

This tiny microprocessor is the latest innovation in Pioneer's best components. It can improve the way you listen to your music. And it can also improve your music.

THE SX-8 RECEIVER: DON'T TURN THAT DIAL.

How smart is smart? For starters, the brain inside the SX-8 allows us to use push button controls, eliminating noise and distortion caused by



All-electronic receiver operation does away with knobs and dials. Volume, station and bass and treble levels can be easily monitored thanks to L.E.D. rendouls

mechanical dials. So all you hear is crisp, clean music. Just the way it was recorded. The brain also willingly takes over the chores you used to do yourself. Just push a

button to raise or lower volume or tone, change stations, even check the time. Push the Scan Tuning button and the receiver automatically scans every strong station, playing five seconds of each one.

Then, simply touch the Memory button. Your station, volume, and tone settings will

Not that there's anything wrong with the one you've got.

We just had something a little smaller in mind. More like the one you see here.

Technically, it's called a microprocessor or computer chip.

But we like to think of it as a little brain. Because when it's built into our Pioneer receivers, tape decks and turntables, they become more.

They become smart.

And when it comes to getting the most music out of your music, smart components have a lot of advantages over dumb ones.



be instantly stored in the memory. Ready to be recalled just as fast.

THE CT9-R TAPE DECK: SMART ENOUGH TO FIND NOTHING.

If you've ever done even a small amount of cassette recording, you've gone through the not-so-convenient fast forward/stop/play/reverse procedure

of trying to find the blank area where your last recording left off. The CT9-R, on the other hand,

has a button marked Blank Search. Give it a push and it will find the area that's

long enough to tape on, back up to the last recorded piece, leave a nine second space and stop, ready to record.

In about three seconds.

Automatically.

And, as if that weren't enough, the CT9-R also has the world's fastest Automatic Bias Level Equalization. In plain English, that means that it takes just eight seconds for Auto B.L.E. to analyze the tape being used

(no easy task with over 200 different tapes on the market) and then adjust the deck for optimum performance with that tape. Improving the quality



The real-time counter reads out the amount of tape left in meaningful minutes and seconds instead of meaningless inches.

of your recordings faster than you can say "wow and flutter."

THE PL-88F TURNTABLE: IT WON'T PLAY WHAT YOU DON'T LIKE.

In the history of recorded music, there has probably been one, maybe two people who like every cut on a record. If you're not one of them, you'll take an immediate liking to the new PL-38F.

It's front loading, stackable and, best of all, it's fully programmable.

Punch in up to eight cuts per side in any order that makes your ears happy. The turntable will automatically skip the ones that don't.

And when you're recording from records to cassettes you'll appreciate the tape deck synchro that automatically



places any Pioneer Auto Reverse tape deck into the pause mode when the turntable tone arm lifts off the record. Leaving you free for more important things.

Like listening to music.

The Pioneer CT-9R tape deck, SX-8 receiver and PL-88F turntable. Proof that to get the quality of music you buy quality components for, you don't need a lot of knowledge.

You just need a little brain.

Because the music matters.



MAXELL IS PLEASED TO PRESENT AN EVEN HIGHER PERFORMANCE TAPE.



If you're familiar with Maxell UD-XL tapes you probably find it hard to believe that any tape could give you higher performance.

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

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

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

To keep the particles from rubbing off on your recording heads Maxell XL-S also has an improved binder system. And to eliminate tape deforma-

tion, XL-S comes with our unique Quin-Lok Clamp/Hub Assembly to hold the leader firmly in place.

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

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



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*Cover Story

The ADC Sound Shapers." Improvements on perfection.

When you make a line of equalizers that audiophiles consider to be the best, it's difficult to make them better.

But we did. And our exciting new Sound Shaper^{*} line reinforces our reputation as the leader in the equalizer world.

You'll find the same superb electronics and high performance technology that you've come to expect from ADC. With LED-lit slide controls that let you custom-tailor your sound to compensate for room and system deficiencies. And now, you'll find our Sound Shapers updated with new refinements and sleek styling that makes them look

as good as they function. Our top-of-the-line SS-30 is a perfect example. A ten-band equalizer with LED meters and two-way tape dubbing, it has its own integrated spectrum analyzer built in, so you can clearly see the altered frequency response. And unlike many other equalizers with integrated spectrum analyzers that require outside pink noise sources, our SS-30 has its own pink noise generator built right in. So now, you can accomplish corrective equalization of your room without

an additional component.

The rest of the line is equally impressive. F-om our 12-band SS-20 to our ten-band SS-10 to our five-band SS-5, all ADC Sound Shapers offer you fingert p control of your frequency response, with features geared to your equalization needs.

If you're serious about equalization and want to maximize the potential of your present system, an ADC Sound Shaper is your answer. The new ADC Sound Shapers. Perfect examples of sound thinking. Improved.



Frequency Equalizers

Sound thinking has moved us even further ahead. ADC, Route 303, Blauvelt, N.Y. 10913 & Sound Shaper is a registered trademark of Audio Dynamics Corporation. At manine 1111111 CONTRACTOR OF THE 2222 6 - CCMMC and all and Shaper String der-Service Card ound

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Creating technological breakthroughs is nothing new to Sansui. One of our most recent innovations, the unique Super Feedforward DC power amplifier system routs all types of distortion—harmonic, intermodulation, transient intermodulation, switching—you name it.

switching—you name it. And it's the reason we can claim that Sansui's new top-ofthe-line, 120-watt* Z-9000 receiver is truly distortion-free.

Simply stated, the Sansui Super Feedforward circuit is the perfect marriage between negative feedback and feedforward. As a result, you're never bothered by any type of distortion. You hear precisely what's on the records, tapes and broadcasts. Nothing added, nothing lost—just pure music.

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Unlike receivers with conventional two or three tone controls, the Z-9000 provides total flexibility with a state-of-



the-art 7-band graphic equalizer that helps balance the sound in your listening room.

IMPROVEMENT IN DISTORTION WITH SUPER FEEDFORWARD SYSTEM



Digital Quartz-PLL tuning is more precise.

While Super Feedforward alone is enough to outperform most receivers, the Z-9000 adds the pinpoint accuracy of drift-free digital Quartz-PLL tuning. To make su e it's as easy to use as it is precise, there's microprocessor-controlled pushbutton pre-selection of eight FM and eight AM stations. Plus automatic scanning to recall each preset station at the previously programmed volume level. Each time you touch the tuning button you can scan or go up and down the FM and AM bands, bringing in perfectly tuned stations even when they're a hairline away from each other.

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The built-in reverb unit with its own display can make your fines: tapes and recordings sound even more magnificent by adcing natura depth ∋xtra brilliance and sound realism. he exclusive quartz/time* clock with three independent memory functions can be programmed to wake you up, ull you to sleep, ≡nd tape a proedcast in your absence. There are also high and subson c filters and \equiv preamp that handles both moving magnet and moving coil cartridges.

If the new distortion-ree Sansu Z-9000 sounds too good to be true, satisfy yourse f with an audition at your audic specialist. Or write today for additional details.



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- 2 1

Putting more pleasure in sound



The crossover network. A great place to hide.

You don't usually see crossovers in loudspeaker ads.

Because the crossover is the most embarrassing part of most loudspeaker systems; an electronic 'kludge' buried deep in the cabinet. Designed to cover up the deficiencies of mediocre drivers. Or, just to save money so that the speaker can be sold at a particular price.

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All its components are computer grade, and mounted on a 'military spec' epoxy printed circuit board. Chokes are wound with wire imported from one country on ferrite cores imported from another.

It's one of the reasons an ADS speaker sounds better, and tighter in the low end. It is an elegant solution, in every way.

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Or best of all, see an ADS dealer. We can only tell you how well they're made. He can show you how much better they sound.

ADS. Audio apart.

Letters

Shared Condemnation

I share Harris Goldsmith's condemnation of Alfred Schnittke's new cadenzas for the Beethoven violin concerto [July]. I heard the Philips recording only once on FM. That was enough! The timpani intrusions in the cadenzas certainly violate any concept of good musical taste, surprising especially in the case of conductor Neville Marriner, known for his refinement. I would assume both Marriner and violinist Gidon Kremer had total control over the proceedings, so the indiscretion is *theirs* for using the cadenzas, not Schnittke's for composing them.

Notwithstanding the borrowings from violin concertos by Brahms, Sibelius, and Shostakovich noted in the review, Schnittke is more of a plagiarist than Mr. Goldsmith indicated. I believe Schnittke got the idea for the timpani obbligato, and even some of the thematic material, from the use of timpani in the cadenzas of Beethoven's piano transcription of his violin concerto, published in 1808, the year before the original violin version.

To be totally objective, however, I have this gnawing doubt: Even given the differences between the violin and the piano, would the timpani parts, if adapted from Beethoven's transcription for piano, seem that wrong in the violin concerto, since he himself had used timpani in the cadenzas of the piano version? James D. Maffett

Lakeland, Fla.

Mr. Goldsmith replies: The presence of the timpani in the cadenzas is not objectionable, but the dubious use to which they are put assuredly is.

Wrong List

In "'83 Audio & Video Component Preview" {August}, you state "Luxman's three-head cassette deck, the \$500 KX-102 ...," etc. This price tag on his brand-new deck drove my local dealer to drink as he had already quoted me Luxman's list price on the KX-102 as \$1,000! The KX-101 listed at \$500. Who's correct? **Thomas E. Weybrew**

Raleigh, N.C.

Your dealer is correct. We were led astray by a press release that listed both decks, the \$1,000 KX-102 and the \$500 KX-101.—Ed.

Cheap Shot

I have just read Steven X. Rea's very negative review of "Jools Holland and His Millionaires" [BACKBEAT, June]. Mr. Rea quotes a line from *Goodbye World*, "I'd shoot myself but I can't afford a gun," and then responds with, "One feels tempted to send him the money." Such a remark strikes me as both inappropriate and sophomoric. Holland is a first-rate artist. His work deserves to be reviewed by a responsible journalist.

Robert A. Lemansky Elizabeth, N.J.

Stokowski Duo

Regarding "Stokowski at 100" [April], Curtis Davis described the maestro's 1976 recording of the Rachmaninoff Third Symphony as a "flawed performance" albeit with an "irresistibly powerful finale." Apparently, in playing the work again after forty years, Stokowski did not care to consult or be guided anymore by the composer's own 1940 recording. There are some flagrant departures from the score, notably the rubato missing from the E major subject in the first movement (some passages should be stretched virtually to 5/4), which Stokowski renders very squarely. Strangest of all is the absolute misreading in the second movement of the *Alla breve*; *L'istesso tempo* at cue 66, where the quarter note is marked as constant and Stokowski turns it into an *eighth* by mistake. He recovers the right value only after a fermata, three pages later.

Stokowski also waited forty years before performing for the second time the work Rachmaninoff dedicated to him in 1926, the "*Three Russian Songs*," Op. 41. Francis Crociata describes the work as having had "a huge success," yet Stokowski's 1966 performance with the American Symphony at Carnegie Hall was only its second performance in America! It's a pity that this superb rendering was not captured in a recording to become part of Stokowski's great legacy.

Finally, your readers may be interested in the following story about the maestro, told to me by the late Mrs. Sergei Rachmaninoff. In 1947, when the Rachmaninoff First Symphony was resurrected, Mrs. Rachmaninoff was approached by a number of conductors who were interested in giving the American premiere of the "new" work. "Everybody wants to do the first performance," she remarked, but "nobody wants to do the second." Stokowski visited Mrs. Rachmaninoff at her apartment, and after they had talked about the symphony, the conductor suddenly said: "Madame Rachmaninoff, once your husband came to see me unexpectedly, looked at me; and said. 'Stokowski, you are a very bad man!' Then he turned away and left. I have always wondered what I had done to make him say such a thing. Please, can you tell me what he meant?' Mrs. Rachmaninoff replied that she was at a loss for an explanation, and that she could not imagine how her husband could have been so rude. Noel Farrand

President, Friends of American Music, Inc. Taos, N.M.

Many thanks to HIGH FIDELITY for the article concerning Stokowski's pioneering stereo recordings made at Bell Labs ["The Way We Might Have Been," December 1981; "Letters," March]. We at the Infant Hearing Assessment Foundation have been delighted to make these rare recordings (donated to us by Bell Labs) available in return for a tax-deductible donation.

Thanks to your thoughtful and generous readers, we have already raised just over \$5,000 to aid in developing methods for the diagnosis of hearing disabilities in infants. **William Gilmore**

Concord, Calif.

Fewer than 200 albums remain. The two-record set is available for a \$25 contribution, and one disc is \$15. Add \$2.00 for postage and handling (Infant Hearing Assessment Foundation, 2625 Park Ave., Concord, Calif. 94520).—Ed.

Letters should be addressed to The Editor, HIGH FIDELITY, 825 7th Ave., New York, N.Y. 10019. All letters are subject to editing for brevity and clarity.

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creating light, yet rigid titanium carbide speaker domes for unheard of transient response, extended frequency response, and ideal directional characteristics.

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AUDIO **High Fidelity News**

New equipment and developments

by the Editors



A Circular Port

An innovative driver mounting system, called Center Bass Reflex, is said to reduce baffle resonances by 10 dB in Jamo's CBR-903 loudspeaker. The Danish design's bass-reflex port forms a circle around the woofer, the intended result being to make bass loading symmetrical and reduce distortion. The \$300 CBR-903 is a three-way system with an 81/2-inch woofer, a 41/2-inch midrange driver, and a 1-inch dome tweeter. Level controls and LED overload indicators are provided for the midrange and tweeter; speaker stands are optional. Circle 88 on Reader-Service Card



CX Receivers from Toshiba

CX noise reduction circuitry is incorporated in two new receivers from Toshiba, the \$300 SA-R2 (with 25 watts, or 14 dBW, per channel) and the \$400 SA-R3 (with 40 watts, or 16 dBW, per side). The R2 has quartz-lock tuning, an infrasonic filter, and provisions for two sets of speakers. The R3 adds digital frequency-synthesis tuning with six AM and six FM station presets. Circle 85 on Reader-Service Card

Solar Charge Card

An electrifying solution to the expense of battery replacement is provided by Kyocera's SB-II Solar Battery Pack. Said to be capable of restoring 6-volt nickel-cadmium cells to full charge in three hours of exposure to direct sunlight, the solar module can also be a source of direct power (as long as the sun is shining) for your portable radio,



cassette player, or calculator. The 3-volt version of the SB-II sells for \$95, the 6-volt system for \$100. Accessory connector cables are optional.

Circle 81 on Reader-Service Card



Follow the Rule

Zero Distortion Rule (ZDR) circuitry and Yamaha's X power supply are united in the company's M-50 power amplifier. Rated at 120 watts (203/4 dBW) per channel, the M-50 is said to generate less than 0.002% total harmonic distortion-because, in part, of the ZDR circuit, which Yamaha claims cancels distortion inherent in the power amplification system while leaving the audio signal intact. A twenty-LED peak-power output meter has two switchable ranges and a peak-hold function; switching and independent level controls for two sets of speakers are also provided. The M-50 is priced at \$650; a more powerful model, the M-70rated at 250 watts, or 24 dBW, per channel-sells for \$950.



Smart and Strong

Pioneer says its front-loading PL-88F turntable is a champion weightlifter, capable of supporting as much as eighty-eight pounds of equipment stacked on top of it. At the touch of a button, the platter assembly glides in and out of a housing specially designed to reduce vibration and suppress feedback. The \$400 turntable's built-in (Continued on page 15)

What you hear will change your ideas about driving. About sound. And very possibly about music itself. Ø

ntroducing a totally new class of music systems. Each system is engineered for the acoustics of a specific car. And actually built as an integral part of the car.

Designed to bring you music with such clarity, impact, and realism that it literally will change how you feel about driving an automobile.

Sound by Delco-GM/Bose

hree years ago Delco Electronics and Bose Corporation began a joint research program to study all aspects of sound reproduction in automobiles. Their combined technologies encompassed everything from the growing of silicon crystals for special integrated circuits to the psychoacoustics of listeners in automobiles.

Out of this research came music systems in which each component is matched to the interior of the specific model car. The placement of the loudspeakers, the electronic balancing of the music signals, and the design of the amplifiers each take into account the precise acoustical environment and even the positions of the passengers.



Your enjoyment

We submit that the sound of music has been captured for the first time in an automobile with realism so striking that it will be immediately recognized and appreciated by young and old, by music lovers, and by those who never thought that music would play an important role in their lives.

The experience awaits you at your General Motors dealer.*

Delco GM BOSE totally new class of music systems from Delco-GM

AUDIO High Fidelity News

(Continued from page 8)

microcomputer can be programmed to play as many as fourteen passages in any sequence from a maximum of eight cuts; an infrared Index Scan samples the first ten seconds of every track on a side. Other features of the fully automatic unit are a quartz/ PLL-servo direct-drive motor, repeat play and skip play provisions, and synchronization with Pioneer's autoreverse cassette decks. The PL-88F comes equipped with a high-output moving-coil cartridge that requires no head amp.

Circle 80 on Reader-Service Card



Realistic Presets

Automatic search is just one of the tuning options available on the Realistic Model 12-1897 AM/FM/cassette stereo car receiver from Radio Shack. You can also select from among twelve preset stations (six AM and six FM) or revert to old habits and tune manually. The \$250 receiver, which has a rated output of 15 watts per channel, also offers separate bass and treble controls, automatic replay, locking fast forward and rewind, and automatic end-of-tape or ignition-off tape eject. Sized to fit most American and foreign cars, it comes with a power cable and mounting hardware for in-dash installation.

Teldec Introduces Direct Metal Masters

Teldec in West Germany, a longtime pioneer in recording technology and a specialist in high-quality pressings, has developed a new mastering technique. The groove is cut directly into metal-copper over a stainless-steel base -rather than into a lacquer blank. The metal master is then plated to make the metalwork (stampers and intermediate parts) necessary for the molding of vinyl records.

Several potential sources of noise and distortion are thus said to be eliminated. Lacquer is a temperamental medium, requiring the use of a heated stylus with "burnishing facets" (small bevels) along the cutting edges for a cut free of tearing and burring. And even if the cut is clean, the lacquer is subject to plastic deformation during the cutting process, resulting in distortion and pre-echo in finished pressings. In addition, the process of depositing a thin metal film (usually silver or gold) on the lacquer so that it can be electroplated is particularly trouble-prone; dust contamination at this stage, for example, can create ticks

and pops in all pressings made from the affected metal parts.

Teldec's new metal mastering technique uses a special cutter head fitted with a stylus that has no burnishing facets. The basic groove shape is therefore said to reflect the audio waveform more precisely than in a traditional cut, and there is no burr at the edge of the groove to create problems in subsequent plating. Neumann direct-cutting lathes should be available to mastering labs in this country by the time you read this; the technique, already in use by Teldec for classical recordings on its sibling Teletunken label, is expected to prove advantageous for everything from hit 45s to limited-edition LPs.



A Straight-Shooter from Sonus

The Lambda stylus used in the Sonus SB-11 Super Blue moving-iron cartridge mimics the shape of a record-cutting stylus, a design whose purpose is minimum tracing distortion. According to Sonic Research, mounting the stylus in line with the cantilever, rather than at a right angle to it, will yield cleaner, better defined sound. The SB-11 is a low-mass, high-compliance cartridge and is priced at \$195.

Circle 92 on Reader-Service Card



Memories from Onkyo

Onkyo has incorporated eight AM and eight FM station presets in its lowest price digital frequency-synthesis receiver. The \$300 TX-41 provides three tuning methodsmanual, direct (via the presets), and auto scan-and a four-LED signal strength indicator. Onkyo says the receiver's stereo sensitivity is 37.2 dBf for 50 dB quieting and claims a 1.5 dB capture ratio. Output is rated at 30 watts (143/4 dBW) per channel. The TX-41 also has switchable FM muting, built-in Dolby FM de-emphasis, and LEDs that illuminate when tone controls are in their center (defeat) positions. Circle 93 on Reader-Service Card

For Information cail 854-8989	SPO VERS
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The Only Receiver Built Like A Mitsubishi.

On the subject of receivers, we can perhaps be accused of a bit of priggishness.

Having established certain standards in our components,we aren't about to put our name on a receiver if the receiver doesn't measure up.

Which brings us to a receiver in our 25/30 series, the R-25.

It owes a great deal to developments incorporated in our separates.

The R-25 features Quartz

Synthesized tuning for hairsplitting tuning accuracy. And if you have greater tuning accuracy you're going to have less distortion and noise, and maximum stereo separation.

Each station is illuminated on a fluorescent digital display. Tap the control bars and it proceeds to lock on to the first available station. Hold the bars down and it will scan up and down the band.

You can pre-select up to seven

AM and seven FM stations for storage in memory.

To combat noise—the highfrequency variety that FM stereo falls prey to when stations are weak or far away—the R-25 has an Automatic Hi-Blend feature. It blends stereo signals into monaural in the noisy highfrequency ranges. But it leaves the undisturbed low-frequency signals in the stereo mode.

This removes almost all the perceived noise while preserving



MITSUBISHI DA-R25 stereo receiver

the broadcast in stereo.

Having solved the noise problem, we moved on to that of signal strength.

Strong signals, by nature, will bully the weak ones, drowning them out, pushing them aside.

Our automatic IF(Intermediate Frequency) switching circuit solves this problem by narrowing the tuning window, thereby excluding interference.

However, since narrowing the window increases distortion, this switching function is introduced-with laudable discretiononly at that precise point where the increased distortion is a lesser levels by a linear switching circuit. evil than signal interference.

As a result, the best possible signal is delivered automatically.

The R-25 Pre-Amp section features a continuous loudness control of ten settings. Rather than the usual single on or off loudness mode. This lets you contour the low and high frequency ranges at low volumes for much richer tonal balance.

Built into the pre-amp section as well is a moving coil amplifier. A simple push of a switch and you're ready to use a high-grade moving coil cartridge without any other external unit.

Meanwhile, back in the amplifier, crossover and switching distortion is reduced to negligible

A rather ambitious array of features for a receiver.

And on the subject of distor-

tion, High Fidelity (March, 1982) commented, "At low power... the distortion barely reaches 0.01%-the threshold below which we consider distortion altogether negligible."

They also had another nice thing to say about Mitsubishi: "The flimsy and the tacky are as inconceivable from its design studios as a pianissimo is from Ethel Merman."

Or, as we like to put it, if it says Mitsubishi, it's got to sound like a Mitsubishi



Mitsubishi Electric Sales America, Incorporated, 3030 Victoria Street, Rancho Dominguez, California 90221. Available at specialty houses nationwide. Specifications are subject to change without notice



AUDIO CrossTalk

Practical answers to your audio questions by Robert Long

Thumper

The main components in my system are a Concept 11.0 receiver, a Technics SL-10 turntable with an Audio-Technica AT-152LP cartridge, and JBL L-166A speakers. When playing classical records, especially the audiophile variety, "thumps" are produced at various intervals. I've had all these components checked out, and I recently installed an infrasonic filter (24 dB per octave below 20 Hz), but the thumps remain. Can you help?—Ralph G. Abbott, Anaheim, Calif.

I hope it's not just prejudice against a model with which I'm unfamiliar that leads me to suspect the receiver, but I can't come up with any compelling alternative. As Tom Holman of Apt Corporation showed in his fascinating studies of amplifier and amplifier/speaker behavior, some amplifiers produce a DC pulse when they're clipped by only one side of an asymmetrical waveform. Such signals are relatively rare in most program sources, but audiophile discs (especially those made from digital master tapes) might have them in greater than normal profusion. (And the quiet surfaces of audiophile discs might tempt you to crank up the gain a bit, increasing the likelihood of amplifier clipping.) Your thumps might conceivably be caused by such a clipping pulse, or "bounce." If that is the case, the frequency with which the thumps occur should increase when you turn up the volume and decrease when you turn it down. However, we must admit that we've never actually encountered this particular phenomenon ourselves.

Mono Malaise

Your suggestion about using two Yadapters on a tuner to mix channels for mono reception [June] is practical, but I feel it should be mentioned that this is not as good as buying a tuner or preamp with a built-in mono switch if you intend ever to listen in stereo. And I disagree that it is harder to ignore mono noise than stereo noise when listening to a mono signal; personally, I find a wide spread of stereo noise on a mono source more annoying. Combining channels cancels whatever stereo noise there is (usually a considerable portion of the total noise) and often makes it possible to enjoy a record that is unlistenable in stereo.—Kurtis Vanel, Burnaby, B.C., Canada.

The letter that prompted my suggestion simply asked how to hook up Y-connectors for mono listening with a preamp having no switch for the purpose; it seemed to presume typical listening to modern (stereo) sources. You're quite right, however, that for playing old records and tapes—or for getting the best possible sound from borderline FM reception—there's no substitute for complete mode switching.

The subcarrier on which the stereo difference information (the left signal minus the right) is placed in FM broadcasting is amplitude modulated and at a lower level than the mono baseband (left plus right) signal and thus is much more subject to noise. That's why mono signal-to-noise ratios in FM tuners are commonly about 10 dB better than those for stereo. In stereo reception, any noise on the subcarrier channel is distributed equally, but out of phase, to the two channels; recombining them at the mode switch (or with Y-connectors) cancels all of this noise. Or, partial recombination via a blend circuit-which drastically reduces separation at the very high frequencies where FM noise is most obvious and direction cues are least important-can be used to restore listenability without destroying the stereo effect.

Records pose different problems. While it's true that much of the worst noise (most rumble, in particular) derives from vertical stylus motion and therefore is cancelled by a mono switch, most scratches and surface noise are not. Sometimes one groove wall is quieter than the other and can be isolated if your mode switch has leftonly and right-only options, which feed the selected input channel to both output channels. Such a switch is particularly helpful in playing old tapes or using old decks. [A half-track mono tape played on a quartertrack deck, for example, will normally sound better in the left-only mode than in the right-only (because the right-channel head element extends beyond the edge of the recorded track). Sometimes it will sound better than the left-plus-right mono mode, which can cause highs to fade in and out if the tape has been subject to physical deformation in storage.] And a full complement of mode options can be helpful in isolating system problems, even if you never listen in mono.

Reely?

I observed with some puzzlement the signal-to-noise ratios with "standard" tape in your review of the Akai GX-77 open-reel deck [February]. It doesn't seem unreasonable that the Akai measured a shade better in this respect than the Pioneer RT-909 reviewed earlier [February 1981], but the GX-77 also seems to surpass the Denon DH-510 [August 1981], which is a half-track machine and should therefore have an advantage of about 3 dB out of the gate. Are these unexpected results to be taken at face value, or does some variable in testing procedures explain them?-Joseph E. Mahady, Brooklyn, N.Y.

The one variable involved is the tape. We tested the Akai and the Pioneer with Maxell UD and the Denon with Scotch 206. But before you exclaim, "Aha, so 206 is noisier!" let me point out that you're making mountains out of some molehills and overlooking others.

First, let's consider the noise figures themselves. At 71/2 ips (the only speed common to all three decks) and in record/play (which is what counts), the noise figures for the Akai, Pioneer, and Denon decks are, respectively, 60, 591/4, and 553/4 dB below the reference level of 200 nanowebers per meter. If that were the whole story, the Akai and Pioneer would rate virtually identical and only marginally quieter than the Denon. But the full dynamic range of a recorder extends from this noise floor up to the overload ceiling of the recorder-tape combination, as documented in the figures for recorded level at 3% distortion. Taking into account the differences in meter calibration, as shown in our data, the overload points are (in the same order) about 5, 8, and 91/2 dB above the reference level. Added to the S/N ratios, this gives you dynamic ranges of 65, 671/4, and 643/4 dB, respectively. This suggests that if you use the same tapes we did and all of the available headroom, you should get essentially the same noise levels in the Akai and Denon and very slightly better results with the Pioneer. Moral: The amount of noise you hear in an open-reel recording often depends more on the choices made by the recordist than on the tape or the recorder.

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

Stop. You're in for a very delightful surprise. Because something exciting has happened to TDK's **Professional Reference** Series of audio cassettes. Something-exciting for vour ears...and inviting for vour aves.

Look. And you'll see the bold, new packaging of our MA-R, SA-X and AD-X cassettes. Each cassette package has been redesigned for quick and correct identification. Yet, for -all you see, it's only a hint of what you' I get when you listen to what's insice

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AUDIO Basically Speaking

Audio concepts and terms explained

The Makings of a Receiver

THE HEART OF MOST audio systems is a multipurpose component called a receiver, which might be thought of as a very high quality radio without speakers. For our purposes, however, it's more useful to view it as several separate components—a tuner, a preamplifier, a power amplifier, and a power supply that provides the other three with the electrical current they need to operate all sharing the same chassis.

The tuner section is the part of a receiver that is actually responsible for radio reception. Out of a vast number of

very high frequency signals, ranging in strength from a few microvolts (millionths of a volt) to perhaps as much as several volts, the tuner must select the one you want to hear (rejecting in the process all the other competing signals), amplify it, and convert it down into an appropriate audio-frequency signal. And if the broadcast is in stereo, the tuner's job is substantially more complicated because it has to pull two independent audio signals (one for each channel) out of a single encoded radio-frequency (RF) signal.

Modern receivers invariably have tuner sections capable of receiving FM (frequency modulation) broadcasts. FM can take advantage of the wide bandwidth (to 15 kHz) and inherently low noise of frequency modulation broadcasting. And for the moment, at least, FM tuners are the only ones capable of stereo reception, although this seems certain to change should stereo AM get a good foothold in the market. (Actually, the AM, or amplitude modulation, sections included in many receivers are there more as a matter of convenience than of high fidelity, since low-noise, full-bandwidth reception is virtually impossible to achieve with AM.)

The tuner section's audio ouput feeds into the preamplifier section's selector switch, which enables you to choose what you will listen to (disc, tape, radio, etc.). Sources other than the receiver's own tuner section are connected via RCA-type pin plugs attached to shielded cable, so as to prevent noise pickup, such as 60-Hz hum from power lines. Most high-level sources by Michael Riggs

are normally connected to what are known as auxiliary inputs.

Tape decks and some signal-processing devices (equalizers, for example), however, are customarily patched into a tapemonitor loop, which includes both input and output jacks on the receiver and usually is switched independently of the main selector. The output from whatever source you choose at the main selector switch is routed directly through the tape-monitor outputs to the inputs of the tape deck or signal processor. The signal from the deck or processor enters the receiver through the tape-monitor inputs. Only the monitor inputs are switched, so the output to the device in the loop is never interrupted. This scheme enables you to alternate between



SOURCE and TAPE while you are taping without interrupting the recording or to use the MONITOR to switch equalization, for example, in or out.

The remaining input is the one designed to accept the output of a phono cartridge, and it is also rather special, because it is the only low-level one. Cartridges produce electrical signals measured in millivolts (thousandths of a volt)-or even in microvolts for some low-output moving-coil models-as compared to levels on the order of a whole volt for tape decks and other high-level sources. For that reason, signals from phono cartridges require amplification to bring them up to a level comparable to that of signals from high-level sources. This task is performed by a stage called a phono preamplifier, which also supplies an appropriate termination impedance for the cartridge and equalizes the signal to compensate for the standard RIAA bass cut and treble boost cut into all modern records. Some high-end receivers have still another stage, called a head amp or pre-preamp that can be switched in ahead of the phono preamp to provide the additional gain necessary for low-output moving-coil pickups.

Whatever signal is tapped by the selector (or tape monitor) switch is passed through a number of controls—including a volume control, for varying the system's loudness; a balance control, for adjusting the relative signal levels in the two channels; and tone controls (usually bass and treble), for altering the flavor of the sound. There may also be filters, to remove troublesome noise, such as surface noise from old records or turntable rumble and spurious signals generated by record warps; loudness compensation (which attempts to correct for the way the ear's frequency

> response varies with volume); or other controls that in some way modify the signal.

> Besides all these functions, the preamp also boosts the voltage of the signals passing through it to levels high enough to drive the power amplifier section (which is why it's called a *pre*amplifier). The power amplifier's job is to increase further the voltage of the input signal and to supply the current necessary to drive the loudspeakers.

When an amplifier reaches its voltage limit or current limit or both, it shears off the top of the

offending waveform and produces gross distortion. If this condition, called clipping, occurs only briefly and infrequently, it may pass unnoticed. But if clipping occurs often, or is prolonged, the sound will become rather squashed and harsh—a sign that you need more sensitive speakers or a more powerful receiver.

The amount of power a receiver can deliver depends partly on the design of its power amplifier's output stage. A more important determinant, however, is the heft of the power supply, which is at once the simplest and bulkiest part of a receiver. The cost differences between power transformers account in considerable measure for the price differences between receivers with dissimilar power ratings. In fact, the main key to the cost-effectiveness of receivers, compared to separate preamps, power amps, and tuners, is the fact that only one power supply and one chassis are required, rather than three.

Next month, a look at how loudspeakers work.

From the Driving Force:

A new angle in Panasonic speakers solves some old problems in car stereo performance. The Panasonic EAB-069 car speaker system and its smaller version, the EAB-049, represent a new and

different approach toward improving car stereo performance.

Notice the unusual angle of the horn tweeter. It projects higher frequencies in music directly at the listener: frequencies sometimes lost within the confines of a car. At the same time, a diffuser channes



the lower frequencies down the length of the passenger compartment. Accurate bass reproduction requires a treatment all its own. So an upward firing woofer is used to max mize bass frequency projection. Working together, the angled horn tweeter and upward firing woofer

enhance the stereo image and aphieve expeptional sound reprocuetion.

And how much power can these speaker systems take? The EAB-069 handles a hefty 60 watts. The EAB-J49, 30 watts. And these compact, low profile speaker systems can be used in separate pails or as a powerful complementary foursome.

Angled horn tweeter speaker systems. Part of the entire line of high quality, innovative car speakers rom Panasonic

Panasonic.car audio The driving force

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Unprecedented and unequaled in our time – the complete and definitive collection of America's country and western music.

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F or the first time in history, the greatest recorded performances of country music's greatest artists will be brought together in a single, definitive collection. It will include the most important recordings by the leading country artists of today ... landmark performances by legendary greats ... and all the diverse and varied musical styles that have enriched America's country music.

This remarkable collection is the official issue of the Country Music Foundation – home of the Country Music Hall of Fame and Museum, and the world's largest I brary of recorded country music. And it is the first complete collection that the Foundation

has ever issued honoring The Greatest Country Music Recordings of All Time.

A unique collection that only the Country Music Foundation could assemble

To assemble this collection, the staff of the Country Music Foundation carefully reviewed the Foundation's own archives of 75,000 records. In addition, they enlisted the support of all the country music record companies – whose values hold many of the master recordings selected for this collection. And they were able to obtain rare recordings from private collectors and country music artists themselves.

As a result, the Country Music Foundation Official Archive



"Country is the music of the people. Sorgs of the soil, forsaken and fulfilled love Story songs whose music is both contemporary and timeless... I love it, and I am proud to be part of the first collection to tell the whole country music story." — Johnny Cash

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Collection is unique both in scope and importance. A collection that would be difficult – or impossible – for any individual to duplicate.

All the great performers

The collection will feature milestone recordings from the careers of country music's most important artists. Such great contemporaries as Loretta Lynn, with 'Blue Kentucky Girl' and 'Coal Miner's Daughter.' Kenny Rogers and The First Edition, with 'Ruby, Don't Take Your Love to Town.' Johnny Cash with 'I Walk The Line' and 'Sunday Morning Coming Down.' Dolly Parton, with 'Coat Of Many Colors' and 'My Tennessee Mountain Home.' The "outlaw" music of Willie Nelson. The Nashville sound of Chet Alkins and Eddy Arnold. Country rock, with The Charlie Daniels Band. And country classics by popular music artists Linda Ronstadt, Glen Campbell and Anne Murray.

Also included will be the unforgettable recordings of such long-time favorites as Hank Snow, Emest Tubb and Merle Travis. The legendary giants: Hank Williams, Patsy Cline, Jim Reeves, Flatt and Scruggs, and Jimmie Rodgers. And recordings that reflect regional influences and evolving musical styles – bluegrass, Cajun, country gcspel, western swing, honky tonk and rockabilly. The collection will include such rare recordings as Vernon Dalhart's 1924 recording of 'The Prisoner's Song' – country music's first million selling record, and Loretta Lynn's early classic 'Honky Tonk Girl' – now out of issue. And from the Foundation's archives will come previously unreleased recordings – studio "takes" never before made generally available.

Records of superior quality Every step has been taken to ensure the *technical excellence* of the collection. Thus, all of the *early* recordings will first undergo a painstaking restoration process in the Country Music Foundation's newly opened Audio Restoration Laboratory. Here, recordings of classic performances will be electronically "cleaned" groove-by-groove to eliminate extraneous surface noise and preserve the original sound.

To produce the records, the Foundation has appointed The Franklin Mint Record Society – judged by audio experts to be a leader in producing records of superior quality. The vinyl used will be of a special formula containing its own anti-static element. This material, together with the careful process by which the pressing is made, results in a record that is more rigid, durable and resistant to dust. A true proofquality record – providing exceptional





In the Foundation's audio laboratory, the latest electronic techniques are used to restore the original sound quality of early recordings. Then, the records are pressed in a dust-free "clean room," where strict production standards, and audio and visual inspection, assure high quality.

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The collection may be acquired only by direct subscription to The Franklin Mint Record Society, Franklin Center, Pennsylvania 19091. It will not be sold through record stores. To enter your subscription, simply complete and return the accompanying application. Please note it should be mailed by October 31, 1982.

AUDIO **Retsoff's Remedies**

Simple solutions to common stereo system problems

by Alexander N. Retsoff

Tracking Down Acoustic Feedback

NOW YOU HEAR IT, NOW YOU DON'T: a lowpitched, rumbling hum that occurs-sometimes-when you're playing records. Like a poltergeist, it comes and goes, without any apparent connection to a particular disc or control setting (although switching in the loudness contour or boosting the bass does make it worse). The infrasonic filter doesn't help. You've checked the wiring between turntable and preamp, and it's fine. You've tried connecting and disconnecting the ground wire between your turntable and the electronics, and that's not the problem. Rearranging the cables has been equally fruitless. Finally, just when you think you might be on the right trail, the hum disappears-for a while.

Has this ever happened to you? It has to me, and it took some real detective work to track down the culprit. The first real break came when I touched the turntable and the hum seemed to diminish. This suggested a grounding problem, but I couldn't find anything wrong with the wiring. And why did the hum occasionally disappear entirely, even when I wasn't touching the turntable frame?

At last, the light dawned: It wasn't an electrical problem at all. When I touched the frame, I felt a very slight vibration in my fingertips. The source of my poltergeist "hum" was a small refrigerator resting on a shelf several feet below and well to the side of the turntable. Vibrations from the refrigerator's motor were being transmitted through the shelving to the turntable, where they induced sympathetic motion in the stylus. When I rested my hand on the turntable, I damped the vibration and reduced the noise, and whenever the refrigerator cycled off, the problem simply went away.

The particular point here is that you should never rest a turntable on a surface that could be set into vibration by a motor. But there are other implications. Sound waves are, after all, air vibrations, and when they impinge upon *any* object, they cause some motion. The lighter the object, the greater the induced motion. The larger the area exposed to air vibrations, the larger the force transmitted to the object, and, accordingly, the greater the motion. And the louder your stereo system is playing, again, the greater the induced motion. This, in a nutshell, is the acoustic-feedback problem that affects every conventional discplaying system to some degree. Fortunately, you can minimize acoustic feedback and frequently make a substantial improvement in sonic clarity by applying a few simple principles.

Keep in mind that it is relative motion between the stylus and cartridge body that creates an electrical signal that subsequently gets amplified and reproduced as sound. Anything that causes the one to move with respect to the other creates a signal; the cartridge has no way of knowing whether the stylus is responding to the undulations of the record groove or to vibrations from some outside source. Unwanted vibrations can get into a system by several routes: the shelf on which the turntable rests, the turntable base and dustcover, the tonearm, or the record itself. The first two sources are the worst offenders and can best be avoided by an intelligent choice of turntable and proper installation.

For example, place the turntable as far from the loudspeakers as possible and make sure it's securely supported: Resting it on a flimsy shelf is asking for trouble. Any equipment cabinet you plan to use should be well constructed and have no loose panels. Record cabinets can be excellent turntable platforms and should be as full as possible. The extra weight will increase the cabinet's mass and substantially reduce any sympathetic vibration.

Wall installations will also work and may even be preferable if you live in an old house with insecure flooring. But avoid standard-and-bracket shelving. Instead, securely fasten the shelf directly to the wall studs. The idea is to attach the surface on which the turntable rests to the most immovable object possible.

A turntable's suspension system, which works to isolate the mounting feet from the platter and tonearm, is also very important. Although isolating techniques and their particular implementations vary considerably in effectiveness, in principle they all operate in much the same way. The turntable is mounted via some sort of compliant, springlike mechanism, to which is added a damping material. The compliance of the mounting system resonates at some frequency with the mass of the turntable it supports, creating a mechanical low-pass filter that blocks the transmission of external vibrations at higher frequencies. Below the suspension resonance frequency, the degree of isolation falls off markedly. Well above resonance, it depends mainly on how heavily damped the system is. (Damping tends to reduce isolation, but since a suspension may actually exaggerate the transmission of vibration near its resonance frequency, a certain amount is usually necessary to prevent instability.)

Theoretically, it would be good to have the suspension's resonance frequency occur below the audio band, so that its filtering action would be fully effective at all audible frequencies. However, it's not advisable to allow the suspension resonance to occur at (or very near) the same frequency as the toncarm/cartridge resonance, where it might exacerbate any mistracking problems.

In practice, most turntable-isolation systems are tuned to higher frequencies than theory would dictate. Bringing the resonance down to, say, 2 to 4 Hz requires considerable mass, a very soft, springy compliance, or both. Also, the turntable would seem insecure and would probably wobble a good deal. (The wobble might be cured with added damping, but that would



decrease the suspension's effectiveness where it is most needed.) This would create only operational difficulties, however, not performance problems, and some excellent units (such as the Thorens turntables and the Oracle) have very low suspension resonance frequencies. The entire system may bounce a bit, but as long as the platter and arm are rigidly tied together and move as a unit, there is no *relative* motion and hence no unwanted output. Such turntables can be a bit tricky to operate manually, since the entire system may jiggle when you lift the tonearm, but they usually exhibit outstanding immunity to acoustic feedback.

Although a good isolation system is the first defense against vibration being transmitted from the mounting surface to the cartridge, it cannot prevent sound waves from affecting the system directly. One of the prime culprits here is the dust cover. Usually, it is flimsy; has a large surface area, and actually acts as a microphone diaphragm, which is precisely what you don't want. In a few systems (again, Thorens comes to mind), the dust cover is attached to the outer frame of the turntable case, while the turntable proper is suspended within the case (rather than by mounting feet), so that its suspension is also effective in removing vibration picked up by the cover. If your turntable is not one of the few designed this way, you might find it best to remove the dust cover entirely when playing records.

Sound waves can also directly induce motion in the turntable frame and the tonearm. Several manufacturers have used very massive frames, frequently molded from a filled plastic resin that looks and feels like marble, to reduce this motion. All else being equal, I think this is a move in the right direction.

Increasing tonearm mass to reduce susceptibility to direct vibration is more of a mixed blessing, since high tonearm mass also reduces the arm/cartridge resonance frequency, usually which increases the likelihood of mistracking warped records. In most instances, I would favor an arm with low mass for stable tracking and a small cross-sectional area for minimum pickup of airborne vibration.

Finally, the record itself can respond to the sound field and vibrate sympathetically. Many years ago, when records were thick and relatively massive, this was less of a problem. Today's thinner records are more responsive to airborne vibration. Use of a resilient platter mat (preferably in conjunction with a center weight or a spindle clamp) is your best solution.

Acoustic feedback can affect any system, sometimes with such subtlety that it escapes immediate notice. So even if you don't hear any obvious deficiencies, you may realize a substantial improvement in sound quality by taking steps to minimize acoustic feedback.



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AUDIO **Sound Views**

Opinion and comment on the changing audio scene

What the Real **Issue is in the** "Right to Tape" Controversy

IT ALL BEGAN very suddenly six years ago, when Walt Disney Productions and Universal Studios, as copyright owners of films broadcast on television, filed what has come to be known as the "Betamax Suit." The defendants were Sony Corporation of America, Sony's ad agency, several of its dealers, and a consumer who allegedly had used a Sony Betamax VCR to tape Disney and Universal products off the air for his own use. That last was the real shocker. Though copyright laws don't specifically exempt private home use, it had long been assumed that profit was a salient index of culpability in copyright cases and that, even if nonprofit home copying were outlawed, such a law would defy enforcement, making it functionally invalid. In addition, the courts had already held that taping the audio portion of a television show off the air was not in and of itself a violation of copyright. So a great many observers (including me) were convinced that Sony would win the case

It did win a round and a half, so to speak. In 1979, the first trial ended in a decision for the defendants. The plaintiffs appealed their case and one year ago the lower court's decision was overturned. Score one round each way in the courts. Meanwhile, Disney Productions discovered that Mickey Mouse was receiving the worst press in history as a result of the Betamax case, and the company withdrew as a plaintiff. But that half of a round, too, has been nullified by subsequent events: MCA, parent company to Universal, used the favorable decision of the appeals court as a springboard and promptly launched a second suit against a list of companies offering VHS gear. At the close of 1981, therefore, the confrontation between copyright owners and home tapists was a draw of sorts, at least in the judicial arena.

Much the same might be said of the legislative efforts that the court battle precipitated. Both the House and the Senate have bills before them that would specifically exempt home videotaping from the copyright laws: H.R. 4808, cosponsored by a group of almost 130 congressmen after being introduced by Rep. Stan Parris of

Virginia, and S. 1758, sponsored by Senator Dennis de Concini of Arizona and cosponsored by thirteen others. The Senate bill is subject to the Mathias Amendment, named after Senator Charles Mathias of Maryland, who proposed that it be linked to S. 1758. Mathias' proposal is to leave the exemption for home tapists intact, but to impose a royalty on both raw tape and tape recorders. In the House, the thinking behind Mathias' amendment is embodied in an additional bill, H.R. 5705, introduced by Rep. Don Edwards. Congress' intent is clearly to frame any legislation (whether including a Mathias Amendment or not) broadly enough to encompass audio tape and decks, as well as their video counterparts

Fortunes will be made in new ways, but nobody can be sure by whom.

Once the Mathias Amendment royalties are collected, how would they be distributed to copyright owners? According to the bill's present language, the fund would be administered by the Copyright Royalty Tribunal. Its job would be to see that the royalties were equitably dispersed, overlooking neither the creators' proprietory interests nor the public good. That's a pretty tall order, of course, and this element of the proposal is one on which its opponents have come down particularly hard. They see previous attempts by such tribunals as largely unsatisfactory and claim that any across-the-board scheme for the collection and dispersal of the royalties is inherently unfair

This, however, is only one area of the attack brought by the forces opposed to the limitation or taxation of home taping. Calling itself the Home Recording Rights Coalition, a group led by the Electronic Industries Association (itself a comprehensive group of manufacturers, including all the major producers of consumer video tape and decks) has mounted a major "Right to Tape" campaign that includes lobbying efforts before the House and Senate Judiciary Committees and any other bodies that may choose to enter the fray.

But even this development is not with-

by Robert Long

out its counterpoise. The Recording Industry of America (made famous in high fidelity circles by the RIAA phono equalization curve) heads a similar but opposite group, which calls itself the Coalition to Save America's Music. It numbers various music trade unions, music licensing companies, record labels, and music publishers among its members. This lobby's argument is that those who do the creative work must have some protection for their products so they can realize a share of the profits. Otherwise, they say, the economic incentive for creating works-both music and videolike those now being taped by the public will disappear.

Certainly there are strong elements of truth on both sides of the debate. And both have undoubtedly alienated some possible support by overstating their respective cases. Save America's Music, for instance, not only has assigned a staggering dollar value to the business that the recording industry loses to home tapers each year, but has treated that figure as incontrovertible fact. That, of course, is patent nonsenseunless you could get honest and accurate answers from all home tapists about how much each would have spent on records had blank tape not been available. Similarly, the Right to Tape people talk darkly of the number of dealers who would be put out of business by the higher prices created by royalty "taxes" (generally expected to be \$50 to \$100 per VCR and at least \$1.00 per video tape.) Again, it seems preposterous to assume that the failure of a specific number of dealers could be attributed to this cause alone.

Two proceedings will probably bring things to a head this fall. First, Sony has appealed the decision of the Sixth District Court of Appeals to the Supreme Court, which has agreed to hear the case-possibly in November, at this writing. Second, the Reagan Administration has asked Congress to delay action on the matter until the high court has been heard from (although some members of Congress seem unwilling to lose the initiative and want to press ahead.)

Whatever happens, the turmoil is likely to continue well beyond the Supreme Court decision and the floor votes on the pending legislation. Cable transmission, satellites, pay-per-view, interactive cable, computer networks, and the many other areas of technological innovation in home entertainment and information distribution all give promise of fortunes to be made in (Continued on page 96)

AUDIO New Equipment Reports

Preparation supervised by Michael Riggs, Robert Long, and Edward J. Foster. Laboratory data (unless otherwise noted) supplied by Diversified Science Laboratories.



The Littlest Dahlquist

Dahlquist DQM-5 loudspeaker system. Dimensions: 13/2 by 213/4 Inches (front), 11 Inches deep. Price: \$290; optional ST-9 stands, S80 a pair. Warranty: "limited," three years parts and labor. Manufacturer: Dahlquist, Inc., 601 Old Willets Path, Hauppague, N.Y. 11788.

ROOM RESPONSE CHARACTERISTICS



SENSITIVITY (at 1 meter; 2.8-volt pink noise, 250 Hz to 6 kHz) 89 dB SPL

AVERAGE IMPEDANCE (250 Hz to 6 kHz) 19.4 ohms

ON THE SURFACE, Dahlquist's DQM series of loudspeakers looks like clear evidence of corporate schizophrenia. That's because the company has traditionally been a specialist manufacturer-indeed, an ultraspecialist, in that its product "line" consisted of but a single model: the DQ-10 "phased array" system, in which five drivers (woofer, midwoofer, midrange, tweeter, and supertweeter) are individually mounted and positioned for phase coherency and minimum diffraction. Because of its unconventional design, the DQ-10 sounds exceptional, but also makes unusual demands on the consumer. Besides being relatively expensive, it is inefficient (and therefore requires a powerful amplifier), rather large, and somewhat unconventional in general appearance. It is not a speaker for everyone (and doesn't claim to be).

The DQM series remedies all these problems, and in so doing benefits everyone from Dahlquist itself to the company's dealers to audiophiles. The DQMs are more conventional in size and appearance than the DQ-10, much more efficient, and in the case of the DQM-5 considered here, substantially less expensive.

Naturally, phase relationships and transient response are high among the priorities of the DQM design scheme. But instead of trying to dispense with the conventional box enclosure (as the DQ-10 does), Dahlquist has sought to create one of exceptional acoustic deadness by using double layers of particleboard separated by a plastic film. The company has dramatized this construction with a matte black Nextel finish that bespeaks "monitor," set off by a black knit grille fabric. (A walnut-grain version is available for traditionalists.)

The back panel has a recess in which are two fuseholders and rugged, color-coded, three-way (banana-plug, spade-lug, and bared-wire) binding posts. They're called banana plugs, we sometimes think, because they're the only way to keep from going bananas when you're trying to reconnect





When the band lets you down, the CP-1028R won't.

It's too bad that most albums today contain certain tunes that just don't measure up to the others. Fortunately though, there's the CP-1028R turntable.

Our special microcomputer lets you program up to nine cuts, in any order you want, while an optoelectronic sensor in the cartridge quickly and accurately

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trolled direct drive motor for outstanding rotational accuracy and stabil ty. High Compliance Dual Magnet cartr dge. All adding up to specs that rank this turntable among the best in the industry,

If you're tired of always getting up because the band lets you down try the Onkyo CP-1028R. Perfect programming will make for perfect listening.

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able turntable is what you get

in addition to its programming. A straight Low Mass tonearm (a concept Onkyo developed first). Servo-con-

AUDIO New Equipment Reports



speakers whose terminals are made semiinaccessible by the well in which they're placed. Dahlquist has solved that problem by angling the binding-post mounting surface so that even the holes that accept bared wires are easily visible and your fingers can easily turn the knurled collars of the tightening nuts. This may be of small concern to users who connect their speakers once and never again touch the wiring, but it's a godsend to reviewers.

As the smallest and least expensive model in the line, the DQM-5 has a simple two-way design with a 1-inch dome tweeter crossed over at 3 kHz to a 9-inch polyvinyl acetate laminated woofer driven by a flatwound ribbon voice coil and loaded by dual ports at the back of the enclosure. Since these ports must not be blocked if the speaker is to function normally, Diversified Science Laboratories tested it 6 inches in front of the back wall and raised on Dahlquist ST-9 stands, which are specifically designed for the DQM speakers.

Dahlquist rates the impedance at 8 ohms nominal, 5 (or 4, depending on which spec sheet you read) ohms minimum. These seem reasonable ratings in view of DSL's measured curve, which descends to minima very near 5 ohms both in the 150-Hz region and near 7 kHz, but peaks near 40 ohms at 1.5 kHz. As the DSL data show, however, the average impedance is well over 8 ohms, and musical signals are unlikely to overtax most amplifiers when driving paralleled pairs, despite the relatively low minima.

The fuses (one for each driver) blow at the voltage equivalent of approximately 20 dBW (100 watts) into 8 ohms, more or less, depending on the duration of the offending level. This made it difficult to test highlevel distortion or continuous power handling, but DSL's pulse test fed the full output of the test amplifier (the equivalent of more than 27 dBW, or 500 watts, into 8 ohms) into the speakers without misadventure on this short-term (and therefore more realistic) basis. The sound pressure level (SPL) achieved in this test calculates to 116¹/₂ dB, which is more than ample. Distortion figures at saner listening levels average well below 1% at frequencies above 63 Hz at 85 dB SPL; they gradually increase at higher levels, averaging about 1% over the same frequency range at a relatively loud 95 dB SPL.

The response shown in the graph is within $\pm 5\frac{1}{4}$ dB from 50 Hz up, with a broad hump in the bass and a narrower (though more elevated) one near the top end of the range. Moving the speakers farther from the wall de-emphasizes the bass rise, but, partly as a consequence, emphasizes that at the high end. In listening tests, we did find the midrange slightly retiring, as the curves would suggest, and that a little boost in the extreme bass is both accepted gracefully by the speaker and welcome in the listening. We found the treble "zing" less aggressive than the curves suggest, however, and therefore made no attempt to reduce response at the top end with most program material.

Overall, we consider the sound to be very likable: not exceptionally uncolored, but with residual coloration confined to relatively warm and amiable habits. However, given the difficulties involved in trying to cover the entire audible range with two drivers (the woofer of the DQM-5 is expected to cope with six or seven octaves, for example) this constitutes a high degree of success.

Circle 98 on Reader-Service Card

A Tough Little Oklahoman

Norman Laboratories Modei 8B-V loudspeaker system. Dimensions: 12 by 23 inches (front), 101/4 inches deep. Price: \$160. Warranty: "Ilmited," five years parts and labor. Manufacturer: Norman Laboratories, Inc., 2278 Industrial Blvd., Norman, Okla. 73069.

ROOM RESPONSE CHARACTERISTICS



SENSITIVITY (at 1 meter; 2.8-volt plnk noise, 250 Hz to 6 kHz) 89 dB SPL

AVERAGE IMPEDANCE (250 Hz to 6 kHz) 9.6 ohms

OKLAHOMA IS NOT A STATE whose name has been very intimately linked to sound equipment, though Norman is not the first loudspeaker company to settle there. But the 8B-V is the first Oklahoman product we have tested in many years-perhaps the first ever-and true to the spirit of the West, it turns out to be a sort of Unsinkable Molly Brown whose resiliency belies both its size and its price. Though Norman says it (or, more specifically, its tweeter) can be destroyed by high-level testing with continuous waveforms, we could find no evidence of that. Actually, it boasts three-way protection: what Norman calls a Vario-Resistive Protective Circuit (or V-RPC), a circuit-breaker, and a fluid-filled voice-coil gap in the tweeter.

In basic outlines, however, the 8B-V doesn't seem so unusual. It is a sealed twoway system of traditional bookshelf design—though, like many other examples, it is recommended for vertical placement, with the tweeter directly above the woofer, which—along with the speaker's bulk and

depth-argues in favor of floor, speakerstand, or counter-top placement. (When the term bookshelf first was applied to speakers, the minis that really do fit among the books weren't even around.) The front panel holds a 10-inch woofer with a vacuumformed polypropylene cone and a polyester-foam surround, plus a 1-inch polycarbonate dome tweeter mounted in a raised block that fits into a slot in the solid backing of the grille's fabric. The tweeter thus lies in the plane of the backing panel, which is beveled at the edges to minimize diffraction effects. Recessed into the back panel are the circuit-breaker reset button and a pair of press-to-release terminals for bared wires.

The system measures very well indeed in the test setup at Diversified Science Laboratories. With the 8B-V on a stand and against the back wall, frequency response is quite flat: within $\pm 5 \,\text{dB}$ from 50 Hz up, and within only a dB or two if you ignore the rise at bass resonance, the dip at approximately 700 Hz (doubtless a floor-reflection cancellation, since it disappeared when



NOW YOU CAN HAVE DIGITAL RECORDING WHERE YOU WANT IT MOST: AT HOME.

There are moments when a musician is so inspired he stops making music and starts making magic. And, as most artists agree, these peak periods of supreme inspiration don't always occur in the clinical conditions of the recording studio. Which explains why Sony, the inventor of digital audio processing, has just created the world's smallest, lightest and most compact digital audio processor — the PCM-F1.

Already touted by every major audio magazine, the PCM-F1 leaves one awestruck by its vital statistics.* Its level of performance surpasses that of even the most sophisticated analog recording studio.

Its unique 3-way power supply allows you to use it anytime, anyplace.

And because Sony consciously designed it without a built-in VCR, it can be used with any VCR $-\frac{1}{2}$ or $\frac{3}{4}$ inch.

But perhaps its greatest feature is its price.

Obviously, we can go on and on about the brilliance of this new machine, but by now we figure you've heard enough about it and you're ready to go to your Sony dealer and hear it for yourself.

Sony dealer and hear it for yourself. Features and Specifications: Wow and flutter – unmeasurable; dynamic range – greater than 90dB; distortion – less than 0.005%; frequency response – 10-20,000 Hz, \pm 0.5 dB. Weight – 9 lbs.: height – 34″; depth – 12″; width – 812″; 14- and 16-bit quantization. © 1982 Sony Corp. of America. Sony is a registered trademark of the Sony Corp.



DESIGN INTEGRITY:



Many cassette manufacturers compare their sound quality to open reel. Rather than making such inflated plaims, Denon chose to incorporate the transport technology developed for our studio and ¼" mastering machines into our passette decks.

Proper tape-to-head contact, absolutely critical for the highest quality tape recording and playback, is controlled by outboard tension sensing arms on studio machines. On the DR-F Series cassetze decks, this is accomplished by Denon's Tape Tension Servo Sensor system. Working in concert with the DR-F Series' Non-Slip Reel Drive Motors, which eliminate belts and clutches (the principal source of maintenance problems on conventional cassette decks). Denon's decks offer a literal miniaturization of a studio-two transport

Denon's decks offer a literal miniaturization of a studio-type transport. An equally important example of Denon's design approach for the DR-F Series is the use of DC (capacitorless) electronics throughout, a principle developed for Denon's Advanced Engineering Series.

Denon products share more than name alone.



Denon America, Inc. 27 Law Drive, Fairfield, N.J. 07006

AUDIO New Equipment Reports



DSL tried the speaker on the floor), and the rise near the top of the range. The treble bump, however, appears to be the source of the 8B-V's relatively bright sound. This can add sparkle to some music, but tends to emphasize any hiss from tape or FM program sources and can impart an over-etched quality to the highs, depending on the sounds involved and the way they were recorded. We found a treble cut to be helpful in taming this quality, though not entirely successful at eliminating it.

Above the bass resonance, which Norman lists at 70 Hz, distortion averages less than 1% at moderate sound pressure levels (85 dB) and goes up only gradually as level increases, averaging about 1% at 95 dB SPL and a little higher at 100 dB. In fact, despite Norman's specific warning against subjecting the 8B-V to high-amplitude continuous-wave signals, the speaker proved capable of accepting the maximum level of DSL's 300-Hz continuous-tone test for power handling. This level is equivalent to 20 dBW (100 watts) into 8 ohms (a value that the 8B-V's unusually flat impedance curve closely approximates across the entire audio band) and produced an output of 109 dB SPL without sign of strain. In the 300-Hz pulse test, the Norman accepted the full output of the test amplifier (equivalent to $27\frac{1}{2}$ dBW, or 570 watts, into 8 ohms), for a calculated output of $116\frac{1}{2}$ dB SPL.

This degree of ruggedness—and the dynamic range that it makes possible—is admirable in a speaker whose price is so moderate. Contributing to its economy is the standard finish for such models: woodgrain vinyl so lifelike it easily can be mistaken for veneer. (A more costly true veneer version, specified by omitting the "-V" from the model designation, has proved less popular than the 8B-V and may be dropped from the line.) If you're shopping in this price range, where many of the entrants are much less carefully built "house brands," don't pass the 8B-V by. *Circle 95 on Reader-Service Card*



A Spartan but Effective Audio Control

Audio Control D-520 equalizer. Dimensions: 14¼ by 2½ inches (front panel), 6 inches deep plus clearance for connections. Price: \$130. Warranty: "limited," one-year replacement. Manufacturer: Audio Control, 6520 212th S.W., Lynnwood, Wash. 98036.

RESPONSE CHARACTERISTICS (individual sliders set at maximum and minimum positions)

DB + 15 + 10	
+5	
10	0-638
HZ 20 50 100 200 500 1K 2 OUTPUT CLIPPING LEVEL (1 kHz)	2K 5K 10K 20K 7.5 volts
INPUT CLIPPING LEVEL (1 kHz)	5.1 volts
GAIN	+ 31/2 dB
S/N RATIO (re 0.5 V; A-weighted) all controls flat worst-case setting (see text)	971⁄2 dB 76 dB

IN A RELATIVELY SHORT TIME, Audio Control has carved for itself a significant niche in the signal-processor market. And the D-520, though it is among the simplest of equalizers, reflects the kind of thinking that has made the company's products not only widely accepted, but widely imitated, even by companies with much longer histories in the audio business.

For example, Audio Control has been adamant (and others have come to agree) that a five-band equalizer, such as this one, should have its control bands shaped and placed so as to do the most good, rather than contoured alike and distributed evenly across the frequency spectrum (as has been the usual practice).

Here there are three bands in the bass, at intervals of approximately one octave, one at the nominal middle (1 kHz) of the frequency range, and one in the sparkle range, very high in the treble. A diagram on the front panel does an admirable job of making the relationships clear.

The sliders for the five bands have detents at their 0-dB (no boost or cut) positions and are paired so that the left- and right-channel controls for each band are together. Because for some types of work—equalizing a signal that you are recording, for instance—it is desirable to treat both channels identically, this arrangement strikes us as more useful than the common alternative of grouping the sliders together by channel.

The three front-panel switches include neither a POWER ON/OFF nor an option for equalizing the feed to a tape deck. (Only the main output is equalized, whether it's switched to carry the feed from the source or from the tape.) This would argue in favor of running the power cord to a switched outlet and using the D-520 primarily as a set-and-forget speaker equalizer. But the owner's manual-which reads like Robert Benchly after the odd circumlocutions we're used to with imported productswon't hear of such a passive approach. It urges experimentation and constant tweaking to a degree that some users may find downright sybaritic: If it sounds good, do it. It also has a good deal to say about preequalizing recordings (particularly if the tape is to be played back in a car), but for that, as the manual itself confirms, you must reroute your system's signal cables.

The manual also makes plain that there are more elaborate equalizers available (from Audio Control and others) that will do jobs at which the relatively simple con-

AUDIO New Equipment Reports

HARMONIC DISTORTION (THD; 20 H;	z to 20 kHz)
at 1 volt output	≤ 0.012%
at 2 volts output	$\leq 0.024\%$

FREQUENCY RESPONSE (all controls flat) ± ½ dB, <10 Hz to 159 kHz; -3 dB at 270 kHz

INFRASONIC FILTER -3 dB at 21 Hz; ≈18 dB per octave; -401/2 dB at 5 Hz trols of the D-520 can only take a rough stab. But given this simplicity, we judged it to do a lot of things well. Its allocation of frequency bands quite handily addresses the most common speaker problems. The three bass bands can not only give the impression of more extended response than is native to the speaker, but in conjunction with careful placement, can be of help in taming room resonances. Similarly, the 15.5-kHz control can supplement a range where many speakers are beginning to roll off.

Another of the D-520's strong suits is what might be called "creative tweaking." The top band can be used to add sparkle or dampen sibilants, as occasion demands. The "midrange" control (its 1-kHz center frequency puts it a little above what many would consider the musical midrange) does not have quite the scope or sharpness of the other bands (it is calibrated to ± 12 dB, rather than ± 16), which is all to the good. It helps control what might be called the "pushiness range," to which some speakers are overly partial.

The D-520 is perhaps a little too simple for heavy remedial use on really substandard signals (for which some users would prefer one of the usually much more expensive parametric designs in any case). In particular, the 60-Hz and 120-Hz bands are quite sharp and noninteractive, and thus at their maximum boost settings produce dual peaks with some 6 dB of dip in between them. This means that trying to boost the overall bass in material containing significant line hum tends to enhance the hum more than the bass. And since there's an overall gain of 31/2 dB at the detented settings (the only place where flat response can be maintained), valid A/B comparisons of the equalized and unequalized responses

via the EQ IN/OUT switch are impossible. The very effective infrasonic filter, however, is an important plus for removing potentially distortion-inducing signals generated by warped records and the like.

On Diversified Science Laboratories' test bench, the D-520 performed splendidly. The calibration of the controls is unusually accurate for this sort of product, response with all controls at the detented positions is very nearly flat, and distortion and noise are low. With the standard reference of 1/2 volt, you can probably count on signal-to-noise ratios of 90 dB or better at just about any reasonable setting, though when DSL pushed all the bass controls to their minima and the other two to their maxima (which is a little absurd), the reading was 76 dB. Note that these figures would apply to typical setups, in which the equalizer is run off a set of tape connections, but not to one in which the manual's recommendations were ignored and the equalizer inserted between preamp and power amp. By putting the equalizer after the volume control, the latter configuration would tend to keep maximum signal levels much lower and thus could seriously compromise the S/N ratio.

All in all, the D-520 gives you more than you might expect from its price or its description. And because the characteristics of the five bands are cannily chosen, you have more control flexibility than is traditional with five-band models. The unusually useful front-panel calibration and the graphic presentation of the operating controls are real plusses. And, finally, we like the attractive appearance of the model, with its solid wood endpieces. It may be simple, but it's not simple-minded. *Circle 99 on Reader-Service Card*

3D's Decade to Remember

3D Acoustics Decade floor-standing loudspeaker system. Dimensions: 12% by 31 inches (front), 9% inches deep plus clearance for connections. Price: \$395 per pair; optional DS-1 stands, \$40 per pair. Warranty: "full," five years parts and labor. Manufacturer: 3D Acoustics, 175 Heritage Avenue, Portsmouth, N.H. 03801.

ROOM RESPONSE CHARACTERISTICS DB +5 0 -- 5 10 HZ 20 50 100 200 500 1K 5K 10K 20K 2K boundary-dependent region on-axis response off-axis (30°) response

SENSITIVITY (at 1 meter; 2.8-volt plnk noise, 250 Hz to 6 kHz) 891/4 dB SPL

AVERAGE IMPEDANCE (250 Hz to 6 kHz) 10.2 ohms

THE DECADE IS 3D ACOUSTICS' third product. Its first was a highly regarded threepiece satellite/subwoofer system (test report, June 1981); the second was a compact (about ten inches in each dimension) twoway loudspeaker called The Cube. Standing slightly more than two-and-one-half feet tall, the Decade might be thought of as a grown-up version of The Cube. Like the smaller speaker, it has a 3/4-inch dome tweeter and a 6-inch woofer. These are married to each other by a dividing network apparently very similar to The Cube's (although at 2.4 kHz, the Decade's crossover frequency is about 100 Hz lower). And the Decade's look is much the same, with black fabric covering the two sides and the front and with top and bottom caps of oiled walnut. In both cases, amplifier connections are made via color-coded five-way binding posts inset in the back panel, and neither model has any driver level controls.

What mainly distinguishes the two speakers, other than size, is the way their

woofers are loaded: The Cube is an acoustic suspension system, whereas the Decade uses a 10-inch passive radiator. That and a larger enclosure enable 3D to achieve extended bass response and low distortion without sacrificing the small woofer's excellent dispersion at the upper end of its range or incurring the expense of a third active driver and its associated crossover components.

The effectiveness of this approach is revealed by Diversified Science Laboratories' measurements (which were made with a Decade mounted on one of 3D's optional six-inch-high black metal stands, away from side walls and with its back three inches from the rear wall). Power handling proved very good, with the Decade accepting 300-Hz pulses of as much as 41 volts peak (equivalent to 23¼ dBW, or 210 watts, into 8 ohms) without audible distortion. Perhaps even more impressive was its ability to handle the 28.3-volt maximum level (equivalent to 20 dBW, or 100 watts,

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into 8 ohms) of DSL's 300-Hz continuouspower test—an impressive feat for so small a woofer, which at that high a frequency is operating without the support of the passive radiator.

As one would expect from such results, distortion was also respectably low. At a moderate 85-dB sound pressure level, total harmonic distortion (THD) remained less than 1% from 80 Hz to 10 kHz, the upper limit of DSL's distortion test. In fact, except for a peak of about 2% at 63 Hz, THD did not reach 1% above 40 Hz and averaged about 1/2%. At 90-dB SPL, THD was still less than 1% from 100 Hz up, except for a peak of about 3% at 2.5 kHz (the very bottom of the tweeter's operating range, and therefore the point of maximum stress). Above 40 Hz, THD averaged about 1% and reached a maximum of about 4% at 63 Hz. And at a very high sound pressure level of 95 dB, THD averaged about 11/2% above 40 Hz, with a maximum of approximately 61/2% at 2.5 kHz. At most frequencies and levels, the distortion consisted mostly of the relatively innocuous second harmonic

The Decade's sensitivity is high, as is its average impedance. Impedance is greatest at 63 Hz, where it reaches 26.5 ohms, and lowest at 175 Hz and 2.5 kHz, where it droops to 6.5 ohms. All told, then, the Decade should be an easy load for just about any amplifier, and with most, we would have few qualms about driving two pairs of Decades in parallel.

Perhaps most impressive is the Decade's frequency response, which is quite smooth and extended. The on-axis curve lies within $\pm 4\frac{1}{2}$ dB from 40 Hz to 20 kHz, and if we ignore a sharp, localized dip at 400 Hz, the spread improves to $\pm 3\frac{1}{2}$ dB. And the off-axis curve is smoother still, remaining within $\pm 3\frac{1}{2}$ dB from 40 Hz to approximately 18 kHz.

In the listening room, this translates into a very clean, clear, neutral sound. Following the manufacturer's recommendations, we placed the speakers a few feet from side walls and about a foot and a half from the rear wall. We also used 3D's stands, which give the speakers a very nice look in addition to conferring sonic advantages. With the Decades so positioned, the bass is firm, smooth, and extended, without any trace of boominess. The midrange and treble are well balanced to the bass, and there is no detectable discontinuity through the critical crossover region. Imaging is also superb, with that rare quality that makes the speakers almost seem to disappear. This may, in part, be attributable to the unusually broad high-frequency dispersion of the tiny tweeters.

Whatever the reason, we like it. The Decade is an excellent loudspeaker, made all the more appealing by its attractive styling and very reasonable price. Moreover, it imposes no extraordinary demands on decor or ancillary equipment (although we would recommend—as we would with any other vented loudspeaker—that you use a good infrasonic filter to prevent any distortion that might otherwise be caused by ultra-low-frequency garbage from record warps and so forth). It all adds up to 3D's best effort to date and a speaker that can hold its own against much more expensive competitors.

Circle 97 on Reader-Service Card

Technics' Sweet Honeycomb

Technics SB-6 loudspeaker system. Dimensions: 13¾ by 24 inches (front), 13 inches deep. Price: \$400. Warranty: "limited." five years parts and labor. Manufacturer: Matsushita Electric Industries Co., Ltd., Japan; U.S. distributor: Panasonic Co., Division of Matsushita Electric Corp. of America, 1 Panasonic Way, Secaucus, N.J. 07094.



SENSITIVITY (at 1 meter; 2.8-volt pink nolse, 250 Hz to 6 kHz) 941/2 dB SPL AVERAGE IMPEDANCE (250 Hz to 6 kHz) 5.5 ohms THE LOUDSPEAKER DESIGNER'S holy grail is a rigid, zero mass, acoustically inert, flat diaphragm that can be shaped to fit whatever size might be appropriate. In pursuit of this quest, Technics has developed the Honeycomb Disc diaphragm, which is used in the company's Model SB-6 in the woofer, the midrange, and the tweeter.

Since the SB-6 uses flat drivers, as opposed to the cones and domes of other loudspeakers, it might be wise to point out some of the advantages flat drivers have over their conventional counterparts. Provided it moves uniformly, a flat diaphragm achieves the piston-like action long considered ideal. Furthermore, multiple flat drivers can easily be arranged so that their diaphragms align, or are coplanar. Thus, sounds from each driver eminate from a point on a common plane and arrive at the listener's ear relatively simultaneously. (The arrival times vary slightly, because of the difference in path length from each driver to the ear and whatever differences in response time there are between the various

drivers and through the crossover networks.) Technics traditionally has stressed the importance of this "time alignment" in creating convincing stereo imaging.

The reason flat drivers haven't been common long before now is that conical and hemispherical shapes are substantially more rigid than a flat plate of equivalent mass. (Compare, for instance, an old-style paper cup with a piece of flat paper of the same size.) A flat, low-mass paper diaphragm buckles under motional stress; it "breaks up," vibrates in segments, and introduces frequency response irregularities and distortion.

Technics has sought to overcome these drawbacks by using a technique developed by the aerospace industry to form strong, lightweight airfoils. Whereas traditional diaphragms are rigid because of their shape, the Technics models draw their strength from very thin skins of aluminum, bonded to the front and back of a low-mass aluminum reinforcing structure that looks very much like a bee's honeycomb. The edges of
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the honeycomb support the skins at closely spaced intervals, while the skins themselves prevent the honeycomb from collapsing. The result is a flat, mostly hollow, very low-mass structure of extraordinary rigidity.

The SB-6 uses three honeycomb drivers: a 10-inch woofer (with an effective piston diameter of 7 inches), a 3-inch midrange, and a 1-inch tweeter. Crossover points are at 800 Hz and 4 kHz. The dark, simulated wood enclosure, which is tuned via a 3-inch front-aiming port, has a black fabric grille. The diaphragms of the woofer and the midrange speaker are protected by integral metal screens; what appears to be a diffraction lens shields the tweeter. And the midrange and tweeter are thermally protected by an internal circuit with a reset button behind the grille. An LED lights when the protector has been tripped, although with an 800-Hz crossover, we're sure you'd be able to tell by ear. Continuously adjustable midrange and tweeter level controls are located behind the grille near the overload protector. The maximum settings produce nominally flat response.

Diversified Science Laboratories tested the SB-6 a few inches away from the rear wall, both with and without the optional 6inch stand. With the stand, which helps reduce a peak at 250 Hz, response is notably uniform-within ±31/4 dB from 50 Hz to 20 kHz on axis and within ±3 dB from 53 Hz to 15 kHz off axis. Except for a peak at 500 Hz, off-axis response is within $\pm 2\frac{1}{4}$ dB from about 55 Hz to 15 kHz. Near-field measurements confirm the 800-Hz crossover between woofer and midrange, and the relative dip in response at that frequency may very well be caused by interference between the two drivers. The anomaly around 1 kHz may come from the port, which DSL found to be radiating in a narrow band in that region. (Otherwise, the port is effective mainly between 25 Hz and 80 Hz.)

The midrange functions in a relatively narrow two-octave range from 800 Hz to 3.15 kHz, and the tweeter becomes the main sound source above that frequency. As is to be expected from a high-frequency driver more than an inch in diameter, the tweeter does become directional above 10 kHz, causing the off-axis response to roll off smoothly. The midrange and tweeter level controls essentially mute their respective drivers when turned to their minimum settings.

The SB-6's sensitivity is substantially higher than average, and except for the twin peaks (at 25 and 69 Hz) typical of a vented system, its impedance is notably smooth and independent of the tweeter and midrange control settings. The SB-6's impedance is rather low (5.5 ohms on average), however, and we would not recommend that paralleled pairs be driven by the average amplifier. As far as we can recall, the SB-6 has the lowest total harmonic distortion (THD) of any loudspeaker we have tested. At a modest listening level of 85 dB SPL, distortion is under 1% from 40 Hz to 10 kHz and no greater than ¼% above 63 Hz. At a loud 95 dB SPL, distortion doesn't exceed 1% above 50 Hz. And even at an extremely loud 100 dB SPL, distortion is no greater than 2% from 40 Hz to 10 kHz (and only ¾% above 80 Hz). These truly remarkable figures testify to the rigidity of the Technics Honeycomb Disc diaphragms.

Although Technics warns against continuous (sine-wave) inputs in excess of 5 watts-and we can't suggest that you repeat the abuse we gave the SB-6-the speaker did clear the 28.3-volt input of DSL's 300-Hz sine-wave test to deliver the equivalent of a prodigious 1141/2 dB SPL. In light of the 5-ohm impedance at that frequency, the actual power the speaker was absorbing was some 22 dBW, or 160 watts. On the 300-Hz pulse test, the SB-6 took the full output of the laboratory amplifier (621/2 volts peak, equivalent to 27 dBW, or 488 watts, into 8 ohms) without complaint and delivered a calculated peak SPL of 1211/2 dB

For our listening test, we placed a pair of the SB-6's on 6-inch stands and positioned them about eight inches from the rear wall. We are highly impressed by their extraordinary ability to create a stable, deep stereo image. With well-recorded source material, the effect is uncanny. They are not, however, the easiest speakers to drive, and the bass is a trifle heavy for our taste. We could clear up the bottom end by moving the speakers against the wall, but in that location, image depth is merely good, not extraordinary. For most of our listening, we opted for the better imaging.

More auditioning convinced us that this is an extremely clean loudspeaker with remarkably low intermodulation. Inner detail-no matter how subtle and at whatever volume levels-is never obscured. If there is any fault to find, it is with the high end. which is a bit too brilliant, and with the midrange, which is ever so slightly depressed. Turning the tweeter control to -1 tames much of the high-end sizzle, but we cannot find a setting that will convert steely strings into silk. Combined with the slightly depressed midrange, the hot highs alter the character of a guitar so that it sounds slightly muted on the lower strings and extra brilliant on the upper.

But we are being picayune—encouraged, no doubt, by our very favorable overall reaction to this speaker. On most program sources—voice, woodwinds, and, by and large, piano and brass—it is an exceptionally accurate reproducer, one with unusual clarity and imaging ability. If this is characteristic of Technics' Honeycomb technology, give us more, please. *Circle 96 on Reader-Service Card*

Report Policy: Equipment reports are based on laboratory measurements and controlled listening tests. Unless otherwise noted, test data and measurements are obtained by Diversified Science Laboratories. The choice of equipment to be tested rests with the editors of HiGH FIDELITY. Samples normally are supplied on loan from the manufacturer. Manufacturers are not permitted to read reports in advance of publication, and no report or portion thereof may be reproduced for any purpose or in any form without written permission of the publisher. All reports should be construed as applying to the specific samples tested. HiGH FIDELITY and Diversified Science Laboratories assume no responsibility for product performance or guality.

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A Proper British Speaker from Mordaunt-Short

Mordaunt-Short Pageant 3 loudspeaker system. Dimensions: 1014 by 23 loches (front), 1134 inches deep; optional stands, 14 inches high. Price: \$815 per pair with stands, \$765 without, with teak or walnut top. Warranty: "limited," five years parts. Manufacturer: Mordaunt-Short, Ltd., England; U.S. distributor: Mordaunt-Short, Inc., 1919 Middle Country Rd., Centereach, N.Y. 11720.

ROOM RESPONSE CHARACTERISTICS



SENSITIVITY (at 1 meter; 2.8-volt pink noise, 250 Hz to 6 kHz) 871/2 dB SPL

AVERAGE IMPEDANCE (250 Hz to 6 kHz) 8.2 ohms

ENGLAND. LIKE THE UNITED STATES. has long been an exporter of loudspeakers; in fact, the lion's share of the world's Loudspeaker Prestige Quotient (if such a rating were to exist) would clearly go to these two countries. Traditionally, however, the two countries' products have been distinctly different. Whereas we have tended to go for big sound (even before the advent of rock) and color-paying particular attention to both extremes of the frequency range, for example-the British usually have concentrated on grooming a tight, accurate sound, even if that has meant accepting a more restricted range in dynamics or frequency response. These days, however, the internationalization of engineering practice and the improvements that has brought to loudspeaker design in general have drawn British and American speakers closer together.

Still, Mordaunt-Short's Pageant 3 strikes us as retaining something of the traditional English character in its sound. Heading up a line of three new loudspeakers, it is a vertically standing system with a wraparound grille, intended for mounting on a shelf or table or on a handsome bolt-on stand the company offers as an option. The Pageant is the only three-way system in the series. It uses a 1/2-inch dome tweeter with a ferrofluid-filled gap, a 4³/₄-inch midrange driver with a treated paper cone, and the 81/4-inch DSB-208 woofer shared by all three models. The woofer enclosure is vented, and the midrange driver is independently loaded by its own subenclosure.

At the lower edge of the back panel are a driver-protection fuse covered by a plastic shield, a holder for a spare fuse, and colorcoded jacks that accept banana plugs. (Incidentally, the system is said to be laid out so that conversion to active driving, with amplifier systems approved by Mordaunt-Short, is relatively simple.) The company supplies the Pageants with ten-foot lengths of 42-strand conductor, terminated on one end with banana plugs and unterminated on the other, for connecting the speakers to your amplifier. We found these cables a little too short to be convenient in our test setup, though we preferred to mount the speakers on their stands at some distance from the listening-room walls. If you plan to run the cables along moldings or furniture, you may find their length even more inadequate (even in rooms smaller than the ones we use), unless your electronics are near the speakers. However, it's easy enough to buy an appropriate length of zip cord and attach banana plugs yourself.

Diversified Science Laboratories found the Pageant 3's impedance to be unusually uniform across the frequency band. Even at the upper bass resonance (the lower one is evidently below 20 Hz), the impedance measures only 13.5 ohms, and though it drops to 5.7 ohms at about 150 Hz, all values in the audible range lie between these two extremes and yield an average very close to 8 ohms. It's hard to imagine that paralleled pairs would pose real problems for most amps, even though the combined load would sink below 4 ohms in the midbass.

The data show DSL's measurements with the speaker on its stand and moved a few inches away from the wall behind it. In this position, on-axis response is within $\pm 4\frac{1}{2}$ dB from about 40 Hz up. The lab also tried the speakers three feet in front of the wall, with a predictable diminution in deepbass output and some rearrangement of the minor bumps and valleys in the midrange, due to altered boundary reflections. Most of our listening was done in the latter position, however. On some program material we did choose to boost the bass a bit at the tone controls, but often we left it flat. There also were times when we cut the treble slightly, since the Pageant 3 is a somewhat brightsounding speaker (possibly as a result of the prominence shown at the top end of the response curves).

Harmonic distortion is reasonably low, though not as low as we might have guessed from the cleanness of the Pageant's sound. At moderate sound pressure levels of 85 dB, total harmonic distortion (THD) averages about 1/2% from 50 Hz up, rising to an average of about 1% with 10 dB more drive. At 100 dB SPL, which is very loud for continuous tones, there are signs of distress, and the fuse blew when DSL attempted the 6.3-kHz measurement. (The fuse, incidentally, is a special type available only from Mordaunt-Short. The company sends you an additional supply--besides the pair supplied with each speaker-when you return the warranty card.) The 300-Hz continuous-tone test was also discontinued just short of DSL's usual upper limit of 28.3 volts (equivalent to 20 dBW, or 100 watts, into 8 ohms), because distortion had crept above 10%. On the other hand, the test amplifier ran out of steam in the 300-Hz pulse test-at a calculated 1141/2 dB SPL-without untoward behavior by the speaker.

Though these data document some limitations of the Pageant 3, our overall impression of it is very favorable. Stereo imaging is excellent; timbres are reproduced cleanly and with a minimum of coloration; dynamic range is excellent. And there is much about these speakers that testifies to the care that has been lavished on them, from the sound to the physical detailing to the fact that they are sold in sonically matched stereo pairs. (Mordaunt-Short and some other British manufacturers are among the very few in the world willing to admit that crossover and driver parts can't be held within zero tolerance limits, which, of course, implies that sonic variations do occur from sample to sample of a given model.) In short, we find the Pageant 3 to be an unusually enjoyable speaker for its price class.

Circle 94 on Reader-Service Card

Car Stereo Components for 1983

New road-sound gear takes on a bold, high-tech look as noise-reduction systems proliferate. by Gary Stock

DESPITE THE RECESSION'S toll on both the automobile and consumer electronics industries, the car stereo business remains alive, well, and eager to sell you on the splendors of mobile music. And as the Summer Consumer Electronics Show demonstrated, the equipment is getting better all the time.

Before getting too deeply into the specifics, however, I want to note something that as a student of automotive design I find very interesting. This year's biggest news in car stereo is that the appearance of the equipment is changing dramatically. The autosound components of two years ago looked as though they were trying to camouflage themselves: Their low-key markings, walnut-grain faceplates, and (in the case of speakers) upholstered grilles were designed to be as unobtrusive as possible. Most dealers collaborated in preserving this "invisible" look by installing components so that they would blend with the interiors of the cars.

By contrast, the styling of the latest crop of autosound gear is boldly high-tech and defiantly independent of the Corinthian-leather-and-burled-walnut school of rolling-bordello decor that has predominated in cars for years. Among the most striking examples of this new wave are the Pioneer TS-2000 rear-deck speaker, with its elaborate, almost art deco superstructure; the Philips EN-8320 add-on tweeter, complete with enameled frequency-response curve and a level control; and the futuristic B&W LM-1 Leisure Monitor speaker (styled by the noted Pentagram Design Group), finished in matte Nextel and designed to be mounted in any of several positions on the door or rear deck. Frankly, I'm not sure why car stereo manufacturers have decided to break so sharply with tradition, but whether you like it or not, you're going to have to get used to it.

Another thing that may take some getting used to is the proliferation of noise reduction systems, which now number four: Dolby B, Dolby C, DBX, and National Semiconductor's DNR. Although you can't exploit the full dynamic range afforded by systems as powerful as Dolby C or DBX in a listening environment as noisy as an automobile, their availability in car systems gives audiophiles who use them at home a way out of some otherwise unavoidable compatibility problems (especially with DBX).

At any rate, here's the score card. Dolby B is still the leader, as it always has been, in autosound. Further up the alphabet, Dolby C is off to a slow start: After a year's availability in home cassette decks, it has been picked up by only two car stereo makers—Sanyo and Concord. DBX is faring a bit better, with four adherents in the autosound community: Metrosound, FAS, the reconstituted Rockford Fosgate, and



Concord. And the attractions of the singleended DNR system—which requires no encoding of source material and is equally effective in reducing tape, radio, and some forms of ignition noise—seem stronger still. Autotek has expanded its range of DNR-equipped offerings, while old-time accessory makers Fultron and Metrosound have also adopted the system. Concord's approach to noise reduction, by the way, strikes me as eminently sane: The various circuits are available as modules that you can swap in and out of your system at will.

Another interesting inheritance from the world of home audio arrived at the show in the form of high-technology speaker materials and design techniques. Panasonic has taken a leaf from its home-speaker book and introduced a two-way rear-deck speaker with an exotic honeycomb-sandwich woofer that is said to have an incredibly rigid diaphragm surface. An outfit once known as Transrib has changed its name to Babb and introduced a line of speakers with cones of transparent polyester film similar in many respects to the Bextrene plastic used in the drivers of some British loudspeakers. And B&W has borrowed from its home-speaker technology with an aramidfabric cone for its Leisure Monitor.

Janszen and Alpine have gone one step further, offering tweeters that use electrostatic and ribbon drive principles, respectively. (Perhaps they hope to capitalize on the associations that those two designs have in the minds of serious audiophiles.) And this year's hottest home-speaker compounds-polypropylene and other olefin plastics-are turning up in auto speakers from Becker, Kenwood, Polydax, and a number of others. JBL, however, has eschewed avant-garde technology in favor of good old no-nonsense armor plate. All four of its new models have massive castalloy frames, steel grilles, and edge-wound voice coils.

Electronic sophistication has found its way from home equipment to autosound components this year, too. Image-enhancement circuits such as Carver's Sonic Hologram and Sound Concepts' Image Restoration System have previously seen only one autosound application-the Honeybox from Omnisonix. This year Panasonic has added a four-speaker imaging system, called Ambience, to four of its AM/FM/ cassette units, including one that sells for a relatively modest \$190. Such ambience circuits may be just what the audiophile on the go has been waiting for. The compromises necessary in most car stereo installations usually reduce or eliminate any suggestion of a well-defined stereo image, making the capacity of these enhancers to regenerate a spacious-sounding image, even under such difficult conditions, very appealing

The problems of mobile FM reception [discussed in "The Autophile," July] have been getting considerable examination by the noted engineer Larry Shotz, the designer of Proton's radical new AM/FM/cassette units. The receivers incorporate the Shotz Variable Bandwidth Tuner, as it's called,

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Speakers

Many of this year's new speakers emphasize high technology, borrowing design techniques and materials from their home counterparts. For instance, Becker, Kenwood, and Polydax are among the manufacturers offering auto speakers that use polypropylene. a hot home-speaker cone material



Alpine Models 6217 & 6227 Speaker Systems



Clarlon SD-5000 Speaker System



JBL T-420 Speaker

which works by continuously varying the IF (intermediate frequency) bandwidth in response to changing reception conditions, so as to automatically optimize the tuner's operation for surroundings as varied as downtown Manhattan or upcountry Vermont. The circuit, which yielded impressively noise-free reception in Proton's demonstration, will be used in two receivers, both with rather unusual control layouts designed by the noted industrial designer Rene Weiss.

Among the most interesting and novel product lines at the show was Sansui's. This veteran audio manufacturer's components come complete with remote-control modules that can be used by backseat passengers-or anyone else out of arm's reach of the controls-to change equalizer settings or tape motion. Some might question the significance of this feature, but I can see its worth, particularly if the remote module could be placed in a position more convenient to the driver.

Night illumination, a feature that I've lobbied for in the past, is turning up on more and more new units. Several members of the new Alpine electronics lineup have large soft-touch buttons that glow green. Sony is offering an illuminated tape well and "Nightlight-equipped" controls on many of its updated receivers, and most of Kenwood's current car stereo line has illuminated controls, too.

Black faceplates for electronic units have become almost universal as Detroit and the Far East move closer to the look long favored by European sports car manufacturers. Security and theft-deterrence are also hot topics: One of the areas that drew the most interest was that set aside for burglar-alarm makers, some of whom are now using microprocessors and sophisticated spectrum analyzers (to "listen" for the sounds of intrusion). Philips, Crimestopper, and a couple of others are offering alarm systems that flood an empty car's interior with ultrasonic energy and then listen for the changes in the sound field that an intruder would cause. This approach eliminates the need to wire each door of the car-Pioneer is fighting car stereo theft with an AM/FM/cassette unit that must be unlocked with two special keys before it can be either installed or removed. My absolute favorite, however, is a siren from Crimestopper that, when tripped, shouts "Burglar! Burglar!" at earsplitting volume.

On the other side of the legal fence, a very clever radar detector from a company called Leisure Time Developments caught my eye. Concealed in a European-style sideview mirror, its superheterodyne circuitry monitors the areas in front of and behind your vehicle, warning you of Smokies in both directions. Why the name "Leisure Time Developments?" I can't say for sure, but I suspect it's because a good radar detector gives its user considerably more leisure time to enjoy at his destination. HF

The number one selling audiophile loudspeaker in Japan isn't Japanese.

Over the years, Japan has introduced some of the most innovative audio products in the world. So it's not surprising that the Japanese are highly critical when it comes to selecting components for their own homes. What might surprise you, however, is that the number one selling audiophile loudspeaker in Japan isn't Japanese. It's made in the U.S.A. by JBL.

In fact, in a recent survey conducted by one of that country's most highly regarded audio magazines," JBL was voted the most desired loudspeaker by an amazing 44% of those surveyed. The closest competitor received only 11.9%. Even more importantly, over 25% indicated that they already owned JBL speakers.

To find out a few more surprising facts about JBL, visit the audio specialists at your local JBL dealer.

*Stereo Sound, Summer 1981 Speaker Systems Market Research





First with the pros.

4 SOLE Experience

17

Picking a model on sound quality and price alone ignores many other key factors by Christine Begole

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CHOOSING A SPEAKER is primarily a matter of personal taste and judgement. Conventional wisdom has it that you should pick your speakers first when building a system from scratch, and that they should account for about thirty-five percent of the total budget. Criteria for selection include warmth, clarity, openness, and balance, as well as less subjective factors such as frequency response, dispersion, and powerhandling capability. Since you will probably own your set of speakers longer than any other of your stereo components, find a pair you can live with and love. For example, the design should coexist comfortably with your listening environment. Indeed, your speakers should feel as right when you look at them as when you listen to them.

Perhaps the first step in choosing a speaker is to write down an ordered set of priorities. By satisfying your chief ones first, you will quickly narrow down what can seem like an overwhelmingly wide array of choices; in writing them down you'll have a handy shopping tool, particularly useful for choosing among several technically equivalent models.

To arrive at your priorities, consider first the role the speakers will play in your listening room. Will they be the center of visual as well as aural attention? Will they be as inconspicuous as possible without sacrificing sound quality? Perhaps your goal is somewhere in between. In any case, write your preferences down. Your speakers' location will also affect the design category. Theoretically, there's nothing to stop you from placing a speaker anywhere you want in a room, but in reality every model is designed to work best in a certain range of positions. True bookshelf speakers, for instance, should sound best when placed at ear level on a shelf, while floorstanding models tend to rely on floor placement for proper functioning. Some manufacturers recommend placing their speakers directly against a wall, others suggest leaving a designated distance between the speaker and the adjacent surfaces, and still others recommend using speaker stands.

Now, back to our previous exercise. If you've decided that your speakers should be inconspicuous, say, then you've essentially narrowed your possibilities to mini, small bookshelf, or moderate-sized cornerplacement speakers. If, on the other hand, the center-of-attention option appeals, then you'll be looking at floor-standing speakers. The best of both worlds category would include medium-size designs, such as satellite mini speakers on ear-level shelves or stands, coupled with a table-sized subwoofer.

Next, consider the speaker's appearance, particularly in relation to the decor of your listening room. Speakers are available in a wide range of colors and finishes; they can be as important to the way a room looks *Christine Begole is Electronics Editor of* Glamour magazine. 2011 ar

Speakers should coexist comfortably with your listering environment. Room size and furnishings as well as speaker appearance and how visible you want thera to be (see above) heavily influence which design suits your needs best.

as any piece of furniture. The appearance of its cabinet is not the determining factor in how a speaker sounds, and many manufacturers offer the same model in a variety of finishes, allowing for plenty of flexibility in coordinating it with various living environments. You can find lush-looking, oilrubbed, wood veneers; metal enclosures in high-tech, sleek-looking grays, silvers, or blacks in matte or metallic finishes; or inexpensive vinyls that look like wood or metal. Walnut, oak and pecan enclosures are widely available. For those who want a rich and opulent look and who have a wallet to match their dreams, exotic veneers like rosewood, ebony, and teak can also be found.

Metal enclosures are roughly comparable in cost to wood veneers. A wide range of colors from white to jet black is available, so that you can choose a finish that will blend smoothly into the background, or one that will make a dramatic contrast. Vinyl took-alike finishes are the least expensive and make the most sense when your budget is very limited or when the speakers will be out of sight.

Also be aware that the furnishings in your listening room will interact with the speakers' sound, absorbing or reflecting it and audibly affecting the balance between treble, bass, and midrange. Wall-to-wall carpeting, soft sink-into-the-cushions furni-(Continued on page 98)

Sonic Ambience— The Missing Ingredient

Properly installed and adjusted, ambience enhancement systems can add a new dimension to your listening. by Peter W. Mitchell

THE MAJOR GOAL of high fidelity reproduction is to re-create the sound of a live performance in all its vividness, warmth, and spaciousness. Stereo is a decided improvement over mono in this regard, but even the best modern systems aren't capable of generating the immediacy of a live performance. What's missing is the distinguishing acoustical characteristic of a concert hall: sonic ambience.

There are at least five ways to enhance the ambience of reproduced sound. Two of them can be used in conjunction with your present pair of stereo speakers:

• Reverberation amplifiers, such as the Pioneer SR-303 and the Sansui RA-700, use springs or electronic circuits to generate artificial reverberation and mix it into the stereo sound.

• Acoustic-crosstalk cancelers, such as the Carver C-9 Sonic Hologram Generator and the Sound Concepts IR-2100 Image Restoration System, electronically "unmask" some of the depth and breadth of the recorded stereo image.

As sophisticated as acoustic-crosstalk cancelers are, however, the sonic image they project is confined primarily to the front of the room, rather like a view through an open window into a concert hall or recording studio.

To pass through that window, to recreate the sensation that you are surrounded by the spacious ambience of a large concert hall, requires techniques that use two (or more) additional speakers located at the sides or rear of the listening room. Among the methods used to "dissolve the walls" are:

• Left-minus-right (L-R) ambience extraction, a low-cost approach that involves wiring two extra speakers (without

Peter W. Mitchell is a prolific writer on science and technology. as well as president of the Boston Audio Society and proprietor of Mystic Valley Audio, a design and consulting firm based in West Medford, Massachusetts. added electronics) to enhance the recorded ambience and spread it around the listening area.

• Time-delay ambience recovery, which is a more sophisticated means of uncovering and reproducing the hidden ambience in recordings.

• Time-delay ambience simulation, which supplements the recorded ambience with both electronic signal-delay and added reverberation.

Let's take a closer look at how to install and use these multispeaker ambience systems and how to get the best performance from them.

Ambience Extraction

When a stereo recording is made, the hall ambience arrives at the microphones from all directions and tends to be recorded with random phasing in the two stereo channels. This provides the basis of a lowcost means of extracting ambience in playback, as illustrated in Figure 1. This circuit is one of several simple wiring arrangements devised by David Hafler about fifteen years ago. An extra loudspeaker is placed at each side of the listening room, and a wire is connected from the positive (red) terminal of each stereo speaker to the positive terminal of the ambience speaker on the same side. A third wire links the negative terminals of the two ambience speakers. Thus wired, the side speakers reproduce the indirect, out-of-phase (L-R) portion of the stereo signal, which is rich in recorded ambience, so that it arrives at your ears from a different direction than the direct, in-phase sound.

Figure 2 shows how to connect the ambience speakers directly to the amplifier, which may be more convenient than wiring them to your main stereo speakers. This arrangement takes advantage of the fact that most amplifiers have two sets of speaker terminals, A and B: By connecting the ambience speakers to the B terminals, you can use the amplifier's speaker selector switch to turn the ambience enhancement off (set the switch to A) and on (A+B).

This setup has an important limitation, however. If your stereo speakers are firing down the long axis of a rectangular room, as in Figure 3a, the ambience speakers may actually be closer to you than your main speakers are, which means that the sound from the ambience speakers will reach you earlier than the sound from your main speakers. This tends to destroy the illusion of ambience (the ambient sound should arrive after the direct sound) and weakens or destroys the stereo image by causing the side speakers to become a false source of direct sound. To get consistently satisfying results with the Hafler L-R method of ambience extraction, the system must be arranged as in Figure 3b, with the main stereo speakers relatively close to you and the ambience speakers farther away, at the ends of the room.

Time Delay

You can overcome these restrictions on speaker placement by delaying the L-R signal to ensure that it will arrive later than the direct sound, regardless of the location of the ambience speakers. In fact, this is the basic principle behind several time-delay products, including the ADS Model 10 (though the extraction circuit in the ADS 10 is actually a complex phase-shifting matrix, rather than a simple L-R circuit). The result is a remarkably open and spacious sound with an almost three-dimensional sensation of depth.

Another means of ambience recovery was discovered by E.R. Madsen in Denmark about twelve years ago. The recorded ambience that is hidden by the masking shown in Figure 4 can be revealed with surprising realism and subtlety just by delaying each channel of stereo sound and playing it through additional loudspeakers located at the sides of the room. Several time-delay products are based on this principle, including the Sound Concepts Model SD-550.



Figure 1. A simple circuit for Hafler-type L-R ambience extraction. The ambience speakers, placed to either side of the primary listening area, have their positive (hot) terminals wired in parallel with those of the main speakers and their negative (ground) terminals connected to each other.



Figure 2. This alternative wiring scheme enables you to use your amp or receiver's speaker selector to switch the ambience speakers in or out. It will not work, however, if the selector makes a series, rather than parallel, connection in its A+B position.

Benchmark Acoustics' time-delay unit provides a pair of delayed stereo signals for Madsen-effect ambience recovery, plus a pair of delayed L-R signals for enhanced Hafler-type ambience extraction.

With either the Madsen or the Hafler types of ambience reproduction, the degree to which the perceived "space" is enlarged may be affected by the amount of signal delay, but the character of the resulting ambience depends mainly on the recording. The success of these methods, then, is determined not only by the amount of ambience that is contained in the recording, but also by the recording technique—specifically, on the number, choice, and placement of microphones. (Typically, the fewer the microphones, the more realistic the result.)

To give you some control over the character of the reproduced ambience, many time-delay units provide optional "ambience simulation": They mix electronically synthesized reverberation with the delayed ambience signal to make the sound more spacious. It is possible, for about \$10,000, to obtain electronic reverberation units whose sound is virtually indistinguishable from that of a real concert hall. The reverb circuits in consumer-grade time-delay units are not as sophisticated, and if turned up to a plainly audible level, their sound takes on a characteristic hard, "twangy" coloration. But used conservatively, to fill out and extend the recorded ambience, they ean be quite useful--particularly if the reverberation circuits use multiple delay times, rather than a single delay.

Choosing Ambieuce Speakers

The obvious requirement for ambience loudspeakers is that they should be relatively compact, if only because that makes it easier to put them where they will both sound good and be unobtrusive. (It's hard enough to integrate two large speaker cabinets into the decor of a living room, let alone four or six.) They also should radiate their sound uniformly over a fairly wide dispersion angle. And for best results, they



Figure 3. Bad and good speaker placements for Hafler-type ambience extraction. If the ambience speakers are closer to your listening position than the main stereo speakers (as in A), they will tend to become false sources of direct sound. You can prevent this by placing the ambience speakers farther away from you than the stereo speakers (as in B).

Ambience Perception

IN ANY ACOUSTIC ENVIRONMENT, be it a living room, a cavern, or a concert hall, we experience both direct and ambient sound. It is the direct component, which travels straight to our ears (and therefore arrives first), that enables us to hear what direction the sound is coming from. The ambient sound field originates from the same source, but because it consists of a myriad of reflections (off the floor, walls, and ceiling). it does not appear to come from any particular place or direction. In fact, we usually aren't even aware of it, unless we hear an echo. Nevertheless, it is the character of this ambience that reveals to our ears the quality and proportions of the space to which it belongs.

The two things that mainly distinguish the ambient sound from the direct are that the reflected sound arrives later (because its various routes are more circuitous) and from all directions. You can easily demonstrate for yourself the importance of having the delayed sound in its proper spatial perspective. Just place a tape recorder in your living room (a small cassette recorder will do) and sit near its microphone so that you will hear the same sounds that the mike does. Have a friend stand at the opposite side of the room and speak a few sentences while you listen and record. As you listen, the ambient (reflected) sounds in your room will seem normal, because they are arriving from all around you. But when you play back the tape, you will hear the recorded ambience mixed together with the

direct sound, all coming out of the same loudspeaker and arriving at your ears from the same direction. As a result, the recorded voice's tonal quality will be colored and the room's ambience will sound unnaturally hollow.

Making the recording in stereo instead of mono improves the illusion of realism, but the ambience is still mixed with the direct sound and must be reproduced by just two speakers. That's why a conventional stereo system can present only a picture-window view of a hall's ambience, rather than a realistic illusion of "being there" in the hall. (You can use multidirectional loudspeakers to spray the sound about in your room, but since they spread the direct and ambient recorded sounds in the same way, the ear still lacks the timing and direction cues it needs to perceive the ambient sound realistically.)

Much of the recorded ambience, especially at low and middle frequencies, tends to be "masked" by the direct sound that it is mixed with. Figure 4 shows why: Ambience (or any other secondary sound) is most clearly revealed if it comes from a direction approximately 90 degrees away from the primary sound. Many record producers try to circumvent this masking by mixing in the output of distant "hall" mikes or by using a reverberation chamber to strengthen the apparent ambience, so that it will still be audible after it is mixed with the direct sound. But this approach is often overdone, making the hall seem more cavernous than it really is.



source heard together with sound from a primary source in front of the listener (at 0 degrees) decreases as the secondary source is moved toward the side (90 degrees).

should spread their sound around the room, reflecting it off the walls and ceiling so that it will arrive from many directions, rather than beaming straight at you.

It might seem that one of the many brands of mini-speakers, with a 4-inch woofer and 1-inch tweeter in a half-cubicfoot box, would be ideal. Some people have, in fact, successfully used them for ambience reproduction. But one of the most pleasing benefits of ambience enhancement is a more natural-sounding bass texture, partly because the injection of delayed bass energy at the sides of the room tends to smooth out standing waves. If you use very small speakers that lack bass below 100 Hz, this benefit is lost. So the best choice in many cases is a midi speaker, bigger than a mini and smaller than a standard bookshelf speaker, with a 5- to 8-ineh woofer and 1- to 2-inch tweeter in a one-cubic-foot box.

Ambience speakers are stand-ins for the reflective walls of concert hall and should never call attention to themselves as discrete sound sources. But if they have a large response peak that coincides with a response dip in your main speakers, they could be enough louder in that frequency band to cause certain notes to jump to the rear, or at least to smear the system's stereo imaging. To prevent such side effects, the tonal balance of the ambience speakers

should match that of your main speakers as closely as possible. In most cases, space limitations and cost make it impractical to use the same speakers in both the front and the rear. But some manufacturers' speaker lines have a sound that's consistent from model to model, with the smaller speakers differing from the larger mainly in bass output and power handling. You may be able to get a good match simply by selecting smaller speakers from the same company that made your front speakers. Failing that, at least be sure to choose ambience speakers that have smooth midrange and treble. It may be tempting to use a pair of really cheap speakers for ambience, because the demands on them (with respect to power handling, distortion, and so forth) are slight, but that would be a mistake.

Speaker Placement

As Figure 4 shows, the placement of ambience speakers is not at all critical. The optimum locations are 90 to 120 degrees away from the front speakers on each side, but they will be effective over a broad range of angles from about 30 to 150 degrees; the only locations to avoid are those directly in front of and behind the listener. And it is not necessary to have the speaker locations exactly symmetrical on each side. This leaves you considerable freedom to deal with unusually shaped rooms or restrictive furniture arrangements.

Unless the ambience speakers are truly omnidirectional, the way they are aimed may be as important as their location. Remember, one of the characteristics of ambience is that it arrives at the ear from all directions. This could be simulated by an array of a dozen or more speakers hung from the walls and ceiling, but that's both impractical and unsightly. A more workable solution is to install and aim the ambience speakers so that some of their sound will bounce around within the room before reaching you. Although most living rooms are acoustically absorptive below waistlevel (because of carpets, upholstered furniture, etc.). they are highly reflective above head-level (because ceilings and upper wall surfaces are so often bare). So the best location for ambience speakers is usually on the side walls, up high hear the ceiling. They can be mounted either directly on the wall (using Radio Shack's handy \$4 speaker mounting brackets) or atop a tall bookcase.

If that's not feasible, the next-best solution is to place the ambience speakers on their backs, either at midwall height (on a shelf or cabinet) or even on the floor, firing upward so that their sound reflects off the upper wall and ceiling surfaces. (This approach may also aid in concealing the speakers from view; just don't try it with large speakers having heavy woofer cones whose suspensions might sag under the weight.) If there is no good location along the side walls, try mounting the ambience speakers high on the wall behind you, facing the side walls or angled diagonally outward so that most of their sound bounces off the side walls before reaching you.

System Balancing

When you first start using an ambience-enhancement system, there is a natural tendency to turn up the volume of the rear speakers to bathe yourself in the dramatically spacious sound. But when you become accustomed to hearing the sound of acoustic space reproduced around you, a more conservative (and less obvious) ambience level will seem right. The easiest way to arrive at the most natural balance of ambient and direct sound is to turn up the volume of the ambience speakers until you can hear them as distinct sound sources, and then turn the level back down just enough to make them disappear into the ambient sound field.

It may then seem that the ambience speakers are not making any contribution, but that is as it should be. After all, when you are in a concert hall, your attention is never drawn to the walls as sources of sound, even though your ears usually receive more reflected energy from the walls than direct energy from the stage. And though the output of the ambience speakers shouldn't be singularly identifiable, once you've become accustomed to the added realism that they bring, shutting off the ambience signal should produce a dramatic feeling of loss as the three-dimensional sound field collapses into a twodimensional image on the front wan.

If you can't achieve an ideal balance-if turning down the ambience speakers so that they can no longer be heard as discrete sound sources has the same audible effect as switching them off-then their sound is probably not sufficiently diffuse. Try re-aiming them to reflect more of the sound off the ceiling and walls. Ultimately, the most effective approach may be to add a second pair of ambience speakers, wired in parallel with the first, but located in different positions along the side or rear walls. With four ambience speakers instead of two, it is much easier to obtain a truly diffuse and nonlocalizable ambient sound field, which is one reason some systems provide two pairs of delay outputs. HF

Amplifiers and Connections

SIMPLE LEFT-MINUS-RIGHT (L-R) ambience extraction requires only a second pair of speakers. If you are using a time-delay unit, however, you will need another stereo amplifier as well. (To take full advantage of systems such as the Benchmark or the ADS, which provide four ambience speaker outputs, you will need two additional stereo amplifiers.) Some time-delay units have built-in amplifiers, which eliminates the need to install a second amp and may save you some money as well.

If the tonal balance of your ambience speakers is similar to that of your main stereo speakers, then a basic power amplifier is all you need. But if the speakers are not well matched, an integrated amplifier with tone controls to facilitate the blending of the ambient and direct sound fields may be a wiser choice.

Power requirements depend on the sensitivities of the speakers. In the unlikely event that your main speakers are large high-efficiency horns and your ambience speakers are very compact low-efficiency direct-radiators, you might need an ambience amplifier equal in power to your main amp. But in most cases, with speakers of reasonably similar sensitivity, the rule of thumb specifies an ambience amplifier rated at approximately one-fourth the power of the main amplifier.

In terms of installation, most time-delay units are designed to be wired between the preamplifier and the power amp or between the preamp-out and main-in connections of a receiver or integrated amp. The volume-controlled output from the preamp goes to the main input of the delay unit: then the signal (usually unmodified) goes from the delay unit's front-channel outputs to the main power amp. Meanwhile, the delayed ambience signal is fed either to a built-in power amp or to a second amplifier and from there to the ambience speakers. With this wiring arrangement, the output-level control on the delay unit adjusts only the ratio of ambient to direct sound. The preamplifier VOLUME serves as the master control, varying the loudness of all four speakers together without upsetting the critical ambient to-direct balance.

A few delay units (the ADS Model 10, for example) can be inserted into the tape-monitor loop of an amplifier or receiver, in case no other appropriate connections are available. With this setup, both the front-amplifier VOLUME and the delay unit's output-level control serve to adjust the ambient-to-direct balance. Once they are set, they shouldn't be disturbed. The delay unit's input-level control then becomes the master VOL-UME for the entire system.

If the delay unit you choose lacks the tapeloop alternative, there are two other effective methods of connecting it to an amplifier or receiver without preamp-out/main-in jacks. One is to use an adapter cable with a stereo phone plug on one end and two RCA phono plugs on the other. The phone plug goes into the amplifier or receiver's headphone jack, while the phone plugs are connected to the delay unit's input jacks. This method takes advantage of the fact that the signal at the headphone jack is usually identical to that at the speaker terminals, except that it is reduced in level by a resistive voltage divider. The amplifier or receiver's volume control becomes the master VOLUME for all four speakers, just as in a separate preamp and power amp setup.

However, a few amps and receivers mute their headphone sockets when the speakers are on, and vice-versa: Plugging a cable into the headphone jack cuts off the signal to the speakers. And in any case, you might prefer not to have a cable permanently hanging from the front panel. Figure 5 shows the solution: another adapter. You'll need two cables, one for each channel. (You can have a local technician make them for you.) One end goes to the speaker terminals of your amp or receiver, and the other (which contains a voltage divider and terminates in a phono plug) connects to one of the input jacks on the delay unit. The wire can be ordinary zip cord. If you connect these cables to your amp or receiver's "B" speaker terminals, you can use the unit's speaker-selector switch to turn the ambience off (A) and on (A+B)

Be sure, however, that the cables are clearly labeled or color coded to indicate which conductor of the zip cord is the hot lead and which is the ground, and then be careful to connect them accordingly. If the wires to the amplifier or receiver's speaker terminals are accidentally reversed, they will short-circuit the hot sides of the two channels together. If you are lucky, this will activate the amp's protection circuitry and shut it down without harm. If you aren't, it will destroy the output transistors.



Figure 5. Adapter cable for connecting a time-delay unit to an amplifier or receiver without preout/main-in jacks. Two identical cables are required, one for each channel.

VIDEO TODAY & TOMORROW. VideoFronts

Latest video news and products by

Toshiba has entered the video disc hardware market with a pair of CED players: the VP-500, which has stereo sound playback capability, and the mono VP-100. The \$600 VP-500 features forward and reverse visual search at four and sixteen times normal speed and a nonviewable rapid-access mode that operates at 180 times normal speed. CX noise reduction and a wired remote control are also included.

The \$460 VP-100 offers Super Scan, a visual search operating at twelve times normal speed, Quick Motion, at twice normal, and nonviewable Rapid Access, at 120 times normal. A wired remote control is optional, as is a stereo adapter (DSA-100, \$90).

Circle 75 on Reader-Service Card



Three new RF amplifiers—the 300-ohm BA-3082 and the 75-ohm BA-7082 for TV reception and the 300-ohm FM-3000 for FM signals—are available from Wineguard. According to the manufacturer, the BA-3082 is ideal for restoring losses incurred by signal splitters used to feed signals to VCRs. The two television versions are said to amplify all VHF, UHF, and cable mid- and superband channels, as well as FM signals. Price of the TV models is \$30; the FM unit is \$35. *Circle 74 on Reader-Service Card*

Bucking the trend toward separate tuner/ timers is Sharp with its new single-unit "My Video" portable VCR. The \$1,000 VC-3500 VHS deck weighs 15 pounds including batteries and is said to be especially easy to convert from home to portable by the Editors



use: You simply remove its AC power pack and snap in the optional BT-3500 rechargeable battery pack for 120 minutes of portable recording. Other features of "My Video" include a seven-day/one-event timer and high-speed search that operates in forward or reverse at five times normal speed. A wired remote control is standard.



A perfect supplement to the VC-3500, according to Sharp, is the "My Video" color camera, the \$560 QC-50. Weighing in at $2\frac{3}{4}$ pounds, the camera has a through-thelens optical viewfinder, a fast f/1.6 lens with a 2:1 (16-32mm) zoom, and an automatic iris control. A three-position colorcompensation switch adjusts the camera for various lighting conditions. *Circle 78 on Reader-Service Card*

Special effects such as superimposition, color-keying alteration, and black-and-white reversal are all possible with Sony's \$500 HVS-120K kit. The unit comprises a

special-effects generator and a black-andwhite video camera with a closeup lens, a camera stand, and a title holder. It enables you to create video titles or graphics and then superimpose them complete with fadein and fade-out, over the image from your color camera. Any of six colors can be selected for titles or background. *Circle 71 on Reader-Service Card*



One of the brightest performers in Mitsubishi's line of television receivers is a new 45-inch-screen (diagonal) rear-projection set with a picture brightness rated at 120 footlamberts—twice as bright as many comparable units, according to the company. The compact set, which measures 50 by 45 by 37 inches, uses three 6-element coated lenses, has a frequency-synthesis TV tuner with 105-channel capability, and comes with a seventeen-function remote control. Video is enhanced by a comb filter; audio benefits from a stereo amplifier rated at 10 watts per channel.

Circle 76 on Reader-Service Card



Furniture-styled cabinetry for video components is available from Gusdorf. Its Status Pro II collection combines simulated wicker inserts with a hickory-patterned vinyl finish that is said to be impervious to stains and scratches. The \$375 Model 2985 shown here can accommodate a TV set, VCR, video disc player, and tapes and still have room for audio equipment. *Circle 70 on Reader-Service Card*

HANDS-ON REPORT



NEC VC-P1000E/ TT-1000E Portable Video System

A Beta-format portable deck and tuner/timer with lots of nifty features

This Hands-On Report was conducted under the supervision of Edward J. Foster, Consulting Audio-Video Editor of HIGH FIDELITY and Director of Diversified Science Laboratories.

OVER THE PAST YEAR, NEC Home Electronics has entered the U.S. market with a broad line of video products. Of the four Betaformat VCRs it now offers, three are home models, and one—the VC-P1000E (\$770)—is part of a portable VCR/tuner/ camera system.

Even without its companion TT-1000E video tuner/timer (\$315), the VC-P1000E is a versatile portable deck. It can record via its camera or audio and video inputs, and since it includes its own RF modulator (switchable to Channel 3 or 4), it can play back tapes through a TV set's antenna terminals, or into a monitor, by means of its audio and video outputs.

Power can be supplied to the deck from any of four sources: a self-contained rechargeable NiCad battery pack (the NP-1), a car battery (via the optional V-CB1000E cable, which plugs into a cigarette lighter receptacle), the V-A1000E AC adapter, or the power-output jack of the tuner/timer. Battery capacity, rated at 1,500 milliamp-hours, should provide about an hour of recording time when used with NEC's TC-1000E color camera. (Since as much power is consumed in the record/pause mode as in RECORD, the actual time available for recording will probably be less than an hour. In any event, recording time is directly affected by the power consumption of the camera you use.) The charge level is indicated by three front-panel LEDs, one each for full, acceptable, and low. The last of them blinks when it's time to insert a freshly charged battery.

Changing the battery is straightforward. After removing a lid on the back panel, you pull on a ribbon and the old battery slides out. The NP-1 NiCad pack is physically keyed so it can be inserted only the correct way, and tabs on the battery make the electrical connections, so no wiring is needed. You can recharge the battery while it's in the recorder by using the fast-charge circuits built into both the AC adapter and the tuner/timer. Each rejuvenates the battery in about one hour.

With its battery and an L-250 cassette





Clock-set and programming controls for the TT-1000E are concealed in a drawer below the digital display. A sharp press and release of the top right edge causes the drawer to slide out, revealing two rows of buttons. When the power is turned on, the display blinks "88:88" rather than the "12:00" common to most VCRs. The CLOCK SET at the top left enables you to set the time via the DAY, HOUR. and MINUTE buttons. CLOCK SET must be held down while the other buttons are pressed. The first press of HOUR brings you to "12:00 P.M." START/STOP doubles as ZERO SECONDS in this mode and enables you to synchronize the VCR with a reference clock. (Set the VCR clock one minute ahead, wait for the precise time mark, and press ZERO SEC-ONDS to reset the second digits to "00.")

Programming the fourteen-day/fiveevent memory uses just the bottom row of buttons, in a logical left-to-right sequence. Pressing PROGRAM on the far left causes a small "1" to appear. The clock display is blank, and start and stop legends flash alternately. The next button (START/STOP) enters the start memory, no matter which legend is flashing. The third button (DAY) causes the current day to appear: each press advances to the next day. The eighth press lights all the days of the week to indicate that the machine will record at the same time each day. The ninth press lights "2nd Week" and the day corresponding to the current day. Consecutive presses advance the programmer through the following week. By the sixteenth press, you've completed the second week and the programmer returns to the current day of the first week.

The fourth button (HOUR) causes "12:---PM" to appear in the display. Each additional press advances the count by one

hour; holding the button causes it to advance continuously. The fifth button (MINUTE) displays the final hour count followed by ":00"', and you advance to the precise starting time in like manner. When the final button (CHANNEL) is pressed, nothing appears to happen; the tuner indicates whatever channel had been selected. The second press, however, lights the Channel 2 button, and each press of CHANNEL advances the tuner sequentially through the twelve possibilities before finally returning to Channel 2. To enter the time you want recording to stop, press START/ STOP. Ending time is entered sequentially, just like starting time. If you wish to enter a second program, pressing PROGRAM enables you to repeat the sequence in the second memory location.

You have only about twenty seconds to enter each command. If you take any longer than that, the tuner returns to the clock mode and wipes out the program you have been entering. "Er" appears in the display if you've made a mistake in the sequence. Once a program has been entered, its number remains in the display so you can always tell how many programs are in memory. You can check individual entries at any time by pressing PROGRAM as many times as are required. The program number will blink, and start and stop times will appear alternately (with their legends) for about twenty seconds, after which the clock mode will return.

You can clear any program by advancing to it and pressing PROGRAM CLEAR. DIM-MER changes the display brightness in three steps (rather than the normal two). The ALL CLEAR button (which is round, rather than rectangular, and slightly recessed) erases everything in memory—clock setting as well as programs—when pressed.



VC-P1000E's EDITING switch (right) on back panel gives smooth interscene edits.

installed, the VC-P1000E weighs $12\frac{1}{4}$ pounds, which is about midway between the lightest and heaviest portables available. At $10\frac{1}{2}$ inches wide by 10 inches deep by $3\frac{3}{4}$ inches high, the deck is about average in size. It's relatively easy to carry by its own, removable handle, but for extensive remote operation, the optional V-CC1000E carrying case is a good investment—both for the convenience of its shoulder strap and for added protection.

A 14-pin connector on the right side of the VCR accommodates a standard camera cable. Behind a door on the back panel are pin-type direct audio- and video-output jacks (for connection to a monitor), direct audio- and video-input jacks (also pin-type, for connection to an external high-level program source), a 75-ohm coax RF-output jack that delivers a signal modulated on Channel 3 or 4 (selected by a nearby switch), and a multipin TUNER/DC-IN jack. This last receives the main cable from the TT-1000E tuner and provides a connection for external power from the AC adapter or car battery cable. The direct audio and video inputs and the camera and microphone inputs override signals from the tuner, so be sure nothing is connected to them before you attempt to record off the air.

When used without the companion tuner, the deck's RF output is routed through an antenna switch box, which enables you to switch the source of the signal that's fed to the TV set between an antenna and the VCR. If you *do* use the tuner/timer, the VCR's RF output is connected to the tuner's RF input via a supplied coaxial cable. The TV antenna is connected directly to the tuner—which, in turn, feeds signals to the TV set, either from the antenna or from the VCR.

Whenever the tuner/timer is turned off, the signal from your antenna is automatically switched from the tuner to your TV set. A VCR/TV switch on the tuner enables you to watch one program while recording another, but if you want to watch a TV program through the tuner, both the VCR and the tuner must be turned on.

The VCR receives signal and power from the tuner via a multiconductor umbilical cord. A single antenna-input coax fitting and a single antenna-output fitting on the tuner serve both the VHF and UHF bands. The VHF/UHF splitter supplied with the VCR separates the tuner's 75-ohm output into two 300-ohm feeds (one VHF and one UHF) for a TV set. This approach assumes that your antenna feeds a single downlead that carries both UHF and VHF signals. This isn't always the case, and you may need a VHF/UHF combiner to handle antenna systems that have separate downleads for the two bands. A balun transformer is included to match 300-ohm downleads to the 75-ohm tuner input.

The TT-1000E tuner/timer has a twelve-channel electronic tuner and fiveevent/fourteen-day programming capability. As received from NEC, the twelve channels are assigned to the VHF band, but any preset can be reassigned to any VHF or UHF station. Tuning controls lie under a top panel and operate via a three-position switch (LOW-VHF/HIGH-VHF/UHF) with a tuning thumb-wheel for each channel. An AFT (automatic fine tuning) switch defeats the AFT circuit during tuning. We found the tuner reasonably sensitive in our fringe reception area and easy to set up.

The clock and memory controls are located in a slide-out drawer (see sidebar). An internal battery maintains the memory and correct time during power interruptions of as long as thirty minutesa desirable feature found in few VCRs. This battery charges whenever the line cord is connected, and about thirty hours are required to recharge a depleted battery fully. The display has three brightness levels rather than the customary two, and the memory has some nifty features. If you make an error while programming, the message "Er" appears; if you try to go into the timed mode without a cassette in the well (or with one whose erasure-prevention tab has been removed), the timer light on the power switch won't come on. When the tape runs out, the deck switches to STOP automatically, but does not rewind. After five minutes in PAUSE, the deck switches to STOP to prevent excessive head wear.

The VC-P1000E records and plays at both Beta-II and Beta-III speeds. The special playback features-freeze frame, frame advance, and high-speed search in either direction-are supposed to work almost equally well at both speeds, but we found them virtually useless at the faster Beta-II rate. Our TV set lost horizontal sync entirely, and it could not be restored with the set's horizontal-hold control. (NEC's owner's manual does acknowledge that special effects in Beta-II are noiser than in Beta-III.) At the slower speed, however, special playback effects are better than average. The picture is stable, and the three or four noise bars that do appear during SEARCH are very narrow. In FREEZE FRAME, there is just one rather wide noise bar. FRAME ADVANCE continues to advance the picture at a slow rate for as long as it is pressed. When it's released, you're back in FREEZE FRAME (PAUSE).

All special effects, plus normal playback, recording, fast spooling, and stop, can be operated from the RB-1000E wired remote control included with the VCR. It connects to the deck via a 16³/₄-foot cable that plugs into the front.

When a special editing switch on the rear panel is turned on (which happens automatically whenever the camera is connected), the VCR backs up for about three seconds' worth of tape when PAUSE is pressed, so that edits will be smoother. Without this editing mode, the VCR's PAUSE works instantaneously. Actually, editing ability is very good either way, though backing up the tape yields slightly smoother transitions.

How you enter the record mode depends on the edit-switch setting. With the switch off, RECORD LOCK activates the circuitry for recording, which commences immediately when you press RECORD. In the editing mode, pressing RECORD LOCK and RECORD backs up the tape and places you in the record/pause mode. Pressing PAUSE then begins the recording.

You must press RECORD within one second after pressing RECORD LOCK, or else the circuit switches off to prevent accidental recording. (When you are using the remote control, however, the two buttons must be pressed simultaneously.) RECORD LOCK must also be pressed prior to AUDIO DUB when you want to record over just the audio track. The VC-P1000E also has an OPERA-TION LOCK, which must be switched off before you can change mode, thus stopping the deck from prematurely leaving the recording mode.

In general, the VC-P1000E's color quality is quite good at both speeds, but "ghosting"—a white repeat image to the right of sharp outlines—impairs overall picture quality. The fault was substantially more severe in the faster Beta-II mode than in Beta-III. Overall, we preferred to use the system in the longer playing mode.

Except for the problems with the special features in the Beta-II mode and the ghosting, the VC-P1000E is a very good machine. It's quite portable, the battery charges quickly via the accessory tuner, and you know it's fully charged when the indicator extinguishes. The battery-condition indicator and DEW lamp, which many other decks don't have, are essential on a portable such as this.

The choice of two editing modes is useful, and the companion tuner has adequate sensitivity and operates logically. Its slightly limited channel capacity and programming ability (see sidebar) are unlikely to be negative factors under most circumstances. And as the ghosting may have been due to our review samples being misadjusted, the problem may not be as evident on other units. We'd suggest you preview the VC-P1000E yourself: It has a lot going for it.

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VIDEO **TubeFood**

New video programming: cassette, disc, pay and basic cable by

(Check local cable listings for availability and schedules.)

October Arts Cable

OPERA and ITS PERFORMERS

ABC Arts: Samson and Dalila (Saint-Saëns) with Jon Vickers and Shirley Verrett; conducted by Colin Davis (Covent Garden).

Bravo: Der Freischütz (Weber) with Catarina Ligendza and Toni Krämer; conducted by Dennis Russell Davies (Württemberg State Theater, Stuttgart).

CBS Cable: Signature, an interview with Shirley Verrett. \Box H.M.S. Pinafore (Sullivan) with Peter Marshall, Frankie Howerd, Gillian Knight, Meryl Drower, Della Jones; conducted by Alexander Paris (London Symphony, Ambrosian Opera Chorus). \Box Three Penny Opera (Weill) with Lotte Lenya (1931 film).

SYMPHONIC and CHAMBER MUSIC

ABC Arts: Beethoven with pianist Israela Margalit, violinist Arnold Steinhardt, cellist Stephen Kates, mezzo-soprano Barbara Conrad. □ Vivaldi: Two Concertos with flutist Michel Debost (Secolo Barocco Ensemble).

Bravo: Wagner: Rienzi Overture/ Rachmaninoff: Symphony No. 2 in E Minor conducted by Sergiu Comissiona (Baltimore Symphony).

CBS Cable: Viola (construction documentary). □ The Chamber Music Society of Lincoln Center with soprano Barbara Hendricks and trumpet soloist Stephen Burns (Torelli, Bach. Rachmaninoff, Arne, Kreisler). □ Emil Gilels, Pianist (Beethoven, Mozart, Mendelssohn). □ Mozart: Symphony No. 35/Haydn: Symphony No. 97 conducted by Karl Böhm (Vienna Philharmonic) and Leonard Bernstein (New York Philharmonic), respectively. □ Timeless Vienna conducted by Willi Boskovsky (Vienna Philharmonic and Vienna Boys' Choir).

DANCE

ABC Arts: Moses Pendleton Presents Moses Pendleton (choreographer profile). □ Mobile Showcase: The Firebird (Stravinsky) with Claudia Moore, Louis Robitaille, Jean-Marc Lebeau; choreographed by Hugo Romero (Montreal Symphony conducted by Charles Dutoit). □ The Seven Deadly Sins (Quantz) with mimist Marcel Marceau (Ensemble Orchestra of Paris). □ Twyla Tharp Dance, 1965–1981 (choreographer profile) with John Curry, Mikhail Baryshnikov, Peter Martins. Bravo: Pineapple Poll (Sullivan, arr. Mackerras) with Marion Tait; choreographed by John Cranko; conducted by Barry Wordsworth (Royal Ballet).

CBS Cable: Mac Millan's Mayerling (documentary) with Lynn Seymour and David Wall (Royal Ballet).

JAZZ and POPULAR SONG

ABC Arts: Nightcap with drummer Max Roach, pianist Cecil Taylor, critic Nat Hentoff. *Women in Jazz: The Vocalists* from Bessie Smith to Billie (documentary/



Billie Holiday on Arts

performance) with Carmen McRae. \Box Women in Jazz: Scatting with Sarah Vaughan, Dakota Staton, Ella Fitzgerald, Sheila Jordan.

CBS Cable: The Resurrection of Lady Lester, based on the life of saxophonist Lester Young, with Dick Anthony Williams and Mary Alice. \Box Mixed Bag: New Blues, a look at the current Chicago blues scene. \Box A Tribute to Count Basie (profile/ performance) with Tony Bennett, George Benson, Sarah Vaughan, Joe Williams. \Box Style: Video Rock. \Box Kraft Music Hall: An Evening with Alan Jay Lerner with Bobbi Baird, David Chaney, and Liz Robertson.

Pay Service Premieres

Bravo: A Face in the Crowd; The Tin Drum; 1900; The American Friend; The Tenant; Black & White like Day & Night; Baby Doll: The Marriage of Maria Braun; Nosferatu.

Cinemax: The Elephant Man; Sea Wolves: The Great Train Robbery; La Strata: The Man Who Would Be King; Liz Taylor Festival; The Mirror Cracked.

Home Box Office: Arthur; Body Heat; First Monday in October: Halloween II.

Showtime: Arthur; Body Heat; First Monday in October; Halloween II; Tattoo;

by Susan Elliott

Private Lessons; Zoot Suit; Nijinsky; Improper Channels: House Calls: The Club; Bloodbrothers; Athena; Forever Darling; Affairs of Dobie Gillis; Three Guys Named Mike: The Little Hut; Spirit of the Wind; Black Beauty; Mark Twain Theater: The Buried Treasure, Three Tales Dark and Dangerous; Faerie Tale Theater: Rumpelstiltskin; Hot Ticket: Jamboree in the Hills II (Jerry Lee Lewis, Ronnie Milsap); Broadway on Showtime: Fifth of July (Richard Thomas, Swoosie Kurtz).

The Movie Channel: Arthur; Body Heat: First Monday in October; Private Lessons: Tattoo; Halloween II; The Adventures of the Wilderness Family; Pacific Inferno; Blood Barrier; Galaxy of Terror; Who Has Seen the Wind?; Coming Out Alive; Strange Behavior; On the Air Live with Captain Midnight; Joseph Andrews; Body and Soul; House Calls; The Gambler; On the Nickel.

Video Cassettes

FEATURE FILMS

Blay Video: Romeo and Juliet; A Tale of Two Cities; Genevieve; The Lady Vanishes; The 39 Steps: In Which We Serve; Ferry to Hong Kong; Carry on Behind; Doctor at Sea; King Solomon's Mines; The Naked Truth; Never Let Go.

Columbia Pictures Home Entertainment: And Now for Something Completely Different; The Boys in Company C; QB VII

MCA Videocassette: Abbott and Costello Meet Frankenstein; Cat People; An American Werewolf in London.

Nostalgia Merchant: Cross of Iron; Night of the Juggler; The Uncanny; The Amazing Dobermans: Kitty Foyle; Stage Door; I Remember Mama; Son of Monte Cristo; Cat People; High Noon; The Thing.

Thorn EMI Video: Montenegro: Goodbye Norma Jean; The Stud: Spaced Out; Four Feathers.

Twentieth Century-Fox Video: History of the World, Part I; Dr. No; The Great Muppet Caper; Caveman; Eyewitness; Chu Chu and the Philly Flash; A Fistful of Dollars; Diamonds Are Forever; A Funny Thing Happened on the Way to the Forum; Lunatics and Lovers.

Vestron Video: Benji; The Private Eyes; They All Laughed; The Last Chase.

VidAmerica: *Kitty Foyle: James Dean—The First American Teenager; Hey Abbott.*

Warner Home Video: Looker; Arthur: Outland: Body Heat; Excalibur; Pri-



Arthur on cassette and pay TV

vate Benjamin; Under the Rainbow; Fritz the Cat; Heavy Traffic; Sphinx. Rental: Personal Best; Sharkey's Machine; Rollover: Chariots of Fire.

STAGE SHOWS/POPULAR MUSIC

MGM/UA Home Video: The Compleat Beatles (stereo in VHS).

Thorn EMI: Little River Band (in concert).

Twentieth-Century Fox: To Russia . . . with Elton (1979 concert tour).

Warner: Divine Madness (Bette Midler); The Grateful Dead—Dead Ahead; Joni Mitchell, Shadows and Light; The Music of Melissa Manchester.

Vestron Video: Dick Cavett's Hocus Pocus It's Magic.

CHILDREN'S PROGRAMMING

Walt Disney Home Video: The Legend of Sleepy Hollow; Night Crossing; The Watcher in the Woods; Blackbeard's Ghost; The 3 Caballeros.

Video Discs

FEATURE FILMS

Blay Video (laser): *The Night Porter*: *Magic*.

Paramount Home Video (laser): The Jazz Singer: The Conversation: Dragonslayer: Bugsy Malone; The Longest Yard: My Bloody Valentine: North Dallas Forty; Play It Again Sam; Time Bandits; To Catch a Thief; Shane: Rough Cut; Rosemary's Baby; Serial; Bang the Drum Slowly; Greatest Show on Earth; I'm Dancing as Fast as I Can; Little Darlings: Marathon Man; Ragtime.

RCA Selectavision (CED): American Werewolf in London; Endless Love.

Twentieth Century-Fox (laser): Star Wars; On Golden Pond.

MUSIC/DANCE

MGM/UA (CED): The Compleat Beatles.

Pioneer Artists (laser): The Knack— Live at Carnegie Hall: Dave Mason Live at Perkins Palace: Swan Lake (Royal Ballet).

Q.&A.

Your video questions answered

When you compare Beta and VHS portable VCR/camera combinations under the same conditons—the same speed and tape length—which has the best picture quality? And can I record and play back on a portable unit without a tuner? If so, what purpose does the tuner serve?—Thomas Booth, Peoria, III.

A. Beta and VHS can't be compared under "the same conditions," because they operate at different tape speeds. Theoretically, the Beta system should provide somewhat better video resolution because its video writing speed is greater. In practice, however, differences between individual machines may outweigh any such theoretical advantage, and you may find a VHS deck outperforming a Beta.

All portables can record video and audio signals from a camera and microphone (or from another VCR) without a tuner. They also can play back tapes over a TV monitor (a set that has direct video and audio inputs, but no tuner). Many portables contain the circuitry needed to modulate taped video and audio signals onto Channel 3 or 4 and thus are directly compatible with standard TV receivers, which have only radio-frequency (RF) inputs. Some, however, require an auxiliary tuner to perform this task. And any time you want to record off-the-air, you will need a tuner to receive the broadcast and demodulate it into video and audio signals for the recorder.

Q. How long can I expect the heads on my video cassette recorder to last?—Allen Klein, San Francisco, Calif.

A. It's hard to predict the head life of any tape recorder, particularly that of a VCR. In addition to its video record/play heads, a typical home VCR has heads for audio and video erase. audio record/play, and control-signal record/play. These probably will last as long as the recorder itself because, being wider than the half-inch tape that slides over them, they distribute the friction over a large area. In addition, the relative tape-to-head speed is very low: 1.31 inches per second (ips) in the VHS-SP mode and about 0.8 ips in the Beta-II mode and even slower in the long-play modes.

It's the video record/play heads that wear first. A VCR has either two or four video heads, depending on the particular machine's design and features. They are mounted equidistantly around the circumference of a drum, which rotates at high speed as the tape passes it. On machines designed for the U.S. market, the drum

by Edward J. Foster

spins at 1,800 rpm (30 revolutions per second), making the relative tape-to-head speed, or video writing speed, about 230 ips for VHS and 275 ips for Beta. Since the video writing speed is determined by the drum's rotation rate and diameter, it is essentially independent of the tape speed.

The video heads are very narrow and protrude slightly from the drum's surface to ensure adequate contact with the tape. Because they bear all the pressure from the passing tape, how long they last depends on their design, the control of tape tension within the machine, and the quality of the tape. (Good video tape is specially lubricated and polished to reduce head wear.) Some manufacturers suggest replacing video record/play heads after 1,000 hours of use; it is possible, however, for these heads to last as long as 3,000 hours.

Q. Since 1 became involved in photography about ten years ago, 1 have collected three Konica 35mm camera bodies and fifteen Konika Hexanon lenses. Last year 1 bought an RCA CC-006 video camera, and although its lens is fine, 1 would like to know if anyone makes an adapter that would enable me to mount my lenses on my RCA camera.—Stephen K. Ricciardelli, Lake Worth, Fla.

Although some video cameras do have replaceable lenses, we know of none that can accommodate Konica's bayonet mount. Nor are we aware of any adapter on the market that will mate the Konica system to a video camera.

Frankly, we don't think you'd gain anything in picture quality—resolution, color rendition, etc.—if you *did* manage to fit your Konica lenses to the RCA camera. The weak link in the video-recording chain is the VCR itself and, to a lesser extent, the camera's imaging tube (Vidicon, Newvicon, etc.), which converts light to an electrical signal. Even relatively modest optics are no limitation.

The only justification we can see for accessory lenses is for special effects macro photography, for example. Now that may be what you're interested in, but be forwarned: Most video cameras have an automatic iris in the lens that adjusts the amount of light hitting the image sensor. Although you could adjust your add-on lens manually, you would have to forgo automatic light control, and that would increase the possibility of accidentally burning the imaging tube if you pointed the camera at a light source with the lens wide open.

Haydn's Orchestra: The New Authenticity ...

And now it's Haydn's turn, as Saga launches its traversal of the symphonies on original instruments. Reviewed by John W. Barker

WHAT TOOK SO LONG? That is one of the first thoughts prompted by the appearance of these two sets. Why didn't some group devote this kind of attention to Haydn's symphonies much sooner?

'Authenticity'' has been a Holy Grail for musicians, quested after, and glowing with varying degrees of wattage, through much of our century; recordings-especially in the LP boom following World War 11-have only helped to stimulate, disseminate, and popularize continuing progress. Of course, what constitutes "authenticity" differs with time. At some points, merely to switch an early piece from piano to harpsichord was all it seemed to take. As music of the baroque era became a particular focus of attention, orchestra conductors were content to add a harpsichordist, perhaps reducing ensemble sizes a bit, and assume that they had achieved "authenticity." And such was the recording history of Haydn's symphonies. This was one area of literature spectacularly opened up by the LP boom. but aside from the discovery that some of the horn parts should be played an octave higher than conventionally printed, relatively little attention was devoted to playing sound per se. The most immediate problems were textual, and it took the work of H. C. Robbins Landon and his peers to furnish musicians with reliable editions of the scores. Beyond that, of course, was the ever present need to rethink interpretational standards and practices, still a major factor of striving for "authenticity" in performance style.

But recordings remind us, as we look back over the last decade or two, that we have come through an important phase in seeking authentic performance practice in



L'Estro Armonico, led by concertmaster Derek Solomons, recording Symphony No. 32

early instrumental music, especially of the baroque. This phase has brought a renewed revolution in the sheer sound aimed at, with string playing as the particular focus. The recognition that vibrato in early ensemble playing is anachronistic, together with the restoration of stringed instruments to earlier size, lowered tension, and gut stringing, has now made common a string tone that can sound scrapy and flat at first encounter but, once assimilated, has a plangent and expressive quality genuinely its own. Such string-ensemble sound, in combination with the sonorities of actual period winds or their modern re-creations, has given us access to the actual sound of orchestral playing past composers knew and wrote for, of a kind and to a degree only recently possible.

Understandably, baroque literature has engaged the attention of the swelling number of ensembles that now perform and record with this "new authenticity" of playing sound. Nevertheless, the appeal of a restored performance sound has also spilled into the literature of subsequent periods (at a time when we are even willing to hear the Lieder accompaniments of Schubert and the piano pieces of Chopin and Schumann played on period instruments). Even Beethoven has profited from the extended enthusiasm: The Collegium Aureum, an early pioneer among newer groups, has gone so far as to record the Missa solemnis, the Fourth Piano Concerto and Triple Concerto, and the Third Symphony, no less, with a Seventh on the way. Among composers of the preceding generation, Mozart has received considerable attention. Haydn perhaps a bit less. Isolated cases aside, Haydn's piano trios seem to have received a disproportionate share of earlyinstrument treatment among his worksperhaps because the scoring also intersects with the current parallel rage to revive the early fortepiano.

Whatever the cause, it is striking that so little has been done to apply "originalinstrument" approaches to Haydn's symphonies, especially in light of the exciting results achieved with Mozart's symphonies in Christopher Hogwood's series with his Academy of Ancient Music for Oiseau-(Continued on page 95)

Longtime record reviewer John Barker is a professor of history at the University of Wisconsin-Madison, where I had the pleasure of taking his course The Historian and Music (since retitled); he specializes in medieval and Byzantine history—and Haydn.—J.R.O.

and the (Good) Old Modernity

Meanwhile, modern-orchestra recordings continue to stream forth—and many of them remain eminently enjoyable. Reviewed by John Canarina

IT IS TO HERBERT VON KARAJAN'S credit that, at this stage of his life and career, he is not content merely to rerecord the same repertoire over and over again—though he has also been doing that, to be sure. Recent years have seen a marked increase of works new to his discography, such as Mahler, Bruckner, early Schubert, and early Tchaikovsky symphonies, and now a Nielsen Fourth as well. No less significant is this release of Haydn's *Paris* Symphonies; only No. 83 exists in a prior Karajan version (Angel RL 32008).

Simply put, these are vigorous, exciting, rhythmically alive performances, especially Nos. 82 and 86. The former with a driving, propulsive first movement and a brisk Allegretto has no real slow movement. A stately Minuet and spirited Finale cap this exuberant rendition brilliantly. (All the minuets, in fact, are very broadly and grandly presented.) Karajan chooses trumpets over horns where that alternative is specified.

Karajan's older No. 83, smoother than the present version, featured brisker tempos in the Minuet and especially the Finale, and glossier, more distant and reverberant recording, with much loss of detail. The new one is sturdier, with a little added weight in the first movement, appropriate to the minor key, and a moderately paced vivace Finale. Karajan is less witty here in his treatment of the first movement's second theme (the "hen" of the subtitle), and in the Andante he ignores one of Haydn's little jokes: the four bars of repeated eighth notes for second violins and violas, starting softly in measure 24 with a gradual diminuendo to virtual inaudibility, in which we wait in vain for something to happen. Karajan plays them with no diminuendo, at a steady piano dynamic, thus lessening the impact of the surprise fortissimo when it does come in bar 28. (Another Surprise Symphony?) Still, on its own terms, this reading is very effective.

For a recent radio program, H.C. Rob-

bins Landon chose Karajan's Finale of No. 86 as an example of the very best in modern Haydn playing. I can only agree. My favorite of the series (and Landon's too), the symphony gets an exhilirating performance, with just the right combination of dash and sensitive introspection, as appropriate. In No. 85, the first theme of the opening Vivace is suavely insinuating, the third movement's Trio perfectly charming at a tempo slightly slower than the Minuet. (No. 86's Trio is comparable.) No. 87 betrays a slight moment of indecision at measure 125 of the first movement; the strings start tentatively after a silence of almost three bars.

On balance, this is a superb set. One could argue that, for all their brilliance, these are slightly impersonal performances on the part of Karajan and the Berlin Philharmonic yet the personality of Haydn emerges loud and clear! The recording is beautifully transparent with a natural perspective and admirably silent surfaces. May we now have the *London* Symphonies from the same source, plus Nos. 88 and 92?

Kurt Sanderling is a conductor betterknown in Europe than in the United States. Some may recall his 1950s recordings of Tchaikovsky and Rachmaninoff symphonies with the Leningrad Philharmonic, and his Beethoven cycle with the Philharmonia Orchestra has just appeared (EMI SLS 5239, May). Since 1960 he has headed the (East) Berlin Symphony Orchestra, organized specifically for him. He has done his job well, to judge from these 1971 recordings-extremely well-disciplined, virile readings, such as George Szell might have achieved had he chosen to perform the Paris Symphonies. Like Karajan's, Sanderling's is definitely a big-orchestra approach with plenty of bass (sometimes too much), well suited to this music written for an orchestra of forty violins and ten double basses. (Neither Berlin ensemble sounds quite that big!)

Most successful are the last three sym-

phonies. No. 85 is elegantly done, with an exciting presto Finale. Nos. 86 and 87. in spite of slowish first movements, have a well-sprung lift in the outer sections and minuets, much sensitivity in the slow movements. The first three works (again like Karajan's), especially No. 83, lack the charm found in Denis Vaughan's admirable set (Arabesque 8047-3, October 1980), and could use a little more pointing up of their humor, which Szell certainly would have done, not to mention Beecham. The Hen's first movement suffers particularly from Sanderling's dogged, militaristic approach. The Bear's opening and Finale are splendidly virile, its Allegretto and Minuet slightly dull. No. 84 benefits from greater geniality, though the tuttis are quite beefy. (The bass is heaviest in this work.)

To his credit, Sanderling does not fuss with Haydn's dynamics as do so many of his colleagues. (Nor does Karajan, save for a few "echo" effects.) The sound is rather plush, a bit more resonant than appropriate, and the surfaces have intermittent pops and clicks. There are some quaint translations of the German annotations: No. 85 "has become a real popular favorite owing to the nice variations"; "the Finale, loaden with esprit...." All in all, an enjoyable set albeit without the distinction of Karajan's.

To follow up Arabesque's reissue of the aforementioned Vaughan set, we now have the continuation of the series, plus the delectable Sinfonia concertante. Also dating from 1967, this release doesn't make as good an impression as the first, mostly because the sonics are dry, with very little bass and lots of pre-echo. In No. 89, the right channel drops out entirely at times; at one point I feared the entire performance would be lost. Elsewhere. strange buzzing noises appear in forte passages, particularly when trumpets and timpani are playing. This set doesn't seem to have been produced with the same care as the earlier one. which is unfortunate, for Vaughan's performances, attractive as ever, deserve to be heard to better advantage.

Especially enjoyable are Nos. 89–91, none of them well-known. In No. 89's Finale, Vaughan is very effective with the several dragging upbeats marked *strascinando*, giving them a wonderful lift. No. 90 has a very spirited opening Allegro and a sensitively played slow movement, which begins like the Andante of Schubert's Fifth. The first movement of No. 91, though a trifle slow for *Allegro assai* (rather fast), is brightly played, as is the buoyant Finale. The bassoon solo at cue 15 of the slow movement is particularly droll.

In the more familiar Nos. 88 and 92, however, Vaughan faces greater competition. No. 88 needs a lot more thrust in the outer movements. The intended sudden dynamic contrasts in the Finale don't amount to much, so similar are his piano and forte. The Minuet's Trio shows some of that dynamic tampering mentioned earlier, with a crescendo and diminuendo before and after the fortissimo; the contrast is meant to be abrupt. The Oxford's great Adagio is movingly projected, but elsewhere the winds are too forwardly balanced to allow the important violin passages to be heard in proper perspective-or at times to be heard at all. As before, Vaughan employs a harpsichord continuo, which ranges from inaudibility (No. 88) to obbligato prominence (No. 90).

The Sinfonia concertance is too leisurely throughout, especially the fast movements. Heavy-handed, unlike Vaughan's other performances, the opening Allegro is played moderato, its theme double-dotted unnecessarily. The soloists acquit themselves well; violinist Franco Gulli is particularly outstanding.

An English friend refers to "those wretched people who play and conduct." The trouble is that most of them don't do it as well as Salvatore Accardo, an apparent newcomer to the field. His *Sinfonia concertante* is more flowing throughout, more buoyant than Vaughan's. The Finale is really *con spirito*. Here, however, there is too much bass; some of the low pizzicato notes have the effect of a bass drum. All the soloists are excellent, though cellist Heinrich Schiff is a bit too Romantically fervent at times, especially starting at measure 136 of the first movement.

Accardo seems to be recording the entire violin concerto literature, and why not? An artist of scrupulous musicianship, he does wonders for the three Haydn concertos. (No. 2 has never been found.) Lacking the emotional depth of Mozart's, these are charming works nonetheless; in Accardo's hands they provide very satisfying, even exciting, experiences. No. 1, once recorded by Stern, has a Vivaldian slow movement remindful of *The Four Seasons* with its sustained melodic line over a simple pizzicato accompaniment. All three works have most delectable finales, here



Kurt Sanderling: a big-orchestra approach in an enjoyable set of Paris Symphonies

rendered with great zest.

The unusual concerto for violin and harpsichord is also delightful, with another marvelously animated finale. Bruno Canino, well-known as a pianist in contemporary music (he recorded the Berio concerto for two pianos, with Boulez conducting) proves a worthy partner to Accardo. While these works may not represent "great" Haydn, the tasteful and exuberant performances make this one of the most refreshing albums to have come my way in some time. The recording and surfaces maintain Philips' high standards.

It's good to have some Haydn from Georg Solti, if only as a reminder that one of his very first recordings was of the Drum Roll Symphony. He gives the Miracle a lithe, energetic reading, with a fleet, bouncy opening Allegro, gently flowing Andante, spirited Minuet. and ebullient Finale, doing ample justice to the work's high good humor. The London Philharmonic's playing is particularly well disciplined; my only reservation concerns the extreme reticence of the timpani. Haydn wrote crisply rhythmic timpani parts that are meant to be heard distinctly; here they are virtually nonexistent. A case in point is the entrance of brass and timpani at measure 40 of the Minuet, the impact of which is almost nil.

The timpani are only slightly more audible in the *Clock*, and here Solti's account is not quite so convincing. The outer movements are completely successful; the Adagio introduction is slow enough without dragging, the Presto again quite energetic and nicely sprung, the Finale vigorous and exciting. The Andante, on the other hand, is simply too fast, although it's becoming customary for conductors to take it at a fairly brisk tempo. True, Haydn is famous for his wit, his humor, his sense of fun, some of it rustic, some of it more elegant. One thing he did not write, however, is silly music, which is how this movement sounds at such a tempo; one can easily imagine John Cleese doing one of his "silly walks" to it. In addition, the downbeat staccato of the theme's second bar is overdone—also a commonplace these days fruther trivializing the music.

The Minuet is quite heavy, with each beat equally stressed in the forte passages. Surely the second and third beats should be lightened somewhat. In the Trio, Solti correctly (I think) plays the "wrong" harmony the first time around, although another famous and respected conductor once told me, "This is insanity!" So, an excellent *Miracle*, save for the nontimpani, and a partially excellent *Clock*.

Combining elements of concerto grosso and sinfonia concertante, the symphonic triptych titled Morning, Noon, and Evening appeared during the first year of Haydn's service to Prince Esterházy. Written on an intimate scale, these works nevertheless presage some of the grander achievements of the composer's late years: Le Matin's opening sunrise (surely the shortest such depiction in music history) reaches its full fruition in The Creation, Le Soir's tempest Finale in The Seasons. Once virtually unknown, these delectable scores have attained some prominence in recent years and deserve even more frequent hearings (though not necessarily in one sitting).

Neville Marriner and his Academy are, of course, old hands at this sort of thing, and they don't disappoint here. In matters of tempo, phrasing, rhythmically vital and alert playing, these readings cannot be faulted, nor can the playing of the plethora of soloists headed by Iona Brown, the Academy's current director. Marriner does tamper with some of the dynamics, inserting crescendos and diminuendos in passages marked simply forte or piano. However, I don't object to this as much in these works, modestly scored, with little opportunity for tonal variety, as in the later symphonies, where Haydn was more explicit in his dynamic markings. Marriner also adds an appropriate and tasteful harpsichord continuo.

It's gratifying to find Haydn symphonies given the digital treatment. The classical repertory benefits especially from the technique's greater clarity, more so than some of the sonic blockbusters we've been getting.

With Nos. 46 and 47, Daniel Barenboim completes his survey of the Sturm und Drang Symphonies. These are the leastknown of the group and surely among the least-played of Haydn's oeuvre. In all my years of concert-going, I've never encountered-or even read about-a live performance of either. No. 46, in the rare key of B major, is notable more for its contrapuntal dexterity than for its thematic distinction. The Finale has many of Haydn's typical starts and stops, and after one of the latter, a great portion of the Minuet reappears! No. 47 has an exhilarating Finale, as well as Minuet and Trio al rovescio, in which each section is played forward and backward. (And you thought only twelve-tone composers did that sort of thing!)

It's doubtful that Haydn's Esterházy band played these works with the polish, deftness, and suavity Barenboim achieves with the English Chamber Orchestra. These are truly beautiful performances, though some listeners may prefer the earthy vigor of Dorati's Philharmonia Hungarica readings (available only in London Treasury STS 15249/54, containing Symphonies Nos. 36–48), a bit more characterful. Unfortunately, my copy has fuzziness in the treble register and some surface crackle as well, all quite uncharacteristic of DG.

Having very much enjoyed Colin Davis' previous Haydn recordings. I'm a bit disappointed by the latest installment, stylishly played and conducted though it is. No. 95 is the only London Symphony in a minor key, and while the liner notes are at pains to tell us that "Haydn's C minor is not the sinister, dramatic key" of Mozart's Piano Concerto, K. 491, or his C minor Mass, or of Beethoven's Fifth Symphony. there is, nevertheless, a dark side to the first and third movements not even hinted at in this performance. A little more tonal weight and coloration would have done much to dispel the unseemly high spirits. The impact of the opening five-note figure is vitiated by an unauthorized diminuendo in the second bar, and short of "Romantic" tampering with tempos, one would still like more than the metronomic inflexibility offered in the first two movements. In the second, a singing line is precluded by the flippantly detached downbeat of the theme's second measure

Haydn is famous for his wit, humor, and sense of fun, but he did not write silly music.

(preceded by grace notes). The Trio goes at a slower tempo than the Minuet; I don't object, but I do mind the unduly long pauses on either side. (Harro Ruijenaars is the excellent solo cellist.)

Davis is more successful with No. 97, which has the flexibility lacking in No. 95. The exuberant Finale, however, is entirely too prim and straitlaced. Absent are the panache of Bernstein's great recording (CBS M 35844) and the swagger of Beecham's (Arabesque 8024-3). The effect of the great ringing forte pizzicato in measure 261, discreetly played, goes for naught. Davis does, however, employ some delightful Beecham-esque rubato in the Minuet's Trio. In spite of my grumbling, there is much to enjoy here; I just wish there had been more.

Johannes Somary's versions of the familiar *Military* and *Drum Roll* are distin-

HAYDN: Paris Symphonies (6).

Berlin Philharmonic Orchestra, Herbert von Karajan, cond. [Michel Glotz and Günther Breest, prod.] DEUTSCHE GRAMMOPHON 2741 005, \$38.94 (digital recording; three discs, manual sequence). Tape: 3382 005, \$38.94 (three cassettes).

Berlin Symphony Orchestra, Kurt Sanderling, cond. [Heinz Wegner, prod.] EURODISC 85 961, \$29.94 (three discs, manual sequence).

Symphonies: No. 82, in C (*Bear*); No. 83, in G minor (*Hen*); No. 84, in E flat; No. 85, in B flat (*La Reine*); No. 86, in D; No. 87, in A.

HAYDN: Symphonies (5); Sinfonia concertante in B flat, Op. 84*.

Franco Gulli, violin*; Giacinto Caramia, cello*; Elio Ovcinnekoff, oboe*; Ubaldo Benedettelli, bassoon*; Orchestra of Naples, Denis Vaughan, cond. [Miles Morgan, prod.] ARA-BESQUE 8048-3, \$20.94 (three discs, manual sequence). Tape: 9048-3, \$23.94 (three cassettes). [From RCA RED SEAL LSC 6805, 1967.]

Symphonies: No. 88, in G; No. 89, in F; No. 90, in C; No. 91, in E flat; No. 92, in G (Oxford).

HAYDN: Sinfonia concertante in B flat, Op. 84*; Concertos (4).

Heinrich Schiff, cello*; Neil Black, oboe*; Graham Sheen, bassoon*; Bruno Canino, harpsichord[†]: English Chamber Orchestra, Salvatore Accardo, violin and cond. PHILIPS 6769 059, \$21.96 (two discs, manual sequence). Tape: 7654 059, \$21.96 (two cassettes).

Concertos for Violin and Orchestra: No. 1,

guished by well-chosen tempos, with one exception, and a general feeling of vigor and alertness. In the former's second movement the nonmilitaristic sections are sensitively handled, though I question the oboist's excessive rubato at the ends of phrases; this is still a march, after all. Similarly, in measure 35 of the third movement another overdone rubato results in one bar containing five beats (this in a minuet!). The intention is good, but there are ways of doing such things less obviously.

Haydn supplied no dynamic marking for the opening drum roll of No. 103 and its later recurrence. Various editions offer differing solutions, but Somary's is new to me: a forte attack, diminuendo, crescendo to fortissimo, diminuendo. I'm old-fashioned enough to prefer the soft beginning, crescendo to forte, diminuendo, already indicated in early editions and more suitable for the mysterious music that follows. Somary's ensuing Allegro is a bit slow and more than a bit ponderous.

The violins sound thin, lack tonal unity, and fail in many instances to avoid the open E string in passage-work (a resulting metallic sound sticks out like the proverbial sore thumb). The recording is bright and clear; surfaces are quiet except for the occasional pop and click. While certainly honorable, these versions are no match for Marriner's more polished coupling on Philips (9500 255).

in C; No. 3, in A; No. 4, in G. Concerto for Violin, Harpsichord, and Orchestra, in F.[†] HAYDN: Symphonies: No. 96, in D (*Mir*-

acle); No. 101, in D (Clock).

London Philharmonic Orchestra, Georg Solti, cond. [Michael Haas, prod.] LONDON LDR 71044, \$12.98 (digital recording). Tape: LDR5 71044, \$12.98 (cassette).

HAYDN: Symphonies: No. 6, in D (*Le Matin*); No. 7, in C (*Le Midi*); No. 8, in G (*Le Soir*).

Academy of St. Martin-in-the-Fields. Neville Marriner, cond. PHILIPS 6514 076, \$12.98 (digital recording). Tape: 7337 076, \$12.98 (cassette).

HAYDN: Symphonies: No. 46, in B*; No. 47, in G[†].

English Chamber Orchestra, Daniel Barenboim, cond. [Hans Weber*, Wolfgang Stengel[†], and Günther Breest, prod.] DEUTSCHE GRAMMO-PHON 2531 324, \$10.98. Tape: 3310 324, \$10.98 (cassette).

HAYDN: Symphonies: No. 95, in C minor; No. 97, in C.

Concertgebouw Orchestra, Colin Davis. cond. PHILIPS 6514 074, \$10.98. Tape: 7337 074, \$10.98 (cassette).

HAYDN: Symphonies: No. 100, in G (*Military*); No. 103, in E flat (*Drum Roll*).

Mostly Mozart Festival Orchestra, Johannes Somary, cond. [Seymour Solomon, prod.] VANGUARD AUDIOPHILE VA 25007, \$12.98 (digital recording).

Bach's "Choruses" Reconstituted

Though not uniform in size, Bach's chorus normally consisted of twelve singers, not four. by Robert L. Marshall

JOSHUA RIFKIN BEGINS his remarkable essay on the original size of Bach's chorus by asking us to "think of the last choral performance you attended or took part in. More likely than not, everyone sang from his or her own copy of the music. Vocal groups nearly always perform this way; they could not very practically do otherwise." I shall not protest that I have in fact. and not infrequently, attended performances by (admittedly modestly endowed) choruses in which the singers doubled up on a part. Rather I ask you in turn to think of the last orchestral performance you attended devoted to the music of just about any significant composer who lived between 1700 and 1950. More likely than not, every violinist, violist, and cellist shared his part with a colleague. This is so, even though the music performed more likely than not is readily available in a virtually unlimited number of neatly printed copies. None of Bach's vocal music, on the other handwith the single exception of the very early and untypical Cantata No. 71 (Gott ist mein König), composed in Mühlhausen in 1708-was published during his lifetime. Every copy of every performing partinstrumental or vocal-had to be written out by hand. The Xerox machine, after all, had not yet been invented.

Consider now that the vast majority of Bach's surviving vocal compositions (more than 150 of them) were written during the first three-and-a-half years of his tenure as Thomaskantor at Leipzig: specifically between the end of May 1723 and early 1727. In fact, most of these works were composed-and performed-at the almost unimaginable rate of one per week. That is, between one typical Sunday and the next during those few years, Bach normally conceived the music for a new cantata, wrote it down in score, and marshaled a crew of copyists recruited from among his pupils and family to prepare a complete (i.e., a functionally adequate if minimal) set of parts for his singers and players. This chronology and its practical implications for Bach are now beyond dispute. It was established in the late 1950s and has been further refined and confirmed ever since. Understandably, under such circumstances, there was not even always time available for such desirable tasks as adding performance indications-piano and forte markings, trills, slurs, and other ornamentation and articulation signs-into the principal parts, much less time for copying out separate duplicate parts for every singer in the chorus.

Moreover, the fact is that there would have been nothing impractical about having

Last month we opened our pages to a debate that originated at last November's annual meeting of the American Musicological Society in Boston. Joshua Rifkin presented his thesis that at least some of Bach's ''choruses'' may originally have been sung one singer to a part. At our invitation, Robert Marshall has responded (herewith), and next month, as agreed to in the ground rules, Rifkin will have the last word.

Marshall is the author of an awardwinning study, The Compositional Process of J.S. Bach (Princeton Univ. Press, two vols.) and has published numerous articles in scholarly journals. In addition, he has prepared editions of six church cantatas for the New Bach Edition.—Ed.

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two, or even three, of Bach's singers share one part. First, as Rifkin reports, Bach's original voice parts contained indeed only one vocal line. They were not the relatively confusing vocal scores containing all the vocal lines plus a piano reduction of the orchestra parts in use today. Second, Bach's performing parts, including those for singers, were not so small as our usual vocal octavo editions, which measure 10 by 7 inches with correspondingly small notation on narrow staves less than a quarterinch wide (5 mm., to be precise) from top to bottom. Bach's parts were large, more like $14'' \times 8''$, and the individual staves are close to a half-inch wide (10 mm.), with the notation accordingly around twice as largeand twice as legible-as that found in modern performing editions.

None of this, of course, yet goes to the crucial questions: 1) How many singers actually did perform-at least as a rule-in Bach's own chorus, and 2) how do we know the answer to 1? It does serve. though, to indicate that it is not valid to begin, as does Ritkin, with a priori assumptions about the very point at issue-to begin, specifically, with the unproved assertion, presented as a universal truth embracing everyone from Schütz to Schubert and beyond, that choruses have "invariably" been provided with a separate part for each singer, and to proceed from there. In the case of Bach, at least, this assumption is simply wrong.

The surviving evidence suggests in fact that the constitution of Bach's chorus was not uniform. It seems to have variedmainly according to the external circumstances, but also according to genre. Nonetheless, it seems safe to contend that the vocal ensemble that as a rule sang the "choral" movements (i.e., the movements written for groups of four different human vocal ranges) in Bach's regular Sunday Church cantatas-at least during the Leipzig period-was indeed a chorus, not a quartet: It normally consisted of three singers on a line. This, I submit, was the case for those cantatas from the Leipzig period that begin with a substantial movement calling for a vocal ensemble of four (or more) real parts. Such cantatas constitute a good majority of the surviving church works. (It may well be that this twelve-man chorus was not the norm for other kinds of cantatas—such as the "solo" or "dialogue" cantatas that do not begin with or contain any extended movement for such a fourpart vocal ensemble.)

This view, that Bach's chorus normally consisted of twelve singers, three on a part, is the prevailing one among Bach scholars. It is based on exactly the same evidence as Rifkin's. He adduces no new evidence at all; indeed no new evidence bearing on this issue has been discovered in over fifty years. On the one hand, we have written testimony provided by Bach himself—a document from the year 1730 briefly alluded to by Rifkin; on the other hand, we have the surviving performance materials of the vocal works—primarily the original parts but also the autograph scores.

Let me begin with Bach's own explicit testimony as set forth in a famous memorandum dated August 23, 1730, which bears the heading: Short but Most Necessary Draft for a Well-Appointed Church Music; with Certain Modest Reflections on the Decline of the Same. It is curious that Rifkin barely touches upon this central document in his essay, devoting perhaps a paragraph to it. (It may be that he wishes to let me bring it up first in order-as the ground rules of this exercise dictate-to have the uncontradicted last word about it.) Ideally, of course, it should be read not only in its entirety but in the original German. (An English translation is readily available in The Bach Reader, edited by Hans T. David and Arthur Mendel, and published by Norton. I shall retain some of the crucial German phrases here, along with the English.)

There are two substantial observations to be made about Bach's Draft. First, it was written in 1730, whereas the vast majority of Bach's church music-virtually the entire corpus of cantatas-was written, as we have seen, in the years 1723-27. Second, the document, addressed to Bach's employer, the town council of Leipzig, describes two situations: the normal one, and the current state of affairs, i.e., as of 1730-a state that Bach already characterizes in the heading of his report as one of "decline." What is Bach actually saying? He proceeds immediately to describe the vocal forces necessary for a proper performance of the church music ("wie es sich gebühret"), to wit, "the vocalists must be divided ("müssen ... eingetheilet werden") into two sorts, namely Concertists and Ripienists." He goes on to say that there are ordinarily ("sind ordinaire") four concertists, and there must be at least ("müssen wenigstens auch ... seyn") eight ripienists-"namely two for each part" ("zu ieder Stimme zwey"), that is, a total of twelve voices in all: three for each part.

Bach's own words are clear, explicit, and straightforward; one overinterprets them at one's peril.

This is what Bach says is the normal case if we are willing to take him at his word. He then goes on to say that "*it would be better* if there were four singers to each part" ("*noch besser* . . . *wäre, dass man zu ieder Stimme 4 subjecta nehmen* . . . *könte*").

Note Bach's command of the German language. He distinguishes between the indicative and the subjunctive modes, i.e., between the real and the desirable. A wellappointed church music "consists of," "there are ordinarily," "there must be at least"; on the other hand: "it would be better if we could have," and so on. I think Bach is telling us what he had-or at least what he used to have, what the norm was (namely, three singers on a line)-and carefully distinguishing this from what he would have liked to have (namely, four on a line) and also, by implication, what he currently had: Either he had indeed fewer than three for a line, or at least he was having trouble obtaining three for a line. It was in fact this difficulty that precipitated the writing of the memorandum in the first place. It is an appeal to the Leipzig town council for financial assistance to help him restore the performing forces to their accustomed strength.

Bach's description of his practice in the Draft comprises the best evidence we have as to what his choral-and incidentally, his instrumental-forces normally were. These are his own words, and they are altogether clear, explicit, and straightforward. One will overinterpret them at one's peril. In his brief discussion of the Draft, Rifkin argues, "Even if [Bach] did succeed [in raising the size of his first chorus to twelve], he still could not have had twelve singers in his cantatas; for as we learn from the same memorandum, he regularly had to use three or more of his best choristers to play in the accompanying instrumental ensemble. Considering the undependable health of his pupils, an estimate of even eight singers to a cantata seems on the optimistic side." There is no basis in Bach's words for this interpretation. It would be necessary to take a long and intricate detour into the side issues of the Draft to deal with this point adequately. Suffice it to say that the Draft tells us that Bach had a total of seventeen singers competent enough to participate in the cantata performances-or fifteen, if one subtracts the two "prefects" necessary to conduct the second and third choirs. It is from the fifteen singers provisionally assigned to the first chorus that one has to subtract three to play instruments.

Now, although I base my understanding of the size of Bach's chorus mainly on the testimony of the Draft, Rifkin does not. His principal evidence comes from the original parts. In fact, and quite surprisingly, he has chosen to devote close to a third of his essay to a discussion of the sources of the Passions-mostly the sources of the St. John Passion. This is surprising because the parts to the St. John Passion, as Rifkin concedes, are exceptional. Indeed, they are unique in their complexity, containing as they do traces of at least four separate versions dating from performances of the work that extend over almost a quarter-century. The Passions are in any case an odd choice to represent Bach's typical performance practice in the vocal music since, owing to their length, the use of dramatic personae, and in the case of the St. Matthew Passion, an extraordinarily large performing apparatus consisting of two orchestras and two choruses, they are altogether untypical of Bach's vocal works in general. Even so, the sources for the Passions do not prove what Rifkin thinks they prove even with regard to the performances of the Passions; much less do they afford any conclusive evidence as to the normal size of Bach's chorus under more normal circumstances-those prevailing at the regular weekly church cantatas

I shall address the issue of the Passions shortly. It is more enlightening, however, to begin by mentioning those works for which separate ripieno parts, in addition to a regular set of single vocal parts (i.e., concertato parts), actually survive. There are nine such sets. Rifkin writes: "If one had sufficient forces, one could double the concertists at appropriate spots with extra singers called ripienists, who received special parts that omitted everything sung by the concertists alone." The implication is that if Bach wanted ripienists he wrote out special parts for them, and conversely, if such parts do not exist, then there could not have been any ripienists in the performance.

I should like to begin with a chronological observation. Three of the nine works concerned are Cantatas Nos. 76, 21, and 24. Their performance dates are June 6, June 13. and June 20, 1723. In addition, we should add Cantata No. 75, composed for May 30, 1723. The parts for Cantata No. 75 are lost, but the autograph score contains solo/tutti indications in the vocal parts of the first movement. Cantatas Nos. 75, 76, 21, and 24 were performed on four successive weeks, then-indeed Bach's first four weeks as Thomaskantor. What Bach was doing here, evidently, having just embarked on the duties of this new position, was setting precedents, establishing conventions of performance in a quite systematic and explicit manner. Accordingly, his

In the Eint Lewi/En Fin & Cor.

Bach's handwritten description of the choral forces in the Leipzig churches. c. May 1729

indications are more complete for these first Leipzig works than they would normally be later on. (This is clear not only from the existence of the prepared ripieno parts for these works, but from other features as well, such as the preparation of a second figured-bass part—apparently for a harpsichord—in addition to the usual organ part.) I believe this tells us not that Bach later abandoned the practices testified to by such materials, but that he no longer had the time—or perhaps the need—to spell them all out.

The tutti/solo performance of the choruses is the best example of this. Bach's normal practice-as established by the explicitly notated precedent of the first sets of Leipzig parts-was evidently as follows. In elaborate choral movements in fugal style (i.e., the typical opening movement of a cantata), the first fugal exposition, accompanied by continuo alone, was to be sung by soloists only; the remaining voices entered-together with doubling instruments playing in unison with the sung parts-at the beginning of the second exposition. The recitatives and arias-and duets, if any-were sung by the soloists alone, of course. No special indication of this was ever necessary: It was obvious to anyone from the headings of the movements alone. (In other words, contrary to Rifkin's view, it takes hardly any "effort" to see how three singers could have performed from one part, even when such parts do not indicate "just where the two ripienists should and should not sing.") The simple chorale settings were normally sung by the full chorus. Since the style was maintained in the following cantatas-in particular the device of setting the first fugal exposition a cappella (with continuo) and bringing in the doubling instruments for the second-clearly a sounding signal of what was intended-I see no reason to assume that Bach changed his practice of performance. (I daresay, the practice of having instruments double vocal lines in

unison in such a systematic and extensive manner is virtually nonexistent in Bach's compositions indisputably intended for solo voice[s], such as arias and duets.) This "sounding signal," of course, was surely reinforced by the conductor of the original performances—Bach himself—by visual indications: a simple pointing gesture for a soloist, perhaps, or an upward palm for the full chorus—such as those provided by any conductor today.

But why, then, did Bach stop writing out ripieno parts? I am sure that he would have loved to provide ripieno parts for every cantata. It is undeniably optimal to have only one singer read from a part. And-had time permitted and had he had a sufficient number of copyists available-1 am sure that he would have continued to provide as many parts as possible. As it happened, however, singers normally had to double up. I see nothing wrong with the proposition that up to three singers read from a single part when there was but oneit could be done with Bach's material, as 1 suggested at the outset-and when there was opportunity to write out a separate ripieno part (as in the first Leipzig cantatas and the St. John Passion), then the soloist alone read from the main part and the two ripienists from the second.

Of course, whenever Bach later on had the occasion to prepare additional parts—as was the case apparently sometime during the years 1728 to 1731, when he performed Cantatas Nos. 110, 195, and 29, for which ripieno parts exist—then he often took the opportunity of making more differentiated solo/tutti divisions than he could when he had to rely on the rather simple and schematic alternation of his choral fugue practice as described above. The specifics of these more subtle vocal scorings cannot be pursued here.

I have no difficulty in accepting Rifkin's contention that in a number such as "Mein teurer Heiland" from the St. John Passion the bass soloist alone sang from the

main part. On the other hand, there is no evidence to indicate that only one singer could have read from the ripieno parteven in those instances (such as "Mein teurer Heiland") where only the soloist sang from the main part. As to the fact that the original basso ripieno part of the St. John Passion included the role of Peter, while Pilate has a separate part: This by no means proves that there was only one singer assigned to the ripieno part. It reveals only that the singer of Pilate's part at those first performances was not one of the bass ripienists. The singer of Pilate could well have been otherwise employed by Bach for other functions during the original performances-perhaps even as one of the instrumentalists in other numbers of the work. (The part of Peter, incidentally, contains a total of six notes in the entire Passion-two three-note cadential arpeggios in movements Nos. 14 and 18 |Nos. 10 and 12c in the New Edition |---- both to the words "Ich bin's nicht"-something Bach could readily entrust to a ripieno singer. The part of Pilate is more substantial.)

Rifkin also mentions the final version of the Passion, dating from the late 1740s. for which Bach failed to revise the original ripieno parts. Rifkin declares: "Clearly, [Bach] did not use the ripieno parts on this occasion." True enough. But he goes on: "Their omission has no rational explanation [emphasis added] other than that he did not use the ripienists themselves." This simply does not follow. The most likely explanation is that for this final performance Bach had the ripienists sing from the principal vocal parts just as they surely did as part of their normal practice for most every Sunday cantata. Bach may well not have had time (or perhaps the energy at this time in his life) to enter all those painstaking revisions belonging to the final version of the Passion that Rifkin alludes to into the secondary parts. Since it was necessary for him, however, to rescue Peter's music from the basso ripieno part, he wrote out those few measures and combined them with the part of Pilate. This, in my view, is not only a "rational" explanation, but also the most plausible. Furthermore, it would be the most economical procedure for Bach to follow. Those four vocal ripieno parts, after all, are not short. They fill a total of around fifty pages of music manuscript in the original sources.

Finally, a word about the B minor Mass. First of all, it is exceedingly doubtful that the entire Mass was ever performed during Bach's lifetime at all. (There is no original set of parts containing the whole work.) Nor is there any evidence that the Kyrie and Gloria were ever performed by the Dresden chapel before Bach's death. Therefore it is presumptuous to claim to know anything about the "original" performance of the work: Strictly speaking, the work never had (*Continued on page 94*)

CLASSICAL **Reviews**



Mieczyslaw Horszowski: excellent Bach

BACH: The Well-Tempered Clavier, Books 1–11, S. 846–93.

Angelica Morales von Sauer, piano. [Giveon Cornfield, prod.] ORION ORS 81415/20, \$39.95 (six discs, manual sequence).

BACH: The Well-Tempered Clavier, Book I, S. 846–69.

Mieczysław Horszowski, piano. VAN-GUARD CARDINAL VCS 10138/40, \$17.94 (three discs, manual sequence).

João Carlos Martins, piano. [Heiner Stadler, prod.] ARABESQUE 6505-3, \$29.94 (digital recording; three discs, manual sequence). Tape: 7505-3, \$29.94 (three cassettes).

Age, we like to assume, brings with it maturity, wisdom, and insight. (If all of that wasn't written into our contract, it should have been.) And sometimes it actually does. Here are three experienced Bach performers who have obviously thought long and hard about this summit of keyboard literature—and two of them have thought well. In the performances of both Mieczyslaw Horszowski and Angelica Morales von Sauer, utterly free of frivolous display, one senses that the essential discourse takes place not between performer and listener, but between performer and composer. No one, obviously, approaches Bach as an equal, yet these worthy veterans approach him from an unusually exalted level.

Remarkably, Horszowski's recording of Book I was completed (early 1978) when he was eighty-five. (Some twenty years younger, Morales seems by comparison a mere tot.) More remarkably still, no allowances need be made. However much one may disagree with certain of his ideas, one never doubts that he knows exactly what he wants and retains the wherewithal to carry it off. These excellent performances can hold their own with any piano version now available. One only regrets that Vanguard has no present plans to proceed to Book II.

Horszowski makes no hobgoblin of consistency within pieces, yet he manages to lend each a strongly individual cast. He commands a wide variety of styles, ranging from the mellow Romanticism of the C sharp minor Fugue, which never obscures the voice-leading, to a dry, detached, understated manner at the start of the B minor Prelude, somewhat à la Gould (with even a bit of Gouldian vocalise thrown in). While one could wish for more ornamentation (particularly where, as in the B major Fugue, a trill is accepted as part of the subject at the outset but only rarely thereafter). what there is is fluently handled, and Horszowski proves conversant with "modern" notions of correct baroque embellishment, though he makes no show of it.

Just occasionally, the excitable pianist suffers a lapse in rhythmic discipline and seems to be champing at the bit. There are rushed passages, for example, in the B minor Fugue—exacerbated, as it happens, by an added nudge ahead at measure 50. apparently a faulty tape splice. But these are the merest irrelevancies in light of the larger achievement—a coherent, sensitive, and often profound interpretation. Despite surfaces that are generally fuzzy and often worse, this budget package provides a perfectly acceptable "standard" for the neophyte.

One hesitates to say the same for the larger Orion set, impressive though much of it is. Revealingly, producer Giveon Cornfield notes that the Morales "sessions went smoothly, with incredibly few retakes. Where these were done, I was amazed by her variety of interpretation, tone color, and nuance: No two takes of the same piece sounded alike." Skepticism as to the last point quickly subsides as one Reviewed by: John Canarina Scott Cantrell Kenneth Cooper R. D. Darrell Peter G. Davis Kenneth Furie Harris Goldsmith Matthew Gurewitsch David Hamilton Dale S. Harris R. Derrick Henry Joseph Horowitz

Nicholas Kenyon Allan Kozinn Paul Henry Lang Irving Lowens Karen Monson Robert P. Morgan James R. Oestreich Conrad L. Osborne Andrew Porter Patrick J. Smith Paul A. Snook Susan T. Sommer

hears the seemingly spontaneous shifts of articulation, pedaling, and even mood within a given prelude (1/2, for example). There is also ample evidence in the performances-and this not entirely flatteringthat retakes were indeed limited. Morales launches the F minor Fugue (1) at a tempo quicker than she can sustain once the second voice enters against a busier countersubject. A C crucial to a bass subject entry in the C major Fugue (1: measure 11) is barely audible, and other prominent notes disappear altogether, giving the left hand an occasional gap-toothed appearance (Prelude I/16, measure 2; Fugue I/22, 18; Prelude II/2, 6; Prelude II/5, 8). And so, a case could have been made for at least a few more alternative takes. Still, if that's part of the price of these readings, it's a reasonable one; though far from note-perfect, they are-particularly in Book 1, alas not available separately-fresh, vital, and often lovely. (It's the very beauty of the opening of that G minor Prelude, 1/16, that rivets one's attention, thereby unfortunately emphasizing the omission.)

Morales' mercurial temperament shows to best effect in the segmented preludes and shorter pieces. In Book I, it is only in the monumental B minor Fugue that she bogs down in a tiresome pattern of heavy accentuation. This does not bode well, however, for the vast expanses of Book II (made vaster by observance of the repeats, though not quite "all," as the notes claim: the second repeat of Prelude II/21 is omitted), and there one does in fact find less spontaneity and more sheer doggedness. To some extent, this may simply reflect weariness on the performer's part. understandable if the books were recorded in sequence and on a tight schedule (which might also explain a certain chariness about retakes). Toward the end, the ornaments begin to seem mere obstacles rather than felicitous outcroppings.

The recording has considerable preecho and an abundance of extraneous noises—possibly a squeaky piano bench, and a periodic mechanical whir that makes it sound as if the tape machine were right in the studio. Moreover, the piano is not always well tuned: a high entry in the A minor Fugue (II; measure 21) is especially

Critics' Choice

The most noteworthy

releases reviewed recently ALKAN: Piano Works. Smith. ARABESQUE 8127–3 (3), July.

BARTÓK: Orchestral Works. Budapest Philharmonic, Budapest Symphony, Joó. SEFEL SEFD 5005/9 (5), Sept.

BEETHOVEN: Diabelli Variations. P. Serkin. RCA ARL 1-4276, Aug.

BEETHOVEN: Fidelio. Altmeyer, Jerusalem, Nimsgern, Masur. EURODISC 300 712 (3), Aug. BRAHMS: Symphony No. 1. National Philharmonic, Paita. LODIA LOD 779, Sept.

CAVALLI: Ercole amante. Palmer, Cold, Corboz. ERATO STU 71328 (3), May.

DEBUSSY, FAURÉ: Songs. Ameling, Baldwin. CBS M 37210, Aug.

DEBUSSY, RAVEL: String Quartets. Galimir Quartet. VANGUARD VA 25009, Sept.

grating.

João Carlos Martins' remake of the First Book-with the Second soon to follow-takes its place in Arabesque's "Bach Tricentennial Recording Project," alongside his partitas (6501-3, October 1981) and Goldberg Variations (6503). From the project's inception, Martins' exhibitionistic playing and pretentious proprietary pronouncements have left Bach pretty much in the shade, and increasingly the venture shapes up as a monument to Martins' apparently prodigious ego. (One searches in vain through photos of the maestro jogging, playing soccer, and swimming with his son for the slightest information as to when, where, and why any of these pieces was written or the collection compiled; the project has furnished competent annotations only for the Goldbergs.)

All the more unfortunate, this latest installment also eclipses Martins' eminently respectable 1964-65 recording of both books for Connoisseur Society. Though not without its own arbitrary, cute, and garish moments (many here exaggerated to the point of caricature), that warmly Romantic interpretation showed steady seriousness of purpose and, with its relaxed manner, achieved occasional grandeur, seemingly unbidden. The new recording, for all its liberties, has none of the former freedom and breadth and, for all its mountainous labors, freighted gestures, and clenched-finger aggressiveness, achieves only grandiosity. The forgivable indiscretions of the twentyfive-year-old have too often given way to sheer childish self-indulgence.

With an absurdly slow and fragmented opening prelude (at just over four minutes, nearly twice as long as his earlier version; Gounod might have draped an entire *Stabat mater* over this desultory account), Martins at least leaves himself somewhere to go: Things have to improve, and to some extent they do. But in the C minor Prelude, he paints himself into a corner, taking the **DOWLAND: Songbooks (4).** Consort of Musicke, Rooley. OISEAU-LYRE DSLO 508/9 (2), 528/9 (2), 531/2 (2), 585/6 (2), Aug.

GILLES: Requiem. Ghent Collegium Vocale, Cologne Musica Antiqua, Herreweghe. ARCHIV 2533 461, Sept.

GRIFFES: Piano Works, Oldham. NEW WORLD NW 310/1 (2), Sept.

HAYDN: Keyboard Sonatas (5). Marlowe, GASPARO GS 218, June.

HENZE: Tristan. Francesch, Henze. DG 2530 834, July.

JANÁČEK: Idyll; Mládí. Los Angeles Chamber. Schwarz. NONESUCH D 79033, Sept.

MOZART: Piano Works. Schiff. LONDON CS 7240, Aug.

SCHUBERT: Lazarus; Mass, D. 167. Armstrong, Johnson, Guschlbauer. ERATO STU 71442 (2), May.

SCHUMANN: Orchestral Works. Dresden State, Sawallisch. ARABESQUE 8102-3 (3), July. STRAUSS, R.: Alpine Symphony. Berlin Phil-

opening so fast that the Presto marking can only bring more of same. These showy tempo extremes find their counterparts throughout.

The set contains elliptical albeit exten-sive "analytical notes" by Martins. The Brazilian could have used greater help in rendering his "ideas" in intelligible. restrained English. As it is, these religiomystical fantasies, replete with temples, cathedrals, and processions, lend themselves too readily to parody. Take, for example, the interesting notion that the choralelike central section of the E flat Prelude "should be played or heard on your knees." Such manner of performance holds promise elsewhere as well; in the fugue that follows, it would keep the player's feet off the pedals in measures 19 and 20, eliminating those little impressionistic washes that smudge the voice-leading-to the extent Martins hasn't already demolished it. More useful than most of his maunderings is the score analysis he provides of the little B flat Fugue (which, however, he plays with heavy portentousness).

Inordinately fond as I am of the harpsichord, I find much to admire in almost all piano versions of the Well-Tempered Clavier. While I don't share the widespread enthusiasm for Glenn Gould's eccentric interpretations (CBS D3S 733, D3M 31525), I'm willing to grant-as I'm not with the new Martins-that there's a method in his quirkiness. And though Sviatoslav Richter's hazy Melodiya recording (Musical Heritage MHS 834314, 834554) often makes his "clavier" sound like a harp, I greatly enjoy his virtuosity on its own terms. Arthur Loesser's freewheeling Romanticism (Telarc 5029-5), albeit a bit rich for my taste, will delight many (as it did Harris Goldsmith, July 1979). Yet now that Musical Heritage has dropped Jörg Demus' recording to make way for Richter's, for the buyer needing a "standard" version of both books, I recommend a hybrid of Horszowharmonic, Karajan. DG 2532 015, Aug. TANEYEV: Piano Quartet. Cantilena Cham-

ber Players. PRO ARTE PAD 107, April. TCHAIKOVSKY: Orchestral Works. London Symphony, Simon. CHANDOS DBRD 2003 (2),

June. TELEMANN: St. Luke Passion. Banchetto Musicale, Pearlman. TITANIC TI 88/9 (2), July. WAGNER: Tristan und Isolde. Gray, Mitchinson, Goodall. LONDON LDR 75001 (5), July.

WEINBERGER: Schwanda. Popp, Jerusalem, Nimsgern, Wallberg, CBS M3 36926 (3), July. CENTENARY EDITION OF BARTÓK'S RECORDINGS, VOL. I. HUNGAROTON LPX 12326/33 (8), June.

VLADIMIR HOROWITZ AT THE MET. RCA ATC 1-4260, Sept.

THE TANGO PROJECT. Schimmel, Sahl, Kurtis. NONESUCH D 79030, Aug.

VIENNESE SONATAS FOR VIOLIN AND PIANO, Brainin, Crowson, Kraus. BBC 22313 (2), July.

ski and Betty Oberacker (Klavier KS 567). Then again, procrastinator that I am, I'd probably postpone any major investment for a year or two and await London's release of renditions by Andras Schiff, whose recent New York performance of the *Goldbergs* showed an uncommon maturity that belies his youth. J.R.O.

BEETHOVEN: Septet for Strings and Winds, in E flat, Op. 20.

Boston Symphony Chamber Players. [Judith Sherman, prod.] NONESUCH N 78015, \$8.98. Tape: N1 78015, \$9.98 (cassette).

The Boston Symphony Chamber Players haven't been heard from on records since the orchestra's exclusive contract with DG lapsed, and it's good to find them so happily relocated.

If anything, they sound even a bit complacent here. Elegant, poised, unruffled, they give the youthful septet a decidedly middle-aged kind of performance; the rhythms sound correct rather than driving, the heady passion is smoothed away to comfortable girth, and the tempos are just a shade too leisurely to be "spot on." It is fascinating to study this admirable yet staid reading alongside the classic Toscanini performance (Victrola VIC 8000). The Maestro, of course, multiplied the strings, but they play together with utter precision, and the dryish 1951 sound (though emanating from Carnegie Hall) further reduces the tonal heft; actually the resonant spaces of Boston's Symphony Hall and the splendors of modern (analog) engineering-added to the equanimity of the interpretation-give the new Nonesuch the beefier sound, notwithstanding its original scoring.

I have always preferred early Beethoven with the Promethean qualities well to the fore; the Melos edition (Oiseau-Lyre, deleted) was my choice among chamber versions. (I haven't heard the St. Martin's Academy on Philips.) But I have nothing but praise for the meticulous, musicianly balances here and the absolute luster of the technical production. Nonesuch also contributes a well-nigh perfect pressing and comprehensive notes by Robert Winter.

BELLINI: La Sonnambula.

CAST:	
Amina	Joan Sutherland (s)
Lisa	Isobel Buchanan (s)
Teresa	Della Jones (ms)
Elvino	Luciano Pavarotti (t)
A Notary	Piero de Palma (t)
Count Rodolfo	Nicolai Ghiaurov (bs)
Alessio	John Tomlinson (bs)
	OI NI

London Opera Chorus, National Philharmonic Orchestra, Richard Bonynge, cond. [Christopher Raeburn, prod.] LONDON LDR 73004, \$38.94 (digital recording; three discs, manual sequence). Tape: LDR5 73004, \$38.94 (three cassettes).

COMPARISON:	
Callas, Monti, Votto	Sera. IB 6108

STEFAN ZUCKER: The World's Highest Tenor.

Stefan Zucker. tenor; Mayne Miller, piano. ASSOCIATION FOR THE FURTHERMENT OF BEL CAN-TO AFBC 01, \$10.98 (distributed by German News Co., 220 E. 86th St., New York, N.Y. 10028) [recorded in performance].

DONIZETTI: La Fille du régiment: Ah! mes amis, quel jour de fête ... Pour mon âme quel destin. BELLINI: La Sonnambula: Son geloso (with Rosina Wolf, soprano). SERRANO: El Trust de los Tenorios: Te quiero. DONIZET-TI: L'Amor funesto; Amore e morte. BELLINI: Malinconia, ninfa gentile; Ma rendi pur contento; Vanne, o rosa. DE CURTIS: Senza nisciuno. HOWARD, et al.: Juanita Banana.

There are two ways of looking at London's new *Sonnambula*. On the one hand, the writing is so difficult (Amina and Elvino) or unrewarding (Lisa and Count Rodolfo) that we should be grateful to hear it so prestigiously cast, and even if the prestigious cast doesn't actually sing it so well, the pretty tunes are all there, and anyhow do you have somebody better to suggest? On the other hand, the opera as conventionally viewed is such a sappy piece of grand-opera silliness that it can be justified only by truly exceptional singing, which this manifestly isn't.

Amina suits Sutherland's present vocal condition better than anything she has recorded in ages. You can get through the role without much in the way of firmness of attack and of sustained line, now so problematic for her, and what she can still do is get out lots of notes, with a certain grace and fluency, and the tone is if anything a bit less cloudy than in her old recording, not one of her more successful outings.

In neither recording, though, do I hear the vaguest glimmering of human connection, any sense that those famous Bellinian melodies are coming from somewhere, from some active human sense of purpose. Of course this isn't apt to trouble most True Bellinians, as represented by such as this from Francis Toye: "Possibly there has never been music more purely musical than a Bellini aria... Compared with Verdi, even with Donizetti, there is little dramatic characterization; the Bellinian phrase is lyricism *in excelsis*, lyricism of apparently inexhaustible resource."

The irony is that this nonsense (sorry, gang, but "purely musical" is one of those phrases that sounds swell but just doesn't mean anything) graces the Callas *Sonnambula*, a fleeting effort to locate a human being in Amina's music. Unfortunately, Callas couldn't really sing it well enough to bring this off, even with the recording's substantial cuts and simplifications. She was also functioning in something of an expressive vacuum, owing to her colleagues' more orthodox approach—not en-

tirely disagreeable, but quite unrelated to what she was attempting.

One especially difficult thing about Amina to make credible is her interest in Elvino, at least as represented by the tenors available to us. Pavarotti presents almost the opposite situation from Sutherland: a fairly aggressive vocal attack mode—veering into seeming self-strangulation on top—with a minimum of fluid ease. Considering that the competition includes a double dose of the flyweight Nicola Monti (not so bad with Callas, not so great with the young Sutherland), I'm favorably disposed to the idea of an Elvino of some mettle, except that the mettle sounds here so

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The Diaghilev of Contemporary Music: Heinrich Strobel's Lively Legacy

Reviewed by Peter G. Davis

THIS FASCINATING SET of recordings pays tribute to Heinrich Strobel, one of the most influential figures of new music to emerge from postwar Europe. His name may never have meant much to the general public, but as music director of the Southwest German Radio from 1946 to his death in 1970 and as founder of the Donaueschingen Festival in 1951, he functioned as a veritable Diaghilev of contemporary music. Boulez, Stockhausen, Berio, Dallapiccola, Henze, Maderna, Penderecki, Ligeti, Lutoslawski, Hartmann, Hindemith, Krenek, Messiaen, Nono. Poulenc, Stravinsky-the list of composers whom he commissioned, encouraged, promoted, and befriended is virtually endless.

A man of extraordinary energy, culture, charm, and resourcefulness, Strobel had a keen ear for musical talent, and his eclectic tastes seemed to embrace every contemporary style from Cage to Britten. Not only that, composers of all persuasions respected his intelligence and civilizing influence in an arena fraught with professional jealousies and aesthetic warfare. During the 1950s and 1960s, Strobel turned Donaueschingen and Baden-Baden into the most important European centers for new music, and the scores that received their premieres in this quiet corner of Germany set the international postserial styles for composers around the world.

It was a lively era, now very much in the past. Of the seventeen composers represented on these discs, six are dead, several never amounted to much, while the young fire-eaters—Boulez, Stockhausen, Berio, and Nono—have gone on to other things as they approach *éminence grise* status. Whatever one chooses to think of the music they left behind, these were the sounds that ruled the musical world twenty-five years ago, and historians will doubtlessly speculate at length about the impact this legacy has exercised, for good or ill, on the music we hear today.

Perhaps the most celebrated piece enshrined here is Boulez' *Polyphonie X*, which opened the first Donaueschingen Festival and created a scandal; the reaction of the audience and critics was antagonistic, to say the least. A piece of ferocious complexity resulting from a rigidly serialistic ordering of rhythmic cells, these notes are the ultimate demonstration of Boulez' "organized delirium." The performance was presumably far from accurate (Hans Rosbaud, the principal conductor of the Southwest German Radio Orchestra and a specialist in twentieth-century repertory, re-



portedly loathed the music), and Boulez has since withdrawn the score. In fact, after *Polyphonie X*, he continued making his metrical experiments in the more precise medium of electronics—all indicating a tacit admission by the composer that the piece was indeed a failure, at least on a practical level. At any rate, here it is, and posterity can make up its own mind.

The other composers all have something representative to offer; contrary to popular opinion, gray anonymity was hardly the rule at Donaueschingen. Young Stockhausen weighs in with Punkte, a typically severe exercise in orchestral pointillism. Berio's Chemins I for harp and orchestra shows a flair for operatic drama and colorful lyricism, qualities that have always characterized this vital composer's work. Lyricism of a different sort-quietly introspective-pervades Nono's Varianti and Dallapiccola's Heine cantata, An Mathilde, hampered here by some awkward singing by the soprano soloist. Magda László. These are all important scores of the period, complemented by Ligeti's sound study Lontano, Zimmermann's violently aggressive oboe concerto, and Haubenstock-Ramati's Credentials, a piece based on texts from Waiting for Godot and designed to exploit the vocal virtuosity of Cathy Berberian. Stravinsky, Hindemith, and Britten have recorded their works to better advantage elsewhere, although it is interesting to hear Agon played just a few months after its premiere in Los Angeles.

Included with the discs is a book (German text only) containing samples of Strobel's correspondence with forty-one composers, letters rich in wisdom, wit, and sensitive concern for the problems common to all creative artists. His pets were obviously Boulez and Stockhausen, and he became a virtual father figure to them both. These letters are especially revealing; we even get a rare glimpse at Boulez' private feelings ("the only thing I have in common with Mozart is the letter z'"), while Stockhausen regales the reader with a hilarious Dada language all his own. But then, every letter tells us something about the composer who wrote it. How like that perfectionist Dallapiccola, still dissatisfied with An Mathilde, to send his score off to Strobel with a despairing quote from Valéry: "There are no such things as finished works, only abandoned works."

For those with no German, the book will still be invaluable for its many intriguing pictures. Photography was another of Strobel's passions, and there are dozens of treasurable candid shots that capture these composers in the most unlikely situations-Boulez modeling a Brahms sweatshirt or deep in conversation with, of all people, Werner Egk. Most of Strobel's prewar collection of photographs was destroyed, but what survives is tantalizing: Roussel and Krenek in San Gimignano (even then Strobel apparently relished throwing the most disparate composers together), Berg in Florence, and Stravinsky at home in Paris. All in all, this is an indispensable document for anyone with even a passing interest in twentieth-century music.

HEINRICH STROBEL: Verehrter Meister, lieber Freund.

Southwest German Radio Orchestra, Hans Rosbaud*, Ernest Bour[†], et al., cond. SCHWANN/ DEUTSCHE GRAMMOPHON 0629 027/31, \$59.90 (five discs; manual sequence) (distributed by German News Co., 220 E. 86th St., New York, N.Y. 10028).

BERIO: Chemins I (Francis Pierre, harp). † BOULEZ: Polyphonie X.* BRITTEN: Sinfonia da requiem (Benjamin Britten, cond.). DALLA-PICCOLA: An Mathilde (Magda László, soprano).* FOSS: Elytres (Lukas Foss, cond.). HARTMANN: Concerto for Piano, Winds, and Percussion (Maria Bergmann, piano).* HAU-BENSTOCK-RAMATI: Credentials or "Think, Think Lucky'' (Cathy Berberian, soprano).* HINDEMITH: Symphonic Metamorphosis on Themes by Weber (Paul Hindemith, cond.). KRENEK: Aus drei mach sieben (Ernst Krenek, cond.). LIEBERMANN: Concerto for Jazz Band and Orchestra (Kurt Edelhagen Orchestra).* LIGETI: Lontano.† MESSIAEN: Réveil des oiseaux (Yvonne Loriod, piano).* NONO: Varianti (Rudolf Kolisch, violin).* PENDERECKI: Sonata for Cello and Orchestra (Siegfried Palm, cello).† STOCKHAUSEN: Punkte (Pierre Boulez, cond.). STRAVINSKY: Agon (Igor Stravinsky, cond.). ZIMMERMANN: Concerto for Oboe and Orchestra (Horst Schneider, oboe).*

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much like a tenor bulling his way through. Even Tagliavini (in the Cetra recording) managed to relax now and then into some free lyricism.

At least with Count Rodolfo we can hark back to Siepi (Cetra), whose ripe bass sails easily through the music. I get little pleasure from Ghiaurov, whose fuzzy tone production isn't ameliorated by the lack of sensitivity to phrase or circumstance. Not much more successful is Isobel Buchanan's Lisa—a lovely and promising voice that doesn't move with much assurance through this kind of writing, leaving the character to fend for herself. Della Jones is an adequate Teresa, John Tomlinson a poor Alessio.

Bonynge's conducting is certainly more assured than in the earlier recording, and I'm less bothered by the pushy quality of his recent *Traviata*. All the same, I find myself preferring the old performance, which may not have been terribly ambitious but at least didn't have the new one's inappropriately self-confident air of having answered all the questions that need to be asked about the opera. My feeling is that the really important questions have yet to be brought to the floor, and that, until they are, Bellini will remain the odds-on favorite for World's Most Boring Major Composer.

By way of seriocomic footnote, we have one question considered in the first commercial recording by Stefan Zucker, billing himself as "The World's Highest Tenor." The question he's addressing is a legitimate one: What are we to make of the absurdly high tenor writing of the period, particularly in roles-like Elvino-associated with the legendary Rubini. As we can see from Zucker's extensive annotations, he has tackled the problem seriously, searching out all the available documentation and pursuing all the pedagogical counsel he could. Give him credit for persistence, and for actually developing a technique that enables him to produce pitched sound all the way up to the B flat above high C

Has Zucker really rediscovered the technique that enabled Rubini and others to sing all those high notes? Perhaps so, but it's still a heady leap to the proposition that the squeaky noise he produces in some manner resurrects the *sound* of Rubini. If nothing else, whatever technique the tenors of that time used was applied to the foremost vocal talents available. With all good will, one can't say that Zucker is working with anything like comparable material.

Purchasers of this first release from the Association for the Furtherment of Bel Canto ("Coming soon: Stefan Zucker in a three-disc recording of the world premiere performance of Bellini's Adelson e Salvini") are invited to answer the questions: "Is Stefan Zucker a bel cantist or a banshee? Is he Rubini's reincarnation or Florence Foster Jenkins?" It seems fairly clear to me that Zucker would like to be the reincarnation, and that he has wound up as a contestant on *The Gong Show*. But then, as I understand it, Florence Foster Jenkins was serious too.

Because Zucker has done a great deal of homework, both theoretical and practical, he has many striking observations to offer both on the performance problems he has studied and on the musical establishment he had to fight to study them. There is an audible phrase here and there that shows some sympathetic understanding of the music. But in the main, the politest word I can think of for these performances is grotesque. For the *Sonnambula* duet, Zucker has found a soprano—AFBC prima donna Rosina Wolf—who sounds even more peculiar than he does.

The performances were recorded live (in quite good sound) at New York's Merkin Concert Hall in 1979 and 1980. All credit to pianist Mayne Miller for highly musical work under these, er, trying conditions. The package includes texts in English only. K.F.

FROBERGER: Suites for Keyboard (6); Lamentation sur la mort de Ferdinand III.

Kenneth Gilbert, harpsichord. [Andreas Holschneider and Heinz Wildhagen, prod.] ARCHIV 2533 419, \$10.98.

Suites: No. 1, in E minor; No. 2, in A; No. 3, in G minor; No. 4, in A minor; No. 5, in D;

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No. 6, in D.

When this recording appeared in Europe, in 1979, the edition of Froberger's music used for it was unpublished. With its delayed release here, at least, Howard Schott's Heugel edition of the music has in the meantime appeared in print and can be profitably followed while listening. The extraordinary calligraphy of these suites testifies. perhaps, to the close ties between Froberger and his patrons at the Viennese court; he composed laments on the deaths of both Ferdinand III and the young Ferdinand IV. (Suite No. 6), and as the final notes rise up the keyboard, the last bar line is obscured by an engraving of heaven, to which the soul has ascended. These laments are beautiful, moving pieces, played by Gilbert with quietly expressive intensity on an original Père Ballot harpsichord of 1729.

In the suites, Gilbert follows Froberger's own arrangement of the dance movements (as does Schott), ending not with the gigues, but with the sarabandes. The allemandes are slow, preludelike, the sarabandes grand and noble. The restraint of the music is ideally suited to Gilbert's quiet, almost uncommunicative approach.

Colin Tilney provides a useful companion recording of other music by Froberger, on EMI Electrola 1C 063-30936, in the Réflexe series that German News has recently made available again in this country. N.K.

GRIEG: Symphony in C minor; In Autumn.

Gothenburg Symphony Orchestra, Okko Kamu, cond. [Robert von Bahr, prod.] Bis LP 200, \$10.98.

Mysterious are the ways of the people responsible for selecting works to be recorded. Someone must have stumbled on Grieg's only and inconsequential symphony, reviewed here only a short while ago (London LDR 71037, February), the idea was immediately picked up by a competitor, and here it is again. It seems that whoever "discovered" this youthful *faux pas* failed to read the score and was either ignorant of, or disregarded, Grieg's disavowal of the work and his injunction that it should never again be played. But of course the composer's is a good name, so why not record the symphony? It may take.

The lack of musical judgment in the selection of repertory is often painfully evident. When the baroque jag hit the market, everything that rattled along in endless sequences was recorded alongside the real masterpieces, and of course even Vivaldi composed a lot of works that are safely expendable. One of these days Beethoven's *Ritterballett* will probably be released with appropriate commentary on its importance for the composer's future development.

All I can say about this disc is that, though it is nicely played and well recorded despite the coughs, sneezes, and applause of a public performance, the work remains

The lack of musical judgement in the selection of repertory is painfully evident.

innocuous, useless, even embarrassing. But we can learn a few interesting things from the sleeve notes. The Bergen Library, custodian of Grieg's musical estate, honored his injuction and steadfastly refused to yield the manuscript for printing and performance, until finally it was pried loose in 1981. The notes also tell us that Grieg's symphony is "one of the pillars supporting the great bridge from Beethoven over Mendelssohn and Schubert to what follows." Why, even Bruckner is mentioned among the beneficiaries, though "at slightly greater remove."

I won't say anything about the bonus number, Grieg's symphonic overture In Autumn, because I do not relish this overkill of a perfectly decent composer who himself acknowledged that he was no symphonist. Besides, I don't want the reader to be compelled to revise all he knows about the "pillars" in the history of the concert overture. P.H.L.

HAYDN: Symphonies; Orchestral Works—See pages 60, 61.

MIMAROĞLU: Quartet for Strings, No. 4 (Like There's Tomorrow).

Janis Siegel, vocalist; Beaux Arts Quartet. [Ilhan Mimaroğlu, prod.] FINNADAR SR 9033, \$8.98.

Since both political realities and rhetorical sentiments tend to date quickly, music containing overt and specific political references often turns out to be ephemeral and, in the long run, naive. This isn't *always* the case, obviously, nor would 1 suggest that music and politics should not mix. It's just that to bring the two elements together in such a way that they don't negate each other requires a kind of special care that those who take urgent rhetorical stands do not always bother to exercise.

Ilhan Mimaroğlu, a Turkish-born composer (who, conveniently, runs the

Preview Footnotes

1) Since last month, Hyperion has changed distributors; its records are now imported by Harmonia Mundi U.S.A. 2) The Composers Recordings listing of Harbison's Full Moon in March should have mentioned the lead singer, soprano D'Anna Fortunato, and tenor Kim Scown. 3) On Accent, Konrad Junghänel plays French lute music: he is, of course, a lautist, not a flutenist..., uh, well, you get the idea.—Ed. adventurous Finnadar label) has been grappling with the problem of expressing New Left and antiwar sentiments for more than a decade and has arrived at a workable solution. The latest of his social-commentary works (on record, at least) is the String Quartet No. 4, actually a quintet for strings and voice, composed in 1978.

For his text, sometimes spoken over the quartet's ruminations and sometimes sung, Mimaroğlu has chosen poems of his compatriot Nâzim Hikmet (presented here in Mimaroğlu's English translation). The dilemma of dating politicism is thereby addressed at a stroke: Hikmet died in 1963, but his outspoken poetry, often searingly critical, retains a contemporary ring. The images he evokes, the ironies he points out, and the evils he assails are as real today as they were in his lifetime. (The composer's notes, unfortunately, do not say when the poems were written.)

Nor does Mimaroğlu mold these texts into an exercise in pessimism alone. His subtitle, *Like There's Tomorrow*, implies what the final poems explain more fully that, whatever this century's horrors, somehow a better world can be built. There is, in these writings, an unusually well-integrated combination of cynicism and hope.

Mimaroğlu's music fits these texts magnificently. At the start, the angrily dissonant string writing has the cutting edge of late Shostakovich. Eventually a kind of Romantic warmth attenuates some of the poetry's naked wrath, and finally the vocal melodies become sweetly lyrical. The Beaux Arts Quartet's playing is propulsive and convincing.

About the vocalist, Mimaroğlu has promulgated the unusual decree that a pop singer is preferable to one schooled in art song. Among his reasons, he cites a preference for a pop vocal texture, and a belief that the "naturalness of delivery" of pop singing would most clearly convey the texts. The work was composed for Janis Siegel, of the group Manhattan Transfer, who does indeed deliver the poetry with clarity and without pretensions, although I suspect that many a "serious" singer (Jan DeGaetani, Barbara Hendricks, and Lucy Shelton come to mind) could serve the work equally well, if not better. At any rate, the composer writes: "I regard the performance on this record, vocally and instrumentally, as definitive.

The recording itself is vivid, and while the discreet studio echo added to Siegel's voice during the sung pieces makes her sound a little otherworldly, it is not really objectionable. The pressing is clean, though my copy is slightly warped. I doubt that this work will enter any quartet's regular repertoire soon, but it is certainly worth hearing, and it stands up well—politics and all—to repeated listening. A.K.

MOZART: Concertos: for Two Pianos and Orchestra, in E flat, K. 365; for

Three Pianos and Orchestra, in F, K. 242*.

Justus Frantz and *Helmut Schmidt, pianos; London Philharmonic Orchestra, Christoph Eschenbach, piano and cond. [John Willan, prod.] ANGEL DS 37903, \$10.98 (digital recording). Tape: 4XS 37903, \$9.98 (cassette).

It is almost as fascinating to compare Mozart's two multiple-keyboard concertos—so different are they in intent and realization—as to measure the one for two pianos, K. 365, alongside its sibling *Sinfonia concertante*, K. 364, for violin and viola.

The three-piano work, composed in February 1776 for the Countess Antonia

Lodron and her two daughters, is an occasional piece, albeit a very charming and underrated one. Since the younger daughter, Giuseppina, was pretty much a beginner, her part is negligible technically—performable by most any reasonably proficient amateur. Mozart later rearranged the concerto for two pianos and lost very little except a certain festivity. The music, from around the same time as the violin concertos, is not negligible; the final Rondo, in *Tempo di Menuetto*, is especially attractive.

The two-keyboard work, on the other hand, was meant for "real" pianists—no lesser performers, in fact, than Mozart and his sister. Nannerl. The writing, therefore,

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is far more intricate technically, and it reflects the composer's three added years of growth (about three decades for any mere mortal). At the time of its conception, Mozart was obviously pondering the problem of writing a duo concerto. The key is the same as that of the Sinfonia concertante, and some of the materials are close enough to be considered "shared," yet the differing demands of stringed instruments and keyboards-Mozart was, of course, familiar with both-produced two works worlds apart. I will be so bold as to say that Mozart was more deeply affected by the strings. Certainly the concerto's slow movement, while lovely enough, cannot compare with the searing magnificence of the Sinfonia's central Andante; the other movements are more equally matched in quality.

Both performances here have salient points of interest: In K. 242, curiosity centers around the uncustomary role taken by West Germany's Chancellor Helmut Schmidt. As noted, any amateur of reasonable standing could acquit himself in this undemanding third-piano part; Schmidt-a frequent chessboard adversary of pianist Justus Frantz-agreed to participate as a gesture to Amnesty International, which gets all royalties for this record. The performance, stylish and well coordinated, has a genial quality attributable both to the sensitive keyboard teamwork and to Eschenbach's molded conductorial style. His Bruno-Walter-ish lingering, though considerable, is never excessive; the well-defined digital sound undoubtedly saves it.

The later work features "brass" of a different sort. Mozart himself allegedly added trumpet, timpani, and clarinet parts for a Viennese performance of the work (the first, of November 23, 1781, according to the liner notes; the second, of May 26, 1782, with the "fat" pianist, Josepha Auernhammer, according to Christoph Wolff in the New Mozart Edition), and these are included-for the first time, I believe-on this recording. Whatever their authenticity, they add little of value and contribute a degree of opacity to the voiceleading. But it is interesting to have them available. The performance, moreover, is amiable and well organized (and all the better for its use of Mozart's own cadenzas, as also in K. 242). If this reading doesn't efface memories of Brendel/Klien (on myriad Vox and Turnabout couplings), Haskil/ Anda, or Artur and Karl Ulrich Schnabel, it is nevertheless sympathetic-and highly recommended. H.G.

NIELSEN: Piano Works (complete).

Elisabeth Westenholz, piano. [Robert von Bahr, prod.] Bis LP 167/8. \$21.96 (two discs, manual sequence).

Five Pieces, Op. 3; Symphonic Suite, Op. 8; Humoresque-Bagatelles, Op. 11: Chaconne. Op. 32; Theme and Variations, Op. 40; Suite. Op. 45 (*The Luciferian*); Piano Music for Great and Small, Op. 53; Three Pieces, Op. 59; Festive Nielsen's piano music throws light on his more consequential compositions.

Prelude; Dream of "Silent Night": Piece in C.

First, one must congratulate Bis (and Elisabeth Westenholz) for wonderfully lifelike piano sound and for absolutely noiseless surfaces. The Bösendorfer 275 has rarely sounded so regal and eloquent. And it's a good thing, too, since Carl Nielsen's piano music, with few exceptions, does not represent the Danish composer at the top of his form. Still, this body of music represents one facet of his art and throws light on his more consequential compositions.

Much of Nielsen's output for the piano consists of miniatures that the concertgoer is not likely to encounter in recital. Indeed, the Piano Music for Great and Small, Op. 53. was not intended for concert performance; its twenty-five pieces, most under a minute in length, were designed for teaching purposes. Nielsen did not take his task lightly. The problem of making real music for beginners "interests me like nothing before." he wrote of the set, "as the task is so closely defined that it will be very difficult." Few composers have transcended the difficulties of the genre-Schumann succeeded with his Kinderscenen-and Nielsen was not among them. Nevertheless, Op. 53 (like the Five Pieces, Op. 3, and the six Humoresque-Bagatelles, Op. 11) does contain some ingenious and interesting music

Of the concert works, the most significant are the Chaconne, Op. 32, the Theme and Variations, Op. 40, and above all, the Suite, Op. 45, subtitled *The Luciferian*. The very early Symphonic Suite, Op. 8, dating from 1894, can be safely disregarded, although it does include some of the composer's idiosyncratic harmonic and melodic devices.

Nielsen was a violinist, not a pianist, and while his keyboard compositions are not crassly unidiomatic, they are more difficult than they seem. The Luciferian Suite is most successful when it transcends the piano sound and is heard primarily as an orchestral work. Its subtitle engendered a certain amount of confusion; Nielsen intended it to signify the coming of Lucifer, bringer of light, whereas the critics tried to find a demonic element in it, equating Lucifer with the devil. The central Adagio movement and the acrobatic finale are impressive artistic achievements, and the work as a whole deserves to be performed now and then.

The chaconne and the theme and variations, both composed during World War I,

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reveal Nielsen in his maturity. They are formidably difficult for both performer and listener, and although Westenholz tries valiantly to make them palatable, they do not always succumb to her blandishments. She is plainly a pianist of transcendent gifts with an affinity for her compatriot's music, and if she does not succeed with it, it's hard to imagine that other pianists will.

The most unusual music here is the posthumously published set of three pieces. which show Nielsen embarking on some unexplored territory. At the time he composed them (1928), he was strongly influenced by Bartók and Hauer, and as Knud Ketting's excellent jacket notes point out. "passage after passage ... shows Nielsen's sense of tonality in the process of disintegration." There are also clear indications that he was attracted to serialism, not of the Schoenberg, but of the Hauer, variety. Had he lived longer, there is no telling in what direction he would have marched.

The Festive Prelude, the Piece in C. and the Dream of "Silent Night" are of little consequence, included in the interest of completeness. Technically, the recording is impeccable; would that more firms exhibited Bis's precision and expertise!

NIELSEN: Symphony No. 4, Op. 29 (The Inextinguishable).

Berlin Philharmonic Orchestra, Herbert von Karajan, cond. [Günther Breest, prod.] DEUTSCHE GRAMMOPHON 2532 029, \$12.98 (digital recording). Tape: 3302 029. \$12.98 (cassette)

"Music is life, and like life inextinguishable"-Carl Nielsen's words to explain the title of his Fourth Symphony.

By reasons of birth and geography, the names Nielsen and Sibelius are often linked together, just like Mahler and Bruckner, Debussy and Ravel. The two Scandinavians were, in fact, born the same year (1865). Each developed his own distinct musical personality. Sibelius' was the more obviously Romantic at first, gradually becoming more enigmatic in the later works; Nielsen, of peasant stock, developed a harsher, more biting style, similar in tone to much of late Janáček. His melodies are quirkier than those of Sibelius, less immediately memorable, but once they've been assimilated, their staying power is just as great.

Various conductors-most notably Leonard Bernstein-have championed Nielsen, and several have had a go at the Fourth Symphony on records. But Bernstein's proseletyzing has not done for Nielsen what it did for Mahler. Perhaps Herbert von Karajan can turn the tide; in a significant addition to his discography, he leads an absolutely stunning account of The Inextinguishable. (Those of you who like tongue twisters can try the German title Das Unauslöschliche or, better yet, the Danish Det uudslukkelige.)

Karajan's is an exultant performance. with the Berlin Philharmonic operating at the peak of its form (save for a late timpani entrance one bar before cue 17). The way the strings play the running passage leading into the finale must be heard to be believed. But all is not high-powered brilliance. The woodwinds, especially clarinets and bassoons, are exquisite in the soft passages of the Poco allegretto second movement, played more reflectively, less jauntily, than by some other conductors. Karajan treats the great descending theme of the first movement very grandly; by not overbroadening its return in the finale, he provides a thrilling and joyous climax to one of our century's most significant symphonic works.

The recording is superb. I much prefer Karajan's DG discs to his EMI/Angels, with their recessed sound and excessive reverberation that clouds details.

One thing that could be better is the finale's famous duel for the two timpanists. This comes off to much greater effect in Jean Martinon's version with the Chicago Symphony (RCA, deleted) where each timpanist's rhythm is absolutely distinct, every note telling, and the total effect more impactful. I hope RCA will reissue this excellent account, leaner and swifter than Karajan's, in its Gold Label series. (The overture Helios is a generous bonus.)

Nielsen's compositional voice is pow-

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erful and individual-a tremendous personality. Perhaps his difficulty in gaining wide public acceptance (though this could apply to many composers) can be summed up by the story that has Sibelius and Nielsen enjoying a few beers together, probably with akvavit chasers. At one point, Sibelius leans across the table and says, "Carl, your music will be remembered when Beethoven's has been forgotten ... but not until!" J.C.

SCHUBERT: Sonata for Piano, in A, D. 664; Impromptus, D. 899.

Claudio Arrau, piano. PHILIPS 9500 641, \$10.98. Tape: 7300 806. \$10.98 (cassette).

Arrau's reunion with Schubert (Philips 9500 755/928, May 1982) continues with this monumentalization of what we frivolous folk call the "little A major" Sonata. "What fools these mortals be!," he seems to be saying in regard to all those pianists like the young, not-yet-Dame Myra Hess who, since time immemorial, have treated this work in a gentle, lyrical manner. (Hess's 1928 American Columbia recording was briefly available-a semitone sharp-in an LP dubbing on the now defunct Harmony label.)

This reassessment of traditional values is reminiscent of Otto Klemperer's earthbound trudge through Mendelssohn's Midsummer Night's Dream music, although Arrau's fondness for ample, burgher-esque tonal girth doesn't entail anything quite so lumbering as Klemperer's brontosaurian Scherzo. In fact, there are things I rather like about the performance. Yet in the final reckoning, sobriety and "stature" are less relevant to this sonata than wistful nuance and---in the Allegro third movement--dancing élan (which, in fairness, is suggested, albeit temperately). Editions differ somewhat in the matter of repeats, but Arrau, always a devotee of "heavenly" (or ungodly?) length, predictably chooses the one that repeats both halves of the Allegro moderato first movement.

The impromptus represent a different sort of Schubert, and the stormy C minorwith its Winterreise repeated notes, hammering dissonances, and glazed, lonely harmonies-finds a more responsive interpreter in Arrau. This is an altogether masterful reading, and quite a vehement one at that! The remaining three works are also well considered, although I balk at the slow tempo taken for No. 3, in G flat; that songful piece, in 2/1 meter, ought to flow more succinctly

One thing we tend to take for granted-but which ought to be mentioned-is the really impressive condition of Arrau's pianism as he enters his ninth decade. Philips' sound, though a bit too oppressively close, is superbly sonorous. H.G.

SHOSTAKOVICH: Symphony No. 14, Op. 135.

(in Spanish, German, French, Russian)

Julia Varady, soprano; Dietrich Fischer-Dieskau, baritone; Concertgebouw Orchestra, Bernard Haitink. cond. [Andrew Cornall, prod.] LONDON LDR 71032, \$12,98 (digital recording)

Teresa Kubiak, soprano; Isser Bushkin, bass; New York Philharmonic, Leonard Bernstein, cond. [John McClure, prod.] CBS MAS-TERWORKS M 37270. Tape: MT 37270 (cassette). [Price at dealer's option.]

COMPARISON:

Rostropovich/Moscow Phil. CBS M 34507

Now that five recordings of the Shostakovich Fourteenth have circulated here, two general observations seem in order before we get down to some performance specifics.

First is a curiosity in the manner of presentation. From none of the recordings would you guess that the piece is anything other than a cycle of eleven orchestral songs. And yet, even if you were unaware of the composer's own clear statement that the poems are grouped musically into four movements, you would have only to glance at the score to see that full stops are indicated after Nos. 1, 4, 7, and 9; all the other songs, some of which are actually linked musically, are specifically marked attacca

The point isn't so much that this structure more closely resembles a conventional symphony, although our view of the individual song-movements will surely be affected by their function in the larger structure. For example, Phillip Ramey's description-in his liner note for the CBS issue of Rostropovich's Melodiya recording-of No. 2, "Malagueña" (Lorca), and No. 4, "The Suicide" (Apollinaire), as a symphonic scherzo and slow movement, is an honest response that makes possible some useful observation. But we're apt to respond differently if we hear them as the first and last parts of a symphonic first movement, preceded by the dirgelike No. 1. "De profundis" (Lorca), as an adagio introduction.

However, I'm less concerned for the moment with the particular structures used than with the simple fact that the symphony isn't simply a succession of eleven movements, one after another after another after . . . well, you get the idea. No doubt there are listeners who can absorb such a load. I can't, and it was a big relief to discover that Shostakovich never intended me to. In only two cases, Nos. 2-4 and 7-9, are as many as three songs grouped, and my experience has been that awareness of these groupings made a huge difference in my ability to sort out and deal with the material. Even now, though, the absence of separating bands makes it a chore to go back to individual songs.

What, I wonder, prompts this apparently widespread preference for seeing the piece as one big glop? My hunch is that ease of digestion has never been much of an issue because the glop isn't being digested at all. It all reminds me of the response to the New York City Opera's production of Janáček's Cunning Little Vixen, which everybody agreed was a Stirring Event, yet which didn't seem to stir anybody in any substantive way-something that would surely have involved some kind of emotional response to the fact of our mortality.

By coincidence, death is in one form or another the subject of all eleven poems set in the Shostakovich Fourteenth. And again, most everyone can tell that it's an. um, interesting work, and probably important, and obviously serious. And yet. none of the commentators makes more than a pro forma acknowledgment of its premise.

which is that we are all going to die, and death is awful and permanent and pretty much without redeeming social value.

This brings me to my second observation, which is that in my experience of the piece I have been frequently fascinated but not often gripped. While this undoubtedly has something to do with my own resistance to the subject. I know that it is available to me. Just within a single twenty-four-hour period recently, it hit home in the form of a Best of Carson show with the late Dorothy Stratton and a fifteen-year-old Dark Shadows episode in which poor Liz Stoddard attempts to tie up the loose ends of her life before dispatching herself.





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CLASSICAL Reviews

And yet here is this remarkable symphony, with its impeccable anthologizing of four widely assorted poets (five if you count Brentano rather than Apollinaire as the author of No. 3, "Loreley"), and somehow the subject seems to have been rendered safe, except for a certain number of seemingly can't-miss moments (they tend to be the same from performance to performance), such as the haunting divided-violas-and-cellos introduction to No. 9, "O, Delvig, Delvig!" (Küchelbecker, the one Russian poet in the group). Is it possible that a work intended to force us to confront the subject of death can contrarily, through elaborate intellectual sleight of hand, insulate us from it?

It's certainly true that pretending to talk about a difficult subject can be one of the most effective techniques for evading it. But is the technique being employed here by Shostakovich or his performers? It's in this connection that I become so suspicious of the impulse to glopify the eleven movements in performance, an impulse that appears to concentrate and solemnify the experience but may in fact do the opposite.

My guess is that, at least to a certain extent, performers are being perhaps unconsciously evasive. This can be accomplished fairly simply by musicians, who need only give free rein to their customary tendency to maintain tight control. Actors, for example, talk a good deal about the importance of vulnerability, about the need to be open to the suggestions of the material, wherever they may lead. Admirable as the five recordings of the Shostakovich Fourteenth are in many ways, you won't hear much vulnerability in them, even though the subject would seem to be the one that renders us all most vulnerable.

Perhaps this is why I'm not inclined to pounce on the questionable edition used in the new London recording, where the ten non-Russian poems are put back into their original languages (pre-original in the case of "Loreley," which goes all the way back to the German of Brentano). That Shostakovich approved this edition is less important for me than the possibility it opens up for a more immediate connection to the text on the part of non-Russian performers as well as audiences.

The big dividend in this case is the performance of Julia Varady, who brings to the music not only the most attractive and expressive voice I've heard in it but the highest degree of emotional openness. Her accounts of "The Suicide" and of No. 10, "The Death of the Poet" (Rilke), actually seem connected to the spirits of the departed. Unfortunately (why does the word keep cropping up in connection with Fischer-Dieskau?) her husband is the least effective bass soloist on records. This of course has nothing to do with languages or editions. It has to do with his present vocal limitations, and his *Sprechgesang*-like adaptation to

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them—much of his performance sounds like a study for the Doctor in *Wozzeck*, and not at all my kind of Doctor.

Haitink seems to be in one of his objectivist moods, and so the orchestral part receives an admirably tidy rendering. In fairness, the only conductors on records who seem to have aimed for something more are the Russians, Barshai (Melodiya/ Angel, deleted) and Rostropovich, with the latter no doubt producing the most personal result, though as noted above I still don't find that result especially involving.

Rostropovich also has the bestmatched pair of soloists. While Galina Vishnevskaya (in reasonably unfrayed voice) seems to me outclassed by Varady, Mark Reshetin is the most effective of the recorded bass soloists. I'd still like to hear an altogether legit Russian bass in the music—Nesterenko?—but Reshetin is an expert character singer and actually encompasses the music quite well; he sings the mostly low-lying "*De profundis*" very nicely. In purely vocal terms, there is also something to be said for the work of Simon Estes in the deleted Ormandy/RCA recording.

The interest of the Bernstein recording hasn't much to do with the soloists, although you can hear from its lower range that Isser Bushkin's bass is the right kind of voice, and it's held together fairly well in "O, Delvig, Delvig." Teresa Kubiak is no better than serviceable, the voice sounding worn and uninteresting, and thinning out on top. If you respond to Bernstein's performance, it's apt to be for the prevailing bleak quality, which is underlined by the somewhat broader than usual pacing and a certain grayness in the orchestral textures, which are uncommonly thick-sounding. Whatever the size of the orchestral forces actually used, this is the one recording that doesn't sound chamber-sized.

For me, Bernstein's decisions connect more to the *idea* of the music than to its experience, but you should check this out for yourself. On balance, the strongest performance is probably still Rostropovich's, despite CBS's thoughtless side break between Nos. 5 and 6. (All the other recordings, including the Bernstein/CBS, break *before* No. 5, which begins Shostakovich's ''second movement.'') I'll certainly be returning to Varady's performance, though.

All the recordings come with texts and translations. K.F.

STRAUSS, R.: Songs; Opera Excerpts.

Elisabeth Söderström, soprano; Welsh National Opera Orchestra. Richard Armstrong, cond. [John Fraser, prod.] EMI ASD 4103, \$12.98 (digital recording). Tape: TCC ASD 4103, \$12.98 (cassette). (Distributed by International Book and Record Distributors, 40-11 24th St., Long Island City, N.Y. 11101.)

Four Last Songs. Der Rosenkavalier: Da geht er hin. Capriccio: Intermezzo and Final Scene (with Philip Joll, baritone).

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The ideal recording of Strauss's grandly elegiac Last Songs would combine Kirsten Flagstad's and Wilhelm Furtwängler's breadth of phrase (Turnabout THS 65116, mono). George Szell's or Herbert von Karajan's penetrating clarification of orchestral detail (Angel S 36347 or DG 2530 368, respectively), the spontaneity and involvement and sheer tonal allure of Kiri Te Kanawa (CBS M 35140). Of course, you can't combine these into one-and each on its own has tangible drawbacks. The Flagstad is a live recording of the songs' world premiere, transmitted via very noisy source material that gives out a few bars before the end, leaving us dangling on a distant chord; still, I wouldn't be without it, for no other performance is on such a spacious scale (an East German Eterna disc by Hanne-Lore Kuhse is the only one I've ever heard that even attempts it). With Szell, you have to put up with Elisabeth Schwarzkopf at her most abstract and fussiest (she's rather more committed in her mono version, Angel 35084, but that's short on orchestral impact and clarity), and with Karajan, the problem is Gundula Janowitz, singing with a truly instrumental purity that is almost totally inexpressive (the perfection has not been achieved, however, without the aid of some palpable spliceediting). In this company, the champion is clearly Te Kanawa, though she is rather forwardly balanced with respect to Andrew Davis and the London Symphony, who play very well without quite matching the tonal warmth that the Vienna and Berlin Philharmonics have offered in this music.

Would that EMI's new recording succeeded in cutting this Gordian knot-but, alas, it does not. While her vocal production and tonal quality, as well as certain details of phrasing and enunciation, often recall Schwarzkopf, Elisabeth Söderström is a much more straightforward, vivid, and spontaneous singer. I like what she is doing with these songs, though she can't float the melismatic writing of "Beim Schlafengehen" with the purity of Janowitz or Te Kanawa. Like the latter, she is given a conspicuously unnatural prominence by the engineering-unfortunately not enough to obscure the rough work of the Welsh National Opera Orchestra, which hardly ever plays softly enough and rarely manages the kind of dynamic flexibility required for true interplay with the often almost instrumental voice part. Crucial musical junctures don't come off-singer and orchestra aren't really breathing together in the "development" section of "Im Abendrot," and the uncertainty at the "recapitulation" ("So tief im Abendrot") spoils one of Strauss's grandest moments.

The orchestra's deficiencies are upon us with a vengeance in the other major selection, for the *Capriccio* scene begins with the wonderful Intermezzo, a nocturne led by the horn, which Strauss worked up from material in his Krämerspiegel song cycle. Instead of creating a mood, this performance destroys one, and only when Söderström arrives do we begin to feel at ease-not right away, for Philip Joll is rather a woolly Major Domo. The soprano has recorded this scene (minus Intermezzo and Major Domo) once before (Swedish EMI 4E 061-34788), and I find that version better vocally as well as orchestrally; now the tone comes close to cracking at one point, and the singing can become choppy. In both cases, her grasp of music and character is very convincing, not least in the recitation of the sonnet, which is not meter-ridden yet has flow and shape.

Even in the short *Rosenkavalier* monologue. orchestral deficiencies such as rough, unblended wind playing obtrude, but Söderström, once an Octavian, is now an acute, even slightly (and aptly) waspish Marschallin.

Like the recent Goodall *Tristan* (London LDR 75001, July), this disc is a byproduct of Amoco's support of the Welsh National Opera—an enterprise that in its own context is doubtless well and good. In this recording, however, the best interests of Strauss and of Söderström have been subordinated to the oil company's PR purposes, and that's a disquieting circumstance. Both composer and soloist deserve better. D.H.

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CLASSICAL Reviews Recitals and Miscellany

FLUTE MUSIC OF LES SIX.

Bonita Boyd, flute; Kimberly Schmidt, piano. [Donald Hunsberger, prod.] STOLAT SZM 0119, \$5.98.

MILHAUD: Sonatine, Op. 76. HONEG-GER: Romance; Danse de la chèvre. DUREY: Sonatine for Flute and Piano. AURIC: Aria. TAILLEFERRE: Pastorale. POULENC: Sonata for Flute and Piano.

This is the first Stolat American recording l've encountered, as well as my introduction to Bonita Boyd—at twenty-one, the youngest flutist to have been appointed to a "major" American orchestra, the Rochester Philharmonic, and at twenty-five, the youngest professor of flute at a major American conservatory, the Eastman School of Music. She proves here to be a remarkably low-key, almost self-effacing artist, eschewing bravura showmanship for strictly straightforward realizations of the music at hand.

Perhaps it is in contrast with the more vivid charisma of Paula Robison and Carol Wincenc that, on first hearing, Boyd's tonal qualities and interpretations seem a bit colorless—a misconception soon cleared up in increasingly enjoyable rehearings. More personality projection is needed before she can fully compete with the star, especially French, flutists who have earlier recorded the Poulenc sonata and Honegger's unaccompanied divertissement. Nevertheless, both she and her accompanist, also an Eastman graduate, do play beautifully and are no less attractively recorded in completely honest chamber-scaled sonics.

They are exceptionally imaginative programmers, presenting all six of *Les Six*—not only relatively familiar Poulenc. Milhaud, and Honegger pieces (although Honegger's little 1954 *Romance* is something of a novelty), but also seldom-if-ever recorded examples of the rarely heard music of Georges Auric, Louis Durey, and Germaine Tailleferre. The last-named, the only woman in the Parisian group, exploits with particular skill, in her hauntingly lilting *Pastorale*, the Satie-derived stylistic simplicity—perhaps pseudo naiveté—that some of *Les Six* cultivated so assiduously.

It's not often that such engaging music-making and truly natural sonics are available at (by today's standards) such a bargain price. R.D.D.

HEINRICH STROBEL: Verehrter Meister, lieber Freund—See page 70. STEFAN ZUCKER: The World's Highest Tenor—See Bellini.

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A few strings ...

Historically, music for small string ensembles has been seriously cultivated for only some two centuries. Yet in that time the string quartet in particular has become the quintessential form of chamber music, the inner sanctum of the whole realm of tonal art. And since it is ideally suited to recording and home reproduction, its discography has flourished from the acoustical era right through all subsequent technological revolutions.

Current tapings persuasively attest to its present-day status as reinforced by gifted young interpreters and state-of-the-art recording techniques. Witness the new versions of two of Haydn's finest quartets, Op. 54, Nos. 1 and 2, by the superb Hollandbased Orlando Quartet (Philips 7300 996, \$10.98), which made its recording debut just last year in works of Dvořák and Mendelssohn (7300 995). Also the acclaimed Fitzwilliam foursome's complete Oiseau-Lyre survey of Shostakovich's fifteen quartets, the outstanding achievements in this form since Bartók's. So far, there lamentably seem to be no American cassette editions, but magnificent Barclay-Crocker open-reel versions are in progress; already available are Nos. 7, 13. and 14 (F 9, \$9.95), Nos. 4 and 12, and Nos. 8 and 15 (E 23, E 11, \$8.95 each).

More specialized if no less varied in appeal are provocative recent exemplars of string duos, trios, and sextets. The only available tapings of those fiddle-family favorites, Mozart's Violin-Viola Duos, K. 423 and 424, celebrate the welcome return of Oscar Shumsky and the record debut of his son Eric (Spectrum SC 235, \$4.95; also B-C reel D 135, \$7.95). In their most vivid recordings yet, contrasted Schoenberg masterpieces-the acerbic twelve-tone string trio and the hauntingly Romantic Verklärte Nacht, in its original string-sextet version-are played with greater enthusiasm than authority by representatives of the 1981 Santa Fe Chamber Music Festival (Nonesuch digital/ferric, D4 79028, \$11.98). And perhaps the least well-known of Brahms's chamber works, the early Op. 18 and mature Op. 36 String Sextets, are conveniently coupled in a double-play cassette (RCA Red Seal ARK 2-4054, \$19.98). Warmly rich yet lucid sonics cope ably with the often dense textures, but the indulgent readings of the Cleveland Quartet plus violist Pinchas Zukerman and cellist Bernard Greenhouse, now dreamy, now

insistent, don't make the longueurs (all repetitions piously observed) seem any less so.

... plus piano and/or woodwinds. . . . The relatively scanty violapiano sonata repertory is incalculably enriched by the two Brahms Op. 120 adaptations in near ideal performances by Michael Tree and Richard Goode (Nonesuch digital/ferric D4 79031, \$11.98)-the first to convince me of the validity of the composer's own rescorings of his clarinetpiano originals. And the significance of this milestone release is heightened by the almost simultaneous appearance of the alternative versions in a recording by star clarinetist Richard Stoltzman; probably the best renditions yet of the originals, these feature the same pianist, Goode, and the same producer and engineer, Max Wilcox (RCA Red Seal digital/chrome ARE 1-4246, \$12.98). For once, comparisons are decidedly not odious, but incalculably illuminating!

Still more Brahms: the Cello Sonatas. Opp. 38 and 99, by Lynn Harrell and Vladimir Ashkenazy (London CS5 7208, \$10.98) and all three violin sonatas by Toshiya Eto and William Masselos (Nonesuch double-play, N6 73034, \$11.98). The unabashedly Romantic Harrell and magisterial Ashkenazy are an odd couple indeed; but while I prefer Starker cello playing, this set is always sonically bewitching. Less so is Eto's fiddling, often too intense, sometimes overbalancing Masselos' more restrained pianism, yet this 1977 JVC production economically combines the three Brahms works with the F-A-E Sonata, to which he contributed a movement.

Also on Nonesuch, Sergiu Luca and Paul Schoenfield offer a compendium of the "complete" Bartók violin-piano musictwo sonatas, two rhapsodies, and Romanian Dances, plus Contrasts, with clarinetist David Shifrin (digital/ferric D2 79021, \$23.96). They compensate for occasional hard-toned fiddling and heavy-handed pianism with infectious zest, relish, and idiomatic authority. These same endearing qualities enable St. Louis Symphony members to compete with more famous stars in Mozart's buoyantly lilting horn quintet (Roland Pandolfi) and clarinet trio (George Silfes), part of the fourth and most delectable release yet in the Turnabout Chamber Series (CT 7018, \$5.98).

... and cello with orchestra. It's good to welcome the Lithuanian-born, Russian-trained cellist David Geringas in what must be the first recording of Prokofiev's Op. 132 Concertino (completed by Rostro-

povich and Kabalevsky). coupled with the familiar Haydn Concerto in D, vividly recorded with a routine orchestra under Woldemar Nelsson (Eurodisc 400 745, \$9.98). But in the same Haydn, along with the finer Concerto in C, Yo-Yo Ma displays more distinctive personal bravura, and the English Chamber Orchestra furnishes more refined accompaniments (CBS MT 36674. price at dealer's option, no notes).

Assorted-flavors miscellany. The latest Rachmaninoff set from Leonard Slatkin and the St. Louis Symphony (Vox Cum Laude 3VCS 9013X, \$29.98) is notable for gripping performances of orchestral and choral works, including the American firsts of a juvenile scherzo and symphony, plus the fascinatingly unfamiliar Caprice bohémien and Prince Rostislav, as well as the Isle of the Dead, Symphonic Dances, Vocalise, Bells, Rock, Spring Cantata, and Three Russian Songs. Only a purist's regret over the lack of period instruments shadows my lively relish of Purcell theater music (Abdelazer, Old Bachelor, Gordian Knot Unty'd Suites and the trumpet sonata) in appropriately lightweight performances by Raymond Leppard and the English Chamber Orcnestra (CBS digital/chrome HMT 36707, price at dealer's option, no notes). Exultantly Schumann-esque is the best description of Klaus Tennstedt's robustly Romantic performances with the Berlin Philharmonic of Schumann's Rhenish Symphony and Konzertstück for four horns (Angel 4XS 37655, \$9.98). And while Eduardo Mata's Dukas/Enesco/Mussorgsky/Tchaikovsky warhorse program with the Dallas Symphony may lack some Fiedlerian ebullience, its showpieces have never been more impressively recorded (RCA Red Seal digital/chrome box, ATK 1-4205, \$15.98).

Still closer to the ultimate in recording and real-time chrome taping are virtually handmade productions like those of the Direct-to-Tape Recording Co. (14N Station Ave., Haddon Heights, N.J. 08035). Two of its catalog items are Ginette DiMedio's Chopin/Debussy/Ginastera recital in bravura if heavy-handed pianism that brings her Steinway grand right into one's living room, and an exceptionally imaginative and virtuoso recital of Martinů, Reger, Delius, and Vieuxtemps by Philadelphia Orchestra violinist David Booth with pianist Andrew Willis. I've heard only DBX open-reel editions of these sonic spectaculars, but they're also available in a variety of reel and cassette formats and encodings (DTR 7907, HF 7912, \$11 each; \$1.50 shipping).

BACKBEAT



Bassist John McVie: one of the two founding members

Fleetwood Mac: Making "Mirage"

The current quintet's long-awaited fifth album may be its last with Ms. Nicks. by Sam Sutherland

ON A JULY AFTERNOON, the atmosphere at Mick Fleetwood's Paradise Cove estate is one of relaxed chaos. In the kitchen, Fleetwood leans his long, lanky frame against a counter while Lindsey Buckingham and Christine McVie sit around the worktable that dominates the room. Technicians and friends drift through the hallways, past the living room where Fleetwood's drum kit and the rest of the band's instruments and amplifiers flank the fireplace. Their attorney drops in as phones make polite demands, announcing new arrivals at the front gate or incoming calls.

It's a fitting glimpse of Fleetwood Mac, a multimillion-dollar commodity that stubbornly insists on creative gambles. Its drummer may be a shrewd manager, but he also yields to chance and inspiration as essential elements in the Mac equation. Today, that means both sticking to the scheduled rehearsal for an upcoming fall tour and coping with an unforeseen visit from a studio crew that has decided to film this interview.

Though the band dates back to 1967,

drummer Fleetwood and bassist John McVie are the only remaining original members. Keyboardist/writer Christine McVie joined in 1970, when she was still married to John; Buckingham and Stevie Nicks, at one time a folk-rock duo, arrived in 1975. "Mirage" is the current lineup's fifth album together and, just weeks after its release, it is vaulting up the charts, rekindling the commercial momentum initiated by '75's "Fleetwood Mac," spured on by '77's "Rumours." and slowed by '80's "Tusk," whose sprawling ambitions rendered it radio-resistant. "Mirage" isn't likely to suffer that same fate, though it taps the same playful adventurousness that made "Tusk" such a critical triumph.

"One of the problems with "Tusk"," says Buckingham now, "was that it was a lot like a one-man experience. It was just me doing overdubs and stuff.... It didn't include the band," As reflected in the current album's production credits, Buckingham remains a dominant creative force, but he, Fleetwood, and McVie assert several times during the course of our interview



Bella Donna Nicks: on the fringe



Mick Fleetwood: Mac's shrewd overseer



Lindsey Buckingham: creative force



McVie: "Is that brilliant or terrible?"

that "Mirage" is far more of a collaboration than its immediate predecessor.

Stevie Nicks, however, is conceded to have been involved tangentially at best, a factor that only added to the pressures of recording "Mirage." The "Tusk" tour had ended amid speculation of Fleetwood Mac's demise at the close of 1980, speculation not entirely quieted by the subsequent release of a live album from that tour and by the arrival of solo LPs from Buckingham ("Law and Order"), Fleetwood ("The Visitor"), and Nicks ("Bella Donna"). In addition, both bassist John McVie and his ex-wife became involved in outside session and production chores.

"We certainly waited before we started to cut, didn't we?" cracks Buckingham to wry smiles from his cohorts. "This album was supposed to have come out last Christmas!"

Sessions began in April of 1981, when the band traveled to France to cut basic tracks in an intentionally isolated environment. But subsequent recording, mixing, and mastering dates in Los Angeles delayed completion until last June. Fleetwood's assertion that the project was recorded "with Arrid extra dry" is hardly an overstatement, given his own anxiety about its lateness and a certain amount of understandable pressure from Warner Bros.

Following basic tracking in France. Buckingham, Christine McVie, and engineers Richard Dashut and Ken Caillat (studio allies since "Rumours") became the chief architects of "Mirage." Fleetwood, says Lindsey, "is more of an overseer. He has a real good sense of taste. If something starts to go even a little off, he'll recognize it quickly." Caillat estimates Nicks's contribution to be "about ten percent" of recording, most of it during the sessions in France. "Stevie didn't come down a lot," admits Buckingham. "She was in the studio, aside from France, maybe a total of ten or fifteen days."

That helps to explain the subtle shift in vocal chemistry on "Mirage." "Fleetwood Mac" saw the introduction of an established, distinct vocal relationship in the Buckingham-Nicks duo, a sound that continued to dominate the band's vocal blend through "Rumours." "Stevie and I both had a nasal tendency that seemed to fall in the brass range," says Buckingham, "and Christine added a woodwind sound to the whole thing. 17 There are moments on 11 Mirage" that recall that mix, but in most instances the actual singers are Buckingham and McVie. "We've learned to sing like each other," chimes in Christine, "but that's come about over a period of eight years. When I first started to try and sing with these guys, they were so locked in to each other's sound, I really felt out of it. Now we automatically fall into it."

How well they do that is exemplified by the rich voices that float through "MiFleetwood Mac: Mirage Lindsey Buckingham, Richard Dashut, Ken Caillat, & Fleetwood Mac, producers Warner Bros. 23607-1

After the bold experimentation of "Tusk," the seamless pop flow of the new Fleetwood Mac album sounds initially like a studied attempt to recycle the formula that kept "Rumours" at the top of the charts for an entire year. But listen again: If anything, the music here suggests a valid synthesis of Mac's trimmer pop/rock songwriting with the innovative arrangements that gave "Tusk" its quirky, controversial identity. Yet where Lindsey Buckingham's work on "Tusk" boldly diverged from the band's earlier hits, here he integrates his ambitions into the styles of the band's other writers, Christine McVie and Stevie Nicks.

If Buckingham's own songs—particularly Book of Love, Empire State, and Eyes of the World—are the most distinctive, keyboardist McVie's are the warmest. On the opening Love in Store and the initial single, Hold Me, she offers simple, hookladen pop chestnuts as unassuming and attractive as the similarly uptempo romantic anthems of "Fleetwood Mac" and "Rumours." The major difference in performance lies in the vocal readings, which increasingly pair McVie's smooth alto with Buckingham's keening tenor.

His own songs find Buckingham further exploring the more extroverted vocal attack he has favored since "Tusk." His work here is somewhat more reined than the most primal moments on that LP and his own "Law and Order," but it is hardly due to mellowing: On *Book of Love*, he swings from a plaintive croon on the verses to a throaty, agonized howl on the choruses. The latter attack predominates on the mysterious *Eyes of the World*, which features his teasingly fragmentary lyric style.

Perhaps most impressive are the vocal arrangements and subtle instrumental embellishments that Buckingham contributes throughout. Never a conventional grandstander on guitar, he moves even further away from the original Mac profile as a guitarists' band: Although he's capable of riveting single-note solos, he trims them to a minimum, concentrating more on subtle rhythm parts, lacy acoustic guitar picking, and offbeat filigree (like the open-tuned harp he plucks on *Empire State*, a tribute to Manhattan that suggests the Beach Boys on acid).

As for the vocals, Buckingham and McVie, both together and individually, build lush, ear-filling harmonies behind their material. Framed by the record's predictably deep, immaculate sonics, the choral aspect is one of the album's finest common threads.

If there's any serious weakness here, it's the perfunctory feel Nicks brings to her songs. Whether preoccupied by the success of her recent solo album or weary of the partnerships within Fleetwood Mac, the dreamy pop siren sounds particularly mannered. Her writing simply recycles the ersatz mysticism and narcissistic role-playing that initially intrigued on songs like Rhiannon. Should her apparent detachment prefigure her departure, the band could suffer commercially. But I doubt there would be much musical damage-the best songs on "Mirage" are those from which she has, for all intents, already departed. S.S.

rage." A comment on a particularly effective descant, behind the chorus of Buckingham's *Book of Love*, elicits smiles from the author and his keyboard partner: It may sound like one of Nicks's better moments, but all the voices are Buckingham's. "On some of the vocal parts," says Christine, "Lindsey sort of slowed the track down and sang the part. When it was speeded up it sounded like Stevie. I listen to *Book of Love* and I think *I'm* on it as well."

Buckingham notes that a layered recording scheme has long been an integral part of their albums: "As far back as 'Rumours,' we were really cutting for a good drum track and maybe a good bass track, and that was about it. On *Love in Store* [which opens the new album], we probably kept everything from the basic track, but as a rule, we change the parts constantly."

"John [McVie] inevitably does his bass again," interjects Christine, who goes on to see this meticulous shuffling of parts as governed as much by feel as technical precision. "It's a fine line: Is it a little out of tune, or does it just feel good? Is that brilliant or terrible?"

Buckingham and engineers Dashut and Caillat add to these priorities the importance of subtlety, an issue that helps explain Christine's admission that she has yet to really explore synthesizers. She says she prefers the more traditional voicings of acoustic piano, Hammond organ, and electric pianos and clavinets. "I shouldn't say we hate synthesizers," says Buckingham, "but I think a lot of it is in the way you use them. For instance, remember Syndrums when they first came out? Everyone used them in the most obvious way--- 'bim-bwadim-bwim'. It was tasteless, when you think that they could have been used in interesting ways that were unidentifiable as Syndrums. That holds true for all synthesizers.

"Mirage" also marks the band's decision to shelve digital techniques, after having recorded "Tusk" on Soundstream equipment. That experiment, asserts Buckingham, was "a complete waste of time. It was just something we thought would make a difference, and it didn't, really, when it came down to what got onto the finished dise."

Though Fleetwood concedes that there were audible gains in the studio, Buckingham qualifies those carefully. "You can make a two-track copy of the mix and a digital copy, A/B them, and, in really sterile, controlled circumstances, hear quite a difference," says Lindsey. "But the question is, is that difference really aesthetically preferable? I don't think it is. I think you almost need a little of the softening you get on a two-track analog master, as a buffer between the two-inch master tape and the disc."

That's not to suggest the band is relaxing its reputed care in every stage of recording, mixing, and mastering. Caillat and Dashut note that they act as scouts prior to each new project, checking available studios for both room acoustics and available equipment. Right now, notes Caillat, the band prefers using Studer tape machines or the latest generation of Ampex recorders, although the basic tracks for "Mirage" began with tapes recorded on MCI machines at Le Studio in Herouville, France, "which we'd generally never use, but it was just fine," according to Caillat.

The relative importance of such specifics is also limited by the degree of sonic experimentation that follows basic tracking. Mac albums may not boast dramatic panning effects or obvious applications of heavy echo and distortion, but Buckingham is quick to support claims by Dashut and Caillat that a good deal of tinkering goes into the finished mix: "I think you'd be surprised at how much playing around we do with stuff afterwards."

Caillat also confirms that the band continues to pay close attention after the completion of mixing. Since "Rumours," the band has invested its own money in insuring the highest possible quality standard for each step from disc mastering to actual pressing. They also specify which facilities handle master plating and work closely with Vytec, a U. S. vinyl supplier whose premium Quiex compound has been refined in part from feedback from the band and its producers.

Yet, with all those technical considerations, Dashut and Caillat consistently echo Buckingham's credo, which holds that equipment is less important than the songs and their performance. Dashut, for example, dismisses the need for spectacular sonic effects by saying, "If you have Neiman-Marcus songs, there's no point in putting dimestore effects on them." Especially, one might add, when panning for platinum.

Vintage Vinyl from the Vaults

Reviewed by Mitchell Cohen

PERHAPS IT'S SIMPLY DUE to the pressures of inflation, but lately the record industry seems to be taking a more enlightened attitude toward its past. Many labels are reissuing classic pop, country, r&b, and rock albums (at budget prices) with original graphics, and assembling anthologies that show genuine respect for the music and its place in history. Authentic sound (monophonic when called for, instead of abominable rechanneled stereo), useful annotation and discographical detail, and art direction that truly reflects the contents and the era all help to make collecting cherishable pop music less of a frustrating task. One hesitates to call it a full-fledged movement, but it is a heartening tendency, reflected in the following albums.

Columbia Historic Editions: Sons of the Pioneers (FC 37439), Gene Autry (FC 37465), Lefty Frizzell (FC 37466), Spade Cooley (FC 37467), Bob Wills (FC 37468), Lester Flatt & Earl Scruggs (FC 37469)

Many facets of country & western music, from the depression through the Eisenhower years, are spotlighted in the attractively designed Columbia Historic Editions discs. Not thorough enough for the obsessive collector, nor representative enough for the casual investigative fan, the series encompasses western swing, honky-tonk, cowboy crooning, campfire harmonizing, and bluegrass. Any Bob Wills album is worth owning (also check out "Anthology," Columbia PG 32416) as is a sampling of Spade Cooley's brand of Swing, and Lefty Frizzell is a modern country cornerstone (as equally evidenced from "Remembering ...," Columbia KC 33882). The two singing cowboys-Roy Rogers, with Sons of the Pioneers, and Gene Autry-aren't in Frizzell's and Wills's lofty league, but their records hold up surprisingly well. Autry's creamy delivery on the wistful World War II waltz Same Old Fashioned Girl (1944) is a more rustic version than the big-bandwith-vocalist readings of the time, and Rogers defines a genre on the newly unearthed Cowboy Night Herd Song (1937), yodels and all.

The Dorsey/Sinatra Sessions, Vols. 1, 2, & 3. RCA CPL 2-4334, -4335, -4336 (each two discs)

Frank Sinatra, boy baritone, became a pop phenomenon with Tommy Dorsey's orchestra, and RCA has gathered all eightythree studio recordings that came out of that



Nat "King" Cole: peerless saloon singer

union (1940-42). The completeness isn't necessarily a virtue; some of these songs (Snootie Little Cutie, I'll Take Tallulah) are trivial nonsense. But Sinatra's distinctive warmth shines through, and the band breezes along on the slushiest melodies. Listening to all twelve sides (three double albums) may make you woozy (and the lyrics make you wince), but among the tracks are songs so guileless, charming, and dopey (Polka Dots and Moonbeams, Too Romantic) that they're disarming. By the later sides (There Are Such Things, Street of Dreams) Sinatra's voice was starting to get the dark undertones that marked his later work. This is a valuable, comprehensive guide to his Dorsey years, marred only by electronically reprocessed stereo.

The Best of the Nat "King" Cole Trio, Vols. 1 & 2. Capitol N 16260, 16261

While quantitatively chintzy—only ten songs on each disc—these are the only available Capitol recordings of the Nat "King" Cole trio, and the quality is undeniable. Cole's relaxed, assured vocal style was in its formative stages in this period (1943–49), and when he addded his brisk, Tatum-influenced piano playing, he made some very seductive, and popular, music. Unadorned by the strings and brass of his

later years, Cole was, on *Embraceable You*, For All We Know, It's Only a Paper Moon and almost everything else here, a peerless saloon singer. Capitol has more of this music stashed away, waiting to be liberated.

Ray Charles: A Life in Music Atlantic/Deluxe AD 5-3700 (five discs)

Its title and packaging trumpet Importance. "A Life in Music" is a coffee-table album, recognizing Ray Charles's inestimable musical contribution and trying to cover it all. The five discs sprawl all over his Atlantic years: his awesome gospel-r&b hits, his excursions into jazz with Milt Jackson, the deep blues of Losing Hand and A Fool for You. It's really an "early life," since it stops when he left the label in 1960, but this is when and where soul music started, and the boxed set is worth wading through for the smoldering despair of songs like Lonely Avenue and Drown in My Own Tears. But where are Mary Ann, Night Time Is the Right Time, The Mess Around? And where are the recording dates?

Rockabilly Stars, Vol. 3 Epic EG 37984 (two discs)

By sticking to the era when rockabilly was flourishing, the third volume of Epic's "Rockabilly Stars" series is a decisive improvement over the first two. While the programming continues to suffer from CBS Records' lack of strength in this spunky mid-'50s country-blues hybrid, the LP does have some likeable curios: two very early Everly Bros. songs, more from the irrepressible, teenaged Collins Kids (Soda Poppin' Around is an adolescent variation of Ellington's Don't Get Around Much Anymore), some better-than-middling Carl Perkins, and lots of other winners from leftfield sources-to wit, Werly Fairburn and Onie Wheeler.

The Coasters: Young Blood Atlantic/Deluxe AD 2-4003 (two discs)

Guided by the brilliant writing-producing team of Jerry Leiber and Mike Stoller, the Coasters (née the Robins) made the most enduring "novelty" records of the 1950s: crafty scenarios performed with sly humor and street-corner moxie. "Young Blood" collects twenty-four cuts, all their hits (Yakety Yak, Poison Ivy, Charlie Brown, etc.) and lesser-known gems such as Three Cool Cats, Run. Red, Run, and Shopping for Clothes. It is simply the best U.S. Coasters (Continued on page 96)

BACKBEAT **Reviews**



Carrack: funky fun in the rumpus room

Paul Carrack: Suburban Voodoo Nick Lowe, producer Epic 38161

"Suburban Voodoo" is the perfect title for Paul Carrack's not-quite-debut solo album. Forget about the blue-eyed variety, Carrack sings suburban soul like a Brit who drank his first pint while listening to "The Sound of Young America." The mood of this music is Motown. There's no missing it on the opening *Lesson in Love*, a rightcously rhythmic rocker with a harmony line that simultaneously evokes *I Heard It Through the Grapevine* and *Baby I Need Your Loving*. A man just can't get much more soulful than that.

Carrack has an impressive journeyman's resume. He had been a solo artist (this is actually his second solo disc), and a member of such bands as Ace (he wrote their hit, *How Long*), Frankie Miller's group, and Roxy Music (playing keyboards on "Manifesto" and "Flesh and Blood"). Last year, he attracted high-profile notice as the voice on Squeeze's *Tempted*, and then promptly packed up his toothbrush and split. Clearly, something was in the offing, and after hitting the road with Carlene Carter's band and staying on board when the group became Nick Lowe's Noise to Go, the happy ending is "Suburban Voodoo."

Carrack is not a gutsy soulman, although his voice boasts a solid and smoky middle range. At first listen, he sounds a bit like Robert Palmer, but then you notice that he's at ease. Where most rhythm & blueeyed singers arch their backs to sound authentic, Carrack kicks back his heels, pounds the piano, and lets it rip. Similarly, the songs, including some written by and with Lowe and Carter, are both natty and natural. From the boisterous organ of *Don't Give My Heart a Break* to the rolling harmonies of *Always Better with You*, these songs deliver.

It's ironically significant that all of this funky fun was produced by Nick Lowe. Historically, the combination makes sense: Carrack's Ace and Lowe's Brinsley Schwarz were both part of Britain's pubrock scene, and the joie de rock of this album parallels the work of another Brinsley alum, Ian Gomm. The intriguing difference, however, is that while Lowe's sense of play informs his compositions, it's often lost in his performance. Here, the playfulness of soul shakers like A Little Unkind and I Found Love goes beyond wordplay to capture a rumpus room atmosphere where latent and literal teenagers perform the mysterv dance. "Suburban Voodoo" is no great leap forward, but it is the sort of hop, skip, and jump that keeps you on your toes. JOHN MILWARD

Jimmy Cliff: Special Chris Kimsey & Jimmy Cliff, producers. Columbia FC 38099

Jimmy Cliff's best known songs—The Harder They Come, You Can Get It If You Really Want—have always reflected reggae's closeness to American, African, and even European pop styles, rather than emphasizing its pure, unrefined roots. As such, more than any other reggae artist living today, Cliff has helped make the genre an international musical force via his upbeat, well-crafted songs and sweet tenor voice.

Positive, altruistic anthems like the title track have long been his forte, and this one ranks among his best in its mix of an uptempo reggae beat, sunny horns, and tasteful synthesizer lines. *Rub-a-Dub Partner*, which closes Side 1, offers a slightly funkier take on the same theme (the virtues of true love), with some interesting woodblock parts supplied by the much-esteemed Jamaican percussionist Uzziah "Sticky"

Thompson. Cliff hardens up the beat considerably on *Roots Radical*, which is the kind of musically focused message song ("I'm a true-born Jamaican. . I'm a royal African/Yes I'm a radical/And I'm miles away from home") that Bob Marley perfected. In a similar, though more urgent vein is *Treat the Youths Right*, featuring percussionists from the African rootsinspired Jamaican band Ras Michael and the Sons of Negus. Rolling Stones guitarist Ron Wood guests on *Keep on Dancing*, whose rather common theme is treated with an interesting ambivalence.

A propensity to shift styles and producers, along with several hiatuses from the recording/touring treadmill have held Cliff's career in check to some degree over the past decade; "Special" should go a long way toward reestablishing him in this country as a preeminent, seminal figure in modern reggae. CRISPIN CIOE

Elvis Costello and the Attractions: Imperial Bedroom Geoff Emerick, producer Columbia FC 38157

Ever since his second LP in '78, when he started working with the Attractions. Elvis Costello's obsession has been to manipulate and expand the pop-rock song form. Several critics have even said that, as a lyricist, he has succeeded Bob Dylan as the ranking pop miniaturist of this era. But Dylan has always stayed within the bounds of traditional song form; Costello, like Squeeze's Difford and Tilbrook and occasionally Bruce Springsteen, is much more adventurous. This is more apparent than ever on "Imperial Bedroom," a striking blend of incisive pop poetics and artful, musical excursion.

Having concentrated on specific genres on his last two discs (American soul on "Get Happy," country on last year's "Almost Blue") Costello here draws from a wide array of musical sources to support his mostly dark lyric images. The Long Honeymoon's shadowy, minor-keyed bossa-nova beat fills out the image of a young wife sitting up at home, "wondering where her husband will be tonight" as she gradually builds enough evidence in her mind to substantiate his infidelity. The Man Out of Time "listens for the footsteps that would follow him around" within a Phil Spectorish sound context that, colored by Steve Nieve's brilliant and tasteful piano flourishes, is almost cinematic in effect. Here, Costello's wide vibrato recalls such early

'60s girl-group singers as Darlene Love and Ronnie Spector.

Throughout, Costello paints his images with interior rhymes, changes in meter, and musical bridges that come in unexpected places. Pungent little phrases economically sum up the attitudes, if not the exact physical dimensions, of his characters. Yet, the straightforward ballad Almost Blue is equally effective, more reminiscent of a standard like My Funny Valentine than a rock & roll tune. For the most part, the subject matter is dark and sad. But the songs never sound labored, and the singer is eminently capable of transcending the bleakness of his own visions. In sum, "Imperial Bedroom" is a virtual songwriting tour de force, easily confirming Costello's position as the most strikingly original writer in the modern, post-punk rock era. CRISPIN CIOE

Go-Go's: Vacation

Richard Gottehrer, producer I.R.S. SP 70031

Much of the charm in the Go-Go's huge debut hit, "Beauty and the Beat," rested with the band's synthesis of new rock stance and '60s girl-group demeanor. Even the evident limitations of musicianship were overshadowed by sheer verve and girlish pizzazz.

On "Vacation" those limitations show signs of modest improvement, chiefly in Charlotte Caffey's more prominent use of keyboards to buttress her rudimentary guitar chops. There is also somewhat tighter rapport in the rhythm section of bassist Kathy Valentine and drummer Gina Schock.

Ironically, it's the band's initial lure, the collective persona as fun-loving and rather boy-crazy girls, that poses problems this time around. The last album's best songs conveyed an underlying wit, suggesting that beneath the froth lay some toughminded contemporary views of the war between the sexes. On the strength of songs like Skidmarks on My Heart, This Town, and the album's hypnotic masterpiece. Our Lips Are Sealed, one heard the promise of future maturation.

Here, though, lead vocalist Belinda Carlisle's kittenish delivery fails to tap any new nuances, or, for that matter, to extract as much meaning as she did on the preceding work. Despite new stabs at a worldweary perspective in the lyrics of rhythm guitarist Jane Wiedlin, Carlisle winds up sounding mostly air-headed throughout and closer in spirit to the scatterbrained heroine of Moon Zappa's Valley Girl than to any post-punk thinker.

This is not to suggest that the band shouldn't be commended for attempting to restore mindless fun to modern rock's recent imprisonment in bombast. But despite some infectious new riffs (on the title song, He's So Strange, and Get Up and



Carlisle: less convincing this time

Go, among others), the songs sound more like editorial revisions of the material on "Beauty" than fresh works. Unless that stagnation can be reversed, it's likely this quintet's mannered fun will prove less and less convincing down the line.

SAM SUTHERLAND

The Steve Miller Band: Abracadabra Steve Miller & Gary Mallaber, producers. Capitol ST 12216

Steve Miller didn't have to call his album "Abracadabra" to let us know he's a magician. The undisputed king of briefcase rock has been pulling rabbits out of familiar hats for years. Recently, though, he has appeared to have less up his sleeve. Last year's "Circle of Love" was bissected by the side-long Macho City, which left one wondering whether he had run out of pithy. three-minute melodies. And on this album, the second of three produced during a flurry of recording, he contributes only two songs

"Abracadabra" finds Papa Miller letting his charges show their stuff (or, perhaps, sharing royalty revenue with loyal sidemen). Schooled in the Miller songbook, they pursue his method of cut-andpaste, and tunes like the laconic While I'm Waiting and the streamlined Keeps Me Wondering Why show that the lessons can bear fruit. The pedestrian nature of much of the rest, however, indicates that his protégés have not followed the platinum purloiner's primary rules-steal only the best and covet the cliché.

As a writer. Miller is so brazen it's bracing. No grown man should be able to get away with as silly a sex song as Abracadabra, but he pulls it off like a Casanova. That's because, above all, he is a master craftsman, capable of making the obvious sound sublime. It's in evidence from the stuttering "ah-ah-ah-ah" intro of Things I Told You to the snaky guitar fills of Cool Magic. "Abracadabra" tracks better than its predecessor (after all, there are two sides of songs) but the lack of Miller originals makes it less than magic. What's needed here are a few more rabbits.

JOHN MILWARD

Robert Plant: Pictures at Eleven Robert Plant, producer Swan Song SS 8512

According to a coven of fundamentalist Led Zeppelin fans, spinning Robert Plant's "Pictures at Eleven" backwards reveals the following message: "The song remains essentially the same." Actually, the first solo album by the late group's lead singer boasts a consistency that usually eluded Zeppelin. Guitarist Robbie Blunt is not as flashy as Jimmy Page, so instead of fireworks, we simply hear the band (with drumming by Phil Collins and Cozy Powell) framing a solid set of songs.

The songs of "Pictures at Eleven" are the sort of burnished blues that had become Zeppelin staples. The best (Burning Down and Mystery Title) put new frosting on the form with crisp arrangements and polished performances. Others (such as Like I've Never Been Gone) merely sound familiar. Two songs command particular attention: Fat Lip, a light-tempo rocker unlike anything Plant has sung, and Slow Dancer, which grafts a grinding blues riff onto an aromatic middle-eastern cadence reminiscent of Zeppelin's Kashmir.

Lyrically, Plant's "Pictures at Eleven" (written for the most part with Blunt) are blank canvases. Above all, these richly produced tunes tout texture-the acoustic guitars that feather Moonlight in Samosa, and the mixture of guitars, synthesizer, and voices that moves Slow Dancer from grace to grunt. This is a remarkably relaxed record for a first solo effort. To his credit, Plant has produced nothing more or less than a solid piece of hard rock.

JOHN MILWARD

Donna Summer

Quincy Jones, producer Geffen GHS 2005

On paper, the pairing of Donna Summer's raw vocal talent with Quincy Jones's production finesse sounds like a perfect match. Summer's long partnership with producers/ arrangers Giorgio Moroder and Pete Bellotte may have yielded a long string of hits, but it's clear neither was as sensitive to vocal technique as Jones. Indeed, the first few spins of her eponymous new LP show that he has managed to both tame Summer's more hyperbolic excesses while freeing her to achieve truly uninhibited bursts of energy

Why, then, does "Donna Summer"

BACKBEAT Reviews

ultimately seem like an unhappy marriage? The answer may lie in the extent to which Summer has been tutored. It's exhilarating to hear the erstwhile disco diva stretch beyond her earliest roots in musical theater and rock to tap a new degree of subtlety and r&b depth. Yet too often she winds up sounding closer to other deft black vocalists—Patti Austin, Phyllis Hyman—than to her own considerably more distinct past styles. I suspect her fans will be more upset at the loss of vocal identity than they are impressed by her much improved control.

That's a shame, especially considering how stunning some of the performances are. On *Mystery of Love*, Jones and Summer refine the romantic urgency that was one of her original strong suits, forming a bridge to the Moroder/Bellotte period while injecting fresh sophistication in her smooth vocal attack.

Even better is *Love Is in Control*, a sizzling, sexy declaration of love that features the singer's most convincing r&b foray to date against an intricate, syncopated vocal and instrumental arrangement (crafted by Jones, James Ingram, and Rod Temperton). Summer's reading of a new Bruce Springsteen song, *Protection*, is nearly as good if less distinctive, perhaps because of the arrangement's too reverent approximation of an E Street Band approach.

Those tracks alone may justify the work for some listeners, and Jones fans will probably find enough satisfaction in the playing and the charts to keep them happy. Summer loyalists, however, will probably hope for a reconciliation with her old producers. SAM SUTHERLAND

Jazz

Chet Baker/Jim Hall/Hubert Laws: Studio Trieste Creed Taylor, producer

CTI 9007 (P.O. Box 705, Old Chelsea Station, New York, N.Y. 10113) Chet Baker/Lee Konitz: In Concert Bob Cummins, producer India Navigation IN 1052 (60 Hudson St., Rm. 205, New York, N.Y. 10013)

Both Miles Davis and Chet Baker could be called either trumpeters of limited ability or trumpeters who choose to work within a limited range. Davis, in his early days, was often frozen by his own feelings of incompetence. It was in his association with Gil Evans—both in the Davis nonet and through the big band arrangements Evans wrote for him in the '50s—that Davis found how to make the best use of his capabilities.

Though Baker has had no Evans to guide him, in the ups and downs of his

scarred career he has settled into a style similar to early Davis. And, on the evidence of "Studio Trieste" and "In Concert," that style works best in settings close to those that Evans wrote for Davis.

On the CTI disc. Baker is in the company of guitarist Jim Hall and flutist Hubert Laws playing Don Sebeskey's arrangements of the basically classical Swan Lake and Malagueña and the basically jazz Django and All Blues. Baker's dark tone, clipped, spitball phrases, and sudden soaring snatches of melody fit most comfortably into the jazz pieces. Hall and Laws provide contrast; the former is calm and introspective, the latter full of rich colors and fullbodied lyricism. Sebeskey's arrangements are calculated mood developers that, together with some exceptionally provocative rhythm and ensemble support, provide Baker with a marvelous context within which to move

"In Concert" finds Baker in a jam session with saxophonist Lee Konitz, and Konitz' confidence is a striking contrast to his partner's tentativeness. However, when Konitz moves in behind him on *Walkin*'. Baker gains strength and pulls things together. He is most at ease in the final, rideout ensemble passages when the direction is firmly established by Konitz, Michael Moore's bass, and Beaver Harris' assertive drumming. JOHN S. WILSON

Chicago Rhythm

Louise Anderson, producer Stomp Off S.O.S. 1026 (549 Fairview Terrace, York, Pa. 17403)

There are points of similarity between Chicago Rhythm and the State Street Aces (S.O.S. 1011) [see BACKBEAT, May]: The reed team of clarinetist Frank Powers and alto saxophonist John Otto, the envigorating drumming of Hal Smith, and material that is basically from Chicago of the '20s and early '30s. But Chicago Rhythm, a sextet, is the more civic-minded. Its album includes compositions by such Chicagoans as pianist Alex Hill, clarinetist Bud Jacobson, and guitarist Eddie Condon. The reading of He's the Last Word represents one of the tune's few recordings since Benny Goodman popularized it with Ben Pollack's band in 1926; not coincidentally, Goodman and Pollack are both from Chicago.

The Powers-Otto reed team follows the Jimmie Noone-Joe Poston ensemble style established in Noone's late '20s Apex Club band. Chicago Rhythm even makes use of that band's repertoire with Oh, Sister, Ain't That Hot, I Lost My Gal from Memphis, and Chicago Rhythm. As with Noone's group, there is no brass in Chicago Rhythm. (State Street Aces has a trumpet and trombone.) But, though the tone of the two reed-based ensembles is quite similar, Powers and Otto are not slavishly tied to their model. Rather, they expand on it.



Getz: near perfection

Otto, for instance, plays bass saxophone when Louise Anderson puts down her tuba to sing *Hummin' to Myself*.

One of the most vitalizing elements in Chicago Rhythm is Ted Des Plantes's joyous, rollicking piano; it makes passing reference to Earl Hines's style in the Noone group but is so full of sky-rocketing energy that it has a life of its own. "Chicago Rhythm" is an excellent demonstration of what Powers has called "idiomatic classic jazz"—i.e., vintage jazz that reflects not only the sound but the spirit of the original period. JOHN S. WILSON

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BACH'S CHORUSES

(Continued from page 66)

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an "original" performance. In any case, the fact that the Dresden chapel listed only one tenor among its members may mean only that there was just one musician at the court whose primary function was to sing as tenor (no doubt the tenor soloist). Other choral tenors could well have been listed according to their principal function in the chapel-as players of this or that instrument, for example. Musicians of the time were expected to be versatile. There is then no objective historical or documentary basis for a performance of the Mass in B minor by a quintet of voices (necessarily expanded to eight for the "Osanna"-for the first two hours or so of a live performance of the Mass those three extra voices are apparently expected to loiter about, idle and silent). What such a rendition accomplishes, moreover, is not so much to enhance the "clarity and immediacy" of the polyphony as 1) to put undue, almost inhuman, strain on the singers, who have to sing not only all the arias and duets but also every single note of every chorus of this two-and-a-half-hour work (a feat of exertion never required of standard choruses, of course, where any individual singer can drop a note or a measure here and there to catch his breath-or spare his voice), and 2) to compromise the very design of this monumental masterpiece-obscuring its careful formal architecture consisting of majestic choral pillars enclosing the more intimate arias and duets with their obbligato instrumental and vocal solos. What we have instead is an anemic Mass, deprived of its full resources of carefully contrasted and balanced colors, textures, and densities, in which (at least in a live performance) the handful of singers become increasingly exhausted from their ordeal, mercilessly obliged as they are to sing every single note and instinctively attempting to compensate for the absent ripienists by trying (inevitably in vain) to project the power and grandeur residing in and demanded by those mighty choruses. The result is an eccentric travesty.

Yes, there are indeed "alarming" implications in this curious and totally unfounded notion of one on a part—alarming not for vested musicological interests, but for the music of Bach.

HAYDN/NEW AUTHENTICITY

(Continued from page 60)

Lyre. So far as I know, the only serious ventures have been those undertaken by the old-faithful Collegium Aureum, and at that, in the later works. A 1973 pairing of two of the Paris Symphonies, Nos. 85 and 87, was issued here on the short-lived American BASF label (KHB 20340) and can still be had in European pressings. Two more of the Paris series, Nos. 82 and 83, issued in 1975 in Europe, have lately appeared on Pro Arte (PAL 1001), as has a 1979 pairing of Salomon Symphonies, Nos. 94 and 103 (PAL 1005). While these appealing renditions (led from the first desk by concertmaster Franzjosef Maier) do give an alternative sonic perspective on familiar scores, the retention of a certain amount of string vibrato diminishes the break with conventional modern-instrument ensemble sound; the Collegium Aureum has really fallen behind the more dramatically revisionist ensembles now commanding the scene.

Thus, not only have early-instrument performances of Haydn symphonies been strikingly limited, but they have ignored the earlier works, where the composer's links with late-baroque roots are most evident and where "authentic" instrumentation and sound would best point up the interaction of the old and the new as Haydn slowly forged his style. It is that fresh and illuminating scrutiny that these Saga albums afford. Yet more is involved here than just "original-instrument" performances. For this set also contributes another fascinating "first": an effort to put the earliest symphonies in their correct order of composition, so far as can be determined.

It has long been common knowledge that the conventional numbering system for Haydn's symphonies-established by Mandyczewski for the old Breitkopf and Härtel edition and retained by Hoboken in his thematic catalog-is full of errors in chronology, both absolute and relative. The most vivid testimony to this was the discovery after World War II of the music library of the Fürnberg family. Early patrons of the young Haydn, the Fürnbergs retained the sets of orchestral parts for the symphonies the composer wrote for his first major position, as Kapellmeister to the Morzin family. It was in this service that he first began composing symphonies; what the Fürnberg archives represent, therefore, is the initial segment of his seminal output in this form. Moreover, these parts, carefully edited and corrected by Haydn, bear his own chronological numbering, so that it is possible to correct the Mandyczewski/Hoboken numberings, even though some losses in the Fürnberg sets leave gaps in the sequence. The total collection may originally have comprised twenty-five symphonies, but the surviving numbers run only as high as No. 21. The ubiquitous Landon, adviser and annotator for these recordings, has been

able to suggest which symphonies and other works would have fitted into the gaps. The following list shows how the Fürnberg numberings match the Mandyczewski/ Hoboken counterparts, with the presumed items missing from the Fürnberg collection and posited by Landon indicated in brackets:

F.	M./H.	12	32
F. 1	1	13	5
2	37	14	11
3	18	15	33
4	[19]	16	27
5	2	17	``A`` /107
6	["B"/108	8]18-20	Scherzandos,
7	[16]		H. II: 33-35]
8	[17]	21	3
9	15	[22-24]	[Scherzandos,
10	4		H. II: 36-38]
11	10	[25]	[20]

The recording offers only those works that specifically survive in the extant Fürnberg manuscripts, on which Landon's performing editions are based: in order, F. 1–3, 5, 9–11, in the first album, and F. 12–17 and 21 in the second. For cross-reference, the record information given on page 96 lists

These recordings give us the fascinating new vantage point of chronology.

the numbers from the Mandyczewski/ Hoboken reckoning, in its order (not that of the recording).

From the outset, we listen to these recordings from the new vantage point of chronology. It's one thing to know in the abstract that the familiar numbers have to be disregarded but another to have the sequence actually revised for listening. After all, previous recorded ventures into "complete" Haydn symphonies have followed the nonchronological Mandyczewski/Hoboken numbering: Ernst Märzendorfer's series for Musical Heritage Society; Antal Dorati's on London Treasury; and Max Goberman's recordings for the mail-order Library of Recorded Masterpieces (with his omissions to have been filled in by Charles Mackerras), since discontinued, which Columbia Odyssey began to reissue but broke off with Vol. 8 (through No. 22). Now, here, we can follow naturally the composer's own development as it happened, in his assimilation of background, assertion of individuality, refinement of characteristics, and experimentation with novelty.

Particularly striking is the matter of scoring. The first seven symphonies, which make up Saga's Vol. 1, are all scored for pairs of oboes and horns with strings (and presumed continuo). Then, like some sudden sunburst, Vol. 2 opens with the brilliant C major of No. 32 (F. 12), with trumpets and timpani added; and while the earlier, smaller scoring returns for four more of the symphonies of this second sequence, Haydn's orchestral palette seems enlarged and transformed for good. Such a process we could never have perceived so vividly without this chronological order.

Ultimately, of course, there is the question of the performances, in both musical and sonic terms. L'Estro Armonico was founded in 1973; its name taken from one of Vivaldi's most famous sets of published concertos, it devoted itself in particular to that composer for a while in relation to the Vivaldi Society, also organized by Derek Solomons. Directing from the concertmaster's desk, Solomons here leads an orchestra meant to duplicate that of the Morzin household: three each of first and second violins (from a pool of nine players), one viola (of two players), one cello and double-bass, plus pairs of oboes, horns, and trumpets, with one bassoon, harpsichord, and timpani. The instruments are either originals, dating from as early as 1599, or modern copies of early models, and pitch is set at A=430. The playing is all highly accomplished, matching the best standards among the new generation of early-instrument ensembles, and the recorded sound is full and clear, in admirable engineering and pressing.

Even these early Haydn symphonies have achieved a surprising number of recordings by now, and to enumerate and compare them all-even all those currently available-would be needlessly tedious. I did, however, find it convenient in my own evaluation of the Saga sets to take as one reference point the Dorati recordings, a "standard" and easily accessible systematic cycle (specifically, Nos. 1-19 in STS 15310/5, Nos. 20-35 in STS 15257/62, and Nos. 36-48 in STS 15249/54); and as another, the Goberman recordings of most of these fourteen, as reissued by Odyssey, a coherent and distinctively effective series in its own right even if no longer available.

These comparisons put in clear relief both advantages and disadvantages in the L'Estro Armonico performances, as well as simple realities. The most immediate of the latter is, of course, the scale and sonority of the early-instrument treatment. In the delicate Siciliano slow movement of No. 27 (F. 16), the string writing sounds close to that of a Haydn quartet in charm and intimacy as Solomons leads it, whereas Dorati turns it into more public sentimentalism. Yet in a parallel situation, in the opening movement of No. 33 (F. 15), the smaller scale of Solomons' reading makes for a directness and pungency but also an unsubtlety, against which Dorati, while making a far bigger sound, conveys more cleverness and infleetion in shaping the music. Likewise the case

of the slow movement of No. 4 (F. 10): Its violin cantilena has a refreshingly eerie sound on Solomons' instruments, while Dorati again stresses a richer, rounder quality; but most instructive is the Goberman recording (Odyssey 32 16 0034, previously LRM HS 10), where far more depth of feeling is discovered by attention to the inner voices.

One question that quickly emerges is the extent to which the Saga performances suffer from being led by a concertmaster rather than fully conducted from a podium by a more assertive personality. Sometimes the differences are between viable alternatives. In the brilliant No. 32 (F. 12), especially its dashing first movement. Solomons understates the mood, perhaps in keeping with the scaled-down ensemble's character, whereas Goberman (though hampered by cramped playing and sound) offers (LRM HS 14, not reissued by Odyssey) an infectious exuberance, and Dorati aims at a more expansive fullness-you pays your money and you takes your choice. On the other hand, there are times when understatement gets out of hand. No. 5 (F. 13) opens with one of those experiments with a slow first movement, marked Adagio ma non troppo: Solomons construes this as more in the direction of an andante, and despite some striking high horn playing, the effect is rather prosaic; Goberman (Odyssey 32 16 0034, not originally issued by LRM) goes in the other direction, creating an adagio that, in his characteristically probing fashion, is pure poetry; Dorati is somewhere in between in pacing, a more flowing compromise between those two poles. Even more telling a contrast in pacing is the opening movement of No. 15 (F. 9), an Adagio/Presto/Adagio sequence: Solomons offers little shaping or inflection, taking the fast music at a rather simpleminded jog-trot; Dorati is somewhat superficial in his own way, whereas Goberman (Odyssey 32 16 0166, originally LRM HS 12) is more pointed and pungent in his broader outlines.

None of these comparisons is meant to disparage Solomons and his colleagues, though I must say that they do confirm yet again my admiration for the sadly underrated and ill-fated Goberman. What is apparent is that these fourteen early works, however tentative or preliminary they may seem as the first fruits of a long process of stylistic evolution, are not to be regarded as "primitive" trifles or merely antiquarian objects. A good conductor can discover real substance in many of these scores, and fine performances by conventional moderninstrument orchestras still have much to offer.

What L'Estro Armonico presents us with, then, is nothing that supersedes all predecessors, but a fresh new look that is healthy and fruitful. Its performances are far from definitive statements on these works in interpretational terms. But they are viable renditions, in terms that force us to rethink our understanding of how Haydn's ear for ensemble sound must have developed. By giving us these fourteen pieces for the first time in authentic chronology and sound qualities, they allow us to put Haydn's beginnings as an orchestral composer in a valid stylistic context, displaying both his roots and his originality to better effect. How much more fresh, energetic, imaginative the young Haydn emerges in these bracing sounds of a kind for which this music was conceived!

These two sets are, therefore, a triumph for all concerned. No one who loves Haydn or who cares about the evolution of orchestral music should fail to investigate them. It is interesting to note, in closing, that the expenses of this thorough and remarkable project were underwritten by the distilling firm of Martini and Rossi. Surely, in this age of Reaganomics and the challenge to the private sector, there is a wonderful model here for what enlightened corporate patronage in the arts could contribute to our sadly muddled American classical record industry!

HAYDN: Symphonies, Vols. 1*, 2†: Morzin, 1758–60.

L'Estro Armonico, Derek Solomons, dir. [Martin Compton, prod.] SAGA HAYDN 1*, 2[†], \$32.94 each (three discs, manual sequence) (distributed by International Book and Record Distributors, 40-11 24th St., Long Island City, N.Y. 11101).

Symphonies: No. 1, in D (F. 1)*; No. 2, in C (F. 5)*; No. 3, in G (F. 21)[†]; No. 4, in D (F. 10)*; No. 5, in A (F. 13)[†]; No. 10, in D (F. 11)*; No. 11, in E flat (F.14)[†]; No. 15, in D (F.9)*; No. 18, in G (F. 3)*; No. 27, in G (F. 16)[†]; No. 32, in C (F. 12)[†]; No. 33, in C (F. 15)[†]; No. 37, in C (F. 2)*; No. ''A''/107, in B flat (F. 17)[†].

SOUND VIEWS

(Continued from page 29)

the remaining years of this century, and nobody can be sure just who will make them, or how. Thus, a great deal is at stake-not least for the creative souls whose work is so important to all of us associated, as authors, editors, or readers, with a journal such as this one. If we are to continue to enjoy the fruits of their efforts, some provision must be made for the creators when the profits are divvied up. I find it very hard to believe, however, that the Copyright Royalty Tribunal would accomplish this end very efficiently-even in an administration that, unlike the current one, might be seeking more bureaucracy and regulation, rather than less. Home recordists will continue taping even if costs rise. but they will stop if interesting recordables vanish.

If the recorder and tape businesses are to remain healthy, I think we need to develop some method of channeling income from those who consume to those who create. But the more I consider the situation, the more I become convinced that we are seeing only the opening skirmish in an attempt to wrestle equitably with the realities of modern information-distribution technology. The courts and Congress are trying to come to grips with ten-year-old issues; whatever they achieve will be obsolete at birth.

VINTAGE VINYL

(Continued from page 87) anthology, a superb introduction to the group that brought vaudeville, pop culture, and racial allegory into the Top 40.

Beach Boys/Brian Wilson: Rarities* EMI (Australia) ST 26463

More fun than the repetitive U.S. Capitol compilations of Beach Boys material, "Rarities" is an Australian project, a twenty-track LP of hard-to-find songs that the group and its leader-writer-producer Brian Wilson had a hand in. A master of pop texture, Wilson could be giddy (Surfin' Down the Swanee River by The Honeys), melancholy (Glen Campbell's Guess I'm Dumb), and plain odd (The Beach Boys' Well You're Welcome). If you're a Californiapop fan tired of I Get Around recyclings, seek out this import, which has The Lord's Prayer on one side and Pray for Surf on the other, a true ontological dialectic at work.

Jackie DeShannon: Pop Princess* EMI/Liberty (Australia) UAC 5094

Perhaps best known as the cowriter of *Bette* Davis Eyes, Jackie DeShannon has a notable past as a singer and composer in the '60s, which is recapitulated on "Pop Princess," another Australian package. The record features early Jim Webb, Randy Newman, Carole Bayer, and Burt Bacharach efforts, plus a dozen of DeShannon's own songs, the oft-covered When You Walk in the Room among them. It isn't easy to locate, but quite a pleasure is in store when you do.

Lost Soul, Vols. 1, 2, & 3 Epic PE 37730, 37731, 37732

A number of the artists in this trilogy may be a mystery to you and due to lack of liner information will remain so. That matter aside, a good deal of this music—most from the 1970s, with records by Don Covay and the Vibrations representing the '60s has the potential for commercial impact. Jackie Moore's *Personally* (Vol. 1) recently became a hit single as rendered by Karla Bonoff, and other songs here by the Chair-

*Available from Jem Records, P.O. Box 362, 3619 Kennedy Road, South Plainfield, N.J. 07080.

men of the Board, Thelma Jones, Fontella Bass, Brenda & the Tabulations, and Essence are just as worthy of rediscovery. Pure soul, at a reasonable price.

Gram Parsons & the Fallen Angels: Live 1973

Sierra GP 1973 (P.O. Box 5853, Pasadena, Calif. 91107)

Country-rock pathfinder Gram Parsons left behind too few albums as evidence of his short but significant career, so this concert LP, recorded nine years ago and only now licensed for release (from Warner Bros.), is an event. The duet with Emmylou Harris on *Love Hurts* is one sweet ache, and only Parsons' off-center perspective could encompass Merle Haggard, the J. Geils Band, *Country Baptizing* (lead vocal by Emmylou), and his own inscrutable mournfulness (*The New Soft Shoe*), and have it all make perfect sense. In these days of homogenized Alabama/Barbara Mandrell country, Parsons is sorely missed.

BACKBEAT REVIEWS

(Continued from page 90)

He does all this with one of his best quartets to date. Marc Johnson has, for several years, been establishing a reputation as one of the most skillful and perceptive of the younger bassists; he responds brilliantly to the fire and feeling that Getz projects. Victor Lewis' drumming has the sinew necessary to move the shifting intensities of his leader's drive and drama. Jim McNeely's piano solos fall into rather predictable running lines, but he is an excellent ensemble pianist.

Even on the uninspiring, string-infested soundtrack for *Forest Eyes*. Getz's sense of the dramatic keeps lifting and enlivening Jurre Haanstra's routine music. It is interesting to hear what he can achieve in dull surroundings, but why bother when "Pure Getz" is available. JOHN S. WILSON

The Louisiana Repertory Jazz Ensemble: Alive and Well S. Frederick Starr, producer Stomp Off S.O.S. 1029

"It is impossible to imagine classic New Orleans jazz without dancers," writes the uncredited author of this disc's excellent liner notes. "It was the dancers who demanded the distinctive rocking beat, who wanted hard-driving ensemble playing rather than solos, and who cared more for the right overall 'sound' of a band than for its technical nieeties or pyrotechnics."

This helps to explain why so many of the old New Orleans bands sounded hesitant on the opening choruses of their recordings—the musicians and the dancers were feeling each other out. Once a mutually satisfactory beat had been settled on, the In Brief: Atlantic/Deluxe's "Masterworks" by Albert King (AD 2-4002) contains far too much of the blues guitaristsinger's substandard '70s work, as well as a taste of his fine Stax LP "Born Under a Bad Sign." A reissue of that entire album would have been preferable. Similarly, the memory of seminal New Orleans pianist-personality Professor Longhair would have been better preserved by digging out his 1949 and 1953 Atlantic sessions than by the 1978 live set taped for "The Last Mardi Gras" (Atlantic/Deluxe AD 2-4001). The Solid Smoke label does a consistently exemplary job of packaging r&b, most recently with albums by the Flamingos (early '50s material), the Van Dykes, and a match-up of two mid-'60s Chicago soul outfits, the Esquires (Get on Up) and the Marvelows (1 Do). And MCA has a budget-priced "Collectables" line that ranges from Hoagy Carmichael and Bing Crosby to Tommy Roe and Lloyd Price, skimping on number of songs and liner information, but containing essential performances. HF

ensemble took off, with any solos coming out of and being subservient to the ensemble context

The Louisiana Repertory Jazz Ensemble is not an old New Orleans jazz band, but a disciplined, balanced mix of age and youth that faithfully re-creates the spirit, elements, and characteristic colors of classic New Orleans jazz. It is steeped in tradition and even has its own living reference in seventy-vear-old bassist Sherwood Mangiapane, whose family has been prominent in New Orleans jazz for decades. Other interesting personalities here include Frederick Starr, whose clarinet is always appropriate but is never a copy; Frederick Lonzo. a trombonist whose attack is broad, brash, and swashbuckling; John Chaffe, whose hard-driving banjo on Georgia Swing is balanced by his light and graceful mandolin solo on Yama Yama Man; and romping pianist John Royen. The group has done a good deal of research, and as a result performs the music of Jelly Roll Morton, King Oliver, Sam Morgan, and others with a greater understanding than is usually the case. Yet there is nothing stuffy or stiff about it; the Louisiana Repertory Jazz Ensemble swings and swaggers with freewheeling, driving authenticity.

JOHN S. WILSON

Magnolia Jazz Band: Red Onion Blues Bob Erdos, producer Stomp Off S.O.S. 1016

Stomp Off releases a good many recordings by Dutch and Scandinavian bands that pattern their sound on the old New Orleans groups. As a result, "Red Onion Blues" could fool a lot of listeners: The six-piece Magnolia Jazz Band sounds like its North European peers, primarily because it has more guts and drive than English or American groups that attempt to play in this style.

But its members are all Americans, and most of them are veterans of West Coast traditional jazz. They sound relaxed, unhurried, and quite positive. Their singing tone stems partly from trumpeter Jim Borkenhagen and from Bill Carter's warm, bubbling clarinet. Jim Klippert's trombone also helps to move things along, his tone ranging from dark and gruff with a Jim Robinson moan to soft and airy. And the rhythm section is a real rhythm section. Its pulse is steady, always enough to keep things at a canter, yet never running away into a gallop, as most trad bands do. But perhaps the most distinctive feature of all is the wry, open-voiced singing of Dan Ruedger. Also a banjo player, Ruedger has a bit of Clancy Hayes in him but laces his songs with a grainy, feisty vigor.

The material is all out of the '20s and '30s or earlier, from *The Old Rugged Cross* and *Good Time Flat Blues* to a Leo Robin-Richard Whiting pop song, *I Can't Escape from You*. Like its New Orleans models, the Magnolia Jazz Band sometimes takes a few bars to find its groove, but once it does so, it takes off. JOHN S. WILSON

Ruth Olay Sings Jazz Today with The Red Mitchell Trio

Bosse Broberg, producer Laurel LR 501 (Laurel Record, 2451 Nichols Canyon, Los Angeles, Calif. 90046)

Jazz may not really be Ruth Olay's field. On this album, recorded in Stockholm (no date is indicated) she sings superbly on the slow numbers, successfully bringing out the emotional mood of her material. Her soaring, floating projection is somewhat like Morgana King's, though she is more interpretive than King.

But when Olay tries to round out her program by moving into faster tempos, her voice and delivery sound as out of place as a classical singer's would. She is just not with it. Her backing trio—bassist Red Mitchell, pianist Goran Strandberg, and tenor saxophonist Nisse Sandstrom—provides some compensation. Sandstrom's solo opportunities, in particular, reveal a nonoppressive, modest tenor player who can be very positive given the right context.

Mitchell is the apparent leader and he too takes several solos. Most are rather routine except for his sensitive treatment of Roger Kellaway's *I Have the Feeling I've Been Here Before*. His performance of *Blues for Crushed Souls* (whose credits read "lyrics, music, piano playing, and vocal by Red Mitchell") is seemingly heartfelt but labored. In the long run its attempt to make a political statement becomes boring and, as such, self-defeating. JOHN S. WILSON

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Establishing a set of priorities and using them when buying a speaker assures that the factors you consider important, such as size (above), are integral to the final decision.

ture, and heavy fabric draperies all soak up sound, particularly the treble frequencies. Bare wood floors, extensive glass surfaces (like picture windows or mirrored walls) and almost-bare plaster walls, on the other hand, are all acoustic reflectors and tend to emphasize the treble. Most rooms combine absorptive and reflective elements, but if yours leans heavily in either direction, make note of it on your list of priorities and considerations.

Absorptive or "dull" rooms will diminish the crystalline clarity that contributes shape and definition to musical sound. Reflective, "live" rooms add an extra edge to the overall balance of the music, sometimes making it harsh. (Of course, speakers that include a treble control allow you to nudge treble response up or down to compensate.) A speaker that sounds a little bright in an average showroom may be fine in an absorptive living room, while a slightly dull one may sound perfectly balanced in your minimalist, high-tech listening area. Guessing what a speaker will sound like in another environment is chancy, and it is best to work with a dealer who agrees in advance to let you exchange your speakers, should you not like the way they sound when you get them home.

The size of your listening area is also important. Multiplying room length by width by ceiling height (all in feet) will give you its volume in cubic feet, which is a rough guide as to how much output you'll need from your speakers to achieve a given loudness level. All other design factors being equal, the greater your requirement for loud, deep, bass-filled sound, the larger the speakers and the greater their power handling capability must be.

Your usual listening style is also an important consideration. If you generally listen at low to medium volume levels in an average 12-by-20 foot living room, you could safely choose almost any speaker that complements your amplifier. On the other hand, if you have a lot of space to fill with sound (say 4,000 cubic feet or more), or tend to play music at concert levels, you should look into highly efficient models.

Once you have your priorities firmly in mind, visit your dealer. He will probably

begin by asking what price range you're interested in. Mention as broad a range as possible, and then shift the discussion to what *really* matters: your list of priorities. State them in order and ask to listen to several pairs of speakers that fit your needs some at the upper, middle, and lower ends of your price range.

It is easier to listen critically with music you already know, so bring a familiar record with you for auditioning. Ask for an "A-B" test, in which you can switch from one set of speakers to the next during the same passage. Most people tend to favor the louder speaker, so be sure the levels of the ones you're auditioning have been matched.

Perhaps the most critical question to ask is: "What am I listening for, exactly?" In addition to such intangibles as warmth and openness, you are listening for differences in character. For example, how do different speakers handle percussion instruments like snare drum, timpani, wood block, triangle, or bass drum? Each of these has a distinctive sound, which welldesigned speakers should reproduce clearly. A piano should sound warm and natural, not tinny or boomy. If your test record includes a solo singer with a unique vocal quality, pay attention to the accuracy of reproduction as you compare speakers.

As you narrow down the possibilities to your set of finalists, be sure not to rush through the last listening sessions. Often speakers that are dramatically impressive when you first hear them become irritating during prolonged auditioning. Spend some time with your final selection, perhaps coming back another day, to be sure that you'll be comfortable and relaxed with it over the long run. If you find that your tastes exceed your budget, consider the lower-priced siblings in the same line as your favorites. Manufacturers often have the same basic design goals throughout their line, and you may be able to find the same "sound" at a lower price. In the final analysis, speakers that will satisfy you best will respond, on multiple levels, to your own tastes and personal quirks. Spend the time to get speakers you really like-you'll be living with them for quite a while. HF

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