or an equalizer.

## Sensitivity

Sensitivity is an important amplifier specification, not because it influences sound quality but because it affects compatibility with the other system components. Sensitivity is defined as the input signal voltage required to produce a 1-watt output (or a 0.5-volt output from a preamplifier). It is measured at the maximum setting of the amplifier's gain control, which is unlikely to be used in home listening. Although sensitivity is still frequently quoted at an amplifier's full rated output, in spite of a standard's having existed for many years, this is meaningless. The user of an amplifier is concerned with how much signal is needed for a typical listening volume, and this requires the input to be referred to a fixed, realistic output level.

## Signal-to-Noise Ratio

Finally, there is A-weighted signal-to-noise ratio. This somewhat cumbersome name refers to the noise in an amplifier's output, expressed in decibels below a 1-watt output. It is the same here as with sensitivity: Many manufacturers insist on specifying noise relative to *maximum* output. Not only does this defeat the intent of the EIA standard, which is to produce a relative indication of how audible the noise will be when the speakers are connected, but it produces larger and more impressive numbers that may confuse and mislead prospective buyers comparing the amplifier with others that have been correctly rated. The "A-weighted" part of the rating refers to a standard method of correlating noise readings with human hearing characteristics (our ears are less sensitive at some frequencies than at oth-

ers). Signal-to-noise ratios greater than 70 or 75 dB indicate a satisfactory quiet amplifier, and the best can exceed 90 dB S/N.

All these specifications apply both to separate power amplifiers and to the power-amplifier sections of integrated amplifiers and receivers. With slight modification, they apply to preamplifiers as well. In the case of a preamplifier, the maximum *voltage* output replaces the wattage output rating of a power amplifier. Also, sensitivity is measured separately for each of its inputs. The maximum nondistorting input signal is also measured, especially at the phono input, since there is no volume control preceding it and a high-output cartridge can sometimes overload the input stage, causing distortion. Similarly, the input impedance of the phono stage is important, since it can affect the frequency response of a magnetic cartridge.

These amplifier specifications are only a fraction of those defined in EIA Standard RS-490. They are, however, the primary ratings and, in theory at least, should be given for any amplifier. In addition, there are a large number of rarely published secondary specifications.

## Beyond the Specs

As I stated at the beginning, most amplifier specifications have surprisingly little to do with the way the amplifier is likely to "sound" to any individual. Yes, measurements can reveal differences, but they rarely establish a rank order of products unless we are talking about sheer power.

The very fact that there are so many makes and models of amplifiers competing in the marketplace shows how widely individual needs and preferences can vary. For many people, price is the most important specification, although that probably does not apply to a large segment of the audiophile market.

You will notice that these standard measurements ignore almost all the special features of today's amplifiers, often referred to as "bells and whistles." This phrase should not be taken in a derogatory sense, since the special control features of many amplifiers make them especially desirable to some people, while others prefer a minimalist approach. It seems safe to say that, among the hundreds of amplifiers available to choose from, there is probably something to meet the needs of almost anyone. Just keep in mind what is important, and what is not, and you won't go wrong. □

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TYPE IV (METAL POSITION METAL BIAS) Type PQ  
Ultra S-M **CDit IV**

SONY. **74** 110m  
**METAL**  
TYPE IV (METAL POSITION METAL BIAS) Type PQ  
Ultra S-M **CDit IV**

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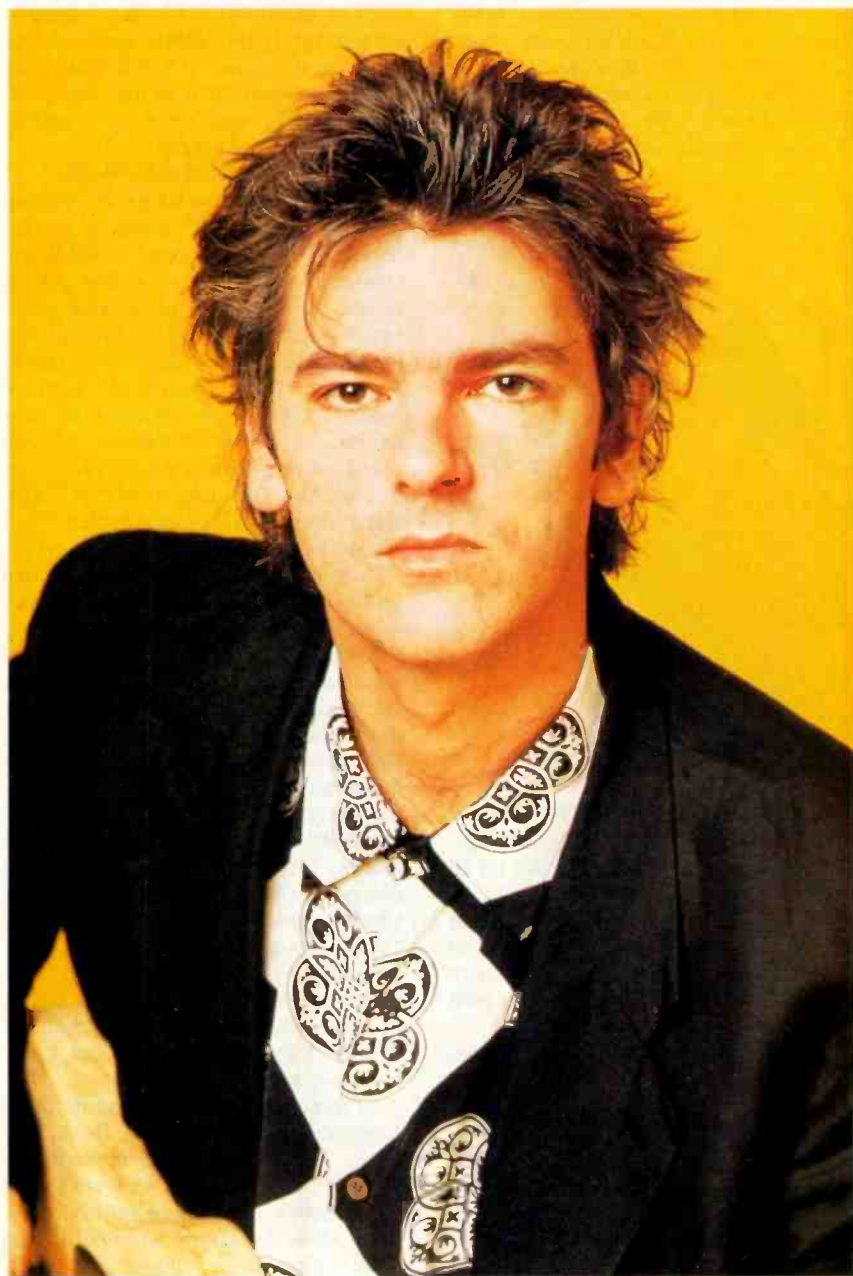
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# ROBYN HITCHCOCK



PHOTOS BY CHRIS CARROLL/A&M

by Mark Fleischmann

**R**OBYN HITCHCOCK, singer/songwriter, college-radio rock's premier surrealist, is sitting in A&M Records' New York offices talking about his home on the Isle of Wight. "There's no one there in a leather jacket," he says. "No style victims . . . no groovers. There are only three people on the entire island who've ever heard of hair dye. It's my roost."

"Just imagine it pouring with rain. Green and damp and cold, lots of old people shivering on the beach eating nasty chips. Old cars bumbling around back lanes. Pubs with really nice beer. A lot of my songs were written down there. *Innerscape* is about the Isle of Wight. *Heaven, Glass*, even crummy songs like *Tropical Flesh Mandala* are about the beach."

The pastoral beauties of life along the English Channel may have inspired part of Hitchcock's latest album, "Perspex Island," which critics are calling his best since his 1981 solo debut, "Black Snake Diamond Role." But long-term fans will also notice a new tenderness in songs like *Birds in*

**"If you're lucky, you  
get to shake  
hands with Arnold  
Schwarzenegger."**

*Perspex*—the sound of a soul moved by something "so beautiful my heart should stop."

"My life has changed for the better," Hitchcock admits, turning to his fiancée, Cynthia Hunt, beside him. That's right, Robyn Hitchcock—who once specialized in such grimly antiromantic lines as, "I feel like making love to a photograph / Photographs don't smell"—is in love.

This is, to be sure, an unexpected development, especially surprising for those who've followed Hitchcock's career from its beginning at Cambridge University in 1977. Appearing at the onset of the punk boom, Hitchcock's sort-of-punk band the Soft Boys—featuring Kimberley Rew, now of Katrina and the Waves, along with bassist Andy Metcalfe and drummer Morris Windsor, both in his current back-up, the Egyptians—quickly became a Cambridge supergroup on the basis of their fabulous two-guitar wallop and Hitchcock's songs, which even then were fancifully spiky like no one else's. But the movement that made stars of the Sex Pistols and Elvis

Costello proved confining for Hitchcock and Company. "It was totalitarian in the same way that in 1967 everyone had to wear a caftan," he recalls. "So in 1977 everyone had to cut their hair short and spit."

The Soft Boys wound down after two official albums and a greatest-nonhits compilation, at which point Hitchcock began an initially ill-starred solo career. "Black Snake Diamond Role" drew critical raves for its well-burnished thumbnail portraits of Jim Morrison and Margaret Thatcher, but it wasn't released in the States (on Glass Fish) until the CD era was well under way.

The follow-up, the now-deleted "Groovy Decay" (Albion), "was one of the things that just caused me to get rid of everybody," Hitchcock says. Another ex-Soft Boy, Matthew Seligman, produced the original sessions, then quit halfway through. Later, Hitchcock became unhappy with the second version, produced by Steve Hillage—so unhappy that he reissued the album as "Groovy Decoy," substituting Seligman's demos for all but four of Hillage's tracks. "I felt I'd become the property of other people's whims," Hitchcock says. "I was being passed around like a shopping bag."

**H**ITCHCOCK then quit music temporarily, re-emerging in 1984 with "I Often Dream of Trains" (on Glass Fish again), a stripped-bare vehicle for his voice, one or two overdubbed instruments, and deep lyrical introspection. Shortly afterwards, he reunited with his reliable Soft Boys rhythm section, recruited keyboard player Roger Jackson, and "hit the wide-open goodies of America" to promote 1985's "Fegmania!" (on Slash).

"It was fun because it was the first time the three of us had played together for five years," Hitchcock recalls, adding that he credits the longevity of his relationship with Metcalfe and Windsor to "a sense of destiny, a sense that something's there and we're going to get it, like blind people going shopping—the discount baked beans must be somewhere. We're all timid, introverted people who are able to turn this inside-out for a performance. We represent a strain of English personality virus."

"Fegmania!" was welcomed (at least by the cult audience that bought it) as a triumphant return to form. It catapulted Hitchcock to college-radio stardom with songs like *My Wife and My Dead Wife* and set the stage for

more albums and tours. "Invisible Hitchcock" (Glass Fish, 1986) was a compilation of odd experiments recorded largely without the Egyptians, containing the now-prophetic *All I Wanna Do Is Fall in Love* and *Raymond Chandler Evening*, possibly his best ballad. "Half of it was recorded for free in people's houses," Hitchcock says. "People remember it fondly as our last independent album. That was the height of our trendiness."

Finally, Hitchcock hit major-label land with "Globe of Frogs" (1988) and "Queen Elvis" (1989), his first albums for A&M. Getting in bed with a big-time record company was not without its perils, of course, especially since Hitchcock has been blessed/plagued with comparisons to John Lennon, whom he resembles vocally, as well as Pink Floyd's Syd Barrett and the Byrds. "We sat around this very ta-



Hitchcock (right) and Egyptians

ble," he says, laughing, "and I said, 'We don't want to be the new anything. We are us, that's it. Don't try to market us as somebody else.'"

"In fact, there was not much change, but gradually, everything you said you'd never do, you do. If you're lucky, you get to shake hands with Arnold Schwarzenegger."

After the first two A&M albums came "Eye" on Twin/Tone, another album in the personal mode of "Trains" but even more solitary. "Every so often you wonder what it would be like if you weren't making decisions by committee," Hitchcock says of his brief detour back to a small label. "I just wanted to be on my own, as naked and simple as possible."

The new "Perspex Island," pro-

duced by Paul Fox (who's also worked with XTC), goes to the other extreme with a thick stew of overdubbed guitars by Hitchcock and R.E.M.'s Peter Buck. "Paul helped tune us in to a good state," Hitchcock says. "He made us feel the songs were live performances rather than another dreary old studio backing track." The songs for "Perspex Island" were written when Hitchcock sat down at his kitchen table, after a six-month break from songwriting, and composed fifty new tunes in one burst, a process he calls "machismo through verbiage." Eleven were ultimately recorded.

"When they come, they come," he says of his songs. "It's like fishing. I was certainly in a better state writing than in the past. It's not quite the disgusted-animal-looking-down-at-its-own-body syndrome . . . not so much existential horror."

Actually, there are love songs of every description—songs of longing (*If You Go Away*), songs of regret (*Earthly Paradise*), songs of giddiness (*Ultra Unbelievable Love*) and exhilaration (*Birds in Perspex*), and occasional moments of philosophical navel-gazing (*Ride, So You Think You're in Love*). As a change of pace, of course, there's also *Vegetation and Dimes*, a characteristically furious rant in which Hitchcock's voice rises to condemn "this city of wolves." The city turns out to be Los Angeles. "Everyone's varnished there," he says. "They've all got their sell-by dates tattooed on their necks. [The song is] a miserable howl, basically."

Still, sure to be most astonishing to his core audience are the many moments of overt vulnerability, the sort of emotionalism other songwriters get rich on but Hitchcock has never even bothered to fake. "That's because in the early Seventies everyone was so painfully sincere," Hitchcock explains. "Everyone ran out of steam and got really stoned and began feeling sorry for themselves, and I hated that. I couldn't stand that wimpy stuff, partly because I was afraid of those same wimpy feelings in myself and partly because that music was genuinely dreary. Later I began to feel more compassion."

"I'm not trying to do the same thing I was doing with the Soft Boys," he says, summing up his current approach. "In those days we were trying to demolish clichés, demolish sentiment, demolish good, demolish all that yucky girly long-winded pink stuff. And now I'm swanning around in a tutu, happy as ever." □



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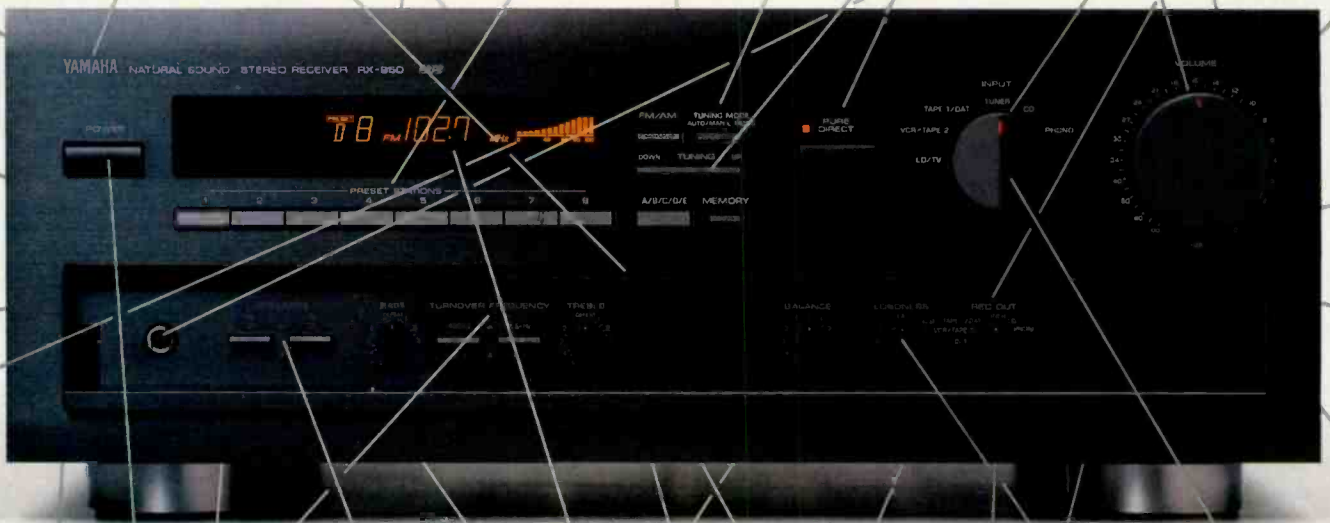
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# FAST SEARCH

BY  
DANIEL  
KUMIN

## HOW TO CHOOSE YOUR NEXT CD PLAYER

**A**T last count, eighty-three brands of CD player were on sale in the U.S. with no fewer than 401 distinct models from which to choose. So identifying the perfect player is a simple matter: Eliminate four hundred, and the one remaining is your baby. But seriously, how is a rational individual to choose?

It's a good question. Every company that makes CD players claims unique benefits for its designs, while the array of features, controls, technologies, and styling is staggering. The simplest solution—and not necessarily a bad one—is to decide how much you're prepared to spend, wad it up, and give it to your favorite audio specialist retailer, who will cheerfully exchange an appropriate model for your cash. But if this sort of blind faith is difficult for you, examine your options carefully and—even more important—think seriously about what sort of functions, features, and performance you really need.

Single-disc CD players no longer dominate the market. The simplicity of one-at-a-time playback is chal-

lenged by the appeal of 5 to 12 hours of uninterrupted music offered by multidisc CD changers. Changers come in two basic formats. Magazine-type players use a pop-out cartridge that usually holds six discs to be played in sequence or programmed at will. (Some models hold ten or twelve discs, and Pioneer recently introduced a changer that can select from three six-disc magazines loaded at the same time, for a total of eighteen CD's.) Rotary, or carousel, designs use a large turntable with recesses for five discs (some take fewer); the big platter rotates above the CD mechanism to bring each disc into play.

Each changer type has both benefits and drawbacks. Magazine models enable you to build a library of magazines you'll want to use over and over (additional magazines are relatively inexpensive at about \$25 or less). On the other hand, loading and changing these magazines is a chore, as can be remembering just which recordings are in which magazines. Carousel players offer faster disc loading and swapping and easy music ID—just pop

the drawer, lift the lid, or look through the clear plastic cover to see what's up next. But you can't store multidisc groupings in a carousel, and carousel changers can't offer the marathon playing times of the biggest-capacity magazine-type models.

Those who live with music on all the time find CD changers irresistible. Folks whose listening is more focused, on the other hand, often prefer single-play models. There is no general sonic penalty imposed on a CD player by multidisc capacity, but there is a fiscal one: A single-play model will cost less—perhaps 40 percent less—than a changer of equivalent quality and performance.

### Bit Wars

Compact disc technology has evolved considerably since the medium's advent almost a decade ago. Most of these advances have quietly made for better, cheaper, more capable and reliable players. But one aspect in particular—the digital-to-analog (D/A) conversion process—receives a great deal of attention.

# 1 BIT



The Technics SL-PS700 (\$450) incorporates Matsushita's 1-bit MASH technology to convert digital data from a CD into an analog signal.

Most recently, this emphasis has led to the development of a fundamentally new category of D/A converters, or DAC's, known generically as "1-bit" converters. Multibit DAC's—16-, 18-, and even 20-bit in some players—translate the 16-bit numbers encoded on a CD to a series of output voltages of corresponding amplitudes, creating a stair-stepped waveform that is then smoothed to an exact replica of the original analog signal by a filter. A 1-bit converter uses sophisticated mathematical transformations to reduce the stream of 16-bit numbers from a compact disc to an extremely high-frequency output (256 times or more the 44.1-kHz CD sampling rate) of constant-amplitude pulses that vary only in width or density. When this signal is filtered, the result is, again, a precise replica of the original analog waveform.

Enhancements to multibit conversion have centered on using 18- and 20-bit DAC's for more accurate handling of the lowest signal levels in a CD's 16-bit code, an area where multibit DAC's tend to be error-prone (and 1-bit DAC's excel). The idea is that the extra precision required for an 18- or 20-bit converter will yield as a byproduct higher performance in the upper 16 bits of its range. On the other hand, tightening manufacturing tolerances for a 16-bit DAC to the same degree will give essentially the same result, and it is possible for a good 16-bit converter to outperform a cheap 18- or 20-bit one, so you really need to focus on how a player performs rather than on its claimed conversion resolution. An 18- or 20-bit converter can also be used to minimize noise and distortion introduced by digital filters, but this is a less significant benefit.

Comparing the performance of the best multibit and 1-bit designs reveals almost perfect parity. If you need a difference to believe in, let's inch our way out on a limb: High-quality multibit converters may have a minuscule edge in certain engineering specifications; 1-bit DAC's have an edge in their simplicity, consistency, long-term stability, and performance for the money, particularly in low-price players. Again, don't buy a player solely on the basis of what kind of DAC it employs.

The same goes for another much-touted technical feature, oversampling. With multibit converters, oversampling is used to enable digital filtering. A digital filter in combination with a shallow-slope analog output filter is easier and less costly to manufacture than the sort of high-precision steep-slope analog filter that would otherwise be necessary, and this has led to nearly universal adoption of four- or eight-times oversampling for multibit D/A conversion. (The 1-bit

designs use much higher oversampling rates but in a very different fashion that's not directly comparable.) Although great emphasis is sometimes put on the degree of oversampling employed, a higher rate does not imply higher performance. There's no reason to choose one player over another simply because it uses four-times oversampling instead of two-times, or eight-times instead of four-times.

## Specsmanship

Choosing a player for its technical characteristics alone is a risky endeavor at best; in fact, many feel that properly functioning CD players are audibly indistinguishable in most cases and very nearly so in essentially all. You may or may not agree, but it is true that all CD players, even the cheapest ones, feature superb technical performance. Nearly always, frequency response is virtually flat, dynamic range is close to live levels, and noise and distortion are well below audibility.

If you're so inclined, by all means try a listening comparison of two machines. You'll need a good pair of headphones (preferably your own familiar set), two identical CD's, and a willing salesperson. Both players should feed the same receiver, integrated amplifier, or preamplifier, to which you'll connect the phones. (Using the headphone jacks on the players can be misleading, so avoid that approach.) Level matching is critical: The outputs of the two players *must* be within 0.2 dB of each other at midband (say 500 or 1,000 Hz); otherwise any differences you hear are patently suspect. Get the two players cued up precisely and then listen, switching between them. Don't feel bad if you detect no difference—and don't try to talk yourself into one! Probably 99

# 20 BIT



Denon's DCD-970 (\$400) uses dual Lambda Super Linear digital-to-analog converters, a proprietary 20-bit system.

percent of the population will not hear a difference between any two CD players, no matter which models are compared.

One possible specification benchmark—a very approximate one—is dynamic range. This indicates the ratio in decibels between the lowest-level (softest) signals and the highest-level (loudest) signals a player can deliver; bigger numbers are better. Keep in mind, however, that the theoretical maximum dynamic range of the compact disc medium itself is about 98 dB, and most players come pretty close to that. The worst you should accept is perhaps 85 dB. The range between these two figures makes relatively little real-world difference, but it can sometimes serve as a very rough guide to a player's overall performance and engineering sophistication. And since frequency-response errors are the most likely to be audible, look for a very flat response, especially below 15,000 Hz.

## The Features Forest

With specs so similar and audible differences so elusive, for most people a player's features become the most important selection factor, then price, overall quality, and value. CD player features are truly legion. The basics—found in nearly all models—include remote control, track programming, and displays of track numbers, timing, and other information.

Only the most basic players come without a wireless infrared remote controller for easy-chair command of (at least) such essentials as track skip, pause, and audible fast-search. If you tend to listen to long works straight through, buying a player without a remote might save you perhaps 10 percent compared to the next model up in a manufacturer's line (which is often exactly the same player with the remote thrown in). Otherwise, remote control is a very worthwhile feature, one of the CD format's many salient ergonomic advantages over LP's.

Only a minority of players include remote volume control—a handy extra. If your receiver, amplifier, or preamp does not have remote volume control, a CD player with this feature might be worth considering. Some audiophiles feel that remote volume-control circuits degrade sonic quality very slightly (purely electronic volume controls usually add some noise and distortion), but most players so equipped also furnish fixed-level outputs, so you can hook them up either way you prefer.

Programming features enable you to play tracks in any order, skipping the ones you don't want to hear and repeating favorites. Most players can program at least twenty tracks; many handle thirty-two or even more. Some changers can handle considerably longer programs, and many will intermix tracks from all the loaded discs. (This slows things down, however, as you must wait for the mechanism to change discs.)

A number of today's players feature elaborate file systems that store a preferred program order for dozens or even hundreds of CD's. These work by entering your program selection

Other user-convenience features include everything from track-randomizing "shuffle-play" to multiple repeat modes, indexing, and on-board equalization. Which ones are for you? Be critical, be objective, and try not to spend too much for gimmicks that you'll rarely use.

Some less apparent features matter too. For example, more and more players today include extensive internal antishock and antivibration treatments. These are inspired by evidence that mechanical vibrations can result in small but measurable increases in distortion in extreme cases. There's not much you can do to quantify such

# C HANGER



Kenwood's DPM-6630 changer (\$329) features a "6 + 1" design, holding six discs in a loading magazine and one more in a slide-out drawer.

into long-term memory, whence it is recalled every time a particular disc is loaded in the future. (Each CD has a unique identifying code embedded in its "table-of-contents" data.) The read-outs of many such players will even display titles of your choosing: "R.E.M.-OUT/TIME," for example.

The array of other features you may encounter is vast indeed. Along with showing track and disc numbers and timings in several modes, displays may show such arcana as the presence of pre-emphasis on a disc or the occurrence of data errors. A variety of tape-recording aids also exist. Some automatically select tracks to fit on a tape of a given length; others search for the highest level on a disc to facilitate setting the tape recording level. And some players can communicate with a compatible cassette deck from the same company, largely automating the CD-to-cassette dubbing process. This level of convenience might be a boon to habitual users of portable cassette players and tape-based car stereos.

countermeasures, though rapping on the case while a disc plays can give an indication of the player's degree of immunity to large impulse shocks, which is of more practical significance anyway.

A player's error-handling ability is another often overlooked attribute, important because it affects how well it will do with dirty, worn, or less-than-perfect CD's. Many dealers have on hand a test disc with man-made errors of increasing size. One of the best comes from France's Disques Pierre Verany (PV. 788031/032), a two-CD set with many other useful test tracks. (It's available from some audio dealers or in record stores through Allegro Imports.)

Finally, consider digital outputs. Found more and more frequently even in budget-price players, these permit CD data to travel outboard for D/A conversion or other manipulation by another component—or for direct digital recording on a digital tape deck. Either a coaxial electrical digital jack

# C COMBI-PLAYER



Combi-players like the Pioneer CLD-3090 (\$1,200) handle both laser videodiscs and CD's. The CLD-3090 features elaborate programming functions and video special effects.

or a fiber-optic one will give you the option for future direct connection of your digital components.

## Sight Plus Sound

Several CD-player variants are available that integrate video capabilities with CD sound. The most significant such variant today is the CD/laserdisc combi-player, which combines a laser videodisc player and a CD player in a single unit. Many of the mechanical functions can be shared in spite of laser video's very different signal format, which is analog even when the soundtrack is digital. And combi-players with CD performance and features rivaling those of the spiffiest audio-only models are available, typically at about twice the price of a comparable CD-only player.

If you are a pure *audiophile*, a combi-player will hold little appeal. For the *audio/videophile*, however, a CD/laserdisc hybrid player is a real draw, because laserdiscs are to videocassettes as CD's are to LP's—vastly better in picture and sound quality, convenience, and longevity.

Recently, a few manufacturers have grafted a multidisc CD changer onto a videodisc player, which yields a somewhat unusual beast that plays videodiscs as usual but can also load three or five CD's in conventional carousel fashion. You *can* have it all.

For the truly future-minded, CD-based multimedia players are now real, if rare. CD + Graphics players reproduce audio programs like any CD player, but they also glean still-frame color graphics (to be displayed on a connected video monitor) from specially encoded CD+G discs. There are still relatively few CD+G re-

leases, however, and it remains unclear whether the format will fly in the mass market.

Philips plans to introduce a CD-Interactive (CD-I) player this fall. It, too, will play ordinary compact discs in the usual way, but with the new CD-I discs, it becomes a sophisticated audio/video interactive playback computer when it is hooked up to a TV set. The first CD-I discs will run the gamut from games to educational programs to research encyclopedias.

Finally, there are the ubiquitous portable players. These diminutive but crafty devices can fill multiple roles, serving as a home player, an occasional car stereo source, a travel mate, a source for private headphone listening, and an active-wear music machine. The best portables feature

sonic and technical performance rivaling that of the top home players, and they pack surprisingly powerful features as well. A few even offer wireless remote control for easier domestic use. On the downside, portables are usually pricier than comparable sedentary models (though there are plenty of truly inexpensive ones), and they have rather fussy controls. Moreover, portables are usually shorter-lived, probably because of their rugged, on-the-go existence.

## The Bottom Line

Once you have identified what category of CD player you want, you can whittle down the hundred or so models available to those that fit your features list and performance needs. But by far the most important factors in selecting any CD player are less obvious ones: quality, value, and the manufacturer's reputation.

Quality is the easiest to judge. Look at a prospective addition to your hi-fi family as you would any appliance. Is it well made? Carefully screwed together? Nicely finished? Does it feel solid? Do its controls operate smoothly, and are they intelligently laid out? Granted, these factors don't necessarily have anything to do with sound or performance, but they give valuable hints as to the care and enthusiasm with which a player was designed and manufactured.

Almost every manufacturer strives to establish an excellent reputation for reliability and customer service. Check the warranty, which may be as short as one year or as long as five years, and talk to as many knowledgeable folks as you can: reputable dealers (more than one), owners, audio enthusiasts. Factor in all their opposing prejudices and beliefs and reach your own informed conclusion.

Value is extremely relative. A \$5,000 CD player is pure insanity (or inanity) to the average American; to a high-end audiophile it may be merely acceptable. Where you fall on this scale is a personal matter, but one rule may help. Buy for overall quality first, features second, and personal affinity a strong third. You may simply fall in love with the way a certain player looks, feels, or operates. Don't ignore such a passion. When you exchange your hard-earned cash for a CD player, you are the one who has to live with it—for many years, we hope. Remember that a CD player is only a thing, but it should be a thing that makes you happy to look at, to touch, and—above all—to hear. □

# P PORTABLE



A sleek portable, Sony's D-303 (\$360) features 1-bit D/A conversion and an optical digital output.



"I go roaring into the lot and bang!  
I get hit with: '75 cents for each 20  
minutes.' Unfortunately, I was going

to have to eat it. Showing up late for this job interview  
could blow the whole deal.

ticket and pulled

So I grabbed the  
into a space.



And then

I pulled out and

backed it in.

Great. I was starting to

freak. I checked my hair. 'Fine.' My teeth. 'Okay.' My tie. 'Too

late now.' As I looked down I suddenly spotted it.

NOT RESPONSIBLE FOR ARTICLES

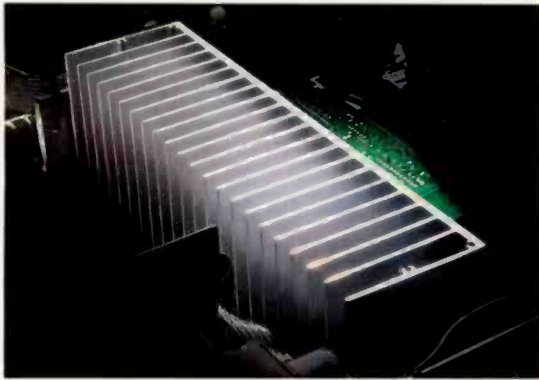
LEFT IN VEHICLE. I laughed!"



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# Decked Out In Style

**Choosing a cassette recorder—the second in a series on the practical business of buying audio equipment**

**I**T'S hard to imagine an audio system these days that doesn't include some form of tape recorder. Despite the inroads of the compact disc, cassettes are still by far the most popular way for most of us to buy recorded music, and even many audiophiles who might not choose the cassette as their primary music source are likely to have a recorder for making tapes to listen to in the car or when jogging. Such activities require that you buy a cassette deck, but before you go shopping for one, check out the alternatives.

If compatibility with other people's systems is less a concern than absolute audio quality, you might consider using a hi-fi VCR as your prime recorder. The AFM stereo soundtracks in the hi-fi videotape formats offer not only an exceptionally high level of audio quality, but at the slowest speed you can record 6 hours of nonstop music with very little sacrifice in quality. Or if editing is your concern, it's hard to beat an open-reel recorder. These are fairly scarce these days, and very expensive, but they do offer the simplest means of sound manipulation along with high audio quality. And, of course, for peerless audio performance there are the new digital recording media: Digital audio tape (DAT) is already here, and coming next year are digital compact cassette (DCC), offering digital recording and a measure of playback compatibility with your existing cassettes, and Mini Disc, promising CD convenience and sound in a recordable medium.

ILLUSTRATIONS BY MARK FALLS



Even if you decide to invest in one of the new technologies, chances are you will want analog cassette facilities as well. If that's only because you intend to make dubs for your old boombox, shoot low—there's no point in spending megabucks if you won't be able to hear the difference. If your interest is playing back prerecorded tapes or old recordings you have made, it's safe to dispense with all but the most rudimentary recording aids.

If, however, your cassette deck is intended to be a major source of real high-fidelity sound, go for features that are likely to improve performance, even at the cost of some convenience or a higher price. Forget autoreverse and dual-well dubbing, particularly the high-speed variety; the first is prone to alignment problems, and the second usually results in inferior copies. If you do have occasion to make copies, two free-standing

recorders will usually do a better job, even if it's a more awkward procedure. Features like three heads, closed-loop dual-capstan operation, and easy-to-use remote controls are much more likely to increase your sound quality and enjoyment.

## WHAT MATTERS

A cassette recorder is one of the most complicated pieces of equipment in an audio system, as it is both a signal source and a destination. Few machines have much problem reproduc-

ing a tape once it has been recorded, so unless you intend to use it as a play-back-only device, you should concentrate on what's offered for recording.

• **WHAT'S WHERE.** Because a recorder is an active component that you actually have to operate, the position of the controls and the way they work is of vital importance. The level indicators should be easily visible from your operating position, and the switches and knobs should be sufficiently large and arranged so that mak-

ing a recording involves little hunting and fiddling. If you can, try making a recording in the store before you decide to buy a particular model. If it's awkward to use, forget it.

• **BIAS.** Matching of machine to tape is critical, and no two tapes are exactly alike, so the ease with which you can tailor your recorder's performance to the tape (or tapes) you want to use will have a direct bearing on the quality of sound you get. Equalization is usually no problem, but proper bias is a must. The standard three-position bias switch is almost never enough: Each position is just a ballpark setting that may or may not be correct for the tape you use. A bias-trim control that can be adjusted by ear may be an economical solution, but it is difficult to use except with three-head machines that allow you to monitor the adjustments as you make them. The best kind of bias adjustment (and most expensive, natch) is a computer-controlled automatic one; it's a worthwhile investment if you do a lot of taping. If you're stuck with the standard switch, have the dealer adjust the deck's bias for a specific tape and use that tape only.

• **NOISE REDUCTION.** Noise, or hiss, is inherent to tape recording; one development that made the cassette a hi-fi medium was the invention of noise-reduction circuitry, beginning with Dolby A, a professional system, then Dolby B specifically for home taping. You can count on virtually every deck to include Dolby B, which thus has the advantage of universality: If you're trading tapes, it's safe to assume that the recipient can decode it. For your own use, however, more advanced systems will probably be desirable. Get Dolby C at the very least; the new Dolby S is attractive as well, although as yet only a few machines include it. A rival system, dbx, is offered on some machines; it's effective, but dbx-encoded recordings cannot be played on decks without the system—which means most decks. Dolby HX Pro is a worthwhile addition as well, although it's not a noise-reduction system but rather a recording-only process for reducing high-frequency distortion.

• **FLUTTER AND SUCH.** It's no easy matter to keep a cassette tape

## The Lingo

**A** tape recorder does things that nothing else in your system does, so it naturally has some distinctive terminology.

**TRANSPORT.** When most people use the terms "tape deck" or "cassette deck," they are referring to the whole component. Strictly speaking, however, "deck" refers only to the mechanical part of a tape recorder, which is designed to move the tape smoothly past the heads. It is also called the "transport" or simply the "mechanism." The transport includes a rotating *capstan* and a rubber *pinch-roller*; the tape is propelled by being held firmly between these as they turn. The tape spools off the *feed reel*, past the capstan, and onto a *takeup reel*. The reels may be mechanically linked and driven by one motor or be driven by two or more separate motors. There may be more than one capstan/pinch-roller assembly as well, one placed before and one after the heads; this is called a *closed-loop, dual-capstan* configuration. Each variant has its virtues, but the more complicated the mechanism, the higher the cost. There are lots of fine recorders with very simple transports.

**HEAD.** An electromagnetic device that converts audio signals to their magnetic equivalents, and vice versa. Simpler machines contain one head for erasing and a combined head for recording and playback; these are called *two-head* recorders. More advanced *three-head* models have separate heads for recording and playback along with one

for erasing. This arrangement allows each head to be optimized for its function and permits off-the-tape monitoring while recording.

**BIAS.** An ultrasonic AC signal that is added to the audio information to permit linear recording. The amount of bias needed is determined by the characteristics of the particular tape being used, and no two are exactly alike, so matching is crucial if you are to realize your recorder's potential. Bias is also used for erasure of existing signals, but this is a less critical operation.

**TYPE I, ETC.** Cassette tapes are divided into three broad categories, determined partly by their magnetic characteristics and to a lesser extent by the material used to make them. *Type I* tapes are "normal" ferric-oxide tapes, which are available in a wide range of qualities. *Type II* tapes originally had coatings composed of chromium-dioxide particles, which require higher bias and somewhat different playback equalization from Type I tapes. In recent years, the characteristics of chromium-dioxide formulations have been emulated by some pure-metal and ferric-oxide tapes, which are referred to as *chrome-equivalent* or *high-bias* tapes. They are also classified Type II. *Type IV* tapes are metal-particle formulations that need even more bias but use the same equalization as Type II. (When these classifications were being standardized, there was a layered "ferrichrome" tape, which became Type III; it has since disappeared.)

# CAN TUBES WARM UP CD SOUND?

*How a very old technology can make a brand new compact disc player sound extraordinarily good*



Our ultra-advanced new SD/A-490t includes two vacuum tubes whose classic design has remained unchanged for over 35 years.

We and many other critical listeners believe that this anachronistic addition to an already excellent CD player design significantly enhances its sound.

## THE AMPLIFIER THAT DOESN'T AMPLIFY.

Between a CD player's D/A converter and external outputs is circuitry called a buffer amplifier which actually doesn't boost the signal strength at all. Instead, the buffer amp is a unity gain device which increases output current, and acts as a sort of electronic shock absorber, isolating the relatively fragile D/A chip set from the nasty outside world of demanding analog components.

## TUBES VERSUS SOLID STATE.

More than 98% of all CD players use solid state devices for buffer amplifiers. A handful of hard-to-find, esoteric designs in the \$1200 to \$2500 range employ one or more tubes instead. As does our readily-available \$699 SD/A-490t.

In ultra-expensive preamplifiers and power amplifiers, tube sound is subjectively described as "mellower", "warmer", "more open and natural" or simply "less harsh than solid state". Objectively, it's safe to say that tubes: 1) Produce even-order distortion versus transistors' odd-order distortion, particularly 3rd harmonics which are especially unpleasant to the ear; 2) Act as a pure Class A device when used in a buffer stage (Class A output is considered the optimal amplifier configuration) 3) "Round off" the waveform when they clip, while over-driven solid state devices cut off sharply, causing audible distortion.

## THE SD/A-490t'S OUTPUT SECTION.

Our new CD player uses two 6DJ8 dual triodes placed between the digital-to-analog converter and a motorized volume control. Operated at less than 30% of



*The Carver SD/A-490t. At \$699, its suggested retail is \$500 less than the nearest competitor with tube output.*

their maximum capacity, the tubes achieve a highly linear output voltage with very low static and transient distortion while providing very high dynamic headroom.

And because they're "loafing" at 1/3 their rated current capability, the SD/A-490t's tubes are designed to last the life of the CD player without replacement or need for adjustment.



## AN ARRAY OF FEATURES AS RICH AS ITS SOUND.

We've designed the SD/A-490t to be both useful and easy-to-use. 21-key front panel or remote programming. Fixed and variable output. Programming grid display. Random "shuffle" play. Variable length fade. Automatic song selection to fit any length of tape. Even index programming for classical CD's.

Plus our proprietary Soft EQ circuitry which compensates for variables in spacial (L-R) information and midrange equalization found in many CD's mastered from analog tapes.

## BRING YOUR TWO BEST CRITICS TO A CARVER DEALER.

It's tempting to further regale you with how well we think the SD/A-490t's tubes and Single Bit D/A circuitry improve the sound of a compact disc. But your own ears should be the final arbiter of quality. Bring them to a Carver dealer and compare tube output with solid state designs costing \$1000 or more. Suffice it to say that almost all critical listeners not only are able to hear a difference, but prefer the sound of the remarkably affordable SD/A-490t's dual triode transfer function.

## THE SD/A-490t

- Dual 6DJ8 Vacuum Tube Output Stage
- Over-sized Disc Stabilizer Transport
- 24-Track Programming with Music Calendar Display and 21-key front panel and remote input
- Indexing
- Random Play
- Motorized Volume Control
- Time Edit/Fade Taping Feature with user-variable time parameters
- 2 to 10 Second Variable Length Fade
- Optical and Coaxial Digital Outputs
- Exclusive Carver Soft EQ

# CARVER

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\*Source: 1990 Audio Magazine Annual Equipment Directory.

# One step ahead.



In 1986, Museatex introduced our first power amplifiers to international critical acclaim. They were referred to as "Mighty Mites" and "Giant Killers" by audiophile reviewers.

Today, the proponents of massive Class A amplifiers are scrambling to design their own amplifiers that meet the performance and aesthetic standards set by Museatex.

Museatex's new Melior Amplifiers use brains rather than brawn to give you audiophile performance in a package that will fit conveniently into any decor.

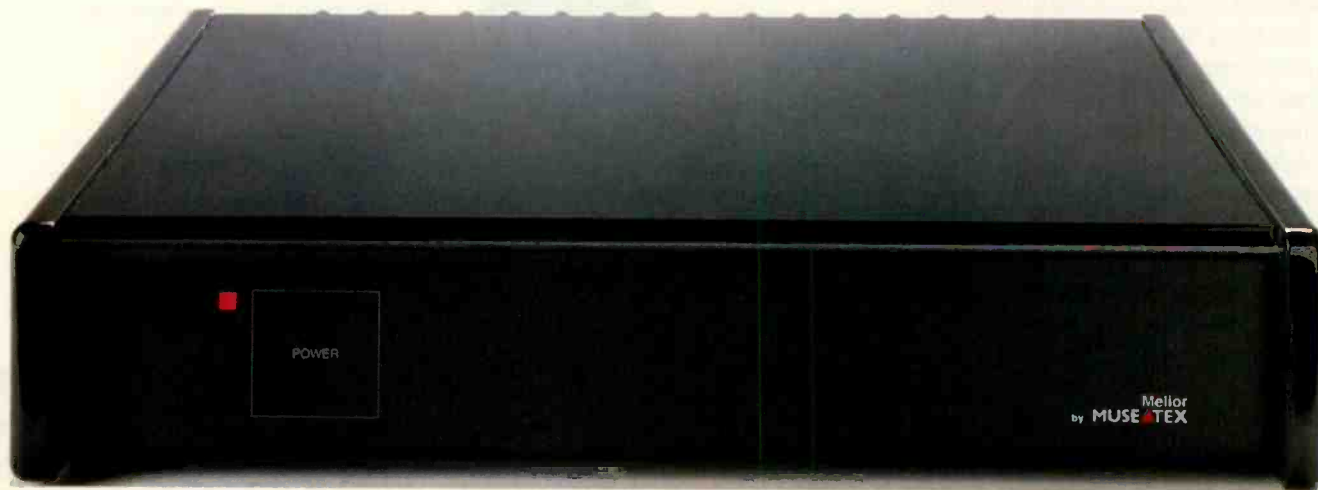
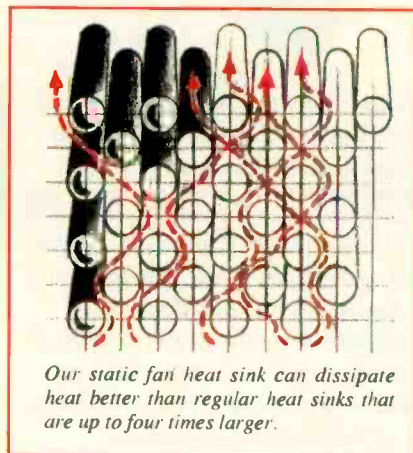
Museatex has always believed that performance should not have to come at the expense of convenience. That is why Ed Meitner and the design team at Museatex rejected the idea that a superior sounding amplifier has to be big, heavy and reach uncomfortably high operating temperatures. Our power amplifiers use several proprietary designs to provide a high current amplifier that can drive complex speaker loads.

Our unique static fan heat sinks use asymmetrically arranged metal rods which create convection currents to dissipate heat without resorting to unwieldy size or noisy fans. This allows us to pack our amplifiers in attractively sized packages that are 60% smaller than if we were to use conventional heat sinks which use fins.

The floating charge power supply isolates the transformer, rectifier stage, and power source from the amplifier to provide cleaner sound that is not contaminated by power line impurities. The large bank of capacitors provide seemingly unlimited head room to handle music peaks.

The sophisticated protection circuits, incorporated completely outside the audio signal path, prevent damage to your speakers and other associated components in the event of system malfunctions.

Whatever your musical tastes, the Melior amplifiers will perk up your ears and blend in with any decor without heating up or cluttering up your home.



Visit a Museatex dealer to find out more about the complete family of Museatex audio and video products including speakers, sub-woofers, amplifiers, FM Tuner, digital converters, projection TV, and accessories.

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running smoothly, considering the slow linear speed and the difficulty of controlling the physical effects of the cassette shell itself, so cassettes can be flutter-prone. The result, in extreme cases, is a sort of "honky" or underwater sound. Many companies produce excellent transports that minimize these problems: Look for flutter specs below 0.07 percent or thereabouts, and try out a piano recording if you can—sustained piano notes are among the best flutter revealers. Remember, too, that whatever speed irregularities there are will affect both recording and playback, so don't try your listening test with a commercial cassette. Record it yourself, preferably from a CD.

• **HEADS AND METERS.** A lot is made of the composition of a cassette recorder's heads, but that can safely be ignored; a tape head made today will probably last as long as you own the recorder—if you clean it regularly. But the *number* of heads can be important. Two-head recorders contain one head for both recording and playback and another for erasing earlier material; three-head devices give each function its own head, optimized for that function. More important, three-head decks allow off-the-tape monitoring, which is a boon if you make a lot of tapes. Level indicators should not only be clearly visible, but if they are of the common bar-graph variety they should have enough distinct segments to be useful. Five or six segments just aren't enough to tell what's going on.

## WHAT DOESN'T

Something as complex as a cassette deck offers a lot of options, but most of the bells and whistles are rarely used and add cost. Better to spend your money on an upgraded noise-reduction system or an extra tape head.

• **SKIP AND SCAN.** Various find-and-play schemes have been developed in the attempt to make a cassette deck as programmable as, say, a CD player. As a rule, however, most of us listen to our tapes straight through; when we want to find something in the middle of the tape, it's not *that* hard to do manually.

• **TIMER OPERATION.** In Japan, where most cassette recorders come



**Get a deck  
with Dolby C noise  
reduction at  
the very least,  
and look for  
flutter specs below  
0.07 percent.**

from, people do indeed time-shift radio programs. Detailed listings are carried in the newspapers, and there is a flourishing trade in audio timers. If you are one of the few people on our side of the ocean who want to do that, fine; if not, pass on the timer facility.

• **RECORD INTERLOCK.** A number of manufacturers seek to simplify the dubbing process by allowing their cassette decks and CD players to be interconnected for one-button recording. The systems do work, but they tend to simplify something that's really not very complicated, and they restrict your equipment choices to the products of one company.

• **ALIGNMENT.** It is true that misaligned heads can seriously degrade sound quality, so a few companies offer machines that enable a user to make his own adjustments, particularly of azimuth. Often this invites trouble, as a user is just as likely to *mis*-align things. Make sure the heads are correct when you buy the recorder, and have them checked by a service facility if you find they have become misaligned. If the heads need more attention than that, there's something seriously wrong.

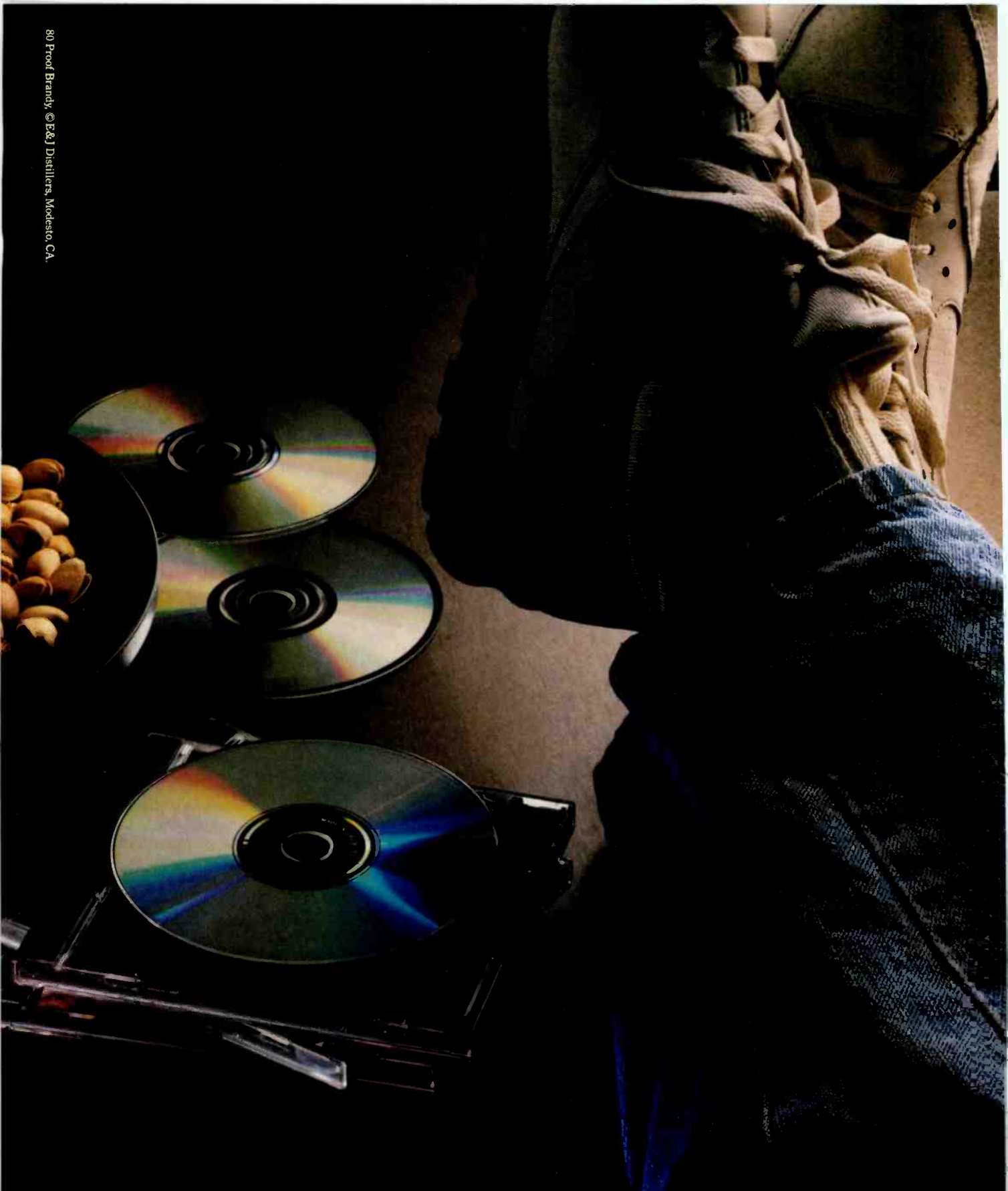
## GET WITH IT

Buying a tape recorder is really just the beginning, so when you budget for one, make sure you make some provision for the extras you will need. Most important will be head-cleaning and demagnetization devices. Cleaners come in all sorts of forms, but usually the most convenient are housed in a cassette shell and operate by being "played" for a minute or so. Cheaper, and usually more effective, are liquid cleaners that can be applied with cotton swabs, but these work only if you can get at the heads and tape guides, which are frequently inaccessible. By the same token, demagnetizers come in cassette form or in wand or probe style. Which you choose will depend on your machine, but be sure to buy one or the other and to *use* it, or magnetic build-up over time may gradually erase your precious tapes.

It's usually sensible to purchase a supply of the tape brand that works best with your machine, once you have discovered what that is. Tape formulations do change, and even if yours doesn't, you may not be able to find it when you need it. Better to have a box of blank cassettes so you'll always have the right tape at hand. Some sort of storage and labeling system is important as well; otherwise, you run the risk of erasing an important but unmarked recording or of damaging tapes that are stacked in an unruly pile.

And if you intend to do any specialty recording, you will likely need mixers, microphones, and other recording aids. The cost for these can far outrun that of the recording equipment itself, but selecting and purchasing them can be left to a later day. □

**NEXT: CD players and changers**



**Change to something more comfortable.  
E&J and soda.**



# SYSTEMS





# Sound Organization

**W**HEN the cable TV company in Orlando, Florida, expanded its offerings to forty-one channels, it was a snap for Lori Swanson to re-program her TV's universal remote control to accommodate the new channels. Her husband, Mark, had neatly organized all of the owner's manuals for their audio and video equipment into a three-ring binder, so she knew just where to look for instruction. And if she or Mark wants to look up which discs and tapes they have, they refer to another binder in which Mark has logged all of their recordings alphabetically.

Mark was just as organized when he put together their audio/video system. Assimilating information he read in *STEREO REVIEW*, he built his own rear-channel speakers using 4-inch drivers (he decided not to connect the passive radiators since the surround channel contains no low-bass information, but he kept them for show). When constructing the pine cabinets he rounded the corners to cut down on diffraction.

Using characteristic foresight, the Swansons had their new house wired for rear- and center-channel speakers during construction, before the walls went up. Mark built the TV shelf out of 2-inch-thick butcher block, which is suspended from two metal braces that go through the ceiling and are bolted down in the attic. Beneath the shelf is a Radio Shack Minimus 7 center-channel speaker, which is powered by an 18-watt Radio Shack STA64B amplifier hidden behind the Laserline CD storage boxes in the wall unit. Mark patterned the 20-foot-tall pine cabinet after one he saw in a model home and built it with wood, glue, and molding from a local home-improvement store.

The electronic components include a dbx Model 3BX2 Dynamic Range Expander, a BBE Model 1002 Sonic Maximizer, a Fosgate DSL-2 surround-sound processor with an on-board amplifier for the rear surround channel, a Nakamichi BX-2 cassette deck, a Sony CDP-C15ES ten-disc CD changer, an Acoustic Research ARSRC remote control, a Hafler DH-100 pre-amplifier and XL-Z80 power amplifier, a Mitsubishi HS-411UR VHS Hi-Fi VCR, and a Sony KV-2781R monitor/receiver. Acoustat Spectra 22 loudspeakers for the main channels are supplemented by a 100-watt Velodyne VA-1200 powered subwoofer.

Mark and Lori relax by watching adventure movies in surround sound or listening to contemporary jazz. If there's a shelf to be built or a file to be organized, Mark takes care of it. Lori is the master of the remote controls. "We both have trouble programming the VCR," Mark says, "but she's usually the one who figures it out." □

by **Rebecca Day**

PHOTOS BY CARLOS DOMENECH



# WE HAVE SO MANY NEW IDEAS, THEY'RE EVEN COMING OUT OF THE WOODWORK.



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## SOUND SUITABLE FOR FRAMING.

Introducing our first in-wall speakers, the Gallery Series™. An artistic achievement that deserves to be displayed in a museum as well as the home.



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Visually, they can either fool the eye into thinking they're not there. Or prove to be a stunning accent. Because only the Gallery Series offers a real pecan frame that complements the rich woodwork found in so many new homes. Or a white frame that blends in when painted.

The Advent tradition of producing great sound from a compact speaker is achieved here with a 6½" high-excursion woofer, and ½" polycarbonate ferrofluid-filled dome tweeter. They handle 150 Watts of peak power. Because of a simplified mounting system, installation takes less time and less drywall cutting than most in-wall speakers.

*The Laureate*



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Now, the popular Eurostyled Indoor/Outdoor Mini-Advent comes in white as well as black. Bringing a whole new personality to kitchens, bathrooms, bedrooms and more. Wherever the new Mini goes, though, it still brings 120 Watts of peak power handling.



*Indoor/Outdoor Mini-Advent, now in white*

## CARVING ITS OWN NICHE.

The new Laureate™ will earn accolades from audio enthusiasts. This handsome natural pecan tower uses the famous Advent Co-active Woofer™ technology. Dual 6½" high-excursion woofers for tight, accurate bass, and a 1" ferrofluid-filled soft dome tweeter for clear highs. Easily handles the dynamic range and power demands of digital-ready sources.

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Stereo Review's critics choose the



outstanding current releases

## Squeeze's "Play": Two Lives in Three Acts

**H**O-HUM, it's "Play," another splendid Squeeze album. So what's new? A few things, actually. Keyboardist Jools Holland has left the band again, and this time—unlike his previous exits—he hasn't been replaced. Without Holland's comic relief, songwriters Chris Difford and Glenn Tilbrook delve into their more analytical, writerly sides—and are therefore truer to their own nature. Long celebrated for songs that play like "suburban short stories" (in Difford's words), they carry their method to its next logical step here: a suburban three-act play, hence the album title (which doubles as a baseball pun). The booklet that accompanies "Play" actually takes the form of a script incorporating lyrics from various songs. The album itself plays through like a musical, charting the ups and downs of a normal couple in processed-cheese suburbia, finding a universality in the stresses, temptations, and quarrels that forever threaten to pry apart even committed lovers in this day and age.

Difford and Tilbrook are at the top of their form in "Play." Difford is a master of the telling detail and clever turn of phrase, communicating pathos and humor while never belittling his characters with cheap satire. Tilbrook provides appropriately understated musical settings that open up, on repeated listening, to reveal a range of emotional shadings through the subtle swell of strings, the soulful punch of a horn section, or wispy curlicues from an insouciant accordion.

There's not a bad song here, but several cut to the heart of the matter with a resonance so truthful that everyone's bound to have shared their sentiments at one time or another. The round, muted tones of Tilbrook's Wes Montgomeryish guitar set the tone for *Letting Go*, an agonized look at the moment when both parties know it's over but neither wants to admit it. Meanwhile, their life goes on as usual in all its mundane rituals: "She boils the eggs, I make the tea/Outside the



Squeeze: at play in the fields of suburbia

sun shines on the street." *The Truth*, a first-person lament with witty guitar filigrees that sting like a guilty conscience, occasions this fretful admission: "When the truth has to be told/My blood runs hot and cold/The truth is not my middle name." The album closes with the cheerless realization that any kind of liaison may be doomed from the beginning because "there is a voice within us all that says, 'Destruct, go to the wall.'"

But "Play" is not morbid. Real-life stories don't always have happy endings either. There is, however, intense

pleasure to be derived from such a closely observed, well-crafted work. "Play" is a high-water mark for Squeeze. *Parke Puterbaugh*

**SQUEEZE:** *Play*. Glenn Tilbrook (lead vocals, electric and acoustic guitars); Chris Difford (vocals, guitar); Keith Wilkinson (vocals, bass); Gilson Lavis (drums, percussion); other musicians. *Satisfied; Crying in My Sleep; Letting Go; The Day I Get Home; The Truth; House of Love; Cupid's Toy; Gone to the Dogs; Walk a Straight Line; Sunday Street; Wicked and Cruel; There Is a Voice.* REPRISE © 26644-2 (53 min), © 26644-4.

## A New Light on Brahms's Requiem

**T**HE conductor John Eliot Gardiner hasn't abandoned the Baroque and Classical repertory he has long been associated with, but he is so serious about authentic performance of nineteenth-century music these days that he has augmented his English Baroque Soloists and rechristened it the Orchestre Révolutionnaire et Romantique. The first recording by the new ensemble is Brahms's *German Requiem*, a pivotal

work that has long needed rescuing from the bloated, post-Wagnerian performance style it has endured for so many decades.

Gardiner's usual touches make the most obvious difference: Textures are leaner, rhythms are much clearer, and the music builds through the cumulative effect of short phrases rather than sustaining a long line at the cost of clarity. Thanks to Gardiner's considerable intellect and imagination, these

STEVE J. SHERMAN/JAY K. HOFFMAN ASSOC



Gardiner: lifting the veil from Brahms

performing techniques are used in such a way as to change one's perception of the piece profoundly. It's as if a veil had been lifted, and the discoveries are thrilling.

In this performance one hears the echoes of Brahms's more modest choral works as well as those of earlier

composers such as Heinrich Schütz. And with this clarity comes a variety of textures that gives the piece a certain narrative quality, almost as if it were a drama unfolding over the course of the seven movements. While many conductors make dramatic points with amplitude of sound, Gardi-

ner does the same thing more eloquently with articulation. Unlike some "authentic" performances, this one never sounds undernourished. Though the sound is smaller than we're used to, the expressive points arise from the notes themselves rather than from effects imposed on the music from outside.

Much of the success of the performance, however, has nothing to do with performance practices but with the near-perfect intonation and diction of Gardiner's Monteverdi Choir. The group maintains such unanimity in the slightest nuances that each choral part has the emotional immediacy of a solo voice. In fact, the two vocal soloists, soprano Charlotte Margiono and baritone Rodney Gilfry, seem a little bland in comparison. This is no serious drawback, however, in a recording that's likely to set a new standard.

David Patrick Stearns

**BRAHMS: A German Requiem.** Charlotte Margiono (soprano); Rodney Gilfry (baritone); Monteverdi Choir; Orchestre Revolutionnaire et Romantique, John Eliot Gardiner cond. PHILIPS © 432 140-2 (66 min).

## The Netherworld of Chris Whitley

CHRIS WHITLEY'S hypnotic debut album, "Living with the Law," is an instant transport to a grimy world of soiled bedsheets and naked light bulbs, a world you might not want to visit but one you can't seem to leave once you're caught up in it. Imagine the movie *Paris, Texas*—its spare, desolate Ry Cooder slide-guitar soundtrack, its sense of vacuous, confused despair—and you have a sense of the surreal wasteland Whitley explores here. His netherworldly blues poetry, alternately graphic and opaque, casts a spooky spell, an eerie ghost-town glow.

Armed with a National acoustic guitar, Whitley draws his portraits with Steve Earle-like clarity, then brings them to life in a voice reminiscent of rural Mississippi blues musicians (whose bottleneck-guitar stylings he also emulates). His grizzled monologues are punctuated with heart-stopping falsetto leaps.

The title song, for example, captures the itchy determination of a boy

who escapes the white-trash world of his drunken daddy and dope-dealing brother by doing his "dreaming with a gun." From a reference to "milking the trigger," Whitley segues easily to another lyric where sex and danger coexist: "So fetch on up your greasy apron/Spread your lover in the straw/Hear me, baby, I'm nearly crazy/It's hard living with the law." Most of Whitley's verbal wanderings, for that matter, including the thrilling *Big Sky Country* ("On a bed of roses in the big sky country/Spread out to love you/Love you in your second skin"), combine sensual description with exhibitionism and paranoia.

Producer Malcolm Burns (Daniel Lanois's keyboardist) rightly keeps the instrumental tracks crisp and uncluttered, but he's not afraid to rub a viola up against a brash electric guitar (*Poison Girl*) or to leave such ringing imagery as the prisoner's hallucinations in *Phone Call from Leavenworth* ("I thought I saw Jesus coming down/He came through the concrete baby/



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He came through them walls without no sound") free of instrumental glut. Many of the songs start out with Whitley's naked slide-guitar ruminations, but they almost always build and swell to an electric climax heavy with bass and drums.

Whitley, who looks like a Eurotrash fashion model, may be faulted for being pseudo-intellectual as well as being somewhat repetitive. But he's also so "primitive" as to be a roots revisionist—and enough of an original folk storyteller to leave your hair standing on end. When he sings, "Feel like

there's something bound to take me over," you know it's already got him by the ankles and headed for deep water. Better play this one with the lights on. *Alanna Nash*

**CHRIS WHITLEY:** *Living with the Law.* Chris Whitley (vocals, guitars); instrumental accompaniment. *Excerpt; Living with the Law; Big Sky Country; Kick the Stones; Make the Dirt Stick; Poison Girl; Dust Radio; Phone Call from Leavenworth; I Forget You Every Day; Long Way Around; Look What Love Has Done; Bordertown.* COLUMBIA © CK 46966 (47 min), © CT 46966.

COMPACT DISCS OF  
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### Popular

- **FRED FRITH:** *Gravity.* EAST SIDE DIGITAL ESD 80452. The pre-eminent British avant-garde guitarist's dance-inspired mid-Eighties solo album, featuring bonus tracks.
- **THE MOVE:** *Message from the Country.* ONE WAY/CEMA 57476. From 1971, Jeff Lynne and Roy Wood working on the formula they'd eventually "perfect" for the Electric Light Orchestra.
- **GRAHAM PARKER:** *The Real Macaw.* RAZOR EDGE RE-1983-2. One of Parker's best post-Rumour albums, from 1983, now including a bonus-track version of the Jackson Five's *I Want You Back.*
- **SOFT MACHINE:** *Third.* COLUMBIA CGK-30339. The British psychedelic group made its first (and arguably best) move in a jazz direction in this 1970 album featuring drummer/vocalist Robert Wyatt.
- **ALEXANDER "SKIP" SPENCE:** *Oar.* SONY SPECIAL PRODUCTS A 9831. The Moby Grape star's only solo album, from 1969, with bonus tracks even weirder than those on the album proper.

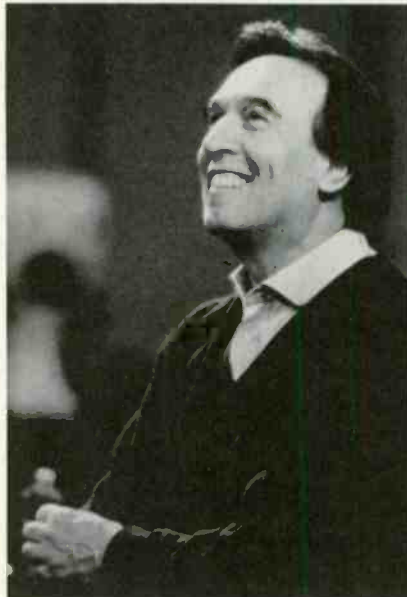
## Schubert's "Rosamunde" Complete

**H**ARD on the heels of the first complete recording of Schubert's opera *Fierrabras* comes a delightful representation of his complete incidental music for the play *Rosamunde*, performed by the same Chamber Orchestra of Europe once again under Claudio Abbado. *Fierrabras* never had a performance in the composer's lifetime, but *Rosamunde* was on the boards for two nights before disappearing into oblivion. Nevertheless, it was Schubert's biggest theatrical success. The play flopped but the music did not; a good deal remains familiar in one form or another.

The history of the two projects is intertwined. Joseph Kupelwieser, secretary at the Imperial Court Opera Theater in Vienna and author of the libretto of the ill-fated *Fierrabras*, commissioned one Helmina von Chezy to write *Euryanthe* for Carl Maria von Weber. The failure of this item cost Kupelwieser his job and caused the cancellation of *Fierrabras*. Nothing daunted, Kupelwieser convinced Chezy to write *Rosamunde* for his mistress, an actress by the name of Emilie Neumann, and got Schubert to write the music, a rare example of a score that outlived the wreckage of the theater piece it was written for.

Some of the music is familiar, some of it is not, but all of it is pleasing. One solo song, several choruses, and some wonderful entr'actes and ballet numbers are elegantly presented here. Abbado, Schubert, and the young performers are in sync; the performances are lively, colorful, and fresh.

Schubert used two different overtures for *Rosamunde*, both written for



Abbado: in sync with Schubert

other plays. The one here was originally written for a flop entitled *Die Zauberharfe* and attached to the *Rosamunde* music by the composer only at a later date when a hoped-for revival was in prospect. That didn't happen, but it compounded an already confused situation by giving a well-known overture two different titles. Well, a *Rosamunde* by any other name . . . .

*Eric Salzman*

**SCHUBERT:** *Incidental Music to "Rosamunde, Fürstin von Zypern."* Anne Sofie von Otter (mezzo-soprano); Ernst Senff Choir; Chamber Orchestra of Europe, Claudio Abbado cond. DEUTSCHE GRAMMOPHON © 431 655-2 (60 min).

### Classical

- **LISZT:** *A Faust Symphony.* Riegel; Bernstein. DEUTSCHE GRAMMOPHON 431 470-2. "An altogether admirable performance, and lovingly shaped, with orchestral details realistically captured" (April 1978).
- **MAHLER:** *Symphony No. 4.* Raskin; Szell. *Songs of a Wayfarer.* Von Stade; A. Davis. SONY SBK 46535. "Exquisite control combined with poetic sensitivity . . . a model of fine balance, true-to-life dynamics, and finely detailed limning of tone color" (June 1966).
- **MOZART:** *Don Giovanni.* Ghiaurov, Gedda, Ludwig, Freni, Berry; Klemperer. ANGEL/EMI CDMC 63841. "An exciting and memorable achievement" (March 1967).
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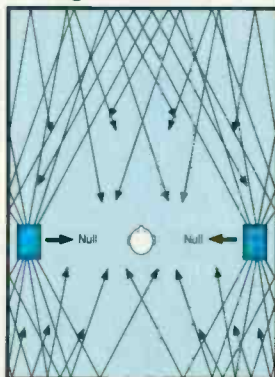
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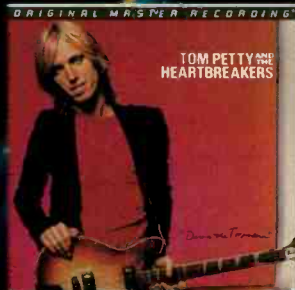
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**ANIMAL LOGIC: II.** Animal Logic (vocals and instrumentals); other musicians. *In the Garden; Love in the Ruins (Doctor Dear Doctor); Through a Window; Rose Coloured Glasses; If I Could Do It Over Again; I Won't Be Sleeping Anymore;* and five others. I.R.S. © X2-13106 (46 min), © X4-13106.

Performance: *Spunky*  
Recording: *Very good*

I can't help wondering why Stewart Copeland and Stanley Clarke want to be part of the odd trio that is Animal Logic. Copeland has been a real whackmaster of a drummer since his days with the Police, as well as a fairly successful TV and film composer. Clarke earned his stripes as a nimble-yet-thundering jazz-fusion bassist with Return to Forever and a band he co-led with keyboardist George Duke. Why have these two barely containable talents, who make for a galloping rhythm section, hitched themselves to romantic singer-songwriter Deborah Holland? Maybe it's because they like the countryish lilt of her butter-milk soprano—which sounds like Linda Ronstadt's when things get emotional—or maybe they like the pop psychology that permeates her lyrics ("Talking is good," she opines therapeutically at one point).

No matter why Copeland and Clarke are here, however, Animal Logic "II," like its predecessor, "Animal Logic," combines a strong voice and a stronger musical force. Even if the music, fleshed out by miscellaneous guitarists and keyboardists, seems at times a little too rambunctious for the mood and sensitivity of the lyrics, these songs are exhilarating. *R.G.*

**GARTH BROOKS: Ropin' the Wind.** Garth Brooks (vocals); Trisha Yearwood (background vocals); other musicians. *Against the Grain; Rodeo; What She's Doing Now; Burning Bridges; Papa Loved Mama; Cold Shoulder;* and three

others. CAPITOL © CDP-96330 (37 min), © C4-96330.

Performance: *His best yet*  
Recording: *Very good*

In the early stages of Garth Brooks's career, his handlers worried about how to distinguish him from the myriad of "hat acts" then flooding the marketplace. His second album, "No Fences," with its provocative mix of styles and subjects, went a long way toward making him stand out. But it is this third album that tells the tale, primarily through the breadth of Brooks's song-

impersonating a country singer, and in a cover of Billy Joel's melodramatic *Shameless*. He also doesn't seem to understand that a bluegrass tune needs a special kind of vocal treatment. But despite these small failings, most of the album is impressive. *A.N.*

**RAY CAMPI: With Friends in Texas.** Ray Campi (vocals, guitars, acoustic bass, dobro); Bonnie Raitt, Del Shannon, Lou Ann Barton, Rose Maddox, Mae West (vocals); Merle Travis (lead guitar); Joe Ely (rhythm guitar, background vocals); other musicians. *Guitar Rag; Austin*



Animal Logic's Copeland, Holland, and Clarke: strong voice, stronger music

writing in a program that ranges from bluegrass (*Against the Grain*) to Western-swing (*We Bury the Hatchet*) and pop (*What She's Doing Now*).

No cardboard-cutout country singer could have created *Papa Loved Mama*, a terrific novelty tune inspired by a poem by Carl Sandburg ("Papa loved mama/Mama loved men/Mama's in the graveyard/Papa's in the pen"), which Brooks expands into the biography of a jealous trucker and his cuckolding wife. And while he weakens his involving Western-romance story song *Lonesome Dove* by using an overworked title, it took a mature thinker to come up with *The River*, a pop anthem about making the most of your life and validating your dreams, dressed here with African-sounding instrumentation that enhances the song's spiritual quality. On the down side, Brooks goes over the top vocally in Larry Bastian's *Rodeo*, where he turns so twangy as to suggest he's merely

*Waltz; Quit Your Triffin'; Wee Mouse; Blue Ranger; Dobro Daddio from Del Rio; Merle's Boogie Woogie;* and five others. FLYING FISH © FF70518 (27 min), © FFC70518.

Performance: *Asylum time*  
Recording: *Good*

Can this be true? Mae West, Bonnie Raitt, Merle Travis, Joe Ely, Lou Ann Barton, and Del Shannon in the same album? All assembled as *back-up* for somebody named Ray Campi? Affirmative, Jack. Campi, an Austin, Texas, rockabilly aficionado, came of age in the Fifties listening to country, blues, rock, and plain ol' hillbilly, stirring them all into a high-energy, eclectic mix. Through the years he's played in shows with Gene Vincent, Bo Diddley, Dave Edmunds, and the Fabulous Thunderbirds, and a number of performers from varied backgrounds have warmed to his wild-haired kind of stylized rave-ups.

### Explanation of Symbols

- Ⓢ = Tape cassette
- Ⓛ = LP record
- Ⓢ = Compact disc (timings are to the nearest minute)

That—by the grace of overdubbing—is how we get Mae West singing with Campi on a track where Joe Ely plays guitar and warbles background vocals; West's vocal was originally recorded in 1973, the rest in 1986. Similarly, Merle Travis, who died in 1983, laid down his tracks in 1974, and the finished product was built around them twelve years later.

The program includes a couple of coy waltzes, Mexican-style rhythm numbers, a guitar rag, a cowboy tune, some blues, and even an accordion two-step, and most of the time the music is good enough—though campy—to stand on its own. Even *Caterpillar*, a rollicking rockabilly tune where Miss Come Up and See Me Sometime handles lead vocals, holds up to scrutiny (of course, once you real-



Fatima's Cathal Coughlan: radical, dude

ize it's Mae West doing the heavy breathing, you're so transfixed you can't hear anything else). I can't say I urge you to go out and snarf this up immediately, but if it should happen to land on your sound system mysteriously, you'd be most pleased—or at least temporarily dazed—if you gave it a spin. A.N.

**THE FATIMA MANSIONS:** *Viva Dead Ponies*. The Fatima Mansions (vocals and instrumentals); other musicians. *Angel's Delight; Concrete Block; Blues for Ceausescu; Legoland 3; Mr. Baby; Start the Week; You're a Rose*; and thirteen others. RADIOACTIVE © RARD-10242 (50 min), © RARC-10242.

Performance: *Scabrous*  
Recording: *Okay*

You certainly can't accuse the Fatima Mansions of playing it safe. This Irish band sets forth on its debut album to capture the world in all its confusing,

depressing, revolting glory. The songs here are about angry revolutionaries, deposed fascists, civil-war desperadoes, repressive civil servants, cutthroat émigrés. Chaos, economic desperation, moral confusion, and despair are everywhere in these tunes. It's not pretty.

Appropriately, considering the lack of order and clarity in the Fatima Mansions' world view, the music rockets back and forth between different styles—sometimes in the same song—incorporating bits of lounge-lizard crooning, spitfire screaming, punk-guitar screeching, dance-hall pounding, and neo-Motown bouncing. When singer-songwriter Cathal Coughlan sneers, in *Blues for Ceausescu*, "God I love living in a democracy," before proclaiming, "the only solution, another revolution," he may have his tongue in his cheek, but not very far. This is powerful music made by intelligent, impatient radicals. R.G.

**GOLDEN THROATS 2: *More Celebrity Rock Oddities***. Sammy Davis Jr.: *John Shaft*. Mel Tormé: *Sunshine Superman*. Mae West: *Light My Fire*. Bing Crosby: *Hey Jude*. Sebastian Cabot: *All I Really Want to Do*. And nine others. RHINO © R2 71007 (53 min), © R4 71007.

Performance: *In a class by itself*  
Recording: *Good*

This is Rhino's second anthology of rock songs sung by . . . er, inappropriate celebrities, and once again it's hard to know what to make of it. Is it a listening experience akin to hearing medieval peasants having their eyes gouged out with sharp sticks? Do its fourteen selections provide a convincing argument about the inhumanity of the capitalist system? Does it prove that whom the gods would destroy, they first let sing? Well, all of the above, actually, but the album is also—in small doses, at least—extremely funny, so perhaps we should abandon the quest for any higher (lower?) meaning and just enjoy already, as my mom used to say.

As in the first album, the *Star Trek* contingent provides the most memorable moments, in this case Leonard Nimoy's excruciatingly off-key *Put a Little Love in Your Heart* and William Shatner's hallucinatory reading of *It Was a Very Good Year* (yeah, right, for drugs apparently). But I'm also much taken with Sammy Davis, Jr.'s so-hip-it-hurts *In the Ghetto* ("Dig, man"), Cassius Clay's punch-drunk *Stand by Me* (would that Rob Reiner had used it in his movie), and the obligatory Bob Dylan selection as read by Sebastian Cabot (*All I Really Want to Do*). All in all, then, "Golden Throats 2" is fully up to the remarkable standards set by the first volume, and here's hoping that the promised No. 3 will contain the Brady Bunch Kids version of *American Pie*, which missed No. 2 because of a contractual snarl. Or how about a companion video featuring the legendary Mary Tyler Moore cover of *Sympathy for the Devil*? S.S.

**VERN GOSDIN: *Out of My Heart***. Vern Gosdin (vocals); Ricky Skaggs (background vocals); vocal and instrumental accompaniment. *I Knew My Day Would Come; The Garden; Love Will Keep Your Hand on the Wheel; Out of My Heart; The Bridge I'm Still Building On; Once and for All*; and four others. COLUMBIA © CK 47051 (32 min), © CT 47051.

Performance: *Masterly*  
Recording: *Good*

People who really know country music listen to Vern Gosdin because he's in George Jones's league as a honky-tonk song stylist, and that means he's one of the best conveyors of heartbreak and pain in the business. But there's another reason to seek out Gosdin, and that's the sheer pleasure of his lyric writing in lines such as "It's gonna take a month of Sundays/To get me over Saturday night" and "I just wrote down the way I was feeling/And cried while this song wrote itself." Now, that may not sound like T. S. Eliot to you, but coupled with a weepy steel guitar and Gosdin's soft-moaning baritone, it's a lot more immediate than Mr. Eliot ever hoped to be, and twice as heartfelt.

Sometimes Gosdin gets a little skewed and left of center—in *The Garden*, for instance, we think he's about to lose his wife to another man, when it's really a terminal illness that whisks her away—and there are other times, such as when he debates whether love "will wash your clothes and cook your meals," that you've got to wonder about the old boy. But then comes his quintessential cheater's song, *Out of My Heart*, with the kind of lament that'll make potential cheaters think twice: "When I get up in the morning/It's so hard to face my face/As it tells me from the mirror/I'd rather be at your place." That may not be great poetry, but it's bare-bones honesty. Down my way, they call that country soul. I call it gold—100 percent hillbilly pure. A.N.

**ROBYN HITCHCOCK AND THE EGYPTIANS: *Perspex Island***. Robyn Hitchcock (lead vocals, electric and acoustic guitars); Andy Metcalfe (bass, keyboards, mandolin, guitars, vocals); Morris Windsor (drums, vocals); other musicians. *Oceanside; So You Think You're in Love; Birds in Perspex; Ultra Unbelievable Love; Vegetation and Dimes; Lysander; Child of the Universe*; and four others. A&M © 75021 5368-2 (49 min), © 75021 5368-4.

Performance: *Enchanting*  
Recording: *Good*

Because of some snappier-than-usual songs that gush in relatively forthright terms about love, "Perspex Island" will no doubt be proclaimed Robyn Hitchcock's "most accessible record to date," his "long-overdue bid for commercial respectability," or some other catch phrase plucked from the critic's pickle barrel. What's really notable, however, is the way the quartet of songs

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that opens the album creates a listener-friendly appearance that will seduce the unsuspecting into Hitchcock's realm, wherein things are not always so four-square and obvious.

Maybe you never thought you'd hear him sing a song entitled *So You Think You're in Love*, complete with a line about "the look in your eyes," but the fact that it's done with Beatlesish/Byrdsy vigor and apparent sincerity lends it a disarming, mop-toppish charm. Even *Birds in Perspex*, with its weird images of dead birds encased in clear plastic, includes such nonironic sentiments as "I'm so lonely I could melt,"

adds texture and tone to eight of eleven songs. (R.E.M. vocalist Michael Stipe turns up to add dry la-la-la's in *She Doesn't Exist*.) Over the years, it's seemed quixotic to hope the general public would embrace someone as quirky as Robyn Hitchcock, but maybe that improbable moment is at hand. *P.P.*

**VAN MORRISON:** *Hymns to the Silence*. Van Morrison (vocals and instrumentals); other musicians. *Professional Jealousy; I'm Not Feeling It Anymore; Ordinary Life; Some Peace of Mind; So Complicated; I Can't Stop Loving You; Why Must I Always Explain; Village Idiot*;

bliss. Set to bland musical combinations of Irish folk and American jazz, r-&b and blues, these songs seem like therapy that never approaches resolution. Only in *Take Me Back*, with the same kind of singing in tongues that energized his albums in the early Seventies, does Morrison sound completely engaged with his music. A nice album in many ways, but never compelling. *R.G.*

**PULNOC:** *City of Hysteria*. Pulnoc (vocals and instrumentals). *It's Dangerous; End of the World; No One No Where* (CD only); *City of Hysteria; Song for Nico*; and six others. ARISTA © ARCD-8668 (63 min), © ACP-8668.

Performance: *Interesting*  
Recording: *Okay*

Talk about suffering for your art. Decades ago, when they were known as the Plastic People of the Universe, these underground Czechoslovakian rockers had to worry about secret-police raids, arrest, and destruction of their equipment merely for performing their music. Today, the political climate has changed radically, and as Pulnoc they've recorded their first aboveground album in New York City. It's an interesting piece of work, suggesting the Velvet Underground, Kraftwerk, and a lot of obscure European bands you've never heard of.

Without meaning to sound xenophobic, I think it's fair to say that rock has largely been a phenomenon of the English-speaking nations, much appreciated but not terribly well rendered in the rest of the world. To a certain degree, Pulnoc bears this out. The band's doomy music and straitjacketed rhythms have a kind of mechanistic lockstep that lacks any of the looseness of rock-and-roll (to be fair, the same could be said of Depeche Mode). In "City of Hysteria" you can hear the toll that living under repression must exact; freedom will probably take some getting used to before it finds a place in Pulnoc's music. In the meantime, these strident, choppy visions of lives lived in shades of gray may pass muster on the alternative-music scene simply by virtue of their origins. With its Eastern European take on the Velvet Underground—there's an original called *Song for Nico* and a cover of *All Tomorrow's Parties* whose haunted fatalism even Lou Reed couldn't have imagined—Pulnoc makes for adventurous listening, though it won't exactly appeal to all tastes. *P.P.*

**THE SMITHEREENS:** *Blow Up*. The Smithereens (vocals and instrumentals); other musicians. *Top of the Pops; Too Much Passion; Evening Dress; Get a Hold of My Heart; Indigo Blues*; and seven others. CAPITOL © CDP 94963-2 (48 min), © C4-94963.

Performance: *Not their best*  
Recording: *Good*

"Blow Up" is not the best album the Smithereens have ever made, lacking



Pulnoc: haunted fatalism and Lou Reed covers

sung against a wistful twelve-string guitar and exquisite three-part harmonies. Then there's *Ultra Unbelievable Love*, which fulfills the exaggerated promise of its title with lyrics that commune with the angels.

The chirpy, "Revolver"-style enriched popcraft soon gives way to songs of a more cerebral cast. *Ride* glides through the ether on a rich, exquisite bed of guitars and the comforting assurance that "all you got to do in this world is ride." But sometimes the trip's a little unnerving. *Vegetation and Dimes* conjures the grim reaper stalking a forbidding urban landscape. "In this city of lies/Real life is a crime," Hitchcock cries against a stark musical backdrop. *If You Go Away* finds him ruing the fate of the planet ("It's corporation time, and the whole world is going up in smoke tonight") while a buzzing, modal raga builds to an angry, hard-rocking boil.

In "Perspex Island," Hitchcock and his back-up, the Egyptians (Andy Metcalfe and Morris Windsor), are joined by Peter Buck of R.E.M., whose guitar

*See Me Through Part II; Take Me Back; By His Grace*; and ten others. MERCURY © 422 849 026-2 two CD's (95 min), © 422 849 026-4 two cassettes.

Performance: *Mild*  
Recording: *Okay*

How many Van Morrisons does it take to make a great album? Two. One to turn loose his considerable writing and performing talents, and a second to make sure the first one maintains concentration and discipline. Unfortunately, for "Ordinary Life" only the first Van showed up. The tunes are pleasant, the lyrics show his customary concern with love and enlightenment, the singing is easy and soulful—but almost nothing here is truly exciting, and seldom does Morrison sound truly excited himself. In the past he's made music that's been both mellow and exciting, but that hasn't happened here.

For much of the album, Morrison sings about being spiritually out to sea. He longs for an earlier, happier time as if it were now impossible to recapture that

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the consistent sizzle of "11" and the unassuming pop charm of "Especially for You" and "Green Thoughts." It is a workmanlike consolidation of their strengths at a time when they're poised to break through the cult barrier toward bigger things. They've played their cards a little close to the vest here. The measured tempos, homogenized vocals, and unexciting production of about half the songs—check out *It's Alright* or *Indigo Blues*—feel perfunctory and cautious when you'd really like to hear the band shake loose and blow up for real. *Top of the Pops* is a lukewarm rewrite of *A Girl Like You* (the hit from "11"), and *Too Much Passion* suffers from too little passion despite its attempt to mimic Motown. Still, there are some classic Smithereens tunes scattered about, among them *Anywhere You Are*, whose jazzy organ recalls the *Zombies'* *Time of the Season*; *Girl in Room 12*, a surprisingly direct, simmering number about the lustful lure of infidelity; and *Tell Me When Did Things Go So Wrong*, a fuzz-toned social-conscience number for the Nineties. Just don't expect to be bowled over by the album as a whole. *P.P.*

**SPANIC BOYS:** *Strange World*. Spanic Boys (vocals and instrumentals). *All Alone*; *When You Travel*; *Strange World*;

*I Don't Understand*; *Go Around*; *I'm All You Need*; *My Head Hurts*; and five others. **ROUNDER** © CD-9027 (39 min), © C-9027.

Performance: *Retro*  
Recording: *Good*

If early rock-and-roll seems like the music that time forgot, then the Spanic Boys are the band that forgot time. "Strange World," like their Rounder debut a year ago, sounds as if it had been trapped in a bottle since the late Fifties. With their Everlys-on-the-edge harmonies, rattling, flint-sharp guitars, and plaintively befuddled outlook, father Tom Spanic and son Ian Spanic manage to seem almost obsessively innocent. But their innocence doesn't sound affected. When these guys wail about not understanding "some people" and "their ways" in *I Don't Understand*, you know that they tried real hard and it wasn't enough. In *Strange World* they first observe, "It's a strange world that we live in," and then conclude, "One of these days maybe we should pack it all up and just give in." "Strange World" may be naive, but it's a highly entertaining throwback. *R.G.*

**BRENT SPINER:** *Ol' Yellow Eyes Is Back*. Brent Spiner (vocals); instrumental ac-

companiment. *Time After Time*; *The Very Thought of You*; *More Than You Know*; *Toot Toot Tootsie*; *Zing! Went the Strings of My Heart*; *Goodnight, Sweetheart*; and six others. **BAY CITIES** © BCD2004 (33 min), © BCC2004.

Performance: *All a quiver*  
Recording: *Too clear?*

With certain singers, such as Judy Garland and Johnny Mathis, a degree of vocal quiver can give the voice a distinctive character. With Brent Spiner, currently playing the android on the TV series *Star Trek: The Next Generation* (thus the yellow-eyes reference in the album title), the quiver is so wide and obtrusive as to invite comparison with a Coney Island roller coaster.

A few tracks—such as *It's a Sin (To Tell a Lie)*, with its Ink Spots-like backup quartet called the Sunspots (all members of the *Star Trek: TNG* cast), and *Toot Toot Tootsie*, where he repeatedly omits the letter "s" in the title phrase—make me wonder if I might not be taking the album too seriously and missing some kind of joke. But Spiner sings everything so straight—as well as on-pitch and with such innate rhythmic sense—that if he intends his ultraquivery style as some kind of spoof of traditional pop singers, it doesn't work. As Molly

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often said to her husband on the popular old *Fibber McGee* radio show, "T'ain't funny, McGee!" R.H.

**SQUEEZE: Play** (see Best of the Month, page 71)

**DAVE STEWART AND THE SPIRITUAL COWBOYS: Honest.** Dave Stewart (vocals, guitar); other musicians. *Honest; Whole Wide World; Crown of Madness; Out of Reach; You're Lost; Fools Paradise; Motorcycle Mystics*; and six others. ARISTA © ARCD-8659 (55 min), © ACP-8659.

Performance: *Peripatetic*  
Recording: *Excellent*

Freed from corporate pressure to be a hit-producing machine with Eurythmics, Dave Stewart (the male half of that duo) can do anything he wants on his own—and he does just that here. "Honest," his second solo album, is a pleasantly inconsequential piece of ear candy. Its bright, playful arrangements hark back to the cheerful eclecticism of the Sixties, and Stewart's gruff, half-spoken vocals and surreal lyric scenarios find their origins in early Dylan. Stewart hops from pad to pad on the musical lily pond. Early in the album, he makes reference to Lou Reed (the *Sweet Jane*-ish title track), the Rolling Stones (the *Jumping Jack Flash*-derived chant "mad, mad, mad, whooo" toward the end of *Crown of Madness*), and Van Morrison (the allusion to *Madame George* in *Out of Reach*). He even breaks into the Beatles' *She Loves You* in the fade of one number for no apparent reason other than it popped into his head.

While droll and intermittently entertaining, too much of "Honest" meanders uneventfully in search of a point, willingly settling for glibness and craft. Finally, even when the songs are really good they cry out for a singer equal to them, and Stewart is not that person. There's one transcendent exception: the gorgeous, glimmering *Whole Wide World*. P.P.

**CHRIS WHITLEY: Living with the Law** (see Best of the Month, page 72)

**WILD JIMBOS.** Wild Jimbos (vocals and instrumentals). *Howlin' at the Moon; Sarah in the Summer; Train in the Canyon; Let's Talk Dirty in Hawaiian; Tilt-a-World; My New Wife*; and four others. MCA © MCAD-10279 (34 min), MCAC-10279.

Performance: *Jimbos yes, wild no*  
Recording: *Good*

Maybe the name was just tongue-in-cheek ballyhoo, but it seems that if you assembled three guys named Jim and called them the Wild Jimbos, we could expect some, well, Big Jim-sized excitement. Instead, Jimmy "Ibbo" Ibbotson (of the Nitty Gritty Dirt Band), Jim "Salebo" Salestrom (of Dolly Parton's touring band), and Jim "Rattbo" Ratts

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(from the Denver band Runaway Express) turn out some moderately involving music that suggests they should have called their ersatz band Tame Jim to the Third Power, or Mild Jim Times Three. Since Ibbotson wrote fully half the cuts and sings lead vocals most of the time, a lot of this album sounds like Dirt Band outtakes (*Howlin' at the Moon*, *Sarah in the Summer*, the spiritual and uplifting *Where the Light Comes From*), nicely turned out with chiming fiddle and mandolin fills by Sam Bush ("Sambo"), who doubles as producer. But any record that reprises Fred Koller and John Prine's *Let's Talk Dirty in Hawaiian* can't be all that somnambulistic, even if the Jims did lay it back there just a tad. In the end, this amounts to an off-the-cuff indie-label effort released by a major record company. And to think it could have been jimdandy. A.N.

## Jazz

**JOHNNY GRIFFIN:** *The Cat*. Johnny Griffin (tenor saxophone); Curtis Fuller (trombone); Steve Nelson (vibraphone); Michael Weiss (piano); Dennis Irwin (bass); Kenny Washington (drums). *The Cat*; *Wistful*; *What Do You Do?*; *Chicago's Calling*; *Woe Is Me*; and four others. ANTILLES © 422-848 421-2 (61 min), 422-848 421-4.

Performance: *Feline funk*  
Recording: *Too drummy*

I used to see and hear a lot of Johnny Griffin thirty years ago, when we were both doing our thing for Riverside Records. Back then he was someone who inevitably brought some levity to a recording session, playing with a big tone and a vigor that belied his diminutive size. In his new Antilles album, "The Cat," the big tone remains, and there are moments, too, when the old vigor emerges, but today's Johnny Griffin is far more laid-back. I say that not to criticize, but to point out that what we have here is an album by a mature musician who rolls his vast experience into performances of considerable substance. The humor is also still in evidence, as in the crawling tempo of *What Do You Do?* and the snail's pace of *Woe Is Me*, a haunting tenor tale that sounds as if it might stop at any minute but goes on for nine. Not that the whole album is a dirge: Griffin and company swing furiously in *Hot Sake*, bounce like Basie in *The Count*, and maintain a lithe, Pink Panther gait in *63rd Street Theme*.

The stellar cast for this outing includes trombonist Curtis Fuller, vibist Steve Nelson, the very talented but too seldom heard pianist Michael Weiss, bassist Dennis Irwin, and drummer Kenny Washington (who deserves all the work he gets but here suffers from being too prominent in the mix). The liner notes are by Basie alumnus Frank Foster. C.A.

**WYNTON MARSALIS:** *Thick in the South (Soul Gestures in Southern Blue, Vol. 1)*. Wynton Marsalis (trumpet); Joe Henderson (tenor saxophone); Marcus Roberts (piano); Bob Hurst (bass); Jeff Watts, Elvin Jones (drums). *Harriet Tubman*; *Elveen*; *Thick in the South*; *So This Is Jazz, Huh?*; *L.C. on the Cut*. COLUMBIA © CK 47977 (56 min), © CT 47977.

**WYNTON MARSALIS:** *Uptown Ruler (Soul Gestures in Southern Blue, Vol. 2)*. Wynton Marsalis (trumpet); Todd Williams (soprano and tenor saxophones); Marcus Roberts (piano); Reginald Veal (bass); Herlin Riley (drums). *Psalm 26* (two versions); *Uptown Ruler*; *The Truth Is Spoken Here*; *The Burglar*; *Prayer*; *Harmonique*; *Down Home with Homey*. COLUMBIA © CK 47976 (53 min), © CT 47976.

**WYNTON MARSALIS:** *Levee Low Moan (Soul Gestures in Southern Blue, Vol. 3)*. Wynton Marsalis (trumpet); Wessell Anderson (alto saxophone); Todd Williams (soprano and tenor saxophones); Marcus Roberts (piano); Reginald Veal (bass); Herlin Riley (drums). *Levee Low Moan*; *Jig's Jig*; *So This Is Jazz, Huh?*; *In the House of Williams*; *Superb Starling*. COLUMBIA © CK 47975 (49 min), © CT 47975.

Performances: *Have their moments*  
Recordings: *Good*

Wynton Marsalis's latest record release is a somewhat puzzling one, consisting of three separate albums appearing simultaneously. Each has its own title, personnel, and cover art, but they are linked under the rubric "Soul Gestures in Southern Blue" and even designated as "Vol. 1," "Vol. 2," and "Vol. 3." I did listen to all three entries in this "blues cycle" in the designated order (I doubt many others will do so), but what I heard was three different Wynton Marsalis albums, not a cohesive work.

It all begins with "Thick in the South," a quintet set that also boasts the presence of two jazz elders, tenor saxophonist Joe Henderson and, on two tracks, drummer Elvin Jones. Musically, this is the most eventful volume in the trio, thanks mostly to Henderson's well-seasoned input. The pianist in all three albums is Marsalis's regular sidekick, Marcus Roberts, who just keeps sounding better. Marsalis calls the title tune "a condition, a location, an attitude, a pulchritudinous proposition, and an occurrence." I call it an easy-flowing instrumental.

"Uptown Ruler," the middle set, consists of eight tracks, six of which are quintet performances with Roberts, saxophonist Todd Williams, bassist Reginald Veal, and drummer Herlin Riley. The opening and closing selection is an unimpressive air called *Psalm 26*, which is heard in two melancholic minute-and-a-half snippets: in trio form with Roberts and Veal and in a dirge-like quintet version with Veal switching to trombone,

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Roberts on alto sax, Williams on tenor, and Riley on bass. What happens in between is of greater musical consequence, a set of shifting mood pieces in which the leader's trumpet sounds almost feeble at times, but in a strangely effective way. One track, *Harmonique*, is downright soporific, but things come together in *Down Home with Homey*, which bops effortlessly for 12 minutes and features a wonderful—at times, slightly Dukish—piano solo by Roberts.

The final volume is "Levee Low Moan," a sextet date with alto saxophonist Wessell Anderson taking his place beside Todd Williams. The rhythm section again consists of Roberts, Veal, and Riley. There are five selections, all but one (Williams's *In the House of Williams*) written by Marsalis—who, remarkably, has yet to find a compositional style of his own. Here he sounds like the mellow Miles Davis of thirty years ago, stretching plaintive notes over a comping rhythm section, gently blazing a trail for the rest of the group. Everybody sparkles in this burnished, laid-back set, but pay particular attention to Williams, whose potent tone and well-constructed solos are an asset to any session and a godsend to this one.

Summing up, the meal was fine, but a smaller serving would have made it easi-

er to savor. While I am not wild about any of these records, I found them eminently listenable and sufficiently laced with interesting ingredients to merit attention. I still think there are more exciting young trumpet players than Marsalis, such as Roy Hargrove and Terence Blanchard, but I suppose we ought not complain as long as major labels continue to issue jazz of this caliber. If you wonder which of these albums to buy, I recommend "Levee Low Moan." C.A.

**OSCAR PETERSON TRIO:** *Live at the Blue Note*. Oscar Peterson (piano); Herb Ellis (guitar); Ray Brown (bass); Bobby Durham (drums). *Honeysuckle Rose*; *Let There Be Love*; *Peace for South Africa*; *Sushi*; and three others. TELARC © CD-83304 (73 min).

Performance: *Weighty*  
Recording: *Good remote*

The combination of piano and guitar was popular supper-club and cocktail-lounge fare in the Forties and in the decade that followed. Oscar Peterson and Herb Ellis enjoyed a five-year association during which they perpetuated this gentle style, but the bigger-than-trio sound of Hammond organs eventually dominated. In the Sixties, organs and saxophones had people snapping their fingers and perco-

lating on tiny dance floors throughout the country—slowly, almost imperceptibly, the age of electronic jazz was creeping in. While we eventually lost some good players to electronic pop, stalwarts like Peterson kept right on swinging the acoustic way. Ellis, of course, was playing an electric instrument all along, but we learned to accept a plugged-in guitar as early as 1939, when Charlie Christian perked up a lot of ears.

"The Legendary Oscar Peterson Trio Live at the Blue Note" was recorded in New York in March 1990, when Peterson was reunited with Herb Ellis and his original bassist, Ray Brown. To call this a *legendary* trio is further to abuse a term long since rendered meaningless, and it isn't even a trio, though drummer Bobby Durham is barely mentioned in the notes and does not appear with the others on the cover. Nevertheless, it's a fine album with typical Tatumesque flourishes by Peterson, solid performances from Ellis, and some piano-guitar interaction that is clearly inspired by the Les Paul/Nat King Cole banter that delighted Jazz at the Philharmonic audiences more than forty years ago. Let's call this a quartet date, and let's hope Telarc remasters it with smoother transitions between the tracks—cutting the applause abruptly is inconsiderate editing. C.A.

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**S**OUTHERN rock didn't fade away—it died in violent convulsions. The genre's two best bands splintered under the weight of the untimely deaths of several key members. A series of motorcycle, car, and plane crashes directly or indirectly claimed the lives of Berry Oakley and Duane Allman of the Allman Brothers Band and Ronnie Van Zant, Steve Gaines, and Allen Collins of Lynyrd Skynyrd. Others in the circle had near brushes with death, seemingly touched by a tragic, preordained will to self-destruct. Despite reunion tours and sporadic attempts to keep the band names alive in the Eighties, the whole notion of Southern rock as a driving force in popular music had apparently disappeared for good. There-

bility has done him good. His soulful Hammond B-3 and gruff vocals can be heard all over the new album, and the difference his involvement makes is crucial. Whereas "Seven Turns" sounded like an album by Dickey Betts and band, with occasional guest vocals from Gregg, the new one sounds like the Allman Brothers Band, with the emphasis on *Allman and Band*.

Further tightening up in the ranks is evident in the subtle, intricate guitar interplay between Betts and Warren Haynes, whose slide guitar is a powerful echo of Duane Allman's original style. Haynes is now fully assimilated into the fabric of the Allmans' sound. He and Betts take off on explosive tangents, seamlessly trading solos and executing

again matched by the guitarist's eloquent counterpoint.

Betts antes up a long, flowing instrumental, *Kind of Bird*, that jumps to a spirited theme, giving Gregg space to comp in a Jimmy Smith-style mode and letting drummers Butch Trucks and Jaimoe weave some of their syncopated magic. The rest of "Shades of Two Worlds" is a fine batch of blues that ranges from feisty (*Desert Blues*, Betts's ode to a Gulf War soldier) to harrowing (Gregg's *Get On with Your Life*). If you've ever liked this band, "Shades of Two Worlds" will blow you away.

Lynyrd Skynyrd's prosaically titled studio reunion, "Lynyrd Skynyrd 1991," finds five veteran members joined by two recent arrivals and singer Johnny Van Zant, who ably fills his late brother Ronnie's shoes. From the opening salvo, an ode to tomcattin' called *Smokestack Lightning* (not the Howlin' Wolf standard), they get right down to the business of raising a righteous ruckus. The three guitarists come together in a dense, knotty mix that smokes like tires braking on hot, dry pavement. Johnny isn't quite the visionary conundrum his brother was, but his voice packs a gritty wallop, and the band's full-bore roadhouse rock, dusted with elements of country and gospel, is as meaty as this stuff gets. For a shot of Southern rock at its taut and sinuous best, check out *Keeping the Faith* and *Good Thing*. For bucolic and sentimental changes of pace, cue up *Pure & Simple* and *Mama (Afraid to Say Goodbye)*, respectively. And realize that although this band has been down, you'd better never count 'em out.

Parke Puterbaugh

**THE ALLMAN BROTHERS BAND:** *Shades of Two Worlds*. Gregg Allman (organ, piano, vocals); Dickey Betts (guitars, vocals); Jaimoe, Butch Trucks (drums, percussion, vocals); Warren Haynes (guitars, vocals); Allen Woody (bass). *End of the Line*; *Bad Rain*; *Nobody Knows*; *Desert Blues*; *Get On with Your Life*; *Midnight Man*; *Kind of Bird*; *Come On in My Kitchen*. EPIC © EK 47877 (53 min), © ET 47877.

**LYNYRD SKYNYRD:** *Lynyrd Skynyrd 1991*. Johnny Van Zant (vocals); Gary Rossington, Ed King, Randall Hall (guitar); Leon Wilkeson (bass); Billy Powell (keyboards); Artimus Pyle (drums, percussion); Custer (drums). *Smokestack Lightning*; *Keeping the Faith*; *Southern Women*; *Pure & Simple*; *I've Seen Enough*; *Backstreet Crawler*; *Good Thing*; *Money Man*; *It's a Killer*; *Mama (Afraid to Say Goodbye)*; *End of the Road*. ATLANTIC © 82258-2 (51 min), © 82258-4.



The Allman Brothers Band, 1991 version

fore it is heartening to report that both the Allman Brothers and Lynyrd Skynyrd bands are back in the saddle, making some of the finest music of their careers.

That judgment isn't tinged by charity or nostalgia. Both groups are blazing forward with a determination and sense of purpose that hark back to the fire each summoned in its prime. The current version of the Allman Brothers, in particular, is the strongest since the 1971 lineup that recorded the classic "Live at Fillmore East." The new "Shades of Two Worlds" has the same group as last year's "Seven Turns" except for the departure of keyboardist Johnny Neel. His absence has left Gregg Allman the sole keyboardist for the first time in almost twenty years, and the responsi-

parallel lines in tandem. If Gregg's signal contribution is his clearheaded, animated presence, Betts and Haynes excel as players and songwriters.

"Shades of Two Worlds" is an album without a weak song, and several rank with the best the band has ever done. *Nobody Knows* is a powerhouse number in which Gregg claws at the lyrics with the gratitude and fear of a man who knows he's barely made it out alive. "Got to believe in believing/Got to believe in the dream/Freedom is never deceiving," he sings with spine-tingling conviction, igniting a frenzied guitar duel between Betts and Haynes. *End of the Line*, co-written by Gregg, is another autobiographical testimonial to survival, with the bruised intensity in his vocal

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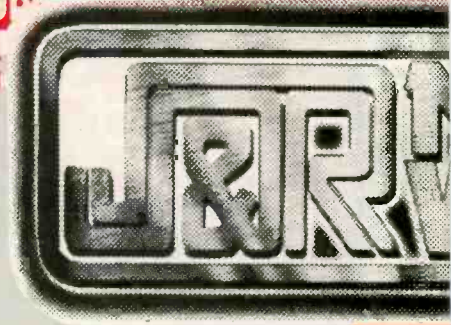
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A6



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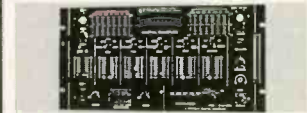
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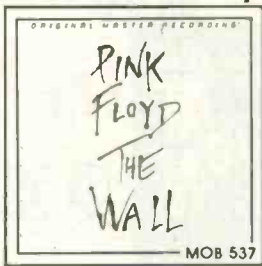




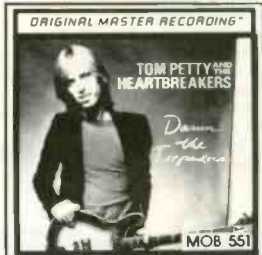
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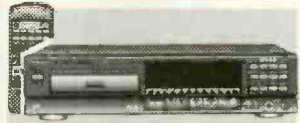


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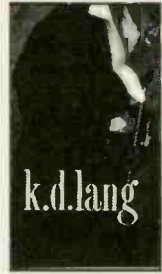


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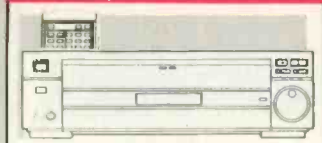
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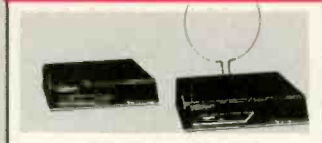
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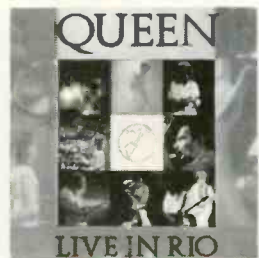
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## Sony Walkman



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# R · E · C · O · R · D

by Maryann Saltser & Robert Ripps

**P**ROVING that there's always room for one more, the Capitol Records band **Crowded House** has taken on a new member, solo artist **Tim Finn**, who joined forces with brother **Neil Finn** and Housemates **Paul Hester** and **Nick Seymour** to record the band's



**Crowded House: more crowded**

long-awaited third album, "Woodface."

Although the Brothers Finn had worked together in the early 1980's as part of the acclaimed New Zealand pop group **Split Enz**, the new album marks the first time they've collaborated as songwriters. Among the songs they

DENIS KEELY/CAPITOL



**Conductor Kent Nagano**

ROY CARNEGIE/JAY HOFFMAN

wrote for "Woodface" is its first single, *Chocolate Cake*. **Crowded House** is currently touring with **Richard Thompson**, also a Capitol artist.

**R**ICHARD STRAUSS's *Salome* has been sung in German for so long that few people are aware that the opera was originally a setting of a French play by the Irishman **Oscar Wilde**. The first-ever performances of the French version, at the Opéra de Lyon in May 1990, were recorded by **Virgin Classics** for release this September. The conductor is the Japanese-American **Kent Nagano**, and the American soprano **Karen Huffstodt** sings the title role.

A champion of contemporary music, Nagano has led the premières of works by **John Adams**, **Olivier Messiaen**, **Toru Takemitsu**, **Michael Torke**, and **Frank Zappa**. He was named music director of the Opéra de Lyon in 1989, and his recording of the original French version of **Prokofiev's** *The Love for Three Oranges* with that ensemble received a **STEREO REVIEW** Record of the Year award for 1990.

**T**HIS fall brought two new **RCA** releases featuring the versatile Grammy Award-winning clarinetist **Richard Stoltzman**. "The Essential Clarinet" finds Stoltzman in his familiar classical mode performing **Mozart's** Clarinet Concerto and Clarinet Quintet with the **English Chamber Orchestra** and the **Tokyo String Quartet**, respectively. In "Brasil," Stoltzman is joined by jazz musicians **Gary Burton**, **Eddie Gomez**, and **Danny Gottlieb** in pieces by **Brazilian** composers, including **Villa-Lobos** and **Milton Nascimento**.

**H**OLLAND-BORN saxophone player **Candy Dulfer** is quickly making a name for herself with "Saxuality," her **Arista Records** debut. The album features a mix of jazz and pop tunes and



**Dulfer: sax appeal**

climbed the *Billboard* jazz and pop charts simultaneously.

Now twenty-one years old, **Dulfer** started playing at the age of twelve and was leading her own band two years later. She gained a loyal following playing in and around her home town of **Amsterdam**, and eventually she was introduced to **Dave A. Stewart of Eurythmics**, who enlisted her help in scoring a Dutch movie called *Lily Was Here*. The title song, featuring a sax solo by **Dulfer**, became a hit in Europe and ultimately led to her signing with **Arista** in the U.S. Plans for a second album and tour are in the works.

**T**ony Bennett is celebrating his fortieth anniversary in style. **Columbia/Legacy** has released "Forty Years: The Artistry of Tony Bennett," a four-CD or four-cassette boxed set spanning his career. The eighty-seven selections include all of the singer's greatest hits as well as two previously unreleased tracks. All have been digitally remixed and remastered from the original recording-session tapes. The sixty-four-page accompanying booklet features rare photos, a complete discography, and song-by-song commentary provided by **Bennett** himself.

**T**HREE titans of the piano passed away this year, and their record labels are commemorating them by reissuing collections of their recordings. **Wilhelm Kempff's** recording of the complete **Beethoven** piano sonatas has been reissued on CD by **Deutsche Grammophon**, and **Sony Classical** released a set offering **Rudolf Serkin** in piano concertos by **Mozart**, **Beethoven**, **Schumann**, and **Brahms**. Meanwhile, **Philips** is releasing a forty-four-disc CD edition of the recordings of **Claudio Arrau**. The first install-



**Stoltzman with cover painting for "Brasil"**

ARISTA RECORDS

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JACK MITCHELL/AUX 8. WILLIAMSON



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ments in the midprice series are devoted to music of Beethoven, Brahms, Chopin, Debussy, Liszt, and Mozart.

**E**RATO is releasing a CD of Poulenc's one-act, one-singer opera *La Voix Humaine* starring the American soprano **Julia Migenes**, with the Orchestre National de France conducted by **Georges Prêtre**. The performance was simultaneously recorded for home video, but admirers of Migenes's



Migenes: opera for one

TELDEC

acting in the movie version of Bizet's *Carmen* (co-starring **Placido Domingo**) will have to wait until fall of 1992 for a U.S. release of *La Voix Humaine* on laserdisc and videotape.

**T**HE **Psychadelic Furs** hit the charts for the first time in almost two years with "World Outside," their latest release on Columbia. The first single from it, *Until She Comes*, climbed to No. 1 on the *Billboard* Modern Rock chart. The album unveils a new band lineup consisting of original Furs **Richard Butler** (vocals), **Tim Butler** (bass), and **John Ashton** (guitar), plus new members **Joe McGinty**

EBET ROBERTS

(keyboards), **Knox Chandler** (guitar, cello), and **Don Yallich** (drums).

Since forming in the late 1970's, the **Psychadelic Furs** have consistently maintained a high profile with recordings and live performances, including last year's "Rock Against Fur" benefit concert in New York. They are touring in support of "World Outside" this fall.

**T**O celebrate the forty-fifth anniversary of the founding of the renowned **Juilliard String Quartet**, **Sony Classical** will release the group's recording of the four **Elliott Carter** quartets. One of these quartets was actually written for the **Juilliard**, which played the world premières of two of them. Quite an impressive addition to a recording career that began in 1946 and is currently unsurpassed, in length and breadth, by that of any other string quartet.

**T**elevisi— the band, not the broadcasting medium—is back. Led by **New Wave** guitar heroes **Tom Verlaine** and **Richard Lloyd**, **Television** was among the first wave of the **CBGB-era** acts (others were **Talking Heads**, the **Ramones**, and **Patti Smith**) that briefly threatened to change the face of rock-and-roll as we knew it back in the middle to late 1970's. The band's two albums, "Marquee Moon" (1977) and "Adventure" (1978), are still in the **Elektra** catalog, and they remain among the most fondly remembered and influential records of the period. Now the original band, including bassist **Fred Smith** and drummer **Billy Ficca**, has been signed by **Capitol**. No producer had been announced at this writing, but the first new **Television** album in over thirteen years is definitely scheduled for release next April.

**G**RACENOTES. **Razor and Tie Music** is releasing a live album, "Too Hot for Snakes," fronted by ex-Tex-



Psychadelic Furs: stepping outside

ROBERT FISHER/COLUMBIA

tone **Carla Olson** and long-missing-in-action ex-Rolling Stone **Mick Taylor**. The CD-only release includes an updated version of the **Stones'** classic *Sway*. . . . **Murray Perahia's** original recordings of the complete **Mozart** piano concertos were widely acclaimed. Now, to celebrate the **Mozart** bicentennial, **Sony Classical** has released **Pera-**

**hia's** first digital recording of the popular **Concertos Nos. 21 and 27**, with the pianist conducting the **Chamber Orchestra of Europe** from the keyboard. . . . **Cleveland** avant-popsters **Pere Ubu** took an unprecedented step when their record label (**Mercury**) refused to cover \$2,500 in travel expenses for the band's appearance on *Late Night with David Letterman*: They faxed a fundraising appeal to hundreds of pop journalists and musicians. Said lead singer **David Thomas**, "We've always depended on the kindness of strangers." . . . **Bridge Records** continues to reap rewards for its association with crossover composer **Tod Machover**. **Bridge CD's** of **Machover's** *Valis*, *Flora*, and *Spectres* have received numerous awards in the "new music" field and are best-sellers for the label and its distributor, **Koch International**. □



Verlaine: new Television

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 • Digital Dolby® Pro Logic  
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CARVER HR 742	456	ONKYO TX-906*	356
CARVER HR 772	596	ONKYO TX-SV50PRO*	436
DENON DRA-335R*	216	ONKYO TX-SV70PRO*	596
DENON DRA-435R*	266	ONKYO TX-SV90PRO*	756
DENON DRA-635R*	376	SONY STR-AV570*	176
DENON DRA-835R*	546	SONY STR-AV970*	326
DENON DRA-1035R*	696	SONY STR-AV1070*	436
DENON AVR-810*	566	SONY STR-D2070*	736
DENON AVR-1010*	726	SONY STR-GX5TES*	406
JVC RX-70SVTN	306	SONY STR-GX6TES*	516
JVC RX-80SVTN	376	TANDBERG TPA-3080A	1496
LUXMAN R-341*	366	TECHNICS SA-GX710	476
LUXMAN R-351*	496	TECHNICS SA-GX910	626
NAD 7000*	456	YAMAHA RX-550*	316
NAD 7400*	746	YAMAHA RX-750*	396
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CARVER TDR 2400*	396	ONKYO TAR-301*	226
CARVER TD 1200*	266	PHILIPS FC-415	396
DENON DRM-510*	186	SONY TCW-875*	376
DENON DRM-700A*	306	SONY TCK-870ES*	466
DENON DRM-800A*	376	SONY TDC-D3*	626
DENON DRW-830*	266	SONY DTC-700*	626
DENON DRW-850*	376	TEAC V970X	396
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NAD 7400*	746	YAMAHA KXW-952*	546
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**BERNSTEIN:** *Candide*. Jerry Hadley (tenor), *Candide*; June Anderson (soprano), *Cunegonde*; Christa Ludwig (mezzo-soprano), *Old Lady*; Nicolai Gedda (tenor), *Governor*, *Vanderdendur*, *Ragotski*; Adolph Green (vocals), *Dr. Pangloss*, *Martin*; Kurt Ollmann (baritone), *Maximilian*, *Captain*; others. London Symphony Chorus and Orchestra, Leonard Bernstein cond. DEUTSCHE GRAMMOPHON © 429 734-2 two CD's (112 min), © 429 734-4.

Performance: *A revelation*  
Recording: *Splendid*

We must all be grateful that Leonard Bernstein lived long enough to refashion—and record—this “final” 1989 concert version of *Candide* (the first time he himself recorded any part of it other than the overture). What we have here is the full, incredible score, not only reinstating songs dropped from both the original production and later revisions, but also restoring the original order of the songs (making clearer and more meaningful the way Bernstein builds new themes from previous ones) and giving several songs back to their original characters.

And what a honey of a performance it gets here, from the infectious overture, played with a crispness and jauntiness unlike that of any previous recording, through the final, genuinely glowing, typically Bernsteinian *Make Our Garden Grow*. The all-star operatic cast is exceptionally well chosen. In the title role, Jerry Hadley perfectly captures the dogged innocence of a youth who has been taught this is the best of all possible worlds but keeps finding out quite the opposite. Christa Ludwig cuts loose hilariously as the *Old Lady*, Nicolai Gedda is rakishly authoritative as the *Governor* (and his variants), and Broadway's Adolph Green holds his own adroitly as *Pangloss*. Only June Anderson is disappointing, especially with her overly arch account of the coloratura parody *Glitter*

**Explanation of Symbols**

- Ⓢ = Tape cassette
- = LP record
- Ⓢ = Compact disc (timings are to the nearest minute)



Jerry Hadley: a perfectly captured *Candide*

HERBERT H. BRESLIN, INC.

and *Be Gay*. Bernstein's tempos tend to be slower than those of the earlier recordings, but never at the expense of verve or bite.

This new recording firmly establishes *Candide*, along with *West Side Story* and the *Chichester Psalms*, as one of Bernstein's three greatest achievements as a composer. *Roy Hemming*

**BLOCH:** *Piano Quintets Nos. 1 and 2*. American Chamber Players. KOCH INTERNATIONAL © 3-7041-2 (55 min).

Performance: *Sturdy*  
Recording: *Excellent*

**BLOCH:** *Piano Quintets Nos. 1 and 2*. Paul Posnak (piano); Portland String Quartet. ARABESQUE © Z6618 (57 min).

Performance: *Hair-raising*  
Recording: *Excellent*

Like so many inexplicably neglected works by Ernest Bloch, his piano quintets are remarkably rich and ambitious compositions, particularly the *First Quintet*, written in 1923 and acclaimed by Olin Downes as “the greatest work in its form since the piano quintets of Brahms and César Franck.” While the quintets don't have the exoticism of some of Bloch's violin sonatas or the memorable melodic profile of his best string quartets, the combination of instruments has textural possibilities that Bloch exploits fully, from the most rugged, primitivist unison writing to rich, post-Straussian harmonies.

The *First Quintet* suggests all sorts of elemental mysteries with its use of quarter tones and its almost ferocious ener-

gy, building an almost unstoppable momentum in the final movement. The *Second Quintet*, Bloch's last chamber work, is less attractive. It occasionally sounds like outtakes from his *Fifth Quartet* and has a contrapuntal rigor that makes it easier to respect than to like.

Both works depend on sympathetic performances to make any impression at all, and while the American Chamber Players are the more polished of the two groups represented in these new recordings, their playing is also earthbound and not consistently interesting. Paul Posnak and the Portland String Quartet are much more inside of Bloch's idiom, and the string players show more freedom, excitability, and utter recklessness than in their earlier set of his string quartets. The performances sizzle, despite some intonation lapses. This is one of the finest chamber-music recordings of the year. *D.P.S.*

**BRAHMS:** *A German Requiem* (see *Best of the Month*, page 71)

**GLINKA:** *A Life for the Tsar*. Boris Martinovich (bass), Ivan; Alexandrina Pendachanska (soprano), Antonida; Chris Merritt (tenor), Sobinin; Stefania Toczyska (mezzo-soprano), Vanya; others. Sofia National Opera Chorus; Sofia Festival Orchestra, Emil Tchakarov cond. SONY CLASSICAL © S3K 46 487 three CD's (210 min).

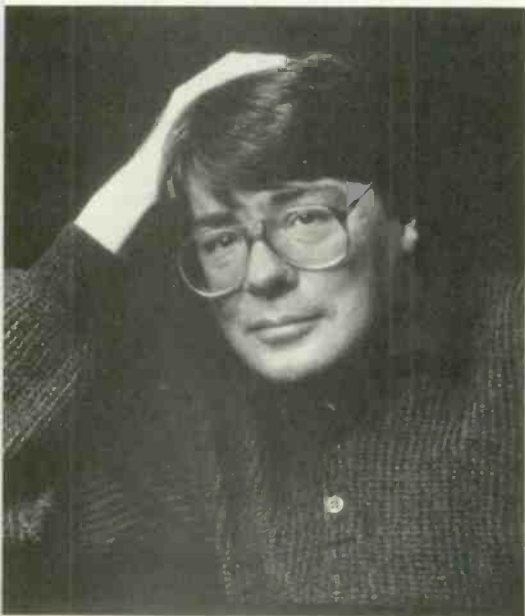
Performance: *Engrossing*  
Recording: *Excellent*

Mikhail Glinka, “the father of Russian opera,” traveled in Europe from 1830 to

1833 and became familiar with the music of Beethoven, Weber, Donizetti, and Bellini. There is little in *A Life for the Tsar* to remind us of the German composers, but there is much that recalls the Italians, especially Bellini. Set in Russia's "time of trouble" from the death of Boris Godunov in 1605 to the crowning of the first Romanov tsar in 1613, the opera describes how the country was saved from the Polish forces through the wily intelligence and ultimate self-sacrifice of a peasant, Ivan Susanin. The opera's eminently national feelings, melodies, and harmonies are interwoven and elaborated as in an imposing early nineteenth-century Italian *opera seria*—with enjoyable and exciting results.

The present performance is spirited and stirring throughout. Each solo artist is fully engaged by his or her assignment, the Sofia National Opera Chorus sings with notable sensitivity, fire, and belief, and the Sofia Festival Orchestra, under the capable and convinced leadership of Emil Tchakarov, plays in exemplary fashion. The sound is excellent.

Boris Martinovich delineates a strong and sympathetic Susanin; he sings well, and his final aria, sung as the hero faces certain death, is remarkably affecting. Chris Merritt as Sobinin sings with taste and with feeling for character. Alexandrina Pendachanska's Antonida is musi-



Conductor Jeffrey Tate

cally sure and strongly characterized (her Act I cavatina is a highlight of the set), but her voice has the sharp, even steely quality common in Slavic singers. Stefania Toczyska, however, seems free of this idiosyncrasy, and her projection of the young lad Vanya is effective; the Act III scene with Susanin is particularly memorable.

A great opera? Probably not. A significant opera? Certainly. An opera to be heard with pleasure? Yes, indeed! R.A.

**GRIEG: *Peer Gynt, Op. 23 (excerpts)*.** Petteri Salomaa (baritone), Peer Gynt: Sylvia McNair (soprano), Solvejg, Anitra; others: Ernst Senff Choir; Berlin Philharmonic Orchestra, Jeffrey Tate cond. EMI/ANGEL © CDC 54119-2 (68 min).

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

For serious *Peer Gynt* enthusiasts, the two-CD Deutsche Grammophon set done in Gothenburg, Sweden, under Neeme Järvi, with all twenty-six numbers that Grieg composed for Ibsen's great drama, is indispensable. For those willing to settle for extended excerpts with spoken dialogue, this new CD offers seventeen numbers and ranks with the sonically spectacular London recording of nineteen numbers with Herbert Blomstedt and the San Francisco Symphony.

One would not normally associate Jeffrey Tate with the music of Grieg, but he and the actors, singers, chorus, and orchestra under his direction come through in capital fashion. Tate puts us right on the edge of our seats with a wonderfully crisp treatment of the Act I Prelude, and he achieves great eloquence in the music of Ingrid's lamentation in the Act II Prelude. The tempo here is slower than usual but immensely telling, and the same is true for Solvejg's famous song in Act IV. Petteri Salomaa is a most convincing Peer Gynt whether in his acting mode with the herd-girls or as singer in his coy serenade of Anitra.

Tate gives us one number not found in the Blomstedt recording, and that is the solemn, almost Wagnerian music for Peer in Egypt at the statue of Memnon. Blomstedt for his part gives us several episodes Tate omits and, most important, Aase's death music not only as the Act III prelude but also in the final poignant duet between her and Peer. Siv Borg makes a splendid Aase in the parts included here, however, and the night scene on the heath is equally scaring in both the Tate and Blomstedt versions. As a whole, Tate's performance is done with great spirit and is powerfully recorded. While Blomstedt has the more spectacular sound, Tate surpasses him in the emotional high points of the score and is especially graced by having Sylvia McNair's lovely soprano in the major female singing roles. D.H.

**HAYDN: *Symphony No. 85, in B-flat Major ("La Reine"); Symphony No. 86, in D Major*.** Saint Paul Chamber Orchestra, Hugh Wolff cond. TELDEC © 2292-46313-2 (52 min).

Performance: *No. 86 better*  
Recording: *Excellent*

"*La Reine*" is surely the best-known of the six symphonies (Nos. 82-87) that Haydn composed for Paris in 1785-1786, and No. 86, without benefit of sobriquet, is far less familiar but perhaps the finest component of that set. All six have been stunningly accounted for by the Orches-

tra of the Age of Enlightenment under Sigiswald Kuijken on two Virgin Classics CD's, but this music need not be the exclusive property of "original-instruments" groups. There is much that is attractive in these Hugh Wolff performances, which initiate a complete set of his own. In No. 86 he seems particularly comfortable in the idiom: secure yet flexible in setting tempos, shaping phrases, judging balances. The striking austerity of the C. P. E. Bach-like largo movement (headed "capriccio") and the pointed wit of the finale are beautifully realized.

No. 85, also handsomely played, is somewhat less successful interpretively. In place of the natural momentum felt throughout No. 86, there is a touch of squareness, and dynamic contrasts are less subtly managed. The finale is not merely animated but a little breathless. The harpsichord continuo is more insistent in both works, by the way, than in Kuijken's "period" performances of them. Teldec has provided fine sound, but Virgin's is richer still, and although Kuijken takes repeats in No. 85, which Wolff does not, his disc includes a third symphony, No. 87. R.F.

**HOLST: *The Planets, Op. 32*.** Women of the Chicago Symphony Chorus; Chicago Symphony Orchestra, James Levine cond. DEUTSCHE GRAMMOPHON © 429 730-2 (49 min), © 429 730-4.

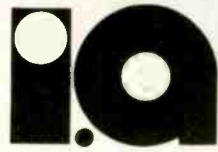
Performance: *Mostly very good*  
Recording: *Impressive*

The sound of the opening "Mars" movement as recorded in Chicago's Orchestra Hall will set you right back on your heels—it's a real blockbuster. "Venus" is as mellifluous as can be, and the Chicago Symphony winds and strings clearly have a great time showing off in a quicksilver "Mercury." "Jupiter" is a handsomely bluff, extroverted affair—no sentimentalizing of the big central tune. It is only in "Saturn, the Bringer of Old Age"—the heart of the score for me—that I feel James Levine's reading misfires. The opening section is so slow that the line seems to fall apart, and it fails to prepare effectively for the inexorable momentum of the central processional. Nor do I sense the right note of desolation in the brass outcry that gives way at last to serene acceptance. Things are back on track with "Uranus," where Levine secures unusually clear articulation of the ostinato timpani line in the march episode (more often than not a confused rumble). "Neptune" is marvelously disembodied, and no small part of the credit belongs to the women of the Chicago Symphony Chorus, directed by Margaret Hillis, and to the engineering staff for an elegant job of placement and miking. D.H.

**MOZART: *Le Nozze di Figaro*.** Alan Titus (baritone), Figaro; Helen Donath (soprano), Susanna; Julia Varady (soprano). Countess; Ferruccio Furlanetto



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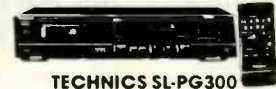
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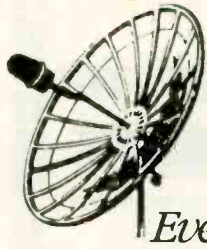
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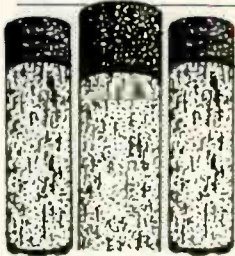
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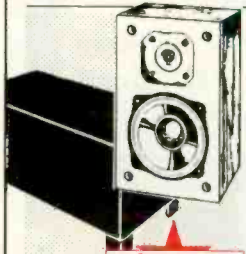


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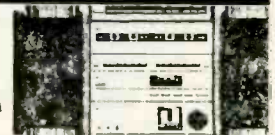
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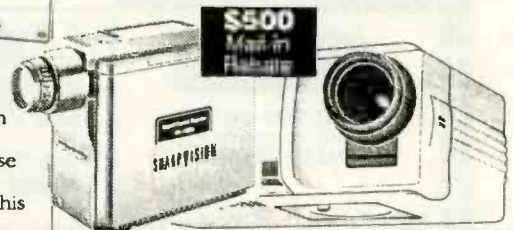
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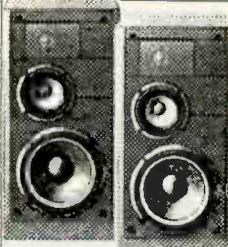
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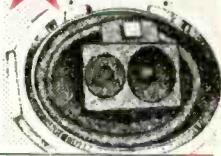
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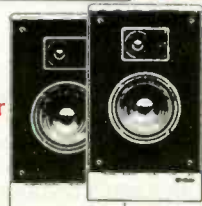
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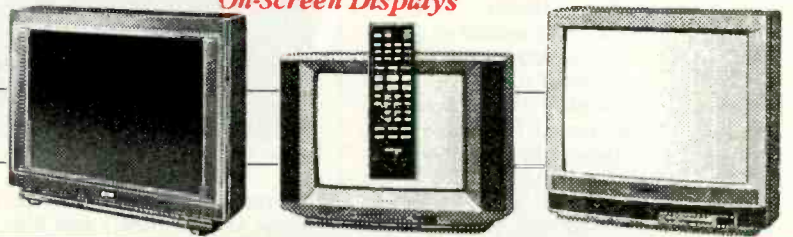
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(bass), Count Almaviva; Marilyn Schmiede (mezzo-soprano), Cherubino; Heinz Zednik (tenor), Don Basilio; Siegmund Nimsgern (baritone), Dr. Bartolo; Cornelia Kallisch (mezzo-soprano), Marcellina; others. Bavarian Radio Symphony Chorus and Orchestra, Colin Davis cond. RCA VICTOR © 60440-2 three CD's (174 min).

Performance: *A strong contender*  
Recording: *Very good*

Faced with more than a dozen *Figaros* on compact discs, most of them good or better, one may be excused for restrained enthusiasm on encountering yet another new one. It so happens, however, that this well-cast and extremely well-conducted Munich-based entry can stand with the best in the lot.

This is Colin Davis's second go at this opera, and it's far superior to his earlier effort, an acceptable if somewhat impersonal and mechanical 1970 account on Philips. His deepened familiarity with the work is evidenced by his impeccable tempo choices, masterly control of the ensembles, and expert guidance of the singers. This is vigorous, muscular Mozart, without any "period" daintiness; the spirited yet unhurried overture aptly heralds a performance of admirable consistency. Only the delicious third-act finale is somewhat wanting in the desired spontaneous hilarity.

Without question, the principal strength of this performance lies with the conductor. There are no major weaknesses in the cast, but only Julia Varady is a true standout: She creates a poignantly melancholy countess whose strength of character shines through a façade of elegance and emotional restraint. Varady's exquisite singing is tellingly contrasted to Helen Donath's temperamental, live-wire Susanna; after some tonal unsteadiness in the early scenes Donath emerges as an assertive and likable center of the action. Among the minor roles, special mention should be made of the charming Barbarina of Ingrid Kertesi.

It may be improper to second-guess such an expert conductor, but the Almaviva and the Figaro should have been reversed. Both Ferruccio Furlanetto and Alan Titus are fine and expressive singers, but Furlanetto occasionally lapses into buffo inflections that run counter to the elegant image he ought to project, and Titus at times finds Figaro's low tessitura uncomfortable.

The recitatives are ably handled by the largely non-Italian cast. The weakest in this respect are Marilyn Schmiede, otherwise an acceptable Cherubino, and Heinz Zednik, a richly characterful but rather Germanic Basilio. Both get their oft-omitted arias in Act IV and perform them creditably. Cornelia Kallisch is an unexaggerated Marcellina, while Siegmund Nimsgern is a strongly assertive Bartolo.

In sum, this is a perfectly safe and commendable version, but my favor-



Julia Varady: an outstanding Countess

ites remain the sets conducted by Carlo Maria Giulini (EMI) and Neville Martinson (Philips), which offer comparable leadership and a higher level of solo contributions. *G.J.*

**RACHMANINOFF: "Paganini" Rhapsody (see TCHAIKOVSKY)**

**SCHUBERT: String Quintet in C Major, Op. 163 (D. 956).** Vera Beths, Lisa Rautenberg (violin); Steven Dann (viola); Anner Bylsma, Kenneth Slowik (cello). **Rondo in A Major for Violin and String Quartet (D. 438).** Vera Beths, Lisa Rautenberg, Jody Gatwood (violin); Steven Dann (viola); Anner Bylsma (cello). SONY VIVARTE © SK 46669 (68 min).

Performance: *Satisfying quintet*  
Recording: *First-rate*

This is a bracing account of Schubert's great valedictory quintet, played on Stradivarius instruments from the Smithsonian collection, all with the gut strings that would have been used in Schubert's time. The gut strings do make a difference in texture, and it is one that must surely have affected interpretive decisions. The opening movement is fleet without being rushed; the heavenly theme is not allowed to become self-indulgent, and the exposition repeat can be wholeheartedly welcomed. The fine sense of natural momentum carries through all four movements, adding up to a thoroughly satisfying performance, with all the poignancy one could want.

The Rondo in A Major (in which Vera Beths switches from first violin to soloist) is a generous filler, but it comes off as a little monochromatic and wanting in charm. This piece is more enticing as performed by Pinchas Zukerman on Philips or Jean-Jacques Kantorow on Denon, both accompanied by a chamber orchestra instead of a string quartet. But the great quintet is the real point here,

and this stimulating "low-fat" version is one that many who love this work will surely want to add to their short list of existing favorites. *R.F.*

**SCHUBERT: Incidental Music to "Rosamunde" (see Best of the Month, page 74)**

**SCHUMANN: Piano Concerto in A Minor (see TCHAIKOVSKY)**

**TCHAIKOVSKY: Piano Concerto No. 1, in B-flat Minor, Op. 23.** SCHUMANN: **Piano Concerto in A Minor, Op. 54.** Cécile Ousset (piano); London Philharmonic Orchestra, Kurt Masur cond. EMI/ANGEL © CDC 54157-2 (68 min).

Performance: *Grandiose Tchaikovsky*  
Recording: *Piano too close*

**TCHAIKOVSKY: Piano Concerto No. 1, in B-flat Minor, Op. 23.** RACHMANINOFF: **Rhapsody on a Theme of Paganini, Op. 43.** Horacio Gutiérrez (piano); Baltimore Symphony Orchestra, David Zinman cond. TELARC © CD-80193 (57 min).

Performance: *Tasteful*  
Recording: *Well-balanced*

Strictly pianistically, Cécile Ousset is impressive in the Tchaikovsky and Schumann concertos, but the effect of the performance as a whole is not terribly positive. She and Kurt Masur take a very *big* approach to a work that many may understandably think is big enough already. One feels the performance has been staged rather than felt, and while the tension in the finale is more convincing than anything in the preceding movements, it threatens to run away with itself. The sonic focus is not helpful, placing the piano so far forward that orchestral detail is frequently obscured. Both pianist and conductor seem much more at home in the Schumann. Others may find a bit more poetry in the work, but one can't mistake the authority and affection in this performance, and even the balance between piano and orchestra is better than in the Tchaikovsky.

There are no problems of balance in the Telarc Tchaikovsky. Horacio Gutiérrez and David Zinman seem altogether more comfortable with the work than Ousset and Masur. They let it flow with a convincingly natural momentum and tasteful sense of proportion, utterly free of gear-shifting or larger-than-life irruptions. Gutiérrez shows a bit more refinement here than in his earlier recording with André Previn on Angel, with no loss of spontaneity, and he could not have asked for a more sympathetic partner on the podium. Throughout the Rachmaninoff, too, one senses Zinman's subtle hand shaping the symphonic whole. The composer's points—variously witty and bizarre—are registered the more tellingly for not being gratuitously underscored, and neither the piano's interest nor the orchestra's is ever sacrificed to the other. The recording is as free of exaggeration as the performances themselves. *R.F.*

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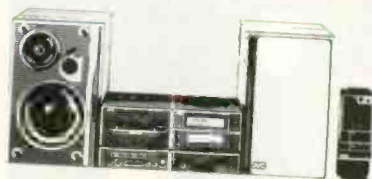


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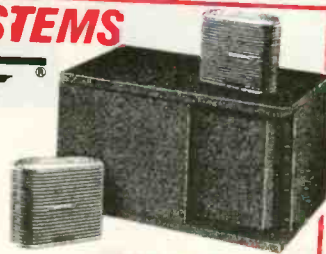


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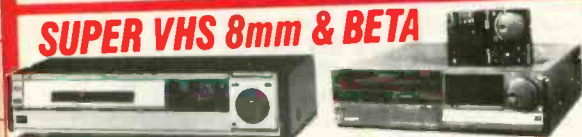
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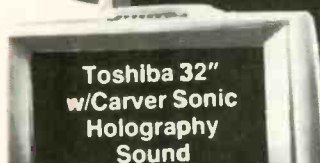
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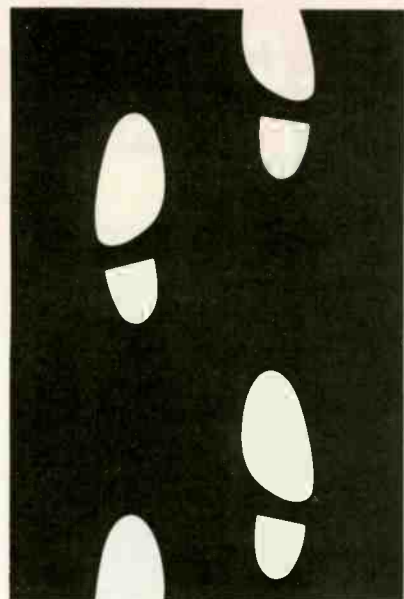


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## Leonard Bernstein's Legacy



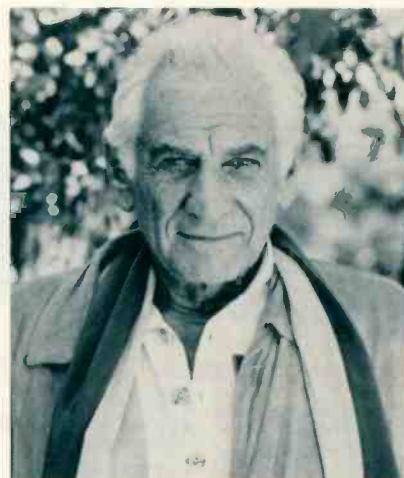
**N**OTHING illustrates the internationalization of classical music better than the career of Leonard Bernstein. His roots were in Eastern Europe. He was brought up and educated in a Franco-Russian environment and became a protégé of Serge Koussevitzky, the last of the old Russian Romantic maestros. At the same time, his own predilections were for multinational modernism, more than a little tinged with the energy of American jazz and musical theater.

For many years, Bernstein was regarded as a strictly American—even American Jewish—phenomenon. About the only Central European music with which he was identified was that of Gustav Mahler, another Jewish composer/conductor with a highly eclectic style, who also directed the New York Philharmonic. The Philharmonic and Columbia Records were Bernstein's only homes.

Suddenly one day, the doors opened worldwide. Bernstein was a hero everywhere, but especially in Germany and, amazingly, Austria. A generation of conductors from all over became his protégés. His new record company, Deutsche Grammophon, began to follow him everywhere, recording dynamic performances of almost everything and creating a second Bernstein catalog on CD.

I don't know how much more of the Bernstein legacy is in the can, but the three recent releases under review here are typical of the quality of the work he was doing at the end. These are all billed as live performances, made in concert halls at or (more probably) following concerts. They are presumably single-take recordings, showing the character and excitement of live performances. There are some signs of a mature, late style: The Tchaikovsky Fourth is almost Neoclassical in its clarity. Bernstein was obviously at home here with the New York Philharmonic in Avery Fisher Hall, and the result is not frantic but very moving Tchaikovsky—superbly shaped, muscular, intense. The performances of the symphony and the accompanying *Francesca da Rimini* play to the composer's strengths, and the recording makes the hall sound like a sonic dream.

Another very successful stop on this world tour is Hindemith-in-Israel. The playing is not quite as dazzling as Tchaikovsky-in-New-York, but the slightly rough edge suits the energy of these works—*Mathis der Maler*, the Concert Music for Strings and Brass, and the Weber Metamorphosis—just as the rhythmic intensity, the wit, and the amusing jazzy touches suit the conductor. Performances like these put Hindemith back up among the best orchestral creators of the century.



Debussy-in-Italy is probably the least interesting of these musical tours, but even here there is something of note. *Images*, for example, really is a suite of dances or dance impressions from different parts of Europe: *Gigues* is based on Anglo-Irish jigs, *Rondes de Printemps* on similar French folk dances, and *Iberia*, of course, is suffused with the dance rhythms of Spain. Inevitably, it is this side of Debussy, rather than the impressionism of *La Mer* and *Prélude à l'Après-Midi d'un Faune*, that brings out the best of Bernstein.

These recordings add up to a tour de force for the DG engineers. Apparently they can go anywhere and make it sound good; in fact, the sound is remarkably consistent between the different locales. Ultimately, of course, the triumph is Bernstein's—he also had the ability to go anywhere with almost anything and make it sound good. Quite a legacy.

*Eric Salzman*

**TCHAIKOVSKY:** *Symphony No. 4, in F Minor, Op. 36; Francesca da Rimini, Symphonic Fantasia After Dante, Op. 32.* New York Philharmonic, Leonard Bernstein cond. DEUTSCHE GRAMMOPHON © 429 778-2 (77 min).

**HINDEMITH:** *Symphony, Mathis der Maler; Concert Music for Strings and Brass, Op. 50; Symphonic Metamorphosis on Themes of Carl Maria von Weber.* Israel Philharmonic Orchestra, Leonard Bernstein cond. DEUTSCHE GRAMMOPHON © 429 404-2 (67 min).

**DEBUSSY:** *Images pour Orchestre (Gigues, Rondes de Printemps, Iberia); Prélude à l'Après-Midi d'un Faune; La Mer.* Orchestra dell'Accademia Nazionale di Santa Cecilia, Leonard Bernstein cond. DEUTSCHE GRAMMOPHON © 429 728-2 (76 min).

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# Murray Perahia

by Henry Pleasants

**I**DLED by an infected thumb that was proving reluctant to heal, Murray Perahia, at his home in the London suburb of Ealing (he is a native New Yorker), had time to reflect on some of the problems facing pianists in this age of jet-propelled concertizing, high-tech recording, competitions, and, of course, video.

Our discussion of video was prompted by Perahia's experiences during the recent video recording of a complete recital in the empty Maltings Concert Hall at Aldeburgh, now available as "The Aldeburgh Recital" on Sony laserdisc and videotape.

"The problem with video recording," he said, "is the cameras. Producers are tempted to use too many, to want too great a variety of camera angles.

"I find that too great a variety and too frequent shifting from one angle to another tend to distract the viewer's attention from what is being played. With close-ups of the fingers on the keyboard, especially, viewers tend to concentrate on the fingers and what they are doing and forget about what is being played. The viewer loses the continuity of thought that is necessary for continuity of hearing.

"I am happy with the way things worked out at Aldeburgh. It helped, I think, that this was the first full-recital use of Sony's new HDVS [High Definition Video/Sound] technology. It took a while before unfamiliar equipment was set up. The result was that we recorded 80 minutes of music in two days. This meant longer takes and less camera activity, sometimes just one camera to a whole movement, which is what I like.

"I know, of course, that the producer is concerned about the viewer's concentration span, and I make things even more difficult for him because I don't move around much at the piano. In this case I think we achieved a satisfactory balance of what can be contending concerns and objectives."

The Aldeburgh program, by the way, offers Beethoven's Thirty-two Variations in C Minor, four pieces from Rachmaninoff's two sets of *Etudes Tableaux*, Schumann's *Faschingsschwank aus Wien*, and Liszt's *Consolation* in D-flat



Major and Hungarian Rhapsody No. 12.

A subject of concern to pianists, teachers, critics, and the concert-going public in general, these days, is competitions and their effect on standards and careers. Perahia's own career was launched by his winning the Leeds Competition in 1972. How does he regard the rash of competitions—and competitors—we are experiencing today?

"I find it a tragedy," he said, "that managers consider them necessary—which is why I entered at Leeds. They won't take a chance on talent unless it has been demonstrated—and publicized—in a prestigious competition.

"As for its effect on standards, I would hesitate to say that competitions are solely to blame for, but they may have contributed to, what I find a too intense, almost exclusive, concentration on technical brilliance and technical perfection among today's younger pianists. They tend to lose sight of, or neglect, problems that are more musical, more musically substantive, than purely technical."

Might something similar not be said of contemporary composition for piano?

"Yes, but I would put it differently.

The problem with composers is their abandonment of music's roots in tonality. Without tonality, a sense of the dynamic, or kinetic, relationship between one tone or pitch and another, there is no song, and without song there is no music."

There's a lot of self-characterization in that statement. What has always distinguished Perahia among pianists is his profound musicality—not quite self-effacing, perhaps, because his playing has always had a distinctive personal flavor, but certainly the opposite of self-aggrandizement or exhibitionism.

That fundamental musicality is reflected in his wide-ranging enthusiasm for other musicmaking than just that of the virtuoso solo pianist: chamber music, conducting (concertos and chamber music), and accompanying (most recently a video recording of Schubert's *Die Winterreise* with Dietrich Fischer-Dieskau).

"Conducting is a bit of a problem for me," he said, "because I

am not technically equipped as a conductor. Success, then, depends on establishing a musical rapport with the musicians. When they grasp and sympathize with your approach and your objectives, the result can be musically and personally rewarding. It's largely a matter of achieving the right atmosphere."

If all this suggests a dedicated musician and music lover who just happens to have been extraordinarily endowed as a pianist, that is just the kind of impression Murray Perahia makes—and confirms in his recordings. □

Murray Perahia's most recent releases on Sony Classical are his first digital recordings of Mozart's Piano Concertos Nos. 21 and 27, the concertos for two and three pianos (arranged for two) with Radu Lupu, and discs of solo works by Brahms as well as a Franck/Liszt program. Perahia has been touring the U.S. and Europe this fall with Mozart programs—a fitting contribution to the composer's bicentennial celebration from an artist whose recordings of his works have been so highly acclaimed.



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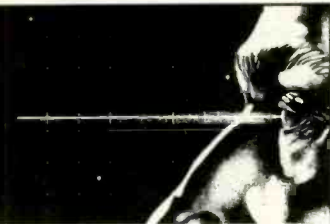
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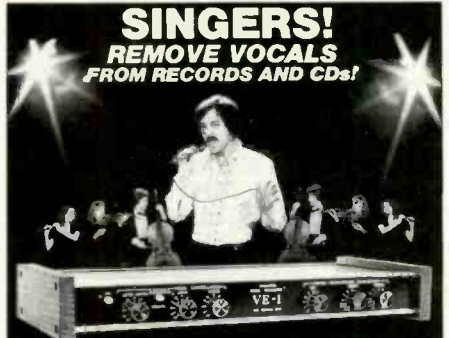


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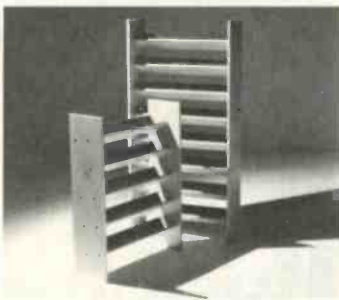
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**November**



## Surround Sound and THX

**T**HOSE of us interested in multi-channel sound reproduction can be thankful that the motion-picture industry is thoroughly in our corner—or all four of our corners, if you wish. In general, record companies still look upon anything related to quadraphonic sound with the hostility of the badly burned, but the cinema people are married to such technologies and are spending some big money to refine and expand them. They even want to put them in our living rooms.

Kicking off this year's summer season in New York was a presentation by Lucasfilm's THX division at the Tribeca Film Center, celebrating the first installation of a THX sound system in a Manhattan movie house. A THX system is a complete cinema "B-chain" (amplifiers, loudspeakers, enclosures, and acoustical treatments) that is intended to complement the "A-chain" (optical pickups, preamplification, equalization, and noise reduction) marketed as the Dolby Stereo system. Unlike Dolby Labs, THX does not make equipment; rather, it certifies the products of others and regulates their installation.

The brief demonstration of the THX theater system that I attended showed it to be sophisticated and potent, which was no surprise. What did take

# THE HIGH END

by Ralph Hodges

me aback was the exhibit, outside the screening room, of a variety of *home* THX equipment. Does this stuff work at home, too?

Yes, according to a paper read at last year's Audio Engineering Society convention in Los Angeles by Tomlinson Holman, creator and developer of THX (the initials are lifted from the title of George Lucas's first feature film, but they also stand for "Tom Holman's experiment"). Holman says that a properly constituted and licensed Home THX system can be inferred to approach equivalency to a theater system, with the reservation that the acoustical differences between small and large rooms must be respected in system design. Whether this is good news will depend on how you respond to the theater experience.

As in a theater installation, the left, center, and right front speakers in a Home THX setup must have tightly controlled directivity, with a narrow vertical radiation pattern and a somewhat broader one laterally. This is mandated because listeners usually find location of sound sources within a stereo sound field more precise with directional loudspeakers. A center speaker is included both because cinema systems invariably use one (to prevent viewers near the sides of the theater from localizing dialogue and other center-screen sounds at the stereo speaker at their side of the screen) and because Holman's tests indicate that listeners find dialogue from a center speaker "less work" to understand than dialogue from a phantom center image produced by the right and left speakers. There is also a subwoofer, operating below 80 Hz.

For the surround speakers, opposite provisions apply. Whereas the front speakers must be optimized for precise localization of sound, the surround speakers are to be dipole designs, mounted to the sides fairly high on the walls, with the radiation lobes pointed front and rear, so that the listener is in the node of the radiation pattern. The objective is, at all costs, to keep the listener unaware of the surround speakers as distinct sound sources. In other words, they should not be localizable. Furthermore, a Home THX system may have only two surround speakers. Use more and "combing" of the multiple outputs

will cause irremediable timbral mismatch between the front and the surround channels. (By contrast, a theater *must* use more surround speakers in order to provide uniform audience coverage.)

An electronic processor is central to the Home THX scheme, and it does several things that you can't get done elsewhere. First, it equalizes the main left, center, and right channels of a movie soundtrack—which was mixed in a large space for reproduction in a large space—to suit the acoustical characteristics of a small space. Second, through more complex equalization of the surround signal it refines the timbral match between front and surround speakers. Third, it performs what Holman calls "decorrelation" on the surround channel. Let me explain that last point.

The Dolby Stereo surround channel is usually a mono signal, and do what you will to create diffusion and delocalization, when it is played back through two loudspeakers it will always try to "image," sometimes in weird, distracting ways. To prevent this effect, it is necessary to present the left and right surround speakers with signals that are essentially the same but somehow different. Holman's paper reports on several experiments to determine what sort of difference would be most effective in promoting a diffuse, enveloping sound field. After considering comb filtering and phase shifts, he decided that introducing a very slight pitch difference between left and right did the best job. This sort of processing is strictly a digital affair, and it's not cheap. Since THX licensees appear to have a bit of latitude in how they implement decorrelation, I do not yet feel safe in predicting just what form it will take in every processor being introduced. But Fosgate/Audionics says that its forthcoming device will use the pitch-shift method endorsed by Holman. For anyone horrified by this prospect, the decorrelation can be switched out.

As I write, other THX licensees include Altec Lansing, Cambridge SoundWorks, Duntech, Lexicon, Miller & Kreisel, NAD, Snell, Technics, and Triad. These are the companies to contact to find local dealers able to give demonstrations of Home THX systems. □

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