Four new and completely different AM-FM stereo receivers with increased performance, greater power, unsurpassed precision and total versatility.

SX-525 AM-FM Stereo Receiver -- 72 Watts IHF

SX-626 AM-FM Stereo Receiver -- 110 Watts IHF
Pioneer has more

SX-727 AM-FM STEREO RECEIVER — 195 WATTS IHF

SX-823 AM-FM STEREO RECEIVER — 270 WATTS IHF
Think of everything you’ve ever wanted in a stereo receiver.
Long before the current wave of consumerism, Pioneer had established its reputation for superior quality craftsmanship. This reputation has been continuously augmented by our commitment to building high fidelity components with a measurable extra margin of value. Our four new receivers — SX-828, SX-727, SX-626, SX-525 — are designed to meet a wide range of requirements and budgets. Yet each unit incorporates a significant array of features and refinements built into the top new model—the SX-828. Regardless which new Pioneer receiver you finally select, you are assured it represents the finest at its price.

More meaningful power.

When it comes to power, each model provides the most watts for your money. This is meaningful power. Power that is consistent throughout the 20-20,000 Hz bandwidth (not just when measured at 1,000 Hz.) Especially noticeable at the low end of the spectrum with improved bass response, the overall effect is greater frequency response and low, low distortion.

Direct-coupled amplifier circuitry and twin power supplies improve responses.

Of course, having power to spare is important; but directing it for maximum performance is even more vital. In the SX-828 and SX-727, you will find direct-coupled circuitry in the power amplifier combined with two separate power supplies to maintain consistent high power output with positive stability. This means transient, damping and frequency responses are enhanced, while distortion is minimized. In fact, it's less than 0.5% across the 20-20,000 Hz. bandwidth.

Ultra wide linear FM dial scale takes the squint out of tuning.

You can't expect great music without great specifications.

Pioneer's reputation for high performance capability is thoroughly reinforced in these four receivers. Listening to them substantiates it; the specifications tell the reasons why. Since Field Effect Transistors increase sensitivity, they're incorporated into the FM tuner section of each unit. For example, the SX-828 uses 4 FET's. You get greater selectivity and capture ratio with Integrated Circuits and Ceramic Filters in the IF stage. Here's a mini spec list.

<table>
<thead>
<tr>
<th>Model</th>
<th>IHF Music Power 4 ohms</th>
<th>RMS @ 8 ohms Both channels driven @ 1KHz</th>
</tr>
</thead>
<tbody>
<tr>
<td>SX-828</td>
<td>270 watts</td>
<td>60 + 60 watts</td>
</tr>
<tr>
<td>SX-727</td>
<td>195 watts</td>
<td>40 + 40 watts</td>
</tr>
<tr>
<td>SX-626</td>
<td>110 watts</td>
<td>27 + 27 watts</td>
</tr>
<tr>
<td>SX-525</td>
<td>72 watts</td>
<td>17 + 17 watts</td>
</tr>
</tbody>
</table>

Inputs and outputs for every purpose including 4-channel sound.

Depending on your listening interests and desire to experiment in sound, each receiver provides terminals for a wide range of program sources.

<table>
<thead>
<tr>
<th>Model</th>
<th>Tape</th>
<th>Phono</th>
<th>Auxiliary</th>
<th>Microphone</th>
</tr>
</thead>
<tbody>
<tr>
<td>SX-828</td>
<td>SX-727</td>
<td>SX-626</td>
<td>SX-525</td>
<td>SX-828</td>
</tr>
<tr>
<td>Outputs:</td>
<td>SX-828</td>
<td>SX-727</td>
<td>SX-626</td>
<td>SX-525</td>
</tr>
<tr>
<td>Speakers</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Headsets</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Tape Rec.</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>

Someday, if you want 4-channel sound, all models have 2 inputs and 2 outputs to accommodate a unit such as Pioneer's QL-600 Quadralizer Amplifier. With it, and two additional speakers, perfect 4-channel sound is simply achieved.

Exclusive protector circuit for speakers.

Another example of Pioneer's advanced engineering is the automatic electronic trigger relay system designed into the SX-828 and SX-727. Since the signal is transmitted directly to the speakers because of the direct-coupled amplifier, this fail-safe circuit protects your speakers against damage and DC leakage, which can cause distortion. It also guards against short circuits in the power transistors. It's absolutely foolproof.

Versatile features increase your listening enjoyment.

Our engineers have outdone themselves with a host of easy-to-use features. All four units include: loudness contour, FM muting, mode lights, click stop bass/treble tone controls with oversized knurled knobs, and an ultra wide linear FM dial scale that takes the squint out of tuning. Except for the SX-525, they all employ high and low filters. Enlarged signal strength meters make tuning easier than ever. Center tuning meters are included as well in the SX-828 and SX-727. Further sophistication is offered on the top two models with a 20dB audio muting switch — the perfect answer to controlling background music. As the senior member of the family, the SX-828 is endowed with speaker indicator lights (A,B,C,A+B,A+C) and a tuning dial dimmer for creating a more intimate lighting atmosphere.

Some day other stereo receivers will strive for this total combination of power, performance, features, precision and versatility. Why wait? Pioneer has more of everything now.

See and hear these magnificent receivers at your local Pioneer dealer. Prices include walnut cabinets.

Prices include walnut cabinets.

U.S. Pioneer Electronics Corp.,
178 Commerce Road, Carlstadt,
New Jersey 07072
West: 13500 S. Esstella Ave.,
Los Angeles, Calif. 90048
Canada: S. H. Parker Co., Ontario
True Tangent Tracking
First time in an automatic turntable!
The diagram over the photograph shows how the tone arm articulates, constantly adjusting the angle of the cartridge and keeping the stylus perpendicularly tangent to the grooves throughout the record. Space-age pivotry and computerized design have made it possible to play the record at exactly the same angle as it was cut. Reproduction is truer, distortion sharply reduced, record life lengthened.
Consider that there are 3,600 seconds of arc in a degree—and that a conventional tone arm will produce up to 4 degrees tracking error—or 14,400 seconds at full playing radius. Compare this to the Zero 100 tracking error, calculated to measure a remarkable 90 seconds (160 times lower!) and you will see why this Garrard development obsoletes the arm geometry of every other automatic turntable.

Test reports by some of the industry's most respected reviewers have already appeared, expressing their enthusiasm. These reports are now available with a 12-page brochure on the Zero 100 at your dealer. Or, you can write to British Industries Company, Dept C32, Westbury, New York 11590.

Mfg. by Plessey Ltd. Dist. by British Industries Co.
EDITORIALLY SPEAKING
By WILLIAM ANDERSON

(MEASURED DIAGONALLY)

I t has been my experience that, given a box of raisins and a houseful of kids, the two are bound to get together sooner or later. My mother's response when they did was to suspend the manufacture of raisin cookies, a punishment that cruelly fit the crime. This rough little parable came to mind as I read Craig Stark's article on the ethics of home tape recording in this issue. The subject of what is proper and what improper conduct with respect to one's tape recorder came up not long ago (July 1971) in the letters column, and I observed then that, given the uses to which they were customarily put, many tape recorders in this country are being operated well outside reasonable ethical bounds with respect to the rights of others. The mail response to this bit of unsolicited candor was long on virulence and short on understanding—a clear mandate for a more thorough examination of the issues.

Certainly not all taping is morally reprehensible; but, just as certainly, a lot of it is. The difficulty lies in deciding which is which without taking refuge in equivocal excuses and chop logic. The great confuser of the Ethical Question, I find, is the Practical Consideration. Therefore, in trying to decide what our attitude ought to be toward a specific taping practice, we may find some help in the fly-in-the-soup analogy: whether or not there is a fly in the soup is an ethical question; how much he eats is. The difficulty lies in deciding which is which without taking refuge in equivocal excuses and artful dodges that may save you the trouble of writing me a redundant and intemperate letter—for, be assured, I am a transgressor too.

0 Home taping is on too small a scale to have any effect on industry income (there is a fly in the soup, but he won't eat much). It is simply not possible to know this with any degree of certainty. If it is true, it has nothing to do with whether or not it is ethical to deprive others of their rightful income, however small. If it is false, it immediately admits the possibility that there will be no more raisin cookies: a recording company deprived of its profit cannot go on making recordings.

0 There would be no way of reimbursing interested parties anyway. If there are enough flies, they eat a lot; if there is enough money, ways will be found to distribute it. In Germany, a point-of-purchase tax paid on each tape recorder goes to the German equivalent of ASCAP for dispensation according to a formula worked out by artists and record companies. Alternatively, and perhaps more equitably, a purchase tax on blank tape might accomplish the same end.

Stereo Review accepts advertisements for tape recorders. Indeed we do; we have also been printing, since July 1965, a Tape Horizons column detailing a thousand and one more ideas. I have constructed, out of my own perfidious imagination, a short checklist of excuses and artful dodges that may save you the trouble of writing me a redundant and intemperate letter—for, be assured, I am a transgressor too.

0 Artists don't mind being dubbed. Those who eat on their record royalties do. Montserrat Caballé was delighted to be pirated and dubbed until her underground stardom was crowned with an RCA contract. She now prefers that you buy her records—a clever and moral woman.

But enough. The point of this little ethical excursion is not to spread an epidemic of virtue or of stricken conscience amongst our readers, but to call attention once again to the simple fact that ethics begins at home, that large corporate malfeasance is not separable from small private pecadillo, that we cannot hope to influence record prices and record quality in the direction we want if we "borrow" rather than buy. The system can and should work better than it does, but it won't without a basic ethical assist. With luck and perseverance we may yet live to see that great day when TV picture tubes are no longer measured diagonally, and TV sets themselves cease to be demonstrated in our living rooms as "actual closed-circuit" transmissions!
How far ahead is the Beomaster 3000-2?

Three Years? Five Years?

When do you think you'll see another receiver with such sophisticated styling and so many functions (and not a single knob)?

The Beomaster 3000-2 gives you less than 0.6% total harmonic distortion at full power (40/40 RMS into 4 ohms). Tuner features varactor diodes for pre-select tuning of 6 FM stations (each covers the full band). Field effect transistors (FET), ceramic filters and integrated circuits combine with slide rule tuning for supercritical station selection.

Ask your dealer for a demonstration. Push the buttons; slide the controls and listen. Then you'll know the feel of quality as well as the sound. Or write today for complete details.

Beomaster 3000-2 Receiver $330

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In Canada: Musimart, Ltd. / Montreal

MARCH 1972

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TO BUY ANYTHING EVER!

Yes, take your pick of these great hits right now! Choose any 3 Stereo LPs (worth up to $20.94) or any 1 Stereo Tape (cartridge or cassette) from a few labels-usually their own! They make this amazing offer to introduce you to the only record and tape club offering guaranteed discounts of 33 1/3% to 79% on all labels—with no obligation or commitment to buy anything ever. As a member of this one-of-a-kind club you will be able to order any record or tape commercially available, on every label—including all musical preferences. No automatic shipments, no cards to return. We ship only what you order. Moneyback guarantee if not satisfied.

Ordinary record and tape clubs make you choose from a few labels—usually their own! They make you choose from tapes or records at a minimum price—usually at list price—to fulfill your obligation. And each month they require you to return a monthly card—they send you an item you don't want and a bill for $4.98, $5.98, $6.98, or $7.98! In effect, you are made to push any one label. Nor are we prevented from subscribing to other labels—usually their own! They make this amazing offer to introduce you to the only record and tape club offering guaranteed discounts of 33 1/3% to 79% on all labels—with no obligation or commitment to buy anything ever. As a member of this one-of-a-kind club you will be able to order any record or tape commercially available, on every label—including all musical preferences. No automatic shipments, no cards to return. We ship only what you order. Moneyback guarantee if not satisfied.
The Complete Lohengrin

In his review of the new DG recording of Lohengrin (January) George Jellinek states that DG offers the same "absolutely complete" version as RCA Victor. This is not true, since DG omits the invariably cut Anhang to the Grail Narrative. In other respects, however, the recording is complete. Also, if Christa Ludwig is the only satisfactory Ortrud on modern recordings, where does that leave Astrid Varnay, whose richly sung and splendidly evil Ortrud is perpetuated on Richmond RS 65003?

J. Edward Kauffman

Mr. Jellinek replies: "The Anhang to the Grail Narrative is not only "invariably cut," it is not included in the vocal scores currently in circulation. It is not even performed at Bayreuth (although it was performed a few times a generation ago). For all practical purposes, then, I regarded the DGG performance as being 'absolutely complete.' I could have been a little more specific, but that would have meant using up valuable space. However, Mr. Kauffman is right in pointing out that RCA does include the Anhang.

'Astrid Varnay's Ortrud is indeed 'splendidly evil.' Vocally the performance is not in Christa Ludwig's class, however. This is, of course, my opinion, but then it could hardly be otherwise, since I wrote the review."

Baez Valentines

In his totally unnecessary defense of Miss Baez. Mr. Hall comments: "I stand corrected on this point he would have found that I said it was strange how much I liked Miss Baez, yet did not like John Denver. And if I had checked further he would know that I have been enthusiastic about every Baez album ever given to me for review.

"The only comfort the letter offers is that I happen to agree with most of what is said in his totally unnecessary defense of Miss Baez."

Multiple-Disc Sequencing

I want to thank all of the staff of Stereo Review for the great help you have given me in acquiring my classical record collection. Your reviews and articles have been invaluable in helping me to choose the right recording from among the different versions of so many works. And through your columns I have found out about many new records I might otherwise have missed.

I'm surprised, however, that you have never taken up in your columns a problem that is not uncommon with past and current releases of the complete concertos or symphonies of a given composer. It is that in many cases the individual works are spread out over two or three discs in the album. When you want to play only one work, you must dig around among the records in the album. This is not only annoying but sometimes confusin. If you really want to be frustrated, try to play the Barenboim-Klemperer album of Beethoven concertos one concerto at at time. I gave this set away, and got the Fleisher-Szell, which has each concerto complete on one disc.

I have learned my lesson. From now on, that kind of sequencing is on my blacklist.

Francisco X. Ramos
Summerland, Calif.

Both sides of the manual-vs.-changer question have enjoyed recurrent attention in these pages without, apparently, affecting the issue either way. There are still purist audiophiles, for example, who would never allow a record changer through the door of their listening room. And there are others for whom automatic sequencing is an acceptable habit acquired in 78-rpm days. De gustibus.

Saint-Saëns and the L.A. Philharmonic

David Hall errs when he writes that the Los Angeles Philharmonic recorded the Saint-Saëns "Organ" Symphony in the Music Center Pavilion (December). The recording was made, as are all of the Philharmonic's recordings, in UCLA's Royce Hall. The Decca/London engineers chose this hall because the acoustics at the pavilion were not quite to their liking.

I've also heard the Saint-Saëns release and fully agree with Mr. Hall's remarks, but I think his memory fails him when he says "Also sprach Zarathustra" was recorded by Mr. Jellinek as he "In and Out of Schwann" (October) as well as Mr. Schwann's reply (December). If you really want to be frustrated, try to play the Barenboim-Klemperer album of Beethoven concertos one concerto at a time. I gave this set away, and got the Fleisher-Szell, which has each concerto complete on one disc.

Mauricio A. Molina
Los Angeles, Calif.

Mr. Hall comments: "I stand corrected on the recording locale. Many thanks."

Schwann Song

I read with interest Richard Freed's article "In and Out of Schwann" (October) as well as Mr. Schwann's reply (December). If many classical records really must be banished to the supplementary catalog to be listed in the cassette guides, we picture on our cover one of the newest of the breed, the Sony TC-654-4 Quadraphonic four-channel tape deck, interpreted as an abstraction by our art director Borys Patchowksy and photographer Bruce Pendleton.

This Month's Cover

This being our annual issue devoted to the subject of the tape recorder in all its guises, we picture on our cover one of the newest of the breed, the Sony TC-654-4 Quadraphonic four-channel tape deck, interpreted as an abstraction by our art director Borys Patchowsky and photographer Bruce Pendleton.

(Continued on page 10)
KENWOOD
KT-7001
3-FET, 4-IC,
XTAL FILTER, FM/AM STEREO TUNER

"We are unreservedly enthusiastic about the Kenwood KT-7001. There are a number of very fine tuners on the market, but if there is a better one than the KT-7001, we haven’t seen it."

"The measurement data show that the Kenwood KT-7001 is one of the most sensitive FM tuners on the market, with exceptional capture ratio, stereo separation, and freedom from spurious responses."

"The stereo separation was an exceptional 41 dB between 400 and 1,000 Hz, decreasing smoothly to 22 dB at 30 Hz and 21 dB at 15,000 Hz. The mid-range separation, in particular, was as great as we have ever measured."

"The complete 'capture' of the tuner by the stronger of two signals on the same channel took place with such a small difference in signal level that we couldn't read the change on the signal-generator's output attenuator! All we can say with certainty is that the KT-7001 has a capture ratio better than 1 dB, and it is far superior in this respect to any other tuner we have tested."

— Excerpts from Hirsch-Houck Laboratories’ "Equipment Test Reports," January STEREO REVIEW
Put an AKG on the job.

It will sound better!

For complete information on AKG performance at prices ranging from $40. to $75. net write to:

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CIRCLE NO. 36 ON READER SERVICE CARD

headed record shop employee that Victrola's mono-only Manon Lescaut was not withdrawn simply because it transferred catalogs. I never did succeed in getting the point across.

2. "Electronically simulated" stereo should be added to the supplementary catalog. It is not fair for a label like Seraphim, which has kept its historical reissues in mono, to have its product banned from supplementary obscurity while Everest's pseudo-stereo butcheries are listed for the public every month.

Charles J. Schlotter
Pittsburgh, Pa.

Schwand replies: "Mono records, we repeat, are not 'banished.' There simply are too many records today for one book. Our monthly Schwann lists newer stereo records and current artists more readily available and asked for in thousands of stores. Less frequently found records, including pop material over two years old, mono (including reissues from 78-rpm discs of twenty to fifty years ago), etc., are in Schwann No. 2, our semi-annual Supplement. We agree that any division into two books is less convenient and may create inequities, which we regret. But today's publishing costs, together with an enormous quantity of records (all of which manufacturers must are still available) present a perpetual challenge. Moving electronically simulated stereo to Schwann No. 2 is an interesting possibility we are exploring, although manufacturers do not always clearly designate fake stereo discs in their release sheets."

Linda Ronstadt

I would like to congratulate Robert Win- deler for a fine interview and for perhaps enlightening some of the few who haven't heard of Linda Ronstadt (November). I never thought I would see her given such treatment in Stereo Review. But she was, and I'm glad. Even if you're a purist and don't like rock music, you have to admit she's pretty to look at.

H. Robert Schroeder
Trenton, N.J.

Noise Pollution

Paul Kresh's article on noise pollution ("Music in the Air," October) struck home. After a trip I made to Marineland recently, I was moved to write a letter to the Los Angeles Times to complain not only about the infernal music (including vocals, not just instrumentals) but about the plugs. The sound system at Marineland advised us, at various intervals, to stop by the giftie shoppe on the way out, or at the friendly Texaco station down the road a piece. Really!

Christie Barter
Los Angeles, Calif.

"4-Way Street"

I read the review of Crosby, Stills, Nash, and Young's "4-Way Street" in the September issue of Stereo Review. The so-called critic was Noel Coppage. I wonder—does Mr. Coppage play a musical instrument or have any vocal talent? Is his name in lights, or his album on the nation's Top Ten list? I'm a musician and vocalist. I have studied music for a long time, and I say from experience that Mr. Coppage's tearing apart of "4-Way Street" is not fair. This is a "live" recording, with pure, real jamming. Of course there are mistakes, but it's all real, and that's what counts.

Michael R. Ebling
APO San Francisco, Cal.

Mr. Coppage replies: "If reality is the thing that counts, then my name should be in lights, for the sounds I get out of a couple of instruments are real enough." Mr. Ebling seems to have accepted a rather tired argument that, steadfastly pursued, would prohibit anyone who had not attended medical school from criticizing doctors, or anyone who had not been elected to office from criticizing politicians. It would even prohibit those who had not reviewed records from criticizing 'so-called critics'—and that, I think we can all agree, would be ridiculous.

Composer Film Biographies

Paul Kresh's review of Ken Russell's The Music Lovers soundtrack in the July issue has prompted me to do some remembering about movies on composers' lives. Such films as a genre, sophisticate like most of them have been, have performed a useful function. They have brought some good music to those who might not otherwise have listened. I credit some of my own awakening to the glories of great music to certain of these films. I recall with exception fondness Jean-Louis Barrault whipp ing up the Symphonie fantastique into a positive artistic frenzy, and a very young John Loder as Mozart in a British film from the Thirties, the name of which I have forgotten and which seems to have been ignored by both film and music historians—unjustifiably so, as the music was brilliantly handled by the late Sir Thomas Beecham. But much the best of such films was The Great Mr. Handel, which was treated with both historical and musical authenticity.

Cyril Levine
South Hazelton, B. C.

A Bargain on Berlin

Some time ago, Rex Reed planted a bug in my brain with his review of Ben Bag ley's Irving Berlin Revisited "Best of the Month," February, 1968. I neglected to order a copy at the time it came out. Needless to say, when I did get around to it, the album was nowhere to be found. I've been frustrated for three years in my attempt to find that particular disc. Imagine my surprise upon coming across several copies of this elusive treasure recently at the insid ingly low price of 44c while rummaging through the discount record section of a local department store!

Truly remarkable records can be obtained at these bargain counters; indeed, they are often unavailable anywhere else. Most of these records turn up in different stores at about the same time, as record distributors use them as bins for disposal of their unwanted, but by no means worthless, merchandise. A word to the wise.

Robert H. Weed
Norfolk, Va.

Erratum

Through a printer's error, the signature of Al Blaustein failed to appear at the bottom of the portrait of Franz Schubert (p. 14) in some of the copies of our February issue. The editors extend their sincere apologies to Mr. Blaustein.

STEREO REVIEW
We enjoy telling you how each aspect of the 12 year basic research program on sound reproduction contributed to the unconventional features found in the Bose 901 and 501 DIRECT/REFLECTING® loudspeakers.* We also take pride in quoting from the unprecedented series of rave reviews because to us they are like awards won for the best design.†

However, it is important to realize that the research and the reviews are of only academic interest unless the speakers really are audibly superior. It is equally important to realize that YOU are in every sense the ultimate judge, for you are the one who lives with the sound you choose.

So—forget the rave reviews and the research and sit in judgement of two fascinating experiments. Take your most exacting records to any franchised BOSE dealer and:

1. Place the BOSE 901's directly on top of any other speakers, regardless of their size or price, and make an A-B listening test with your records.

2. Place the BOSE 501's beside (with at least 2 feet clearance) any other speaker using woofers, tweeters and crossovers and perform the A-B listening test. (Don't ask the price of the 501 before the test)

Then, just enjoy your records. When you finish you will know why we get much more satisfaction from our work than could ever be derived from profits alone.

P.S. If you already own expensive speakers, many dealers will lend you a pair of BOSE 901's for an A-B in your living room, where the acoustics are generally far superior to those of the speaker-lined showroom.

* Copies of the Audio Engineering Society paper, 'ON THE DESIGN, MEASUREMENT AND EVALUATION OF LOUDSPEAKERS', by Dr. A. G. Bose, are available from the Bose Corp. for fifty cents.

† For copies of the reviews, circle our number on your reader service card.

You can hear the difference now.

Unless they're audibly superior it's all academic.
Most record reviewers do their listening on a Dual. Perhaps they know something you should know.
Consider the plight of the music critic who reviews recordings for a living. His reputation depends on his ears. And how much they hear. For the differences between performances are often very subtle.

A reviewer must listen for the artist's interpretation, how his talents have progressed and how he compares with his fellow performers. In addition, he must be sensitive to recording and microphone techniques and the quality of the record surface.

All this is why the professional listener selects his high fidelity equipment with great care. Especially the turntable. Because he knows that what he hears (or doesn't hear) often depends on the turntable.

**What can happen to a recording.**

The turntable is the one component that actually handles records, spinning them on a platter and tracking their impressionable grooves with the unyielding hardness of a diamond. And much depends on how well all this is done.

If the record doesn’t rotate at precisely the right speed, the musical pitch will be off.

If the motor isn’t quiet and free of vibration, an annoying rumble will be added to the artist’s performance.

If, in tracking, the stylus doesn’t respond easily and accurately to the rapidly changing contours of the record groove, there can be even worse trouble. Instead of tracing the sharp peaks of the high frequencies, the stylus will simply lop them off. And with those little bits of vinyl go all those glorious high notes. Taking their place are a lot of unpleasant sounds that were never recorded.

**What most serious listeners know.**

Serious music lovers know all this, and that none of it need actually happen. It’s why so many of them, professional and amateur alike, have long entrusted their precious records to a Dual.

From years of listening, they know that on a Dual, records are preserved indefinitely and will continue to sound as good as new no matter how often played. They also have come to appreciate Dual’s ease of operation as well as its ruggedness and reliability.

Typical examples of Dual precision that preserves and brings out the best in stereo records. A) Twin-ring gimbal suspension that lets tonearm pivot like a gyroscope for total freedom and perfect balance in tracking. B) Special setting that lets stylus track at perfect angle in single play and at center of stack in multiple play. C) Tracking force is applied at pivot, maintaining perfect dynamic balance of tonearm. D) Separate anti-skating calibrations for elliptical and conical styli are provided as each type skates differently. E) Tonearm counterbalance is elastically damped and has vernier adjustment with click-stops for convenience in changing cartridges.

**If you’d like to know more.**

A few examples of Dual precision engineering are shown in the illustration above. But if you would like to know what several independent test labs say about Dual, we’ll send you complete reprints of their reports. Plus a reprint of an article from a leading music magazine that tells you what to look for in record playing equipment.

Better yet, just visit your franchised United Audio dealer and ask for a demonstration. You’ll find Dual automatic turntables priced from $99.50 to $175.00, including our new Integrated Module, complete with base, dust cover and magnetic cartridge at $119.50.

These may seem expensive at first, but not when you consider your present and future investment in records. And now that you know what record reviewers know, doesn’t it make sense to own what they own?
You're looking at part of the Memorex Cassette Tape story.

The rest you have to listen to.

Memorex Cassette Recording Tape can reproduce a pitch that shatters glass. And that proves we can record and play back with exacting precision.

But, it doesn't tell you we've improved signal-to-noise ratio. Or that we've increased high frequency response and sensitivity over the tape you're probably using now.

For that part of our story, you'll just have to listen to what happens when you record and play back your favorite music with our cassette tape.

And that's just what we hope you do.

BOOKS RECEIVED
Compiled by Susan Larabee

  - Weinstock's last completed work, this volume links Bellini's life with those of Rossini and Donizetti, and thus finishes the author's trilogy of bel canto composers.

  - Random anecdotes and comments on the family, love, show business, her personal philosophy, etc. Big print, wide margins.

- **A Rage for Opera**, Robert Lawrence, Dodd, Mead & Co., New York, 1971, $5.95, 176 pgs.
  - An overview of the last half-century of opera, including discussion and criticism of fads, singers, impresarios, designers, producers, conductors, and anyone else the author finds memorable.

  - A biography of Elvis Presley, from Tupelo, Mississippi sharecropper's son to sellout attraction in Las Vegas. Lots of pictures—and a complete horoscope.

  - The famous lieder singer's interpretive comments on frequently sung cycles by Schubert, Schumann, Beethoven, and Strauss, as well as by Berlioz, Debussy, Mahler, and Ravel.

  - An extensively illustrated catalog of the current Smithsonian Institution exhibition which surveys the development of musical machines and the ways in which science and technology have affected the performer and the audience. Record players, juke boxes, player pianos, radio, Moog synthesizer, etc. Order from: The Superintendent of Documents, U.S. Govt. Printing Office, Washington, D.C. 20402.

  - Chronological listings of the roles sung by some of the most famous members of the Metropolitan Opera Company, both in the opera house and on tour. Fascinating for opera lovers. Order from Wayner Pub., Box 871, Ansonia Station, New York, N.Y. 10023.

- **Black and White Baby**, Bobby Short, Dodd, Mead & Co., New York, 1971, $7.95, 304 pgs.
  - Bobby Short's remarkably far-reaching memories, some happy, some bitter, of his family, friends, hometown, and his childhood introduction to show business. Sixteen pages of photographs.
All cartridges are different.
Empire cartridges are more different than others!
Take a technical look for yourself.

How it works.

If you know how moving magnetic cartridges are made, you can see right away how different an Empire variable reluctance cartridge is. With others, a magnet is attached directly to the stylus, so that all the extra weight rests on your record. With Empire's construction (unique of its type), the stylus floats free of its three magnets. So naturally, it imposes much less weight on the record surface.

Less record wear.

Empire's light-weight tracking ability means less wear on the stylus, and less wear on your records. Laboratory measurements show that an Empire cartridge can give as much as 50 times the number of plays you'd get from an ordinary cartridge without any measurable record wear! HI-FI SOUND MAGAZINE summed it up very well by calling the Empire cartridge "a real hi-fi masterpiece. A remarkable cartridge unlikely to wear out discs any more rapidly than a feather held lightly against the spinning groove."

Superb performance.

The light-weight Empire cartridge picks up the sound from the record groove with amazing accuracy. Distortion is minimal. (None at all could be measured at normal sound levels with Empire's 1000ZE/X and 999VE/X.) AUDIO MAGAZINE said of the Empire cartridge "outstanding square waves...tops in separation."
HIGH FIDELITY noted "...the sound is superb. The performance data is among the very best." While STEREO REVIEW, who tested 13 different cartridges, rated the Empire tops of all in light-weight tracking.

X Designates newest improved version.

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Ahab
RAINY DAYS AND MONDAYS

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SANTANA

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CAT STEVENS

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RAY CONNIF

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ANDY WILLIAMS

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MARTY ROBBINS

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THE MOODY BLUES

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JERRY LEE LEWIS

211805

AQUARIUS

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WATERMELON MAN

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SANYI BROWN

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*D Selections marked with a star are not available in reel tapes
GREAT SAVINGS...

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if you join now and agree to buy seven selections (at regular Club prices) during the coming year

Yes, it's true! — if you join right now, you may have ANY 8 of these stereo tapes for only $2.86. Just mail the postpaid application card provided (be sure to indicate whether you want cartridges, cassettes or reel-to-reel tapes). In exchange...

You agree to buy just seven tapes (at regular Club prices) in the coming year — and you may cancel membership any time after doing so.

Your own charge account will be opened upon enrollment... and the selections you order as a member will be mailed and billed at the regular Club prices: cartridges and cassettes, $6.98; reel tapes, $7.98... plus a processing and postage charge. (Occasional special selections may be somewhat higher.)

You may accept or reject tapes as follows: every four weeks you will receive a new copy of the Club's music magazine, which describes the regular selection for each musical interest... plus hundreds of alternate selections from every field of music, from scores of different recording companies.

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... and from time to time we will offer some special selections, which you may reject by returning the special dated form provided... or accept by simply doing nothing — the choice is always up to you!

You'll be eligible for our bonus plan upon completing your enrollment agreement — a plan which enables you to save at least 33% on all your future purchases! This is the most convenient way possible to build a stereo tape collection at the greatest savings possible! Don't delay — fill in, detach and mail the postpaid application today!
Pioneer Stereo Headphones

Pioneer has introduced a pair of lightweight stereo headsets that work without an acoustical seal to the ear. The earpieces, each of which contains a 11/2-inch plastic-film diaphragm, are fitted with acoustically transparent fabric-covered cushions that rest directly on the ear. The backs of the earpieces—covered with conical metal screens—are acoustically unenclosed, leaving the rear radiations of the diaphragms open to the air. The earpieces slide along metal extensions of the headband for adjustment to fit. Both headsets are designed to be driven by headphone jacks intended for loads of 4 to 16 ohms impedance, and each set has a power-handling capability of 30 milliwatts per channel. Sensitivity is on the order of 0.4 volt for an output of 108 dB. The connecting cable is approximately 8 feet in length and terminates in a standard stereo phone plug. The de luxe headset, the SE-L40 (shown) weighs 8 ounces and has metallic-finish earpieces. The SE-L20, very similar in appearance but with some parts of plastic finish, weighs 7.2 ounces. Prices: SE-L40, $39.95; SE-L20, $29.95.

Revox A77 Dolby Tape Deck

Revox offers the new Model A77 open-reel tape deck with built-in Dolby B noise-reduction circuits for simultaneous stereo record and monitoring through the Dolby system. The A77, a three-head, three-motor machine with solenoid controls, is a quarter-track deck with two operating speeds (71/2 and 31/2 ips) in its basic configuration. The Dolby circuits afford a 6-dB measured increase in signal-to-noise ratio—up to 67 dB at 71/2 ips and 64 dB at 31/2 ips, referenced to a recording level that produces less than 2 per cent harmonic distortion—and a somewhat greater subjective improvement. The usual Dolby calibration adjustments are present, as well as a built-in oscillator to record a standard Dolby-level test tone on the tape, and a switchable multiplex filter to prevent the 19-kHz pilot tone of stereo FM broadcasts from interfering with the Dolby action. The Dolby circuits can be switched in and out on the front panel.

Frequency-response specifications for the Model A77 are 30 to 20,000 Hz (71/2 ips) and 30 to 16,000 Hz (31/2 ips), both ±2.0–3 dB, with the recommended 3M Type 203 tape. Weighted wow and flutter are 0.08 per cent at 71/2 ips and 0.1 per cent at 31/2 ips. Reels up to 101/2 inches in diameter are accepted. The two front-panel microphone jacks are switchable for low- or high-impedance microphones; the other inputs are the standard line and an additional pair, labeled RADIO, with a sensitivity of 2.5 millivolts for European tuners. The two recording-level controls can be switched independently between any of these inputs. Sound-on-sound facilities are also provided. The playback controls are volume, balance, a playback-mode selector, and a tape-monitor switch. The transport has automatic end-of-tape shutoff and a tape-drive disengager for editing. The capstan motor speed is electronically controlled to be insensitive to fluctuations in line voltage and frequency.

In a walnut cabinet, the standard A77 measures about 16¼ x 14¼ x 8¼ inches, exclusive of reels. Price of the Dolby deck: $799. The Model A77 is available with numerous options at extra cost. Among these are half-track or full-track heads, 15-ips speed, variable pitch, remote control, built-in power amplifiers and monitor speakers, and a portable carrying case.

Teac AS-100 Integrated Amplifier and AT-100 Stereo FM Tuner

Teac offers an integrated stereo amplifier and a stereo FM tuner styled to complement in appearance the Teac line of open-reel tape decks. The AS-100 amplifier is rated at 30 watts continuous power output per channel (8-ohm loads, both channels driven), with harmonic and intermodulation distortion both under 0.2 per cent at rated output. Signal-to-noise ratios are 70 and 80 dB for the phono and high-level inputs, respectively. Frequency response is 10 to 50,000 Hz ±1 dB. The Model AT-100 tuner, which employs ceramic filters in its i.f. section, has an IHF FM sensitivi-ty of 2 microvolts, a capture ratio of better than 1.5 dB, and over 65 dB alternate-channel selectivity. Frequency response is 50 to 15,000 Hz ±1 dB, with stereo separation at least 40 dB at mid frequencies and 20 dB at the extremes. Image and i.f. rejection both exceed 90 dB, and AM suppression is more than 50 dB.

The AT-100 has signal-strength and channel-center tuning meters, automatic mono/stereo switching with stereo indicator light, and switchable interstation-noise muting and high-frequency blend.

(Continued on page 22)
If you’re getting into 8-track this Wollensak 2/4 channel deck deserves your stereo system

All four channels of the new Wollensak will help keep your stereo system as updated tomorrow as it is today.

True quadrasonic sound coming right at you and all around you through your 4-channel system.

If you’re already into 8-track with a unit in your car, this Wollensak 8054 pre-amp deck also plays your present 2-channel stereo cartridges. Either way, its precise engineering and component design make it a perfect match for your stereo system. And a sound 4-channel investment for its future.

With the Wollensak 8054’s fast-forward control, you can quickly find the selection you want to hear. This deck also features a special channel selector key, automatic programming for 2-channel or 4-channel playback, illuminated program and track indicators and special long life high torque AC motor. Full frequency response is rated at 30-15,000 Hz with a truly outstanding signal-to-noise ratio of 52 db.

Sound expensive? Not at all. This 4-channel deck is so reasonably priced, you won’t have to wait any longer to enjoy true quadrasonic sound.

Nobody knows more about sound-on-tape or has more experience in tape recording than 3M Company.

So, make tracks to your nearest dealer and hear why the Wollensak 8054 deserves your stereo system.
for cancellation of hiss frequencies. Both fixed and variable outputs are provided. The AS-100 amplifier has inputs to accommodate two record players, tuner, and two auxiliary high-level sources. The tone controls are separate for each channel, with ranges of ±10 dB at 100 (bass controls) and 10,000 (treble controls) Hz. Two pairs of speakers are independently controlled by lever switches, as are tape monitoring, low- and high-cut filters, and loudness compensation. The filters have 6-dB-per-octave slopes and act below 100 Hz.

Ampex judges that a 40-minute cassette will appeal to many who regularly record programs of intermediate length, and that it will more closely correspond to the playing times of many LP records being produced today. The 362 Series cassette tape has an oxide coating especially formulated for optimum density and smoothness. Prices for the new cassettes: C-90 (362-90), $3.95; C-40 (362-40), $2.25. The original 362 C-60 remains $2.95.

Circle 119 on reader service card

Heathkit Model AD-110 Stereo Cassette Deck

- **HEATH** has introduced the industry’s first stereo cassette deck in kit form—the Model AD-110. The transport mechanism comes completely preassembled and aligned, with chassis assembly and wiring of the electronics left to the builder (most of the latter are contained on a single printed-circuit board). Once completed, the kit contains built-in test circuits that work in association with the recording-level meters to check the deck’s electrical performance and make final adjustments. Instructions are given for setting the recording bias for optimum performance with standard cassette tapes or the chromium-dioxide formulations.

- Record-play frequency response of the AD-110 is 30 to 12,000 Hz ±3 dB, and the signal-to-noise ratio is 45 dB.

- **TEAC** has introduced the AT-100, which includes a C-90 and the industry’s first range cassettes has been enlarged to include a C-90 and the industry’s first C-40. Ampex judges that a 40-minute cassette will appeal to many who regularly record programs of intermediate length, and that it will more closely correspond to the playing times of many LP records being produced today. The 362 Series cassette tape has an oxide coating especially formulated for optimum density and smoothness. Prices for the new cassettes: C-90 (362-90), $3.95; C-40 (362-40), $2.25. The original 362 C-60 remains $2.95.

Circle 119 on reader service card

Prokit AM-6 Stereo Mixer

- **GATELY ELECTRONICS** has introduced a professional-quality stereo mixer (the Prokit SM-6) for microphone and line inputs. It is available in kit or factory-assembled form. Most of its internal construction is based on printed-circuit boards with plug-in integrated circuits. Eight front-panel gain controls govern six input channels, switchable between microphone and line inputs, and two output channels. Two meters with standard VU characteristics register the output levels. The first four input channels can be switched to either of the output channels or mixed into both. Inputs 5 and 6 can be switched to an RIAA characteristic to accept a magnetic phono cartridge.

- Typical performance specifications for the SM-6 include a frequency response of 30 to 15,000 Hz +0. -1 dB for the low-level inputs and harmonic distortion of 0.05 per cent or less for a 2-volt output. Noise is down 95 dB or more for high-level inputs. The gain of the microphone inputs is adjustable by means of rear-panel switching. Line inputs have 100,000-ohm impedances and microphone input impedance is 150 ohms (balanced). Output impedance is under 50 ohms. The dimensions of the SM-6 are 17 x 3 3/8 x 9 inches, metal cabinet included. Prices: kit $249; assembled $499. Various accessories such as equalizers, echo devices, and rack-mounting facilities will be available from the manufacturer.

Circle 118 on reader service card

Ampex 362 C-40 Cassette

- **AMPLEX’S** 362 Series of extended-range cassettes has been enlarged to include a C-90 and the industry’s first C-40. Ampex judges that a 40-minute
After the monthly breakthroughs and revolutions in speaker design, how come the Rectilinear III still sounds better?

Figure it out for yourself.

More than five years ago, without much fanfare, we came out with a very carefully engineered but basically quite straightforward floor-standing speaker system. It consisted of six cone speakers and a crossover network in a tuned enclosure; its dimensions were 35” by 18” by 12” deep; its oiled walnut cabinet was handsome but quite simple.

That was the original Rectilinear III, which we are still selling, to this day, for $279.

Within a year, virtually every hi-fi editor and equipment reviewer went on record to the effect that the Rectilinear III was unsurpassed by any other speaker system, regardless of type, size or price. (Reprints still available.)

Then came about forty-seven different breakthroughs and revolutions in the course of the years, while we kept the Rectilinear III unchanged. We thought it sounded a lot more natural than the breakthrough stuff, but of course we were prejudiced.

Finally, last year, we started to make a lowboy version of the Rectilinear III. It was purely a cosmetic change, since the two versions are electrically and acoustically identical. But the new lowboy is wider, lower and more sumptuous, with a very impressive fretwork grille. It measures 28” by 22” by 12¼” deep (same internal volume) and is priced $20 higher at $299.

The new version gave Stereo Review the opportunity to test the Rectilinear III again after a lapse of almost five years. And, lo and behold, the test report said that "the system did an essentially perfect job of duplicating our "live music" and that both the original and the lowboy version "are among the best-sounding and most 'natural' speakers we have heard." (Reprints on request.)

So, what we would like you to figure out is this:

What was the real breakthrough and who made it?

For more information, including detailed literature see your audio dealer or write to Rectilinear Research Corp., 107 Bruckner Blvd., Bronx, N. Y. 10454.

Rectilinear III
A. To answer the first part of your question, I cannot conceive of any situation where damage to a high-output amplifier could result from driving a high-efficiency speaker. Of course, the speaker could be damaged if its power-handling capability is exceeded by the amplifier. In regard to a speaker's minimum and maximum power ratings, we are confronted with distortion at both extremes: in one case, it's that of the amplifier, and in the other, it's that of the speaker. If an amplifier has inadequate power to drive a given speaker, the amplifier will be driven into clipping, meaning that it will produce a raspy type of distortion on loud peaks that sounds something like that caused by a phonograph stylus tracking improperly. (A sine-wave test signal with slight and severe overload clipping distortion is shown in the above oscilloscope photos.) The amplifier will also be unable to handle low bass passages and the distortion produced will inevitably result in a generally unpleasant listening experience.

In general, the harder the drive applied to any component, electronic or mechanical, the greater its distortion. But the distortion usually does not become significant until the component is approaching its maximum rating. In regard to speaker systems, the drivers distort in different ways. In a three-way system, the woofer when overdriven will "double" or "triple"—that is, it will turn a pure 50-Hz tone, for example, into a mixed 50-Hz, 100-Hz, and 150-Hz tone, because of the large amount of second- and third-harmonic distortion generated. Or a rattling sound may be produced by the voice coil striking part of the magnet structure. Overdrive of the mid-range usually produces a raspy quality in the sound, while overdrive of a tweeter may not have audible results—the tweeter will simply and quietly burn out.

**Frequency-of-Repair Records**

Q. I would love to see a poll of your subscribers and the subsequent publishing of frequency-of-repair records on stereo components. I would like to know which brands hold up and which break down.

LARRY SULLIVAN
New York City

A. Such a poll might be interesting, but it would unfortunately serve little purpose. I do not know of any component manufacturer still in business who over the years has consistently produced bad products. And, conversely, I do not know of any component manufacturer who has not at some time had at least one loser in his line. If the design of a product reaching the market is such that it acquires a bad repair record, you can be sure that the maker is not able to set things right in the middle of the production run. Consequently, I do not know of any component manufacturer who has not at some time had at least one loser in his line. If the design of a product reaching the market is such that it acquires a bad repair record, you can be sure that the maker is not able to set things right in the middle of the production run.

**Big vs. Little Speakers Addendum**

The graph below was inadvertently omitted from my Q & A column last month. It shows the frequency responses of two speaker systems. The large one has a substantial bass rise which provides a sort of Fletcher-Munson loudness compensation when the system is played at low levels. The bookshelf system, with a flatter bass response, appears to lack bass at low volume levels.

**Cassette Testing**

Q. How can I tell without testing equipment which of the cassette brands or types would be best for my particular cassette deck? Is there some rule of thumb I can use?

NICHOLAS HARDIN
Concord, Mass.

A. The best rule of thumb is to follow the manufacturer's recommendations. It is easy, however, to check how well any particular cassette tape will do on your machine. Simply take a record with good clean high-frequency response and intervals of silence—such as might be provided by a string quartet or a folk singer with guitar—and record it onto a cassette, carefully noting the points at which the record-level meter goes into the red and to what degree. (You might also try deliberately recording at too high a level for certain passages to see what the audible effects are.)

Now, rewind the cassette and play it back synchronized to the original record. By using the monitor switch on your amplifier, you should be able to do an A-B comparison between the sound on the cassette and the original sound on the record. Listen for the amount of hiss, the high-frequency reproduction, and the distortion on loud sections. Some brands or types of cassettes will be substantially better in all of these areas on your machine than others. In any case, you'll not have wasted your money on the brands or types that are not optimum, since they will certainly be usable for noncritical recordings.
Most cassette manufacturers tell you how great their tape is. What they forget to mention is that the tape is only as good as the "shell" it comes in. Even the best tape can get mangled in a poorly constructed shell.

That's why Maxell protects its tape with a precisely constructed shell, made of lasting, heavy-duty plastic.

Unlike other cassettes that use fixed guide posts, Maxell uses nylon roller guides held with stainless steel pins. These provide virtually friction-free tape movement and eliminate a major cause of skipping, jumping and unwinding.

The tape never comes loose from the hub because it is anchored in two places—not one.

A tough teflon (not waxed paper) slip sheet keeps the tape-pack tight and flat. No more bent or nicked tape to ruin your recording.

Maxell doesn't use a welded seal but puts the cassette together with precision screws.

As for the tape itself; in the September, 1971, issue of Stereo Review, both our Ultra-Dynamic and Low Noise tape cassettes were shown under laboratory conditions to be unsurpassed for overall consistency.

Like most cassettes, Maxell comes with a lifetime guarantee. Unlike most cassettes, you never have to return a Maxell.

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Audio Basics
By RALPH HODGES

Record Care

Particle for particle, dust is a surprisingly hard substance. Still, it would pose no special threat to the phonograph record if it were not ground forcibly into the soft vinyl material by the playing process. Every microscopic collision between diamond stylus and dust particle leaves behind some new contribution to the sound in the groove—a “tick,” “pop,” or crackle—that will be heard at every subsequent playing. The goal of record cleaning is therefore to remove as much dust as possible just before the record is played, and to keep more from accumulating thereafter through the use of a dust cover over the player and the dust jacket over the disc.

I prefer to use two record-cleaning devices—one to brush off heavier concentrations of debris before the tone arm is lowered onto the disc, and the other to keep the surface clean as the record plays. A number of commercially available products will serve the first purpose satisfactorily, as will a simple velvet pad made of two circles of the fabric sewn together around some cotton stuffing. The velvet pile is reasonably effective in penetrating the grooves and dislodging trapped material. If the record is cleaned on a rotating turntable, the pad can be held almost stationary and used to guide the dust toward the center or outer edge. Many audio and record stores sell similar pads or brushes with plush piles; the Discwasher kit, for example, has a brush with a slanted pile to get under and lift up particles.

The second device is a classic among audio enthusiasts: the C. E. Watts Dust Bug. This consists of a nylon-bristle brush and a small plush-pile cylinder affixed to the end of a Plexiglas “arm” about seven inches in length. The arm pivots on a vertical pin anchored to the turntable’s motorboard by a suction cup (a bit of rubber cement will help if the suction cup doesn’t “take”). In effect, it is a second tone arm that tracks (and cleans) the record just before the cartridge plays it, the bristles dislodging and the plush collecting the dust particles. On most turntables it can be conveniently mounted on the opposite side of the platter from the playing arm. (C. E. Watts products are distributed in the U.S. by Elpa Marketing, New Hyde Park, New York 11040. The two Watts booklets on record care are also recommended.) The record brushes that come mounted on many Stanton and Pickering cartridges are designed to do much the same thing.

All of the record-cleaning devices named, and most others, come with some sort of fluid to assist the cleaning process or neutralize dust-attracting static charges on the record surface. I’ll have to leave the use of these substances to each man’s discretion. The danger with any of them is the possibility that they will leave a gummy residue behind—or even stir up a sort of mud composed of dust and liquid—that will prove worse than the disease it was meant to cure. Fortunately, most responsible manufactures point out that their fluids should be used very sparingly. From personal experience, I can issue a strong warning against using liberal quantities of anything—except, possibly, distilled water—on a record surface.
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Sony can't stop those little family arguments. But we can make them more worth winning. And a flip of Sony's unique, knob-and-lever dual selector switch gets the winner into the music of his choice just a little quicker than an ordinary, single-knob selector. Because until your fingertips unleash the STR-6065 receiver's performance, it might as well not be there.

So we didn't just engineer our circuits and our switches. We human-engineered them. For instance, in normal FM-stereo operation, all the 6065's levers make a neat row, and all its knob indexes point straight up; any control that's out of place shows up immediately.

You, who have no doubt adjusted to the crotchets of your current equipment (and perhaps even love them), may not think this much. Julian Hirsch, who must re-adjust to every new component that he tests, commended it: "Most receivers and amplifiers are surprisingly deficient in ease of use. Sony is to be congratulated."

With performance this accessible, the 6065 had better perform. And it does. 2.2 uV IHF sensitivity ("1.9 uV," says Julian Hirsh) gets you the weak FM signals; an FET front end prevents overload from strong ones. And our high selectivity makes tuning easier. If you find those stations easier to listen to, you might also credit our direct-coupled amplifier circuitry. It's supplied with both positive and negative voltages (not just positive and ground), so we don't have to put a coupling capacitor between the speakers and the amplifier. And, so that we can maintain full power (255 watts IHF, 160 watts RMS into 4 ohms; 220 watts IHF, 140 watts RMS at 8 ohms), or all the way down to 20 Hz at 50 watts RMS per channel.

Which brings up another way we made the 6065's performance more accessible to you: the price. And if its moderate price isn't accessible enough, we also make a lower-priced model, the 6055. Its power is a little less (145 watts rather than 255 watts) as is its rated sensitivity (2.6 uV instead of 2.2). But its otherwise almost identical.

So perhaps we can solve those family squabbles after all: a 6065 for yourself, and a 6055 for your son.

Sony Corp. of America, 47-47 Van Dam St., Long Island City, N.Y.
LOW-LEVEL AMPLIFIER DISTORTION: Some time ago I received a letter from Reginald Williamson, one of the equipment reviewers for the distinguished British publication Hi-Fi News, questioning my favorable review of a certain moderately priced stereo receiver. As he correctly stated, this receiver’s audio distortion, which was low at power outputs of a watt or more, increased steadily at lower power levels. My own measurements showed 0.13 per cent intermodulation (IM) distortion at 10 watts, 1 per cent at 10 milliwatts, and 2.4 per cent at 1 milliwatt output.

In Mr. Williamson’s view, this characteristic (which is more or less common to almost all amplifiers and receivers) is undesirable—and I certainly agree. We differ, though, in our subjective reaction to its effects. He described the sound of this receiver as “foul,” while I found it quite acceptable, if not exactly “state of the art.” Naturally, I was curious as to the reason for the diametrically opposite conclusions we had reached regarding this unit, especially since there was no disagreement regarding the electrical characteristics that we both checked.

First of all, Mr. Williamson considers 100 milliwatts output as a typical power level for a reasonable listening level. After making some tests with the aid of a sound-level meter, I was inclined to agree. With speakers of moderately low efficiency used in my home listening room, I found that an 80-dB sound-pressure level (average) at an eight-foot distance from the speakers was about as loud as I could tolerate when listening to music. At this level, conversation, without shouting, was out of the question. Measuring the average voltage being fed to the speakers, I determined that 100 milliwatts was indeed a “realistic” level by any reasonable listening standards.

The receiver in question, at 100 milliwatts, has 0.4 per cent IM distortion. The IM products are therefore about 46 dB below the average program level, corresponding to a 34-dB sound-pressure level in the listening room. By shutting off all appliances in the house (including a freezer in the next room), I was able to reduce the ambient (background) noise level in my listening room to 34 dB. But with any activity, human or mechanical, elsewhere in the house, the noise level was appreciably higher.

Thus, it appears that the IM distortion level—in the acoustic form in which it reaches the listener—is comparable to (and usually much less than) the normal background noise level. With due allowance for the simplistic nature of my measurements and various assumptions (and for the psychoacoustic factors that make IM distortion far more objectionable than a much louder random noise level), this suggests to me that low-level distortion may be masked by ambient noise and therefore be inaudible under practical listening circumstances.

Although listening levels of 80 dB or even higher are occasionally used by audiophiles, I suspect that most people would find a 70 dB level much more comfortable. This would require 10 milliwatts of audio power, and the 1 per cent IM distortion of the receiver under dispute at that level would produce a sound-pressure level of 30 dB—far below any practical home ambient noise level. The use of low-efficiency acoustic-suspension speaker systems would result in a further reduction of distortion, since they require several times as much power input for a given sound level, and the amplifier would be operating in an area where its distortion would be somewhat less. Conversely, a high-efficiency speaker, driven at a 1-milliwatt signal level, might reproduce the 2.4 per cent distortion of this amplifier in audible form. It appears that the widespread use of low-efficiency speakers, at least in this country, may have served to conceal this form of distor-
tion—fortunately for the manufacturers of some less-than-distinguished amplifiers.

Incidentally, Mr. Williamson believes that low-level distortion is responsible for the so-called "transistor sound" that supposedly distinguishes solid-state from vacuum-tube amplifiers (most of which were not troubled by a rise in IM distortion at low power levels). Perhaps this was so in the infancy of solid-state amplifiers, but in my view it is now a dead issue. I don't think there is any such thing as "transistor sound" with modern solid-state amplifiers, unless one refers to their vanishingly low distortion, very wide bandwidth, and superior overload characteristics—all of which are well beyond the state of perfection achieved by some of the most respected tube amplifiers. The average medium-price transistor amplifier today is far superior in these respects to the best commercially manufactured vacuum-tube amplifiers of yesteryear.

I offer the preceding hypothesis in the hope that someone with a strong background in psycho-acoustics (the key to the whole problem, I am sure) will come forth and either confirm it or prove me wrong. I would prefer either conclusion to the mysticism and guesswork currently prevailing.

In any case, whatever the audible significance of low-level distortion, it is completely absent from most high-quality component amplifiers. Checking our test files, I find that most receivers priced below $300 exhibit an appreciable rise in distortion at low power levels, but most of them are somewhat better than the unit Mr. Williamson cites. Many of the newer receivers selling for over $350 are almost completely free of this effect. If you consistently hear an unpleasant distortion at moderate-to-low listening levels, there may be something wrong with your equipment. But by all means try listening to different FM stations or phonograph records (and don’t overlook the possibility of an inadequate phono cartridge) before condemning your receiver or amplifier. It is my experience that the vast majority of commercial program sources are far inferior, in frequency response, distortion, and noise levels, to even moderately priced home equipment.

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**EQUIPMENT TEST REPORTS**

By Hirsch-Houck Laboratories

Dual 1218 Automatic Turntable

- The new Dual 1218 deluxe automatic turntable is the model priced immediately below the deluxe top-of-the-line 1219. The 1218 shares many features with the Model 1219, such as a tone arm that pivots within two concentric gimbal rings, a high-torque synchronous motor, and a cueing control with silicone-damped motion in both directions.

The Dual 1218 is somewhat smaller than the Model 1219, with chassis dimensions of 10 7/8 x 13 inches (as compared with 12 x 14 1/2 inches for the Model 1219). Its one-piece non-ferrous cast and machined platter is 10 3/4 inches in diameter and weighs 4 pounds (against the 12-inch, 7-pound 1219 platter). The tone arms of both units are of similar design: the 1218 arm is 3/4 inch shorter, but it is still very much a "full-sized" arm for an automatic turntable. Another obvious difference between the two players is the method of compensating for the change in vertical tracking angle when playing a single record, or a stack in automatic operation. In the 1219, the entire arm assembly is moved up and down to maintain the correct 15-degree angle on one record or at the center of a stack of six. The 1218 accomplishes the same thing, apparently with equal effectiveness, with a small knob on the side of the plastic slide-in cartridge holder. Marked S and M for single or multiple play, it tilts the cartridge slightly on its mounting in the vertical plane. Since the effective center of rotation corresponds to the position of the stylus tip, there is no change in stylus overhang.

The Dual 1218 has the same anti-skating correction system as the 1219, with a control knob on the motorboard and separate calibrated scales for conical and elliptical stylus, which require different anti-skating corrections. The scales, which correspond to the tracking force used, cover a range of 0.5 to 5.5 grams for conical stylus and 0.25 to 3.5 grams for elliptical stylus. The arm is balanced by an elastically damped, threaded counterweight, with click stops for easy adjustment. The tracking-force dial, which is part of the pivot assembly, turns a coiled spring to apply a downward force to the pickup. It is calibrated at 0.25-gram intervals from 0.25 to 5.5 grams.

The Dual 1218 is a three-speed machine (33 1/3, 45, and 78 rpm), with a vernier control providing a total adjustment range of about 6 per cent at each nominal speed. A separate record-size selector indexes the arm for 7, 10, or 12-inch records. The basic operating control is a single lever, which is moved to the left to start the motor and index the arm for both single and multiple-play modes. When moved to the right, it shuts off the

(Continued on page 34)
The Dress Knit.
Everything you love about a sport shirt in a dress shirt.

We have a new dress shirt that feels like a sport shirt. You can wear it out to dinner or anywhere fancy. Yet it's as comfortable as a shirt you'd play golf in. Because like a golf shirt, it's a knit. And shirts that are knit are a whole lot more comfortable than shirts that aren't.

They move as you move, stretch as you stretch. They drape better, too, giving you a trimmer, neater look.

All this, of course, would mean very little if the shirt weren't absolutely fantastic to behold. But it is. The colors are bright, the patterns are handsome, the styling is bold and contemporary. You'll be as elegant as the sharpest dresser in the fanciest restaurant in town. The only difference is, you'll be a whole lot more comfortable.

The Dress Knit by Arrow, the colorful white shirt company.
motor, and the arm returns to its rest. The 1218 can also be used in a fully manual mode, since lifting the arm off the rest and moving it toward the record starts the motor automatically. The machine is completely jam-proof, and the arm movement can be stopped at any point in the change cycle without either causing problems or risking damage.

Two record spindles are provided: a short single-play spindle that rotates with the turntable, and a multiple-play spindle that will hold up to six records of the same size and speed. The metal platter is covered with an anti-static mat, with raised ribs that contact the record only at its outer diameter. The viscous-damped cueing control functions in both single- and multiple-play modes. The price of the Dual 1218 is $139.50. Walnut bases are available in several styles, starting at $10.95. Plastic dust covers are additional.

- **Laboratory Measurements.** The tracking-force calibration of the Dual 1218 was very accurate at low forces, with the maximum error of 0.1 gram occurring at a 3-gram setting. At a 4-gram setting, the actual force was 4.5 grams, and at a 5-gram setting it was 5.7 grams. When set for 1 gram, the force increased by only 0.15 gram at the top of a half-inch record stack.

When a cartridge was installed with the aid of the plastic positioning jig supplied with the unit, the arm tracking error was very small—less than 0.4 degree per inch of radius over the entire record, and typically under 0.2 degree per inch, which is an excellent figure. We tested the Dual’s anti-skating system with an Empire 1000ZE/X cartridge installed. At a 0.75-gram tracking force, the optimum anti-skating setting was 1 gram; at 1.5 grams the optimum setting was 2 grams. In practice, these differences are insignificant, and different results might have been obtained with a different cartridge.

When using a tracking force of 1 gram or more, with the anti-skating compensation set according to the dial calibrations, the damped cueing system always returned the pickup to the same groove, or, at most, deviation, to the preceding groove. However, when operating at 0.75 gram or less, applying the additional anti-skating which we found to be optimum, there was appreciable outward arm drift during descent. This may or may not be a bother to some users.

A knob on the 1218's cartridge shell tilts the cartridge to adjust the vertical-tracking angle. Positions are provided for single-play operation and the center of a six-record stack.

The turntable speed could be varied over a range of +4.5, −3 per cent at 33⅓ rpm. A stroboscope disc is supplied for making this adjustment. The speed was totally unaffected by line voltage or record-stack variations. Wow and flutter were very low, with the latter being 0.04 per cent at all speeds, and the former 0.04 per cent at 33⅓ rpm and 0.025 per cent at the other speeds. The unweighted (NAB) rumble was −32.5 dB, including vertical and lateral components, and −36 dB with the vertical rumble cancelled out. Using the CBS RROL measurement weighting, which correlates well with audible effects, the combined rumble was −54 dB, a good figure.

There was no detectable arm/cartridge resonance in the 10- to 500-Hz range. The change cycle required 12 seconds at 33⅓ rpm and 7 seconds at 78 rpm.

- **Comment.** It appears that every basic operating feature of the $175 Dual 1219 has been included in the more moderately priced Model 1218, and with no significant sacrifices in performance. It is in every respect a very smooth, flexible, and easy-to-use record player, and will accommodate the most advanced cartridges at their minimum usable tracking forces. It is, in short, an excellent value.

For more information, circle 105 on reader service card.

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Panasonic SA-6500 AM/Stereo FM Receiver

- **Over the past several years,** Panasonic has been slowly introducing a broad line of sophisticated high-fidelity components (see our review of their SP-10 turntable, September, 1971). We recently had an opportunity to test one of their most powerful stereo receivers, the SA-6500. Rated at 50 watts per channel continuous power into 8 ohms, the SA-6500’s power amplifiers are direct-coupled, and can be switched to drive either or both of two pairs of speaker systems.

There are two magnetic phono-cartridge inputs (with identical characteristics) and a high-level aux source input in addition to the built-in AM and FM tuners. The usual tape-recorder inputs and outputs, with tape-monitor switch, are also provided.

A row of pushbuttons operates the loudness compensation, high- and low-cut filters (which have 12-dB-per-octave slopes). FM high-frequency blending for stereo-reception noise reduction. FM interstation-noise muting. mono/stereo mode, tape monitoring, and the selection of either phono input. Three other pushbuttons control the power and the two sets of speaker outputs. Vertically oriented sliders operate the balance, volume, and bass and treble tone controls. The only conventional knobs on the front panel are for tuning and input selection. A front-panel stereo headphone jack is always energized.

(Continued on page 36)
Seagram's V.O.
For people who want the best that life has to offer.
They seem to do everything. And they do it right. Even when it comes to having a drink. It has to be Seagram's V.O. Very special. Very Canadian. Very right. Known by the company it keeps.
The FM tuner section of the SA-6500 has a rated IHF sensitivity of 1.8 microvolts. It has two MOSFET tuned r.f. amplifier stages and an i.f. amplifier with both transistor and IC stages. Selectivity is provided by a combination of crystal filters and tuned transformers. The AM tuner section has an r.f. amplifier and two i.f. stages, with otherwise conventional circuits.

The tuning dial has a unique "band of light" that moves across the dial as the knob is turned, with its end indicating the frequency. The FM dial calibrations are linear. Two meters—relative signal strength and zero-center FM tuning—are illuminated when either FM or AM sources are selected. The word STEREO appears in red above the dial scale when a stereo broadcast is received, and orange PHONO and AUX legends indicate when those program sources are in use.

In the rear of the SA-6500, besides the usual inputs and outputs, there are two pairs of preamplifier-output/amplifier-input jacks, normally joined by jumper plugs. The signal path can be interrupted at this point to insert an equalizer or other accessory. There are two a.c. power outlets, one of them switched. The speaker terminals are spring-loaded pushbutton binding posts. A DIN socket parallels the tape input and output jacks. The speaker-line fuses are accessible at the rear of the receiver. An AM ferrite antenna is fixed inside the receiver, but there is a connection for an external antenna if one is needed. The Panasonic SA-6500 receiver, in a walnut-finish wood cabinet, sells for $369.95.

**Laboratory Measurements.** When both channels were driven with a 1,000-Hz test signal, the audio amplifiers clipped at 46.5 watts per channel into 8 ohms, 57 watts into 4 ohms, and 30 watts into 16 ohms. The harmonic distortion was under 0.1 per cent from 1 to 35 watts per channel. It was masked by inaudible noise at lower powers, and reached 0.2 per cent at 40 watts. The 1M distortion was between 0.1 and 0.15 per cent from 0.1 to 30 watts, increasing to only 0.2 per cent at 45 watts.

With 40 watts per channel as a reference full-power output, the distortion was a low 0.08 per cent at mid-frequencies, increasing to 0.3 per cent at 20,000 Hz. Below 1,000 Hz, our measurements included some inaudible power-supply ripple, which resulted in readings between 0.15 and 0.3 per cent at most frequencies. At full power, distortion rose rapidly below 50 Hz. At half power and one-tenth power, the "distortion" below 1,000 Hz was largely hum and noise, measuring between 0.1 and 0.2 per cent. Above 1,000 Hz, where we could filter out the ripple, distortion was under 0.05 per cent up to 7,000 Hz, and reached a maximum of 0.13 per cent at 20,000 Hz.

The RIAA equalization error (measured at the tape outputs) was +0.0, -0.2 dB from 70 to 15,000 Hz, falling to -0.4 dB at 30 Hz. The basic amplifier frequency response (with centered tone controls) was +0.1 dB from 30 to 20,000 Hz. The high-cut filter response was -3 dB at 5,000 Hz, and it did not attain its final 12-dB-per-octave slope until 15,000 Hz. The low-cut filter was excellent, being down 3 dB at 75 Hz, with a 12-dB-per-octave rolloff below that. The loudness compensation boosted both low and high frequencies, with its full effect occurring at any setting below -20 dB. The tone controls had very good characteristics, with a sliding bass inflection point allowing useful correction below 200 Hz with no effect on higher frequencies.

(Continued on page 40)
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MARCH 1972
The audio-amplifier inputs required 71 millivolts (AUX) and 0.8 millivolt (PHONO) for 10 watts output. The hum and noise, on any input, was about 72 dB below 10 watts, a very good figure. Phono overload occurred at 95 millivolts—an excellent figure for a preamplifier with gain as high as that of the SA-6500.

The FM tuner had a sensitivity of 1.8 microvolts, and the measured distortion for any signal exceeding about 5 microvolts was approximately 0.6 per cent—essentially the residual level of our signal generator. The image rejection was a very good 88 dB; AM rejection was 55 dB (a good figure). The ultimate quieting was 65 dB, and the capture ratio was 2.1 dB. The FM frequency response was within ±0.5 dB from 30 to 10,000 Hz, and −3 dB at 15,000 Hz. The filters of the multiplex decoder effectively removed all pilot-carrier signal that might interfere with tape recording from the audio outputs. Stereoeo separation was excellent—between 35 and 38 dB from 170 to 2,500 Hz, and 20 dB at 30 and 12,500 Hz.

The AM section was average in sound quality, with good sensitivity and freedom from spurious signals and noise. The AM frequency response was down 3 dB at 20 and 2,600 Hz, and −6 dB at 4,200 Hz.

● Comment. The Panasonic SA-6500 is an excellent receiver, uniquely and attractively styled and (as revealed by an internal examination) constructed in a rugged and workmanlike manner. It is thoroughly competitive in its price class, and has enough power and FM sensitivity to satisfy the demands of practically any home installation.

For more information, circle 106 on reader service card

Bang & Olufsen Beovox 5700 Speaker System

● BANG & OLUFSEN, a long-established Danish audio manufacturer, has been known in this country principally for its phono cartridges and tone arms. The Beovox receivers, amplifiers, and speakers, which have been sold in Europe for some time, are now marketed in the United States by Bang & Olufsen of America. We have tested the top unit of the B & O speaker line, the Beovox 5700. The 5700 is a three-way system, suitable for floor or wall mounting, measuring 26 inches high, 14½ inches wide, and 11½ inches deep. It weighs about 50 pounds. The 10-inch woofer is augmented by a separate 10-inch passive radiator with a polystyrene diaphragm that reinforces the woofer output over a portion of the low-frequency range.

The mid-range speaker is a 2½-inch dome radiator, and the highest frequencies are handled by a ¾-inch dome tweeter. The crossover frequencies are not specified. The system impedance is rated at 4 to 8 ohms, and there are no level adjustments or balancing controls. The speaker connections are made through an integral 12-foot cable. The cabinet, constructed with exceptional precision, is finished on all sides and is available in rosewood or teak. Price: $570 a pair.

● Laboratory Measurements. Lacking any detailed specifications on the Beovox 5700, we approached it with no preconceptions. However, it did not take long to establish some strong—and positive—impressions of this somewhat unusual speaker system. Its frequency response, measured with our multi-microphone test setup, was smooth and uniform overall, and especially in the important middle range from 500 to 8,000 Hz, where it was constant within ±2.5 dB. The bass was as strong as that provided by the better American acoustic-suspension speakers. The overall frequency response was ±4 dB from 38 to beyond 15,000 Hz.

The Beovox 5700 was typically 3 to 6 dB more efficient than most acoustic-suspension speakers with comparable frequency response. Because of this, we judge that it could be driven successfully with any good amplifier or receiver capable of 15 watts or more per channel. (Many European receivers meet this requirement.) Yet it proved able to handle the output of a 50- or 60-watt amplifier without distress.

The low-frequency harmonic distortion at a 1-watt drive level (based on an assumed 8-ohm impedance) was slightly higher than we have measured on many other good speakers, and was typically about 3 per cent in the 100- to 50-Hz range. Since one watt produced a rather loud sound level from the 5700, the distortion at normal listening levels should be quite insignificant. The distortion rose rapidly below 40 Hz, where it was 5 per cent, and reached 14 per cent at 35 Hz.

The tone-burst response at low and middle frequencies was excellent—as nearly ideal as can be measured in a "live" room. We found a narrow region around 10,000 Hz where the burst became ragged and showed some moderate ringing following each burst. However, this could not be detected when listening to program material, which rarely has substantial content in that frequency range. The high-frequency dispersion was very good—it ranked with the best systems we have tested that have a single dome tweeter. The system impedance was between 6 and 25 ohms (the latter at the two system resonances—45 and 550 Hz) from 20 to

(Continued on page 42)
The new ADC-XLM

Superb performance. Lowest mass. Unbeatable price. And it’s guaranteed for 10 years.

If you’re like most audiophiles, you’ve probably spent a great deal of time, effort and money looking for the “perfect” cartridge. We know what you’ve been through. After all, we’ve been through it ourselves.

That’s why we’re especially enthusiastic about our newest cartridge, the ADC-XLM. It does everything a well designed cartridge should do. It may not be perfect, but we don’t know of any that are better, and few that even come close.

Now, we’d like to tell you why.

The lighter, the better.

To begin with, it is generally agreed that the first consideration in choosing a cartridge should be low mass. And as you may have guessed by now, the LM in our model designation stands for low mass.

Not only is the overall weight of the ADC-XLM extremely low, but the mass of the all-important moving system (the stylus assembly) is lower than that of any other cartridge.

Translated into performance, this means effortless tracking at lighter pressures with less distortion.

In fact, used in a well designed, low mass tone arm, the XLM will track better at 0.4 gram than most cartridges at one gram or more.

A new solution for an old problem.

One of the thorniest problems confronting a cartridge designer is how to get rid of the high frequency resonances common to all cartridge systems.

Over the years, various remedies have been tried with only moderate success. Often the cure was worse than the disease.

Now thanks to a little bit of original thinking, ADC has come up with a very effective solution to the problem. We use the electromagnetic forces generated within the cartridge itself to damp out these troublesome resonances. We call this self-correcting process, “Controlled Electrodynamic Damping; or C.E.D. for short.

And if it seems a little complicated, just think of C.E.D. as a more effective way of achieving lower distortion and superior tracking, as well as extending frequency response.

In addition to the superlative ADC-XLM, there is also a new low mass ADC-VLM, which is recommended for use in record players requiring tracking pressures of more than one gram. The cartridge body is identical for both units, and so is the guarantee. Only the stylus assemblies are different. Thus you can start out modestly and move up to the finest and still protect your investment.

And something more.

In addition to the superb ADC-XLM, there is also a new low mass ADC-VLM, which is recommended for use in record players requiring tracking pressures of more than one gram. The cartridge body is identical for both units, and so is the guarantee. Only the stylus assemblies are different. Thus you can start out modestly and move up to the finest and still protect your investment.

And that brings us to the important question of price, which we are happy to say is significantly lower than what you might reasonably expect to pay for the finest. The suggested list price for the incomparable ADC-XLM is $50 and the runner-up ADC-VLM is only $40.

But no matter which low mass ADC you choose, you can be certain that they share the same outstanding characteristics... superb tracking, very low distortion and exceptionally smooth and extended frequency response.

*We guarantee (to the original purchaser) this ADC cartridge, exclusive of stylus assembly, to be free of manufacturing defects for a ten year period from the date of factory shipment. During that time, should a defect occur, the unit will be repaired or replaced (at our option) without cost. The enclosed guarantee card must be filled out and returned to us within ten days of purchase, otherwise this guarantee will not apply. The guarantee does not cover damage caused by accident or mishandling. To obtain service under the guarantee, simply mail the unit to our Customer Service Department.

Audio Dynamics Corporation
Pickett District Road, New Milford, Connecticut 06776

MARCH 1972

CIRCLE NO. 8 ON READER SERVICE CARD
The removable stylus assembly includes a swing-away of each groove wall. The stylus is a 0.2 x 0.7-mil diamond, which has 1,000-Hz tones recorded at 30 centimeters per second (cm/sec). The two were tracked at 0.75 gram and 0.5 gram, respectively. We used 0.75 gram for all high-level 32-Hz bands, and the Fairchild 101 test record (which has very high-level 32-Hz bands), and the Fairchild 101 test record used the induced-field principle. The magnet and coil structure are embedded in the plastic cartridge body, which is shielded against external hum fields. The stylus cantilever moves a small armature, varying the magnetic flux channeled to each of the four pole pieces and coils. The voltages induced in the coils are combined to generate electrical outputs proportional to the stylus velocity of each groove wall. The stylus is a 0.2 x 0.7-mil diamond, rated to operate at forces from 1/4 to 1 1/4 grams. The removable stylus assembly includes a swing-away plastic stylus guard. The price of the Empire 1000ZE/X monod, rated to operate at forces from 1/4 to 1 1/4 grams.

Laboratory Measurements. The cartridge was installed in an SME 3012 arm. It was terminated in 47,000 ohms shunted by a capacitance of 230 picofarads (including the arm wiring). To establish the minimum tracking-force requirements of the cartridge, we played the Cook Series 60 mono test record (which has very high-level 32-Hz bands), and the Fairchild 101 test record, which has 1,000-Hz tones recorded at 30 centimeters per second (cm/sec). The two were tracked at 0.75 gram and 0.5 gram, respectively. We used 0.75 gram for all subsequent tests. The output from the 3.54-cm/sec bands of the CBS STR-100 test record was 2.2 millivolts per channel. This relatively low output is typical of many good cartridges, and is compatible with the input characteristics of most high-quality amplifiers.

The frequency response, using the same STR-100 record, had a slightly depressed output in the 5,000- to 15,000-Hz range, being down about 3 to 4 dB from the lower frequency levels. (Most wide-range cartridges exhibit a similar effect with this test record.) However, the output increased above 15,000 Hz, reaching its maximum at about 18,000 to 20,000 Hz. We repeated this measurement with the CBS STR-120 record, which covers 500 to 50,000 Hz. This showed a high-frequency resonance at 20,000 Hz. The output dropped rapidly at higher frequencies, but was still measurable at 40,000 Hz.

To determine the sensitivity of the 1000ZE/X to capacitive loading, we measured its frequency response with a 470-picofarad load as well as the original 230-picofarad load. The added capacitance reduced the output at 20,000 Hz by about 2 dB, and raised it by 1 dB in the 5,000- to 10,000-Hz range. Although the overall frequency response was slightly flatter with the higher capacitance, we would consider the difference insignificant. The channel separation was typically between 20 and 25 dB, rising to about 30 dB in the region of 6,000 to 8,000 Hz, and falling to its minimum of 7 to 10 dB at 20,000 Hz.

The low-frequency resonance, in the relatively massive SME arm, was at 7.5 Hz. In most arms it should fall between 8 and 10 Hz—well below the audible range. The 1,000-Hz square-wave response with the CBS STR-111 record showed only a single cycle of well-damped ringing.

Intermodulation distortion measurements were made with the RCA 12-5-39 (78-rpm) record. The IM distortion was about 1 per cent up to about 11 cm/sec velocity. The distortion increased gradually at higher velocities, to 2.2 per cent at 20 cm/sec and to 5 per cent at the 27.1-cm/sec maximum level on the record. The Empire's

(Continued on page 44)
AKAI gives you more than meets the eye. Innovative features and superb engineering combine to make the GXC-40D Cassette Stereo Tape Recorder an unparalleled performer.

Nothing is spared.

It's built with a unique Over-Level Switch to cut distortion and tape hiss.

A tape selector switch allows you to use high performance chromium dioxide tape—for super-range 18,000 cycle response—or standard tape. Both with maximum efficiency.

There's more.

The GXC-40D is equipped with the exclusive AKAI GX glass and crystal ferrite head—dust and wear-free—lifetime guaranteed.

Just a few of many reasons to buy AKAI.

And you can attractively complement this magnificent unit with AKAI's NDS-70 speaker system. Provides an omni-directional sound that will astound you.

Visit your AKAI dealer now for an ear-opening demonstration.

You might find something that looks as good—but you'll never find anything that sounds better than AKAI.

*Requires stereo amplifier. Amplified model GXC-46 also available.
A subjective “trackability” test, using the Shure “Audio Obstacle Course” record, established that the Empire 1000ZE/X could cope with any of the high-velocity musical selections except the higher levels of orchestral bells—but it is only fair to note that no cartridge we have yet tested can track them without distortion.

- **Comment.** As one would expect from its smooth, wide frequency response, low distortion, and symmetrical channel separation, the Empire 1000ZE/X is a thoroughly neutral, clean sounding, and non-fatiguing cartridge. During extended listening tests we soon forgot about the source of the program, enjoying the sound for its own sake. This is a characteristic of almost any first-rate audio component, whether it be a cartridge, amplifier, tuner, or speaker, and in our view is the chief justification for investing in a premium quality, high-price product.

The 1000ZE/X, being relatively insensitive to the effects of capacitive loading, should effectively eliminate that factor from consideration when planning a home music system.

When the Empire 1000ZE/X is compared to most of the other premium-quality cartridges on the market, it is easily the equal of any of them by any criterion we can apply. Furthermore, its ability to track the highest velocities to be found on music records (at middle and high frequencies) at only 0.5 gram, and the exceptionally pure waveform it produced from the 30-cm/sec, 1,000-Hz bands of one of our test records suggests that when playing records with this cartridge, any distortion you may hear, in all probability originates in the record, the amplifier, or the speaker—not in the cartridge.

For more information, circle 108 on reader service card.
How to read a hi-fi ad

Puzzle picture: find the clue that tells you how good the advertised system probably is. Our advice is to check the one component that is the source of the sound — the phono cartridge. We say this because we know that the dealer who's assembled a superior package at a fair price is going to complete it with a superior cartridge within the available price range. This dealer ad above, for example, includes a Shure M91E Hi-Track. Even if you weren't aware of the effortless way it meets your most rigorous trackability demands, you should know that it, as well as virtually every Shure cartridge, has been acclaimed by hi-fi critics and authorities as best in its class, or best for the cost. That's why you see so many of them teamed with "best-in-their-class" components, and why they invariably mean a more-for-the-money total system that's going to make you very happy.

Shure Brothers Inc.,
222 Hartrey Ave., Evanston, Ill. 60204
A SYMPOSIUM ON MUSIC CRITICISM

In honor of its fiftieth anniversary, the Eastman School of Music of the University of Rochester is holding a series of four musical symposia: Music Criticism, Music Teaching and Learning, Musicology, and Support for the Arts. The first of these took place on December 8 through 12, 1971 and, on the grounds that symposia devoted to music criticism are rare (the last major one held in the United States was at Harvard in 1947), I thought the reader might be interested in knowing just what music critics have to say to each other and to an audience of professional musicians and students.


Each participant delivered a specially written paper (they will all be collected and published by Eastman) and all participated in general give-and-take discussions with an audience that was sometimes both larger and more well-disposed toward music critics than one would have thought. That latter quality surprised most of the critics. Accustomed to being considered mortal enemies by both composers and performers, many of us had considered a music conservatory analogous to a lions' den. The papers were particularly interesting for their concentration on fundamentals: on what music criticism is, whether it can be taught, what it should aim to do, and the problems the music critic faces. What seemed to be a great deal of general agreement only temporarily masked some very basic differences when the conversation got down to specifics. Do you or do you not appear at the concert with a score? Do you study a new work in score and at rehearsal before its concert premiere or do you go in "cold" like any other member of the audience? In reviewing older works, how much emphasis do you place on the historical authenticity of performance practice? Do you have an audience in mind for whom you specifically write? Is it the critic's job to interpret the composer to the lay audience? Do you applaud (!) at concerts you are reviewing? Whom—or what—do you review?

There is a lot of meat in those seemingly elementary questions, and the different answers they provoked showed not only schisms between different groups of critics, but indicated, I think, something of a general movement of the critical fraternity (with some moving faster than others) from a historically set position to a new and as yet not completely defined one. William Mann, in referring to the greater movement of music itself today, called it—after the Beatles, Michael Tippett, and Karlheinz Stockhausen—"moving into Aquarius." We are, he went on, saying farewell to a civilization "in which works of art were created by superior intellectual acumen, and truly appreciated only by intelligent, cultured persons," and entering a new era in which, to a great extent, "music . . . is not to be thought about but to be absorbed."

That definition, of course, was not intended to be a complete characterization, but though I was intrigued by critic Mann's paper when I heard it, it was only afterward that it struck me how well it defined just what was happening at the symposium. For example, Henry Pleasants suggested in his paper (If I Were Managing Editor . . . ) that the role of music critic be abolished in favor of less highly trained but more catholic (Continued on page 48)
The Quietest Revox

One of the most compelling reasons for buying a Revox is the sounds it doesn't make.

No spurious pops or clicks. No wavering, fluttering tones. No distracting hum. And best of all, virtually noise-free electronics.

Take our new A77 Mk III for example. We manufacture it to such close tolerances and with such exacting attention to detail, that it is generally regarded as one of the quietest tape recorders ever made.

Unfortunately, no matter how quiet our electronics are, there is still the inherent problem of tape hiss.

And that's where our new Revox A77/Dolby B recorder comes in.

By now, the virtues of the Dolby Noise Reduction system are too well known to require any elaboration on our part.

Suffice it to say, for all practical purposes the last major stumbling block to quality, noise-free recording has finally been eliminated.

Listening to tapes on the new Revox/Dolby B is a revelatory experience. Tape hiss is virtually non-existent. The music seems to emerge from a background of velvety silence. And at 3-3/4 i.p.s. the absence of extraneous noise is truly startling.

But no mere description of the Revox/Dolby B can adequately convey the experience awaiting you the first time you listen to a tape made on this remarkable machine.

Your nearest Revox dealer will be delighted to audition the Quietest Revox for you. Once you've heard it, you'll understand why we say...

Revox delivers what all the rest only promise.
THE BOYS FROM THE JACK DANIEL'S FRONT OFFICE say they've never had their pictures shown. Well, meet the boys from the front office.

Charlie Manley, the one in the middle, can remember when he was our only finance man. But now he has two assistants and a new calculating machine. And he loves to talk about how he's changed our bookkeeping methods over the years. Of course, when it comes to whiskey we still charcoal mellow it in the slow, old-time way. And, you can be sure, neither Charlie nor anyone else is about to be changing that.
Tchaikovsky's
FRANCESCA DA RIMINI

In 1288 or thereabouts, a personal tragedy took place in Italy that has inspired the creative imaginations of poets, painters, writers, and musicians ever since. Guido da Polenta, Prince of the town of Rimini, gave his daughter Francesca in marriage to a crippled and rather repulsive military leader, Giovanni Malatesta. One of Malatesta's brothers, Paolo, known as Il Bello because of his handsome appearance, fell in love with his sister-in-law, and the love was returned. The husband found the two of them in an embrace and in anger rushed at Paolo. Francesca hurled herself between the two brothers, and Giovanni's dagger pierced her breast. In the next century, the chronicler Giovanni Boccaccio described what followed in these words: "Giovanni withdrew the dagger and again struck at Paolo and slew him; and so, leaving them both dead, he hastily went his way and bestowed himself to his wonted affairs; and the next morning the two lovers, with many tears, were buried together in one grave."

In Canto V of the Inferno, Dante is led by Virgil into the second circle of Hell, where the souls of those who died in a moment of carnal sin roam. There are Semiramis, Helen, Dido, Cleopatra, Achilles, Paris, Tristan. A mood of insufferable pity seizes hold of Dante as he sees "two that go together, and seem to be so light upon the wind." He calls to them as the wind sways them in his direction. Finally Francesca says to him: "There is no greater woe than remembering in misery a happy time."

This was the story that served as the basis for an opera libretto sent to Tchaikovsky in 1875 by a writer named Zvantsev. The composer rejected it as material for an opera, but he quickly recognized the dramatic possibilities inherent in the story. In July, 1876 he wrote to his brother Modeste that he was "beset by the wish to compose a symphonic poem, Francesca da Rimini." Three months later he wrote that he had just finished the composition. Nicholas Rubinstein conducted the first performance of the score on February 25, 1877, in Moscow, and it was a huge success. In the near-century since then, Francesca da Rimini has become one of Tchaikovsky's best-known and most frequently played orchestral scores. It is in one movement with several sections. Ossip Gabrilowitsch, the great Russian-American pianist and conductor who heard the work many times in Russia, reported that performances there invariably carried a detailed account of the "action" of the music in the printed program. The opening is "The gateway to the Inferno—the tortures and agonies of the damned." There are rushing scales, depicting violent winds in which Francesca and Paolo are whirled about while locked in each other's arms. The middle section, with its plaintive clarinet solo over pizzicato strings, bore the inscription "Francesca tells the story of her tragic love for Paolo." There is a return to the raging orchestral storm: "The turmoil of Hades. Conclusion."

Among the seven available recordings of Francesca da Rimini there is not one out-and-out failure. Only one—that by Charles Munch and the Boston Symphony (RCA Victrola VICS 1197)—is on a budget label, coupled with the earlier of the two Munch recordings of Tchaikovsky's Romeo and Juliet. It is a straightforward, dramatic account of the music in early but still serviceable stereo sound. As for the remaining half-dozen full-price versions, my own favorites are the performances conducted by Igor Markevitch (Philips 900234), Lorin Maazel (London 21067), and Leopold Stokowski (Everest 3011). Stokowski's is the oldest of the three, dating from the late Fifties, when he made a whole series of memorable recordings for Everest with the Stadium Concerts Symphony Orchestra of New York (a nom de disque for the New York Philharmonic). It is a very personal account of the score, with considerable elasticity of phrasing, tempo, and dynamics. But it all adds up to convincingly dramatic music. Markevitch's is a more direct account than Stokowski's; it is also rather better played (by the New Philharmonia), and the recorded sound is more ideally balanced and smoother. Maazel's is the most recent of the lot; recorded in the Phase 4 technique of London Records, it is also the most vividly reproduced of them all. And Maazel delivers a highly charged performance that culminates in a coda of extraordinary intensity and passion. I think I would select Maazel's as my top recommendation, but you can't really go wrong with any of the available Francesca da Rimini recordings.

Reel-to-reel tape addicts draw a blank: no performance is currently available in this format.
LEARNING FROM CALLAS

One of our greatest living sopranos is back on stage once again—not as a performer, but as a teacher in her own operatic master classes at New York's Juilliard School

By ROBERT S. CLARK

The best musical show in New York last fall was to be seen on Mondays and Thursdays, late in the afternoon, on the stage of the elegant new Juilliard Theater at Lincoln Center. For setting, there was only a microphone, a piano, and a table piled high with opera scores, beside which stood a high stool. The cast, too, was small: a pianist, a journeyman singer, and a teacher. But the teacher was Maria Callas, and that by itself meant an event of considerable musical importance.

The Juilliard School had invited Miss Callas to hold a series of master classes in operatic singing, and, from the reported number of three hundred aspirants who auditioned for her, she had chosen some two dozen—about half of them from Juilliard—to participate. Juilliard had also offered, through a chaste advertisement in the New York Times at the end of summer, seats in the auditorium to "observers." Observers are a standard component of master classes, for the term embraces the notion that the artistic advice dispensed by the master is too precious to be bestowed only upon his pupils, and should be shared with others, and perhaps especially with critics, who are most in need of such insight. I lost no time in getting my request for a seat into the mail, hoping to beat the rush, and was elated when my ticket arrived. So it was a distinct shock to discover, as the audience gathered for the initial session on October 11, that it consisted of just one hundred or so, a small clump up front in the thousand-seat theater. As the sessions went by, and word got around, the theater began to be conspicuously fuller, and to include singers of note—Licia Albanese, Maralin Niska, Tom Krause, Placido Domingo, Tito Gobbi—and other musicians. And for the last few sessions there was just about a capacity house.

At the outset, the trouble may have been the modesty of that advertisement. But Juilliard had chosen, probably at the behest of Callas herself, to avoid at all costs giving the impression that the classes were to be merely another star vehicle. It is likely, too, that many who might have signed on as observers earlier thought that Callas would not show up. The February before, she had been engaged to work with advanced singers at the Curtis Institute in Philadelphia for two weeks, and had stayed just two days. No official reason for her early departure was ever put forward, but rumor has it (and it is only a rumor) that she had been disappointed in the students.

Perhaps because of this, anticipation ran high in the auditorium that first afternoon, and when Callas appeared, at the side of Juilliard's President, Peter Mennin, the burst of applause was more than routine. Some must have been recalling the impact of her entrance upon other stages; some were no doubt relieved that she had decided to go through with it, and hoped to make her feel welcome; and some who were, like myself, seeing her for the first time must have been awed by the woman's wholly natural ability to command attention by her mere presence. She was simply but strikingly garbed—a habit of hers, it was to turn out—in a white blouse and flared brown ankle-length culottes, a pendant dangling on a long golden chain around her neck. She wore horn-rimmed glasses, and her ample auburn hair was pulled severely back from her forehead and fell loosely on her shoulders. An impression of unusual grace was made touching by a hint—something in her gait, in her eyes—of vulnerability. The audience's applause drew from her a rather abashed glance and a reproving wave of the hand, as if to say, "We are here to learn, not to adore." That pretty much set the tone for all that followed.

After Mr. Mennin's brief introduction, she went to her stool at the left of the stage, looked down at the students in the first few rows, and without preamble called for a volunteer to come to the stage. "I know you must all be nervous, eh? Who would like to sing?" A courageous young baritone finally acceded to her urging, and sang Di Luna's aria "Il balen" from Verdi's Il Trovatore. Callas let him finish, and then began at the beginning, taking recitative and aria phrase by phrase, analyzing them and showing how they might be improved,
sometimes singing herself to demonstrate. And so it was to go, twice a week for six weeks, with scenes and arias ranging from Spontini, Mozart, and Berlioz to Rossini, Bellini, Verdi, Puccini, and Cilea.

No one in the auditorium for these sessions could have been unprepared to find Callas a woman of great personal magnetism. What most of us were unprepared for, I think, was her approach to the role of teacher. From the first she was no Olympian goddess doling out absolute wisdom from the sacred fount, but rather a colleague of the students, one whose value to them, she seemed to feel, stemmed from her vast stage experience and the high standards she had been taught and had tried to measure up to. As she went over an aria with a student, no matter what difficulty she might be having getting across to him, she was never without an encouraging word or a bracing pat on the shoulder. She was frank ("You are being cute - never, never be cute on stage"), strict ("No, no - you must give me that phrase better"), and occasionally cajoling ("Come now, you must conquer your nerves"), but never harsh, condescending, or reproachful, even when, once or twice, the students gave her (I thought) sufficient reason to be so. She seemed, in short, to show a comradely concern for the students' development as future performers, a concern that doubtless sprang from her firm belief in the value of the art they and she had chosen to serve.

That belief was manifested in the principles that underlay Callas' instruction in these classes. The first of these was fidelity to the written score. This idea has become a cliché of contemporary musical thought and performance, but Callas' devotion to it gave it life and substance. "Sing it as it is written!" she admonished the students over and over again. One young soprano, tackling an aria from Lucia di Lammermoor, introduced some variation into a cadenza half-way through it, and provoked Callas' disapproval. "That cadenza is written out by the composer: you have no liberty with it." There was no detail of musical and textual inaccuracy too small to escape her notice; her knowledge of the scores was as thorough as her ear for rhythm, intonation, attack, and pronunciation was unerring.

Intimately related to this insistence on accuracy was her insistence on sound technique. By definition, master classes deal with interpretation alone, not with technique. But Callas knows how closely linked the two are, and wanted her students to realize that technical faults blemish musicality and obstruct interpretive effect. And time after time she reminded students that they must sing every note clearly, even in the most incidental grupetto or the swiftest cadenza; that a firm and even legato line is a musical as well as a technical achievement; that notes must be attacked squarely — "go immediately to the note!" — and never slurred up to. "Slurring spoils the rhythmic outline of the phrase," she would say. "Instrumentalists do not do it: if a violinist slurred into a note he would be ashamed of himself. We should be, too."

It goes without saying that all of this turned out to be something more than just musical puritanism, and Callas did, in fact, justify an occasional departure from the score in the name of custom or expressivity, and even encouraged the use — the judicious use — of rubato and portamento. It soon became clear that clean, accurate singing was not, for Callas, an end in itself. It was, rather, the primary means of conveying the dramatic meaning that lies behind the notes.

In these classes Callas operated on the conviction that all a singer's resources must be turned toward realizing the dramatic purpose of the com-

The Medea legend as set to music by Luigi Cherubini was one of Callas’ most successful revivals in the mid-Fifties. Now it is the vehicle for her first non-singing dramatic role, in Pier Paolo Pasolini's film Medea, a scene from which is shown below.
Callas says...

"You can never get enough of looking at your scores."

"Before you open your mouth, you should know exactly where a phrase is going and how long it is going to last."

"You must love the phrase—it must be precious to you."

"Mozart is often done on the tips of the toes, with too much fragility. It should be sung with the same frankness you sing ‘Trovatore’ with—but in the Mozart style."

"When you need to rest and get a breath, turn it into an expressive moment. And a pause must have a beat in it—two beats, three beats, whatever, but you must always count it."

"A phrase has an arch. You cannot have one or two loud notes, and then several piano notes for no reason at all."

"We have no excuse not to have a technique."

"Even when singing quietly, support the tone. The diaphragm must work all the time. And no matter how soft, the sound must be intense."

"Don’t just open your mouth, open your throat."

"There are liberties and there are liberties. You are taking too many."

To an overemphatic singer: "If you cry wolf so much throughout the aria, then at the climax when you need a big effect no one will believe you."

"First express what you are feeling with your voice. The gestures will come later."

"When you ornament a repeat, do not make it too brilliant. Ornaments must always run with the music, and must not detract from its dramatic impact."

"I never liked Gigli’s singing—he sobbed too much."

"Everything you do on the stage must be noble."

"We must fight bad tradition. If you have a conductor who doesn’t know what is in the score because he is in too big a hurry, you must have the courage to object."

To a student who inserted an overelaborate cadenza into an aria: "You can have much more effect with expression than with all that hullabaloo!"

poser. Students were exhorted to identify and keep in mind what she called the “attitude”—the emotional tone or expressive connotation (or successive tones and connotations)—of the aria or scene on which they were working. That part of the singer's task is widely understood and relatively easy, of course. What Callas insisted upon, as well, was that they convey the attitude to the listener—that they “act with the voice.” Since she was taking the role of the listener in this case, the students sometimes discovered to their chagrin just how difficult this is to do. One sturdy baritone sang a sonorous but empty rendition of King Philip’s aria “Ella giammai m’amò” from Verdi’s Don Carlo, and when he finished Callas commented that she had felt none of the despair of an aging king haunted by the fact that his young wife had never loved him. After the singer had tried several fresh starts, all of them halted by Callas, something she said wounded him visibly. "There!” she exclaimed. “You’re looking at me and you’re suffering! That’s what I want in the aria!” Another student violated the emotional tone of Rodolfo’s “Che gelida manina” from La Bohème by greatly overdoing it; Callas quietly pointed out that this is “really a very simple little aria: you are carrying on a flirtation with Mimi, that’s all.” This was not the only occasion on which she made it clear that no substitute for true feeling, the sort that is inward, “inside you,” not smeared over the tops of the musical lines like so much emotional marmalade. Feeling must infuse the singing with a steady, intense glow—the quality Germans call Innigkeit. “The more interior the sentiment,” Callas said at one point, “the more dramatic it will be to the audience."

And, as one might expect, there was always her extraordinary attention to words. This went beyond pointing up a key word—a “core,” a “cruel,” and the like. For it became apparent as Callas worked day after day with her pupils that the flow of a musical line made most sense to her when it came nearest permitting the natural flow of the words—“good spoken Italian,” as she put it. Consequently she often wanted more rapid movement of the lines, in both recitative and aria, than the students at first gave her: with her right hand she would inscribe circles in the air like a policeman urging traffic to keep moving. (Watching her hands as she guided a singer through a piece was, in fact, a graphic lesson in what it means to “shape” or “sculpt” a phrase.) She spent at least as much time during these sessions working on recitatives as she did working on the arias themselves, insisting that the students project the words clearly, that the rec-
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She brought her personal authority to the whole certing because, for my generation of opera-goers, repetition Toscanini's much-quoted remark that "tradition was "traditional," repeating a deviation from the score was "traditional," reflecting a mistaken assumption about Callas' technical resources. It is true that, before she took herself into semi-retirement, she had almost destroyed her vocal instrument. But as you listen to her recordings (not, I hasten to point out, the late Tosca and Carmen), you cannot help but be struck by the fact that, in the broad sense of the word, she had a fine technique. Her tones were rich, secure, and well supported (although some listeners always found the timbre of the voice displeasing), her legato line was firm and shapely, and her intonation was well high perfect. She managed difficult arpeggios and scale passages with grace and vitality (and never faked by gliding through successions of rapid notes), she passed from one register to another with ease, and, save for an occasional unsteady high note, she had her voice under admirable control in every situation. But all of that is secondary.

Not long ago I read a comment on Rembrandt the portraitist that seemed to me unusually apt as an analogy for Callas the operatic performer. "Rembrandt made his clients look more than serious," the commentator wrote. "He made them seem to have important and sometimes complex things on their minds." Maria Callas' gift was to be able to endow the Italian operatic heroine—surely as raw material not often among the most compelling products of the Western dramatic imagination—with a similar kind of depth and significance. One of the chief questions the Juilliard classes raised is just how much of such a gift can be passed on to others. A way of shaping a phrase, a way of sustaining a high note, the pointing of some words, the forming of a more musical line—these, of course, Callas could get across to her students. But the rest—the sina qua non that fuses these things into a musical revelation? Sometimes, as I watched the students and listened to them act on her counsel, I felt it was possible to pass on the rest; sometimes I felt it was not. But I am sure everyone at those sessions who goes to the opera for something more than just an evening of pretty vocalizing is united in devoutly hoping the Callas wealth can be shared.
A handsome distressed-oak cabinet with the appearance of a large upright desk houses the stereo equipment of Edmund C. Byrne of Greenwich, Conn. The cabinet is constructed of 117 individually modeled pieces of wood, carefully assembled and then "distressed" (beaten with heavy chains) to create the antique look currently fashionable in home furnishings. The cabinet body was designed to order by Wood and Design of Portchester, and the equipment installed by The Sound Gallery in Greenwich.

The installation is located in an enclosed stone porch, where two KLH Model 22 speakers on the wall opposite the cabinet serve the immediate area. With these, plus two additional pairs of KLH Model 6 speakers (one pair in the living room, the other in the basement playroom), the installation provides music in areas most frequented by the Byrnes family. Powering all six is a McIntosh MC 2505 power amplifier driven by a McIntosh MX 110 tuner/preamplifier unit. Both components are mounted in an easily accessible wooden compartment that has a slight forward tilt for ease of observation of control positions. Ventilation is provided by two sets of openings, one visible below the amplifier and tuner and another hidden behind them, which permit a constant flow of air. Directly below the power amplifier (left) and installed flush with the desk-top surface is a Miracord PW-50H automatic turntable equipped with a Stanton 500EE phono cartridge. To its right, resting on the same shelf, is a Concord F-105 cassette deck. Records and tapes are stored in the cabinet below.

Mr. Byrne is an investment banker whose interest in music dates back to his childhood. Today he enjoys the same light classics he heard as a boy, plus much popular music, with an emphasis on recordings by Errol Garner. — Paulette Weiss
CASSETTE OR OPEN-REEL?
Some enlightening answers to a question that couldn't even have been asked as recently as two years ago

By David Monoson

Only a short two or three years ago few people with any tape know-how would have considered the cassette a serious candidate for a place in the high-fidelity firmament. And for an audiophile bluntly to juxtapose cassette and open-reel—as is done above—would have made him suspect of being either technically misinformed or terribly perverse. Today, however, owing to the great technical progress made with the cassette format, the question is a real one for anyone shopping for a tape machine, and it deserves some straight answers. We've asked David Monoson of Marketing World, a firm that represents the Teac line of open-reel and cassette machines (as well as Maxell tape and a variety of other products), to help sort out the pros and cons of the cassette and open-reel formats.

—Larry Klein, Technical Editor

For openers, let's look at a very real situation. Mr. A. has been reasonably content with his disc stereo system ever since he switched to solid-state components several years ago. But although he spent almost $800 on his system, his sonic needs remained somehow unfulfilled. He obviously needs something more—such as a high-quality tape deck. But how much should he spend, and on which format should he spend it?

First, let's see what the cassette decks have to offer. There is no denying the ease of handling and the simplicity of use of cassette equipment—you simply snap in a cassette and play. Non-Dolbyized decks are available ranging in price from under $100 to well over $200, and their reliability and simplicity are powerful points in their favor. And when used with low-noise, high-quality tape these machines yield quite respectable results, the limitations of the format considered. The signal-to-noise ratio (with the noise being mostly hiss) is slightly better than 45 dB on the average, and the frequency response goes to about 11,000 or 12,000 Hz. These specifications suggest that there will be some hiss on soft passages, and that the very-high-frequency "shimmer" in the recorded sound of cymbals—and some other percussion and string instruments—will be lost. But most of these cassette decks will be usable with add-on Dolby noise-reduction units that will reduce the hiss to an almost inaudible level. The harmonic distortion at the 0-VU recording level for this category of cassette deck averages about 2 per cent.

On the next step up in cost one finds the more elaborate cassette decks, many of which have built-in Dolby circuits and include some means of adjusting their recording bias and equalization to suit a variety of tape types—in particular the high-energy, high-density tapes and/or the chromium-dioxide formulations. These decks cost from a bit more than $200 to over $300, and provide signal-to-noise ratios ranging from about 50 to almost 58 dB. Their high-frequency response ranges from about 13,000 to 16,000 Hz. Though the use of a single record/playback head (because of space limitations and cost restrictions on the electronics) and the standard 1½-ips tape speed take their toll, this is true high-fidelity performance. (It would, moreover, be easy to make it even better if Philips could be persuaded to permit its licensees to manufacture dual-speed 1½- and 3¾-ips cassette decks for the audiophile. Not only would the frequency response be pushed up higher and acceptable signal-to-noise ratios be achieved more easily, but wow and flutter could be substantially reduced by operation at the higher speed. Perhaps some day Philips will see the light. Two-speed machines would be as reasonable in the cassette format as they are in open-reel.)

The open-reel decks have a different but equally significant set of pros and cons to sort out. It is safe to say that the under-$200 price range in open-reel tape machines is rapidly fading from the marketplace. A cassette deck at the same price will do about as well sonically, and with a great deal more ease and convenience. It is true that some open-reel machines at that price serve well as a
second deck (usually used for playback and dubbing purposes), but the average high-quality open-reel deck today falls in the $300 to $400 price range.

Choosing the right combination of features and price that suits one's particular circumstances is most important, but it is also vital to select a machine that can take full advantage of the latest tape formulations. For example, the deck should either be supplied biased and equalized for the high-output, high-density tapes or it should have a bias selector switch for both normal-bias, low-noise tapes and high-bias, high-density tapes.

The $300 to $350 price range in open-reel machines affords a wide selection. Some products include an almost staggering array of features and gimmicks, with the rule "you get what you pay for" always holding true. The machines that have a three-motor transport with solenoid-operated control functions are most convenient to operate. You should be able to get a 55-dB signal-to-noise ratio and about 1 per cent harmonic distortion at 0 VU in this price class.

As you go even higher in price for open-reel machines, you are paying for ever more elaborate features—automatic reverse, remote-control options, 10 1/2-inch reel capacity, and perhaps built-in Dolby circuits—and an overall effort on the part of the manufacturer to squeeze the last iota of performance out of a close to state-of-the-art device. A few manufacturers have top-of-the-line machines with specifications that do not seem that much superior to those of others in their line costing perhaps a hundred dollars or so less. In general, the increased expenditure here buys robustness, durability, and therefore long-term stability—in other words, the qualities that are important to broadcast stations and recording studios but are of less concern to audiophiles, who don't normally use their equipment on a 12- to 24-hour-a-day schedule, seven days a week.

The open-reel machines, in addition to their technical—though not always audible—superiorities, have other positive attributes. Unlike the cassette, an open-reel tape recorded at 7 1/2 or even 3 3/4 ips is a snap (or a snip) to edit. The signal is stretched out over a considerable length of tape, and the tape is readily accessible. There are also dozens of editing gadgets available that make it easy to cut and patch a program—or assemble one from bits and pieces. And of course open-reel tapes will continue to provide the potential for longer, uninterrupted recording time at slower speeds. Although open-reel tapes do tangle and break, such incidents are almost always the result of careless handling or improper operation of the machine. On the other hand, though it is difficult to operate a cassette machine improperly, cassette tapes nevertheless do on occasion snarl up inside the cassette shell, wrapping themselves, with little or no warning, around the rotating capstan drive post. And because of the cassette's slow speed, any tape-damaging jam-up is likely to cost you a lot of program material.

As for prerecorded tapes in the two formats, if you insist on top-quality sound you are best advised to stick to records. There are exceptions, but, in general, open-reel tapes seldom equal the sound quality of discs. Dolbyized cassettes usually have lower hiss levels than the non-Dolby prerecorded open-reel tapes, but the high-frequency response of the cassette is frequently somewhat weak. In short, the product of some of the major commercial tape duplicators still has a way to go before it can equal the quality of a well-recorded disc. That doesn't mean, however, that you can't get first-rate results when you do your own taping.

To sum up the situation: if convenience, compactness, and ease of storage are your prime considerations, go cassette. If you are interested in live recording and tape editing, and the potential for the highest possible quality, go open-reel. And if you are interested in keeping up with the current state of the recording art in all areas, why, of course, you should own both types of machines.
The cassette is the current darling of the progress buffs. There is no doubt that, cleaned up as it has been by the Dolby noise-suppression system, it is a package with genuine appeal. It is extremely compact, light, and portable—about as effortless to use, when all goes well, as anything of its kind could be. Moreover, the user can record the swan song of the disc is yet to be heard in the land.

The cassette is mechanically complex, and parts must be precision-fabricated. There is no way of checking the mechanical operation (and the recorded quality of the prerecorded product) except by playing each and every one. These factors add to manufacturing costs—and to consumer dissatisfaction when quality control breaks down.

Accessibility of particular selections within a cassette remains poor; the only indication of one's place on the tape is the index counter on the player, the readings of which must be noted and written down for later reference. The means of getting quickly from place to place on a cassette are hardly exciting; fast forward and rewind of a C-60 tape averages over one minute.

Speed irregularities (wow and flutter) and dropouts (momentary signal losses) still trouble cassettes and equipment from time to time. Once in a while a cassette will jam completely, fouling the machine with irrecoverably snarled tape.

The tape-head area of cassette transports must be cleaned and demagnetized according to a regular maintenance schedule if performance is not to deteriorate gradually.

Aside from the various mechanical problems (jamming and/or physical damage to tape) occasionally encountered, cassette plastic shells can warp from heat or unresolved internal stresses, in which case performance become erratic or totally impossible.

Liner notes have always been a problem with cassettes; there just isn't enough space. Librettos are either minuscule or must be specially ordered by mail. Also, it is only simple truth that the repertoire available on prerecorded cassettes still lags behind that of the disc in both variety and depth.
on it, which is a really potent consideration in its favor.

But when we look closer, we find that the long-lived disc possesses unique advantages of its own, advantages it has always had in theory but which have not always been well realized in practice. For example, it is still, surprisingly, the quietest medium for recorded music the consumer has at his ready disposal. The "surface" noise level of properly prepared vinyl material is exceedingly low, and this permits the recording of a dynamic range in music that approaches the real thing. The "hiss" that unsophisticated listeners often blame on discs is more likely the hiss of the master tape from which the disc was made. And, when normal precautions are taken in its use, the disc is permanent. The cassette, on the other hand, is a mechanical device with moving parts; it will therefore break down in time. When it does so, repair often means that several inches of tape have to be sacrificed, and this, at the rate of 1 7/8 inches per second, means a big chunk of the music. By contrast, even a seriously scratched disc will afford some satisfaction to a determined listener.

Given all the above, it might be appropriate in this Annual Tape Issue of Stereophonic Review to draw up a kind of balance sheet for the two media to help us understand how far we have come, where we are, and where we might be headed. Both disc and cassette obviously have a lot going for them, including special advantages that I, for one, would be reluctant to give up if one or the other were declared obsolete. The cassette is a product of a still rapidly growing technology, so we may expect that it will continue to reflect any further development. On the other hand, the disc enjoys the same straight-ahead logical simplicity it had when its inventor first watched his voice-powered stylus write a "picture" of sound on a revolving tinfoil drum. That is what scientists call an "elegant" solution to a problem; such solutions do not go easily out of style.

### DISC PROS:

1. After the molding parts have been made and set up, discs come off the production line like waffles, and at a cost of 25 to 30 cents each for the raw material. A brief visual check usually suffices to reveal any defects in the product. The low manufacturing cost explains why discs are cheaper than prerecorded cassettes.

2. The disc's patterned surface permits ready identification of any selection on a side. It is also relatively easy to jump from one place to another, particularly if the turntable has a cueing control.

3. The fidelity of discs is potentially very high, even if it is not always realized. A good turntable will not intrude with any audible speed irregularities or mechanical noise.

4. Record-player maintenance is minimal today if the device is well constructed. (Stylus should be checked regularly and replaced at the first sign of wear of course.)

5. The actual longevity of discs is still somewhat in question, but recent experiments with the best playing equipment and record-care procedures indicate that an LP can provide satisfactory reproduction long after you've worn it.

6. Disc packaging, if not the ultimate in convenience, is frequently tasteful—even artistic. Liner notes are amply provided for, with glossy illustrated booklets frequently provided in multi-disc sets.

### DISC CONS:

1. Twelve-inch LP's store fairly compactly, but there must be a full foot of space above and behind the shelf's front edge—quite a lot. In bulk, discs are quite heavy, although recent innovations in manufacture have caused them to lose weight significantly.

2. Discs can be played automatically, but only one side of a stack of eight or so can be cycled without further attention, and only the last record side can be recycled.

3. The fidelity of a disc is not constant over each side, in that there is a gradual degradation (increase of distortion and/or lack of highs) due to the crowding together of the recorded material in the innermost grooves. The playing time of a disc is somewhat limited if low frequencies and dynamic range are not to suffer. And, of course, pressing defects do slip by the final inspection now and then.

4. Vast improvements notwithstanding, the record player is still a fairly delicate mechanism, sensitive to external mechanical shock and vibration. Also, discs ought to be carefully cleaned before playing or permanent damage may result.

5. Warpage is the complaint most frequently cited by disc users. Modern low-mass tone arms do help reduce the audible effects, but the problem is still frequent and severe. Also, scratches and surface noise caused by dust and other contaminants must be constantly guarded against.

6. Some people never adjust to the special edge-to-center hand-straddle grip that should be used when handling discs to prevent surface contamination. Labels on discs are usually quite adequate, though their legibility quotient is often quite low even when they are not causing eyestrain and vertigo on a rotating turntable.
"EVERYONE likes a bargain, but nobody likes a thief," was the thought that ran through my mind when I read this in a New York Times advertisement last year:

"Buy the new BLEEP Model BLEEP cassette tape deck and in the dead of night record all your friends' records. A ninety minute cassette costs about three dollars; on it you can flawlessly duplicate at least two long-playing records. Each disc you record will cost you about $1.50... It sounds wonderful. By that, we mean as good as the best LP records."

The last statement aroused my ire as a technical writer, because it is a bare-faced lie: no tape copy is as good as the original, though it's certainly true that tape dubs, both of LP's and of FM broadcasts, can be made which are good enough that it's difficult to tell the copy from the original. But the first part of the ad raises a real question: Is it a recommendation to save money legitimately while satisfying our aesthetic desires, or is it an invitation to turn our tape recorders into what Editor William Anderson once characterized as "a kit of burglar's tools"?

Personally, I was bothered by the fact that my own introduction to tape recording was, in large measure, based on the very premise of that advertisement. Had I unconsciously been contributing to the thesis of such young "radicals" as those who rationalize false credit-card phone calls, shoplifting, and welfare cheating on the grounds that American society itself is based on the principle of the "rip-off" (our "most respected citizens [being the] businessmen who have most successfully held up the most people")? Being a philosopher by profession as well as Stereo Review's "resident demon tapester," that kind of question really troubled me. And since this is a decade in which ethical problems in many spheres (discrimination, the draft, corporate misfeasance, ecology, Vietnam, abortion, et al.) are particularly prominent, perhaps it behooves us to examine the ethics of tape recording as well. Mindful of the sage comment of the English philosopher R. M. Hare that "ethics is the field in which men must agree to disagree," I won't try to speak with the assurance of a dogmatic moralist, but perhaps I can help clarify some of the issues and arguments which an individual should consider in making decisions about his own recording practices.

If we're going to discuss tape ethics, we must begin with certain ethical fundamentals. Ethical discussions tend to center around two different sets of questions. The first have to do with the meaning of such terms as "good," "bad," "ought," and the phrases in which these and similar words are used. One can, for example, define "good" as "whatever God wills," or "whatever brings the greatest pleasure to the greatest number," or (with one of Ernest Hemingway's characters) "what I feel good after doing." There are obviously many
other possible definitions as well, but though in the strictest sense this kind of consideration is philosophically the most relevant, the second kind of question is more practically important: what kinds of actions actually fit the criteria set forth by our definitions? With apologies to my professional colleagues—and especially to Socrates—I’ll try to stick mostly to the practical application of moral principles on which I hope most of us can agree.

I must start, however, by pointing out one very fundamental but widespread logical error. Since at least the fourth century B.C. anthropologists and sociologists have observed that actions condoned by one group (or economic class) are condemned by another, and from this they have inferred that all ethical judgments are “relative.” “Relative to what?” is the obvious question, and while the social scientists have generally sought safety in numbers (a group of one sort or another), since the days of the Stoics the way has been open to make the individual himself the sole arbiter of right and wrong. In our day this has come to mean something like the following: “Smith thinks ‘X’ is right and Jones thinks ‘X’ is wrong, so ‘X’ is ‘right for Smith’ and ‘wrong for Jones.’”

The logical fallacy in this reasoning is that it is valid if—and only if—we grant the additional—and very dubious—premise, “thinking makes it so.” We wouldn’t grant that, for example, to the man who thought that the moon is made of green cheese, and however sincerely he (or any group of his followers) held that belief, we would say that he was simply mistaken. “True for Smith” doesn’t mean “true” if Smith thinks the earth is flat. Similarly, I contend, from “Jones thinks taping his friends’ LP’s is right,” we cannot straightforwardly conclude, “Taping his friends’ LP’s is right”—for Jones, or anyone else, for that matter. I haven’t, of course, said that Jones is wrong in taping the records, but only that his feeling of rectitude doesn’t in and of itself constitute a moral justification.

What I’m suggesting, in other words, is that there are such things as moral facts, and that, like physical or historical facts, they don’t vary according to individual taste or preference. Bertrand Russell, hardly known as a “conservative” moralist, expressed it very well as long ago as 1910 when he remarked, “When two people differ as to whether a thing is good, only one of them can be right, though it may be very hard to know which is right.” I’m opposing the notion (technically known as “ethical subjectivism,” and tremendously popular today) that moral judgments merely reflect the attitudes, sentiments, feelings, and emotions of the speaker. That ethical matters involve our emotions is obvious, but the subjectivist wants to identify them with our feelings, and this would have the curious consequence that you couldn’t genuinely dispute my judgment that a given use of a tape...
recorder is or is not morally justified. A consistent subjectivist such as the prominent British philosopher A. J. Ayer accepts this anomaly:

Another man may disagree with me about the wrongness of stealing, in the sense that he may not have the same feelings about stealing as I have, and he may quarrel with me on account of my moral sentiments. But he cannot, strictly speaking, contradict me. For in saying that a certain type of action is right or wrong, I am not making any factual statement. I am merely expressing certain moral sentiments... It is impossible to dispute about questions of value.

I submit, to the contrary, that it is possible to have genuine moral arguments. This implies that there are good reasons and poor reasons (not just persuasive or unpersuasive ones) for making ethical decisions—in our case, whether to tape a given performance or to abstain from doing so. The trouble with Hitler's "final solution to the Jewish problem" is not simply that it disgusts me, but that it is morally wrong, quite independently of who might approve or disapprove of it. Rather than debate the matter more fully here, however, let me simply refer readers interested in investigating it further to two books. My own position is perhaps most closely represented by Stephen Toulmin's An Examination of the Place of Reason in Ethics (Cambridge University Press, 1961). The other side is ably argued by C. L. Stevenson, in Ethics and Language (Yale University Press, 1960).

At this point, however, someone is bound to object that if I am saying that in a moral situation there are definitely right and wrong choices, I am presupposing that there are objective "moral absolutes." Am I so benighted a modern philosopher as never to have heard of "situational ethics?" Doesn't what's right or wrong depend on the individual and their circumstances, not on inviolable social (especially "middle-class") taboos?

I can't discuss these matters at length here, but briefly, I should say that of course there are "moral absolutes," though they aren't identical with a set of mores handed down by "the Establishment" or, for that matter, by revelations from Mt. Sinai. A "moral absolute" is something like this: "Never intentionally harm another without adequate cause." Of a similarly fundamental nature is Kant's second formulation of the Categorical Imperative: "Act in such a way that you treat humanity, both in your own person and in the person of all others, never as a means only, but always equally as an end."

Obviously, such "contentless absolutes" or "platitudes" are so general that they do not mandate this particular action or that. Just what constitutes an "adequate cause" for harming another may indeed vary with time, place, and individual circumstance. Moreover, even after arguing out all the "situational" factors we can think of, you and I might still disagree about whether taping a given performance constitutes using the artists as a means only to our pleasure or whether we would be giving them adequate consideration as individuals. What is important about such completely abstract principles is twofold. First, they define the arena of moral (as opposed to historical, psychological, political, scientific, et al.) discourse, so that anyone who does not assent to them simply doesn't know what an ethical question really is. Second, I suggest, the birth certificate alone does not confer a sovereign right to make individual moral decisions which differ from the norms of those groups (families, churches, social classes, societies, etc.) which initially taught us to distinguish right from wrong. Rather, as mature people we earn that right by a willingness to analyze all the features in a particular situation, judging them in terms of such over-arching basic principles. It is on those occasions when we can reasonably argue that conventional standards of behavior conflict with still higher values that we can responsibly decide to follow our own moral dictates.

With these considerations in mind, let us turn to the several kinds of situations in which the home recordist typically presses his "record" button. Undoubtedly the most widespread use, recommended by the ad with which we began this examination, is to dub commercially available LP (or tape) releases. The practice seems to fall into five major categories:

1. Ostensibly purchasing an LP from a distributor, taping it overnight, and then returning it for credit (or a different LP) the next day.
2. Forming a kind of "club" or buying "co-op" in which one member purchases the selection in question and then circulates it to the other members for dubbing.
3. Borrowing an LP or tape from a friend or a public library for the purpose of making a tape copy of it for oneself.
4. Dubbing the LP/tape when it is played on an FM broadcast.
5. Buying the LP or tape outright, then dubbing it for one's own use (to eliminate side changes, preserve the disc from deterioration through playing, couple different selections together for extended listening, etc.).

Looking at this list, it's clear that (1) and (5) represent the ethical extremes. Even without considering the rights of musicians, composers, lyricists, soloists, and record-producing companies, (1) constitutes at the very least a deliberate fraud against the retail dealer. Moreover, if the distributor bothers to check the supposedly "defective" returned
LP and finds it quite all right, rather than bear the loss himself, he'll likely be more than tempted to go into the back room with some cellophane and a heat-sealing machine and "factory seal" the album himself. Thus, the next buyer won't get the mint-fresh disc for which he pays.

In the opposite case, (5), a purist could perhaps raise the objection that if a disc will ever be played enough to wear it out, one should treat it as an expendable product and go out and buy a second copy rather than tape it. For one, I don't find this convincing, for by the time one gets around to having to replace the original purchase, the odds are rather good that the album will not be available at all. Further, a disc bought and paid for, the revenues for which will be distributed according to agreed contracts, is (so long as no commercial use is made of it) one's private possession, to be treated as he wishes.

The three intermediate cases (2, 3, and 4) are perhaps a little more difficult to evaluate. On the one hand, the position of the record industry, as summarized by Thomas Frost, Music Director of the Masterworks Division of Columbia, is clear:

We feel it is both unethical and immoral to tape records either from the air or borrowed from another owner. . . . The artist, the composer, and the record company all derive income from records, and it is difficult enough today to make a living from classical music without having to contend with unauthorized copying and the resultant loss of sales.

Opposing this view have been numerous letters to this magazine from home recordists, many of whom seem to view the recording industry as a group of fair-game "robber barons" intent on mulcting the consumer of his hard-earned dollar in order to add to already swollen corporate coffers. A few relevant facts may help dispel this impression. Citing a 1965 study by Profs. John Glover and David Hawkins of Harvard's Business School, Mr. Henry Brief, Executive Director of the Recording Industries Association of America (RIAA), informed me that 87 per cent of classical LP's failed to break even. At that time, no profit at all was to be had on average sales of less than 9,700 copies. In the popular music field, 61 per cent of the releases lost money (an average of 7,800 sales to break even) as did 74 per cent of the 45-rpm singles (11,200). Since then, of course, recording costs have risen considerably, so that at today's prices industry estimates in the classical field (if we grant that such general estimates can be made either with candor or accuracy) put the "break-even point" at about 15,000 sales for a chamber-music group and as high as 35,000 or more for an orchestral group.

It could be argued that figures such as these point to something seriously wrong with our society's values. Perhaps we ought to ensure everyone's opportunity, either free or at nominal cost, to own whatever musical performances he chooses. But such a social commitment to support the arts would entail appropriations of public funds on a scale I can't even imagine our Congress considering, and perhaps in view of the dangers of artistic censorship, it's just as well. In the absence of that sort of "free" provision, it is hard to avoid the conclusion that individual taping of music which would otherwise be purchased from commercial sources does materially harm the legitimate interests of others. Soloists, conductors, composers, and lyricists (or their estates) are hurt directly, for their royalties depend on the number of albums actually sold. And while studio musicians, engineers, and other personnel normally receive a flat fee from the recording companies for their services, it is obvious that the less money the companies make from record and tape sales, the less frequently will they undertake recording projects, and the less they will need these employees.

Against this view a number of correspondents have averred that they simply cannot afford commercial releases at today's prices, so they "must" dub them from borrowed records or off the air. This is a curious argument on at least two grounds. In the first place, there are a few things I would dearly love to have and would undoubtedly treasure more than many who own them—an Ampex or
stereo review

constitute using him and his orchestral fellows as a
performances into the public domain, so who could
least when the work being played is not also avail-
commercially, is now out of print. The former, at
phony orchestras—and the second consists of tap-
ment possible. The first involves so-called "live"
any harm on those who make our musical enjoy-
severely affected.

were dubbing instead of buying that its sales were
practice when it found that so many home recordists
for the nominal sum of $1.00, but ceased the prac-
tent that at least one label (Cambridge Records)
of the cost of private taping. That the damage is
not negligible, however, can be inferred from the
fact that at least one label (Cambridge Records)
used to make its records available to FM stations
for the nominal sum of $1.00, but ceased the pract-
when it found that so many home recordists
were dubbing instead of buying that its sales were
severely affected.

There are, however, at least two categories of
home recording which would not seem to impose
any harm on those who make our musical enjoy-
ment possible. The first involves so-called "live"
FM broadcasts—for example, of the major sym-
phony orchestras—and the second consists of tap-
ing musical material which, though once available
commercially, is now out of print. The former, at
least when the work being played is not also avail-
able by the same artists in disc form, presents
something of a dilemma. On the one hand, one is
tempted to argue that if an orchestra authorizes the
FM syndication of its concerts, it thereby puts the
performances into the public domain, so who could
object to our taping them? Unfortunately, the an-
swer is, "the orchestra itself." In their view, the
radio broadcast, like the performance in the hall, is
essentially a "one-shot" proposition. For the same
reason that buying a ticket to a concert does not
entitle one to bring his tape recorder along as a
guest, so the airing of that concert is not tanta-
mount to approval of its copying. And, as a matter
of fact, even the FM stations are forbidden to du-
plicate these syndicated tapes, but must return
them immediately after broadcast. In view of the
artists' intentions, then, the question can at least
be raised as to whether this kind of home record-
ing, even if it costs the performer nothing, does not
constitute using him and his orchestral fellows as a
means only, and not equally (ethically) as an end.

With regard to out-of-print material, however, I
feel a little more comfortable about opposing the
industry's viewpoint. In their judgment, they have
purchased the master tape "in perpetuity," and
anyone who does not buy the resultant recording
while it is commercially profitable to make it avail-
able should simply do without. This seems to me
not only to have some of the unlovely quality of
the dog in the manger about it, but in fact an un-
ethical abridgment of the rights of others as well.
The recording company, after all, can speak only
for itself in this matter. But would the artist (or art-
ists), the composer, or even the holder of the musi-
cal copyright, if there is one, agree? I very much
doubt it. All question of profit aside, simple per-
former vanity, for one thing, would dictate keeping
such performances available forever. But is it "eth-
ical," then, in the name of art and artists, to side-
step the rights of the recording company in such
cases? It is a decision that everyone will have to
make for himself, falling back, perhaps, on good
old American pragmatism—which isn't, of course,
ethics at all.

To clear my own conscience in this matter as
well as I could, I contacted highly placed spokes-
men for two of the major record companies and
put to them the following proposition. "Suppose,"
I said, "I were to come to your office, checkbook
in hand, and offer to pay you whatever your nor-
mal studio rate might be to have one of your engi-
neers go to the vault, hunt up one of those archival
master tapes, and run off a copy of it for me. I'd
agree, further, to sign an agreement making me
personally liable for any commercial use that might
subsequently be made of the tape. Would you be
willing to send the engineer and make the copy?"
The answer I received in both cases was, "No."
The disruption of normal production routines, the
endless bookkeeping involved in looking up to
whom royalties were due, etc. would be too great a
task. In this case, then, I, for one, can find no prac-
tical fault in the home recordists' dubbing.

What I hope is clear from this rather cursory
discussion is that home taping of music does in-
volve the rights of others, and that, in deciding
whether to tape this or that, one should consult
more than his own self-interest. Buying a recorder
may support a manufacturer's stockholders, but it
does nothing for the artists who create the aesthet-
ic values of the recordings we enjoy. Perhaps, in
the end, the best ethical rule of thumb is that which
the Editor offered in a previous editorial: "Do unto
Angel as you would have Angel do unto you."
The search for the ideal tape formulation and for its ideal employment goes on

By CRAIG STARK

ANYONE who has spent much time in a large metropolitan area knows at first hand the unfortunate psychological effects of what we have come to call "noise pollution." Though it is a thousand or more times less "loud," an equally shattering assault is often made on our aesthetic sensibilities by the intrusion of the magnetic phenomenon called "tape hiss." Masked more or less successfully by very loud musical passages, it lies coiled within the tape reels, waiting to strike out and destroy realism in pianissimo passages.

When present in any significant amount, hiss can be simply impossible to live with, but any attempt to deal with it must begin with an examination of its many possible origins. Let us look first at the tape itself. Basically it consists of three parts: a smooth, flexible backing material (cellulose acetate, polyester, or polyvinyl chloride); a flexible, long-wearing sort of "glue" or cement called the binder; and a powder consisting of tiny particles of a magnetically sensitive oxide. Most of today's tape uses gamma ferric oxide for the magnetic material, though the need for better high-frequency response for video tape and very low-speed audio recording (as in cassette equipment) has led to the development of chromium dioxide and cobalt-treated ("high-energy") ferric oxides as alternatives.

The individual particles of the magnetic powder are needle-shaped ("acicular") and extraordinarily small. On a standard tape, for example, they may measure only a micron in length (a micron is a millionth of a meter—0.00003937 inch) and perhaps one seventh that size in diameter. Both the optimum length and the degree of acicularity (the ratio of length to maximum width) will profoundly affect the tape's magnetic characteristics. Predictably, many of the particles produced will be too large or too small for optimum performance. The unfortunate inclusion of these out-of-size particles typically degrades the signal-to-noise ratio of a tape by more than 3 dB, according to a study made by Eric Daniel of Memorex.

Ideally, of course, all the oxide particles should be evenly dispersed within the binder coating before it is put onto the backing material, so that no two needles touch each other (each would be insulated by its surrounding layer of binder), and one could pack the maximum number of optimum-size particles into the minimum volume of coating material. In practice, of course, this doesn't happen, and so we discover two kinds of noise-producing discontinuities in the finished tape. First are the "clumps" of oxide that occur at various points along the tape, making its surface physically bumpy. Second are the random magnetic variations that arise not only from the clumps, but from voids, differing particle sizes, and variations in oxide thickness. Though polishing the tape surface helps to minimize physical disturbances (a slightly used tape generally outperforms a brand new one), it does not alleviate the magnetic ones. Both of these factors are significant in the production of what is called "modulation noise."

One thing that does help to reduce magnetic noise is to see that the oxide needles are all oriented in the direction of tape flow. This is achieved during manufacture by passing the tape under a strong, properly oriented magnetic field while the oxide binder coating is still wet (so the individual particles can move around). Perfect orientation would increase the signal-to-noise ratio of a tape by approximately 4 dB, according to Daniel's calculations, though, again, the ideal is not fully realized in practice. The importance of this procedure can be appreciated by making a simple comparison: high-quality video tape (whose oxide is oriented latitudinally rather than longitudinally) has been measured as having a 6-dB worse signal-to-noise ratio when used in audio applications. (This, incidentally, should make one cautious about using "white-box" tapes, some of which are re-slit video tapes.)

Another physical factor is important for its effect on noise: the thickness of the oxide coating. In
general, increasing the coating thickness exposes more magnetic particles to the recording field, and so tends to yield higher output on playback. This was the thinking behind the development of “high-output” tapes some years ago. Unfortunately, the rise in signal output tends to be confined to the longer-wavelength signals—which is to say the lower frequencies. To understand, in part, why this is so, we must consider the problem of “spacing loss.” This is a problem that is easily demonstrated: compare the playback of a musical selection with a great deal of treble content (1) in normal play and (2) with a piece of cellophane interposed between playback head and tape. It will sound much duller—lacking in high frequencies—in the second play, obeying the mathematical formula

\[
\text{loss (in decibels)} = 55 \frac{d}{\lambda}
\]

where \(d\) stands for the distance between the tape and the head and \(\lambda\) is the wavelength of the recorded signal.

“Wavelength” is really a very simple concept, and since engineers habitually talk about a tape’s “short and long wavelength characteristics” (instead of “high and low frequency response”), it might be well to explain it. Consider a 15,000-Hz tone recorded at 15 ips. Here there are 15,000 cycles occupying fifteen inches of tape; each individual cycle, therefore, is one one-thousandth of an inch long, so its “wavelength” is one mil. At 7 1/2 ips, the same tone would have to be squeezed into half as much tape, making the wavelength of the individual cycle 0.5 mil. At 3 3/4 ips the wavelength of a 15,000-Hz tone is 0.25 mil, and at the cassette speed of 1 7/8 ips it is down to 0.125 mil. In the same way, a 7,500-Hz tone recorded at 7 1/2 ips has a tape wavelength of 1 mil, as does a 15,000-Hz tone at 15 ips. In tape-recording, in other words, the wavelength on the tape varies both with the frequency of the recorded signal and with the speed at which the tape moves.

Looking at the “spacing loss” formula, then, and the problem of trying to get more signal from a tape simply by increasing the thickness of its oxide coating, we can understand that those particles separated from the playback head—even by the thickness of the coating between them and the head gap—simply won’t make their full contribu-
The qualifier "up to a point" is important, however, particularly as tape speeds decrease. As Figure 1 illustrates, the playback head's output reaches a maximum when the "gap" spacing between its two pole pieces equals a half-wavelength of the signal. When a full wavelength is presented to the head gap, there is theoretically no output from the head at all! For this reason, then, as speeds become slower, playback heads must be made with increasingly narrow gaps in order to "resolve" the high-frequency wavelengths as they become increasingly shorter.

The rising response of the playback head with frequency must be offset by "equalization" to keep recordings from being unlistenably "tinny." In the low and mid frequencies this is achieved by using a very simple bass-boost/treble-cut circuit. At the very high frequencies (short wavelengths), however, tremendous recording losses are encountered that far exceed the automatic 6-dB-per-octave treble boost provided by the playback head. The slower the recording speed, the lower the frequency at which these serious losses begin.

The fact that music does not generally contain large amounts of very high-frequency information (relative to mid- and low-frequency content) permits the recording losses to be overcome to a large extent through treble pre-emphasis (boost) during recording, as shown in Figure 2. If the tape itself is not to distort the high-frequency signals, however, there is a limit to the amount of treble boost that can be applied, and this is indirectly reflected in the standard NAB playback-equalization curves shown in Figure 3. Both Figures 2 and 3 show that the lower the tape speed, the greater the high-frequency boost required in recording and the smaller the cut applied in playback—and, therefore, the greater the relative hiss.

One way to lessen the required recording and playback (pre- and post-) emphasis of the treble frequencies would be to record with less than normal "bias"—the ultrasonic current that is fed to the record head along with the desired signal. But this expedient would also result in increased distortion, since that is what the bias has been designed to prevent. The time-proven alternative is to use tape oxides that are more sensitive at the short wavelengths than conventional formulations are. This is the route along which low-noise tapes have been developed, at the relatively minor cost of raising the level of recording-bias current required for optimum performance. Chromium-dioxide tape pushes this principle a step further. It requires so much less treble boost at high frequencies that there have been proposals to change the standard playback equalization curve at the cassette speed (in effect lowering playback treble boost), thereby decreasing audible hiss.

The bias current itself is the source of another kind of tape noise. Anyone who has run a "virgin" or bulk-erased tape through a tape machine set to record but given no input signal is aware of the dis-

![Fig. 2. To offset losses of the very high frequencies, a boost of these frequencies is introduced during the recording process. The lower the tape speed used, the greater this boost must be.](image)

![Fig. 3. The NAB playback-equalization characteristic compensates for the 6-dB-per-octave slope of the playback head's response. The equalization curves flatten out at the highest frequencies in order to preserve treble content that has undergone previous losses.](image)

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The upper curves in Figure 4 document the existence of still another sonic intruder, "modulation noise." This form of disturbance varies directly with the recorded signal. In one of its guises (not shown), frequency modulation arises because a length of tape tends to vibrate physically against the recorder's heads at a frequency that depends on its unsupported length.

Other forms of modulation noise create amplitude variations in the recorded signal, and it is customary to measure them (see Figure 4) by recording a d.c. signal on the tape. (This is comparable in its effect to the noise caused by a magnetized head.) At absolute maximum recording level (tape saturation—the point at which an audio signal would be unbearably distorted), the relative magnitude and frequency distribution of such a d.c. signal is shown in the saturation noise curve of Figure 4. The noise generated appears attributable primarily to magnetic unevenness in the oxide coating. Curiously, however, a lower (and more typical) recording level for the d.c. signal actually produces more noise—see the surface-noise curve—by bringing out the contribution of tape-surface irregularities that interrupt intimate contact between tape and head.

An indication of the kind of progress the industry is making in the war against tape noise is furnished by Figure 5, which compares the available dynamic range of 3M's venerable "standard" Type 111 to its "Dynarange" 202 and the recently introduced "low-noise, high-output" Type 206. Advances are painfully won, a decibel at a time; for in developing a new oxide formulation one must not sacrifice other desirable features such as signal stability and freedom from "print-through." Moreover, any improvements in recording tape must take place in the shadow of two basic laws of tape technology: (1) For every doubling of the recording speed, the signal available increases by 6 dB while the noise increases by only about 3 dB. This results in a net 3-dB improvement in potential dynamic range. (2) Similarly, if track width is doubled, another 3-dB improvement is realized. All very good, but tape technology is not moving in the direction of greater tape speeds and wider tracks, but toward slower speeds and narrower tracks, and both of these exact a heavy price in signal-to-noise ratios. But perhaps continuing oxide improvements, together with Dr. Dolby's marvelous "black box," may make the toll bearable.

ACKNOWLEDGMENT

Mr. Eric Daniel's invaluable technical data were taken from an advance copy of his paper, soon to appear in the Journal of the Audio Engineering Society, which he was good enough to send me. I wish also to acknowledge gratefully the help of Messrs. John McKnight of Ampex and Deinos Eilers of the 3M Company. It goes without saying that any errors of fact or interpretation are mine, not theirs.

—C.S.
PIANIST MICHAEL PONTI
Old-fashioned bravura
By JAMES WADE

When you win a piano competition, you may get one good season of bookings out of it, if you're lucky," Michael Ponti told me, and he should know. Ponti, a thirty-three year-old American piano virtuoso, has been entering—and winning prizes in—a wide assortment of piano competitions for over half his lifetime. "A year or so after you win," he continued, "the contests come up again, and the bookings go to that year's winners. There are forty or so major contests now, and they turn out too many pianists for the world music market to absorb. It is much more important for a performer to play often for the general public, and cultivate a broad repertoire." It goes without saying that he has done this, too.

Ponti, a balding, dynamic bantam of a man, was born in the U.S. of an Italian-American father and a German mother who together urged music lessons on him from the time he was five. "My father played the piano, and my mother would sing me the Queen of the Night's aria at bedtime—some lullaby! They assumed as a matter of course that I had musical talent." His first lessons were with a parochial-school nun in Washington, D.C. In three years he was playing Beethoven sonatas, and at age eight won his first contest with the Chopin "Minute" Waltz.

At age ten he became a student of the Godowsky pupil Gilmore MacDonald, and played Bach's Well-Tempered Clavier in public at eleven. "I dreamed of a career as a pianist from about that time," Ponti recalls. "It seemed a wonderful idea to run around all over the world playing the piano and being adored by beautiful women. I guess I was precocious in more ways than one!"

The dream moved closer to reality when, as a high-school sophomore, he won another contest and appeared with the North Carolina Symphony Orchestra on tour in Florida, playing Mozart's Concerto No. 27, in B-flat. "It was winter in Washington, but down there I picked up a tan on the beach, and bought some loud sport shirts. When I got back, my friends treated me like I'd been on vacation, and called me 'Palm Beach Ponti.' It seemed like a good life to me."

When he was seventeen, his family moved to Europe, and he began to study with Erich Flinsch, at one time an assistant to Emil Sauer, at the State Music Academy in Frankfurt. "I thought I was already the greatest," he
admits, "and that it would take the world only a year or two to realize it. But I was actually sloppy and undisciplined. Flinsch gave me daily lessons to whip me into shape, which took about six months.

"I made a poor showing in a Geneva contest about that time, and stayed out of competitions for a while, though my father thought I should keep entering. Then, when I was eighteen, I won fourth prize in the 1956 Ferruccio Busoni contest in Italy. That's one of the important ones, and I was up against established names, people ten years older than I was, such as Jörg Demus, Ivan Davis, and Charles Rosen, so I didn't do badly."

For several years afterward, Ponti played frequently at American Cultural Centers in Germany, Austria, and France—about 150 concerts in all. These, he feels, gave him poise and confidence in front of audiences. "They paid me $10 per diem, and some of the towns I played in were small ones, with bad pianos. It was an education. Sometimes there were more cows than people around."

The U.S. State Department also sent him on a recital tour of Egypt and the Near East. "Once in Greece I hit a town with no grand piano, so they took an upright, stuck a long table out behind it, and draped a black velveteen cloth over the whole shebang. I don't know whether they were trying to fool me or the audience."

Meanwhile he kept entering competitions—the Bolzano contest ("until they got tired of seeing me and threw me out"), the Casella contest, and others—and usually placed high, but not first.

His first major professional concert came on his twenty-first birthday, when he replaced an ailing Andor Foldes at a few hours' notice in the Beethoven Third Concerto with the Frankfurt Radio Orchestra. The reviews were good, and he acquired a manager. Like entering contests, filling in for someone on short notice has been a recurring motif in his professional life. In Prague for the 1963 Spring Festival, he was asked to replace the Russian cellist Mstislav Rostropovich for a concert date. "I was tired out from driving, and it was quite a shock when they asked me to play a concerto on one day's notice. But I recovered quickly when they said it would mean an extra fee of $1,000." The concert was a hit, and Ponti has toured Czechoslovakia periodically ever since. And in 1969, while in Berlin for recitals during the city's festival, he replaced an indisposed pianist in the finals of the Herbert von Karajan conducting contest, relaunched the Schumann Concerto overnight and playing this work and the Tchaikovsky First a total of six times in one day with the Berlin Philharmonic under the various contest entrants. "This was auditioning for Karajan the hard way!"

Finally, in 1964, Ponti took first prize in a contest—the top award of $3,000 in the prestigious Busoni event—and toured extensively in Italy thereafter. The same year he won a silver medal in the Brussels Queen Elizabeth Concours. Since then, with his career solidly launched, he has had neither the time nor the inclination to participate in competitions.

He has toured South America, performing all three Bartók concertos on one program in Chile. This composer's grueling Second Concerto has been one of Ponti's most successful vehicles, and last year he reintroduced himself to America with this work, collaborating with Sixten Ehrling and the Detroit Symphony.

In 1967, Ponti came to the notice of Vox Records in the United States, and the company signed him to a contract solely on the basis of his notices, with no audition, "live" or taped. Since then he has made sixteen recordings, and many more are scheduled. Vox has released his complete account of the piano music of Tchaikovsky, and he is working on similar sets devoted to Rachmaninoff and Scriabin.

"This has meant learning an immense amount of difficult new material that is seldom played publicly now," Ponti pointed out. "Sometimes I practice eighteen hours a day to prepare myself for recording sessions. I rediscovered Tchaikovsky this way, and was surprised at the quality of this neglected music. Outside of the First Concerto, I had always thought of him as a salon composer for piano, but many of his pieces are solid and challenging, especially the early and middle works up to about Opus 40. He also wrote five concerto or quasi-concerto showpieces for piano. The Second Concerto, at least, is as good as the popular First, or better."

The expatriate American pianist is now becoming better known in the U.S. via his recordings, particularly his contributions to the "Romantic revival"—the new interest in the music of late nineteenth-century and early twentieth-century composers, most of whom were also virtuoso pianists. Among the discs already released are concertos, études, and variations by Ignaz Moscheles, a Beethoven contemporary whom Ponti sees as foreshadowing the Brahms style of piano writing; Liszt's teacher Anton Rubinstein; and the eccentric but original Frenchman Charles-Henri Alkan.

"Alkan practiced as much as I do," Ponti told me, "and he kept a Bible propped up on the piano so he could read it to break the monotony. He was too nervous to perform in public, though—maybe because of all that Bible reading."

The set of the complete piano works of Alexander Scriabin, in the first stages of preparation, he considers the most challenging project currently on his docket. The twelve to fifteen discs mean for Ponti "a real cram course." This music, with its elusive quality and overtones of mysticism, calls for "real maturity, not just technique. It can be dull if simply played well; it must be done scintillatingly." Horowitz and Richter have in recent years faced the challenges implicit in Scriabin with some success, but they have concentrated on a relatively few pieces in his considerable output. Other pianists—Hilde Somer, Roberto Szidon—are dipping into Scriabin, but by and large Ponti is exploring nearly unknown territory: even the printed music is in some cases almost unobtainable.

The study and recording of "transcendently difficult" late Romantic piano music, Ponti believes, has further developed his technique. "Such music makes the standard repertoire seem almost simple, pianistically, and enables me to concentrate on interpretive aspects when I play the usual pieces."

It has certainly been a challenging and exciting apprenticeship, but Ponti's concert and record reviews leave no doubt that his professional credentials are in perfect order. He will demonstrate this with old-fashioned bravura at his first New York performance in Tully Hall March 13: the printed program will include a list of over forty works that he will play at the request of the audience!

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BEST OF THE MONTH

CLASSICAL

BEETHOVEN BY SZIGETI AND ARRAU: A UNIQUE DOCUMENT

Remarkable ensemble distinguishes Vanguard's set of all the violin-piano sonatas

I must leap in, without preamble, to say that Vanguard's new recording (in its Everyman Series) of Beethoven's complete sonatas for piano and violin is an absolute joy to encounter. It would be hard to imagine a more remarkable ensemble of chamber musicians than is provided on these four discs: violinist Joseph Szigeti and pianist Claudio Arrau.

The recordings stem from "live" performances at the Library of Congress in Washington early in 1944. This means that they are monophonic, of course, but, given the kind of musicianship with which we are dealing here, that fact becomes a mere quibble. Moreover, the performances took place within the acknowledged acoustic gorgeousness of the Elizabeth Sprague Coolidge auditorium in the Library, so that the sound leaves little to be desired even when compared with present-day stereo standards.

Joseph Szigeti has been known throughout his career as a musician whose approach was to put the idea in music ahead of any other considerations. He was never one to produce a violin sound of the "opulent" variety (though it can have great sweetness on the topmost string). His tone is plain, honest, and remarkably controlled in terms of dynamic nuance. But the point with Szigeti has always been the musical message, not the violin medium, and one admires his performances in much the same way one admires those of certain exceptional Lieder singers—those who put expression, intelligence, and intimacy of communication ahead of any concern with mere vocal display. In the case of these sonatas, what emerges from Szigeti's approach (and I must interject at once that Arrau is not one millimeter behind him in any dimension) is an evocation of the music in which every phrase, every fraction of a phrase, every formal section, is elucidated so clearly, so sensitively, and with such an uncanny sense of the full shape of the pieces that it seems almost to be a matter of direct communication from Beethoven's mind to one's own.

All this high-quality music-making does not, however, preclude a great deal of fun along the way. Arrau, at the piano, plays with such gleaming virtuosity that passages which often sound blunt and straightforward in other performances acquire an edge of elegance and vivacity, thus showing them to be anything but plain and lacking in color.

These two great musicians must have rehearsed this music with a degree of assiduity and artistic dedication that latter-day recording techniques, costs, and, indeed, attitudes have almost made a thing of the historical past. This is all to the good, for, truth to tell, the Beethoven sonatas for piano and violin are not as richly endowed with Beethoven's deepest musical thinking as are the sonatas for piano.
alone. This means that, in some cases, one's interest has to be held by the finesse and esprit with which the performers execute a kind of silver-point drawing; Arrau and Szigeti are experts at this. When little phrases are bantered back and forth between the two instruments, there is such unanimity of approach and emphasis that even when the ideas (Beethoven's) are not utterly compelling, the superb craft with which they are presented is splendidly apparent. The playing of the second movement of the Sonata No. 4 in A Minor, Op. 23, could stand as a lesson for all chamber musicians in its perfection of ensemble and in the depth and evident sincerity of the performers' feelings.

Joseph Szigeti will be eighty years old in September. Claudio Arrau is a mere stripling of sixty-eight, but he is making new recordings these days as if he were in his thirties. It is splendid to have this document of their unique collaboration dating from a period when Beethoven meant more as a symbol of the indomitability of the human spirit than he has since, even in the year of his bicentennial. Perhaps there is something in that that we might all ponder.

Lester Trimble

**BEETHOVEN: Sonatas for Piano and Violin (complete).** Joseph Szigeti (violin); Claudio Arrau (piano). **Vanguard** Everyman SRV-300/1/2/3 four discs $11.92.

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**FISCHER-DIESKAU ESSAYS**

**THE ATONALISTS’ SONGS**

In a magnificent new recital disc just released by Deutsche Grammophon, Dietrich Fischer-Dieskau has turned his attention to the songs of the twentieth-century Viennese school, demonstrating in the process how much an interpreter of contemporary music gains by being thoroughly grounded in the traditions out of which modern styles and methods grew. Too often, music like this is left to specialists whose performances, however praiseworthy otherwise, suggest that they have chosen contemporary songs as their field because they cannot sing anything else.

The indefatigable Fischer-Dieskau, of course, not only can sing everything else, but seems at this stage in his long and brilliant career to have already done so. And the result, as one listens to the performances in this album of songs by Schoenberg, Webern, and Berg, is the fascinating experience of perceiving the song style of the teacher and his two leading pupils evolve and grow gradually—and without any hint of revolutionary dislocation—out of the fertile world of nineteenth-century Lieder. The songs are arranged, within the limits of side layout, almost exactly chronologically, thus greatly simplifying the tracing of influences and personal growth. The turn-of-century, pre-Opus 1 songs of Webern, for example, breathe an unmistakable aura of Straussian opulence, and as we follow the composer through as far as 1909, it is extraordinary to watch the bones of his mature style gradually emerge as the surplus flesh is pared, with inescapable logic, away from them. A similar process obtains with Schoenberg, though here the musical sources are Brahms and Wolf, together with some Schumann and, in the more straightforwardly melodic songs, a touch of Schubert. But straightforward melody is rare in both composers—as it is even in the more lyrically oriented Berg. All three display the curious inability to “sit down,” the disinclination to cadential thought that grew out of late-nineteenth-century extensions of chromaticism and led in turn to the pervasive nervousness of the Viennese dodecaphonic style.

Without ever glossing over the more harshly modern aspects of the music, Fischer-Dieskau and Aribert Reimann (an excellent pianist who is new to me) bring this stylistic evolution vividly to life. Only in one song—the first of Berg’s Op. 2, where Heather Harper and Paul Hamburger on Angel
36480 capture the lullaby rhythm more effectively—is there an alternate version that comes near to matching theirs. This is marvelous music-making, superbly recorded.

_Bernard Jacobson_

**DIETRICH FISCHER-DIESKAU: Songs by Schoenberg, Webern, and Berg.**


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**ENTERTAINMENT**

**FROM ROCK'S ARGENTINA, “MUSIC” BY CAROLE KING**

The dues were paid in New York, but the romantic spirit is pure California

_Carole King_ brings a wistful toughness to romantic-pop music that I would guess is a combination of her personality, her artistry, and the combat experience she has had as a professional songwriter for the past ten years. Most of the combat duty was served in New York, and she either moved or fled to California a few years ago—as did such other greatly talented people as Neil Diamond. California is sort of the Argentina of New York rock-and-roll; it can be either a hiding place or a garden to bloom in, and sometimes both. It has evidently given Miss King the peace of mind she needed to become a fine, distinct, individual artist, and she says as much in the closing song (Back to California) on side two of her new Ode album called, quite simply, “Music.”

She has several things going for her: even the least of her tunes are capable efforts, and the best are all her own—no one will ever do them as well as she does, though they could be, are, and will be sung by a great many people. She is at all times a pro, and she is one of the few musicians ever to develop a distinctive style in pop piano. One of the pleasures of listening to her is to hear the keyboard accompaniments she gives herself, the tune being played, and the musicians playing with her—this is a difficult triple play to pull off unless you are very, very good. Her voice might sound like those of a lot of other female singers if it weren’t for her phrasing, which I would call both emotional and professional without being at all clinical. Most important, she enjoys music, enjoys making it, and enjoys people around her making it. The music of the title tune here is cheerfully given over to Curtis Amy’s flailing sax, and Back to California is allotted mostly to Ralph Schuckett’s fine electric piano. Sidemen simply don’t play as well and as freely as they do on this album unless the “lead” makes them feel comfortable, respects them, and gives them lots of room to work.

Surely, Brighter, Carry Your Load, and Back to California are the worst of Carole’s tunes on this album, but they are better than many people’s best—good, solid craftsmanship. Song of Long Ago, Too Much Rain, and It’s Going to Take Some Time (the last two written with Toni Stern) are the standouts, absolutely first-rate in both composition and performance.

As on the “Tapestry” album, James Taylor sits in as sideman and background vocalist. With the exception of a lost bass player, all of Taylor’s first group, the Flying Machine (circa 1967), appear as
sidemen. Taylor also rode up and down all those New York elevators, and it must be a source of pleasure (and of a few sighs of relief) to him, his old band, and Miss King that they did good work in New York, didn't let it kill them, and escaped to California to make it all come musically true. If you haven't ever gotten away to lie easy on a front porch and listen to the waves breaking on Zuma Beach three blocks away, don't worry; this album will take you there.

Joel Vance

CAROLE KING: Music. Carole King (vocals and piano); James Taylor and Danny Kootch (guitars); Curtis Amy (tenor sax and flute); Joel O'Brien and Russ Kunkel (drums); Charles Larkey (bass); Ralph Schuckett (keyboards); others. Brother, Brother; It's Going to Take Some Time; Sweet Seasons; Some Kind of Wonderful; Music; Song of Long Ago; Growing Away from Me; Too Much Rain; Surely; Brighter; Carry Your Load; Back to California. ODE SP 77013 $5.98, ® 77013 $6.98.

FOUR DISCFSULS OF CHICAGO: AUDACIOUS AND JOYOUS

Columbia's big package of the band's Carnegie Hall dates is a gamble that paid off

Chicago took a calculated risk with its latest release—an exhaustive documentation of the group's Carnegie Hall appearances last year. I can't think of any other pop artist (or group) who has had—or even would have—the sheer audacity to issue a boxed set of four (count 'em, four!) discs in a single package. But here it is, here they are. As of this writing, the whole works is very nearly at the top of the best-selling charts. The gamble paid off.

There's no question that the issue is an attractive one. Included, in addition to the discs, are an enormous (6 x 4 feet) poster of the band in action, two other merely large posters (one of them of Carnegie Hall), a twenty-page photo album, and a list of voter's registration requirements (for eighteen-year-olds) in the various United States. As for the music, it is made up of the highlights of Chicago's April 1971 concerts in New York's Carnegie Hall.

Unlike many of its prominent competitors, Chicago keeps getting better and better. The band has retained a sense of joy in the act of making music that is obviously communicated to its audiences—most certainly to the ecstatic listeners who attend-ed the Carnegie programs. Energy is the force that brings rock music to life. Many groups have matched Chicago's success, but in failing to measure up to their music's continuing demand for an inexhaustible supply of simple, raw vitality they can only fall back into parodies of themselves.

Chicago, on the other hand, even in a program such as this one which concentrates on familiar repertoire (it's really a "greatest hits" album), invests tunes they must have played at least a thousand times with the wonder of fresh discovery. Sure, they can be rhythmically dull, and they can even make an emotional cheap shot now and then. But most of the time this band plays good and clean and honest rock music—no hype, no nonsense, no overreaching. A four-record set is a lot to ask anyone to buy, but this one's worth every penny of the tab.

Don Heckman

CHICAGO: Chicago at Carnegie Hall, Volumes I, II, III, IV. Chicago (vocals and instrumentals). Questions 67 and 68; I'm a Man; Beginnings; Colour My World; Make Me Smile; 25 or 6 to 4; Does Anybody Really Know What Time It Is?; Free; and eighteen others. COLUMBIA CAX 30865 $12.98, ® GA 30863/4 $13.98, © GT 30863/4 $13.98.
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"Polonaise Fantaisie," Op. 61
Mazurka in A Minor, Op. 37, No. 4
Waltz in A Minor, Op. 34, No. 2 "Black Key" Etude

Phonograph Records, 15, 78's, and Tapes
ALBRIGHT: Organbook II (see BOLCOM)
BEETHOVEN: Sonatas for Piano and Violin (complete) (see Best of the Month, page 71)
BERG: String Quartet; Lyric Suite (see SCHOENBERG)

RECORDING OF SPECIAL MERIT


Performance: Very fine
Recording: Good

Hats off to American-born cellist Christine Walevska and young Israeli conductor Eliahu Inbal, who make for this listener a most formidable personal debut here. The Bloch performance is the first I have heard to re-capture the elemental passion of the Feuermann-Stokowski-Philadelphia Orchestra recording (1940) of hallowed memory. I am sure the Monte Carlo orchestra is no match for the Philadelphians, but young Inbal certainly has created the illusion of that earlier performance, for these ears, at least.

A more telling test of Miss Walevska’s tonal quality is offered in the post-Mendelssohnian treatment by Max Bruch of the Kol Nidrei and in the not always grateful Schumann Concerto. In the Bruch and in the slow movement and finale of the Concerto I found her playing full of warmth and strength in the best sense of the word, and with considerably less “break” between the high and low registers of the instrument than is usually the case.

Though the Bloch offers Inbal the most advantageous opportunity for display of his conductorial talent, he maintains a firm yet warm hand throughout in his accompaniments for the Bruch and Schumann works. Both artists are clearly major talents who bear watching.

Aside from occasional over-prominence of the cello in the Schumann, the recorded sound is good throughout. D.H.

RECORDING OF SPECIAL MERIT

BOLCOM: Black Host. ALBRIGHT: Organbook II. William Albright (organ), Sydney Hodkinson (percussion). NONESUCH H 1260 $2.98.

Performance: Excellent
Recording: Very good

These are first-rate pieces by two of the most gifted younger composers around. The two are friends, both are excellent keyboard players and first-rate all-around musicians, both have been through the avant-garde scene, both play and write piano rags (they wrote one together), they play each other’s music, both often use dramatic elements in their music, and both have been working somewhat outside the conventional canons of the avant-garde.

Black Host (or “Jeremiad”), written in 1967, is a kind of break-out piece for Bolcom. He quotes St. Sécaire to the effect that the historical Black Mass was intended to purify the Church of its own sin by denying it its own sacred pleasure! Bolcom then goes on to say that his Black Host is about fear. It is, in any case, an exorcism of some sacred canons—going from modern music to ragtime to a huge chorale, all of this punctuated by percussion and an outrageous tape babble. The sacred house has been desecrated! The holy men are indistinguishable from the sinners. This is, to put it briefly, a brilliant, hilarious, and moving multi-layer piece which does indeed exorcize some demons and some saints, and, in the end, gains higher ground.

William Albright’s Organbook II—“Night Procession,” “Toccata Schenker,” “Last Rites”—might seem to be dealing with the same demons. But whereas Bolcom is dramatizing and externalizing a very real struggle with his own personal devils, sacred and secular, traditional and avant-garde, Albright is composing Lisztian tone poems—very beautiful and contemporary ones, to be sure. Even more than Bolcom, Albright knows and uses the sonorous potential of the organ in a most effective and evocative manner. Not surprisingly, some of this music approaches the best electronic music in its timbral intensity, and, in the last movement, tape is used in such a way that it is impossible to tell where the electronic sounds leave off and the organ begins.

Everything is extremely well played by Albright, and, with the exception of a balance problem or two, well recorded. E.S.

BRITTEN: Seven Sonnets of Michelangelo, Op. 22; Cantiicle II: Abraham and Isaac, Op. 51. John Stewart (tenor); Ellen Shade (mezzo-soprano in Abraham); Martin Katz (piano). DESTO DC 7127 $5.98.

Performance: Good
Recording: Good

What with the activities of Peter Pears and Decca/London’s determination to record Britten practically down to his latest sneeze, the composer’s vocal music is dangerous ground for young singers to trespass on. But the American tenor John Stewart has managed to find one substantial piece, the Michelangelo Sonnets, that has somehow slipped through the cracks—the only other version in my collection, by Alexander Young and Gordon Watson on Argo, is too antique to have much chance of reappearing. And though Pears’ Abraham and Isaac is available on an Argo disc of all three canticles, the work makes an attractive coupling here.

The Michelangelo set is one of the earliest of Britten’s long line of song cycles, and, though a more superficial work than the
Donne set written five years later in 1945. It is pretty enough in its facile way. Abraham and Isaac, composed in 1952 for Kathleen Ferrer and Peter Pears, is likewise an early example of what has become an extensive series, since it foreshadows the simple Pietism that has produced the three "parables for church performance" in recent years. Here, moments of touchingly direct expression alternate with banalities like the mannered canticle on the words: "We may no longer abide."

Stewart has a more operatic-sounding voice than Pears, for whom this music was conceived. But there is room for disparate voices on both pieces, and even in the canticle, where direct comparisons can be made. Stewart's singing and musicianship offer a perfectly acceptable alternative to the English tenor's cooler, suaver interpretation. Stewart is well partnered by his wife, Ellen Shade, whom I have listed as a mezzo in the absence of any information on the mater. Desto bills the performers, respectively, "as Abraham" and "as Isaac," and this is misleading—not only do they step out of "character" to point the moral at the end, but they also combine in an eerily atmospheric invocation of the voice of God, an effect that was tellingly picked up by Stravinsky a few years later in Threni.

In the Michelangelo set, my battered Yeats has it over Stewart in a few instances, and especially at the expansive climax of the third song. But again, this is a thoroughly honest, sensitive performance, and it has moments of considerable rhetorical power.

Martin Katz plays both piano parts well. English texts (though no Italian) are supplied, and the recording is clear and pleasant.

B.J.

BRUCH: Kol Nidrei, Op. 47 (see BLOCH)

RECORDING OF SPECIAL MERIT

BUXTEHUDE: Mein Herr ist bereit; O Gottes Staub, Hon; ich lasse dich nicht; Ich suche des Nachts. H. Altmeyer (tenor), Jakob Stämpfli (bass); Bach College, Stuttgart. Helmut Rilling cond. NONESUCH H 71258 $2.98.

Performance: Excellent

Recording: Excellent

Buxtehude belonged to the second generation of Baroque composers, and, in spite of his isolated position—he was Danish by birth and worked in the extreme north of Germany—he was one of the most influential composers of the whole period. He was organist and choir director of St. Mary's in Lübeck and organized "spiritual concerts" that were famous all over Germany. In Buxtehude's cantatas, from which we are here, a kind of intense Protestant mysticism finds its perfect expression. Biblical texts alternate with quaint mystical poems in the manner familiar from the later cantatas and Passions of Bach. Unlike Bach, who loved elaboration, Buxtehude always chose the simplest means of expressing the words, the "affect," the moral. Every line is set and illustrated with the most direct and intense forms of expression, always deeply felt and communicated with fervor. These impressive and beautiful pieces are performed with great style and sensitivity and very well recorded here.

E.S.

COPLAND: Quiet City (see RUGGLES)

CROSSE: Changes. Jennifer Vyvyan (soprano); John Shirley-Quirk (baritone); Orpington Junior Singers; Highgate School for Boys Choir; London Symphony Orchestra and Chorus. Norman del Mar cond. ARCO ZRG 656 $5.95.

Performance: Fair

Recording: Good

Gordon Crosse is a young English composer who has demonstrated high talent in a number of orchestral and chamber works over the past decade. Unfortunately, Changes does not represent him at his best. Subtitled "a nocturnal cycle," it was commissioned for the 1966 Three Choirs Festival in Worcester, and takes its atmospheric inspiration from the traditional sounds of English bell ringing. Some of the texts are actually inscriptions from bells, and the rest assemble the second interlude from where it belongs at the start of Part Three and puts it incongruously by itself at the end of the first side. Altogether, then, this is a disappointment. And I should have done better to turn to such impressive and neglected choral works as Josephs' Requiem and Mortales, and Tippett's Vision of St. Augustine. B.J.

ELGAR: Sea Pictures (see MAHLER: Five Songs from Rückert)

FELDMAN: The Viola in My Life. Karen Phillips (viola); Anahat Ajemian (violin); Seymour Barab (cello); David Tudor (piano); Paula Robison (flute); Arthur Bloom (clarinet); Raymond Demler (percussion). FAKE RELATIONSHIPS AND THE EXTENDED ENDING. Matthew Raimondi (violin); Seymour Barab (cello); Paul Jacobs and Yuji Takahashi (piano); Arnold Fromme (trombone); Richard Fitz (percussion). COMPOSERS RECORDINGS INC. CRPS 276 $5.95.

Performance: Excellent

Recording: Excellent

Morton Feldman is generally credited with being the fellow who, along with John Cage, introduced "chance" into music. But the importance and impact of Feldman's music really has very little to do with chance per se, but rather with time. Feldman wants to free music from time, to "let the sound be itself." The "it-ness" of Feldman's universe of soft, free-floating sounds suggest spatial imagery rather than sequence and process. Feldman's music comes from nowhere, goes nowhere; all of it is, in a sense, excerpted from some large, timeless, Platonic music that always was and is around us, but which first had the ear and wit to perceive and note. If, or if you like, it is the first minimal art—cool, abstracted, stylish, pure, full not so much of Platonic "it-ness" but of Romantic "I-ness." Feldman's style is as much his signature as the paint slashes of Franz Kline or Rothko's fields of color.

The Viola in My Life, written for Karen Phillips, is a rare example in Feldman's output of a carefully notated piece. Perhaps because of that (or even one knows that fact), it seems like one of Feldman's most directional works, and, far from damaging the music, this suggests a quality of intention and direction that is intriguing. The piece is long, spacious, not entirely timeless, and quite exquisite.

FAKE RELATIONSHIPS AND THE EXTENDED ENDING is a more diffused work, more properly suspended, more chordal, more dependent on isolated attacks, more divinely boring like most of Feldman's work, it requires a kind of suspension of disbelief on the part of the hearer.

I assume these performances are, for all intents and purposes, identical with the music. Soft, sustained music with lots of open, meditative spaces presents its particular problems in recording. I hear a door slam in one place, the rattle of a page-turn in another, and bit of record grit everywhere. This is not John Cage, and such events—even the ambient noise in the room you're in—tend to magnify themselves in the context without becoming in any way part of the experience. Otherwise the recordings themselves are good, and treble and general volume cuts do help.

E.S.

(Continued on page 80)
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(Continued on page 83)
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CIRCLE NO. 26 ON READER SERVICE CARD
As everyone must know by now, Leonard Bernstein's Mass was commissioned for the opening of the Kennedy Center in Washington D.C., last fall, and was performed there to apparent audience acclaim and patent critical dissatisfaction. Bernstein calls it a theater piece for singers, players, and dancers; among the ensemble are a couple of dozen soloists, two choruses—one grown-up, one boys—a stage band of electric, brass, and jazz musicians, a symphony orchestra (curiously unidentified), amplification, and prerecorded quad-rasonic tapes. There were settings by Oliver Smith, choreography by Alvin Ailey, musical direction by Maurice Peress, influences from (among others) Kurt Weill, Stravinsky, Off, Muhler, Penderecki, Beethoven, Ives, Blitzstein, and Bernstein's own earlier works. The crème de la crème of the political, social, and artistic worlds was there, and, if grace abounding did not descend on the assembled multitude, it was not because any effort or expense had been spared.

My first reaction on hearing the Bernstein Mass was that it couldn't be as bad as it sounded. In fact, it isn't. But it is so glossed over by artsy chic and show biz that its real values are all but obscured.

The ambivalent and paradoxical qualities of this most secular of sacred works is underscored for this writer by the remarkable parallels with my own music-theater pieces (and, to be sure, those of others working in this area). These parallels, already noted by several commentators, extend to the very specific matters of form, technique, style, and approach—even to titles of sections, use and instrumentation of the stage band, "live" and prerecorded tape interactions, the leading role assigned to a preacher, and so forth. And these similarities are emphasized by the presence of Alan Titus and of the soloists in my Nide Paper Sermon and indubitably the star of the show here.

But these things are in the air, and I think it would be wrong to accuse Bernstein of a kind of radical-chic rip-off. The business of originality and who-stole-what-from-whom is one of these bits of modern-critical baloney that really must go. It isn't where you got it from that counts, but what you do with it.

The problem is that it is not easy to deal with a work so full of associations and references purely on its own terms. Bernstein and Steven Schwartz have taken the text of the Roman Catholic liturgy and "troped" it—i.e., added some very contemporary commentaries on the crisis of faith in our time. By constantly playing with the very familiarity of these words and musical themes, they are always on the thin edge of stylistic confusion, banality, and vulgarity. They are, in effect, almost the victims of the very crisis with which they are dealing!

The "story" is very much like that of Schoenberg's Moses and Aaron. The Celebrant (priest, Everyman, Lennie himself) tries to maintain the simple faith of yesterday and to keep the participants and the audience as well. And despite the audience as well. There is no way to retain the simple faith of yesterday amid the meaningless chaos of modern life. So-&; as you can't lick 'em, join 'em. The Celebrant, in a classic mad scene, cracks up, smashes the sacramental chalice, dances on the altar, and finally disappears—oh, how significantly—into the pit. Of course, there is a happy ending: a song of praise, a choral, and the "sign of peace," which is followed by the participants and the audience as well. The voice on tape that says "The Mass is ended; go in peace" is Lennie's own.

Outside the mud scene which is wonderful operatic hokum—reminiscences of all the principal themes, half-strangled whispers, wild outbursts—most of the best music is in the orchestral interludes. There is a marvelous dance around the Golden calf, as well as several beautiful orchestral meditations that deserve to be heard on their own. Some of the simpler songs and hymns have appeal. Most of the pop and show music is almost self-parody, and this aspect of the work also suffers from Bernstein's painful inability to write rock music at the points where he clearly wanted to. Again and again both text and music succumb to cuteness and catchiness at the expense of profundity and relevance.

Still, the piece is written with great assurance and a deep desire to communicate a sense of crisis, both personal and social. Its now terribly unfashionable Broadway sound and its almost too fashionable multi-level forms and stylistic confusions are really issues of the moment, and I would guess that the piece has a chance to outlive its faults. If it does, then it may indeed prove to be better than it sounds.

Alan Titus is as much the star of the recording as he was of the "live" performance. His range of style and vocal expression is really remarkable, especially since through it all his singing is always beautiful and moving as well as intense and expressive. Except for one or two rather weak rock and blues singers, the cast is first-rate. The piece's work has been produced, recorded, and mixed extremely well.

One report had it that Radio City Music Hall wanted to book the Bernstein Mass on a two-a-day basis; but Lennie said no because the hall is too big. Somehow that story has a ring to it. That's because the piece has a chance to outlive its faults. If it does, then it may indeed prove to be better than it sounds.

In a word, this album is for dyed-in-the-wool Frankistes and for archival collectors rather than for the general listener.

**RECORDING OF SPECIAL MERIT**

GERSHWIN: Rhapsody in Blue; An American in Paris; Concerto in F. André Previn (piano); London Symphony Orchestra, André Previn cond. ANGEL SFO 36810 $5.98.

**Performance:** A natural

**Recording:** Excellent

This is Previn's first recording for Angel, and it is a natural. The LSO is "his" orchestra—he is its Principal Conductor—and the American elements of this music have become so internationalized that there is no stylistic gap any more. Gervase de Peyer, as classical an English clarinettist and chamber musician as you will find, has no problem with idiom at all here in the Rhapsody. Previn himself performs his double task with great ease. He allows himself a good deal of freedom, but all of it is undeniably effective. He operates well within the common practice and style of this music (among other things, he was responsible for the "arrangements" of the film version of Porgy and Bess), and no film-going composer of his generation escaped Gershwin.

Recordings of Gershwin's music continue to come out at an amazing rate, but this one ought to do us for a while where these three works are concerned.

E.S.


**Performance:** Reasonably good piano rolls

**Recording:** Good

One of the joys of Edward Grieg's last years was to hear his music played by the ebullient and extraordinarily gifted Australian pianist, composer, and folk-song collector Percy Grainger. In 1907 plans were under way for Grainger to perform the Grieg Piano Concerto at the Leeds Festival with the composer conducting. But the Grieg that year before the project came off. Obviously, Griegian performances by Percy Grainger, when at the peak of his pianistic powers in the Twenties and Thirties, are of more than passing interest, and fortunately he made a considerable number of both piano rolls and discs (acoustic and electrical) that will present the original performances in the best light, without falsification of tempo, dynamics, or pitch. Proper pitch and the resulting truth to recorded tempo, as well as suppression of surface noise without suppression of anything else as well, are basic to good transfer of 78-rpm discs or masters to tape and from there to long-play discs. To do the same for piano rolls is far more complex. Though it is true that a superbly reconditioned reproducing piano, recorded in stereo under ideal studio conditions, can yield a far more impressive sound than transfers from vintage acoustic and electrical disc masters, the problems of achieving dynamic range, accuracy of nuance and rhythm, and evenness of passage-work are enough to drive any sane person right up the wall. One has to be a combination of fanatic, jeweler, and genius to achieve results comparable to those heard on the Josef Lhévinne disc issued on the British Argo label (DA 41). The telltale marks of so-so piano re-recording—uneven or wood-sounding passage-work, faltering rhythm, and lack of dynamic nuance—are virtually absent on that transfer.

All this is preatory to saying that, by these standards, the Klavier disc of from Grainger piano rolls is just a moderate success. The Grieg Concerto, played as a solo work without orchestra, is the least successful from every point of view. The lack of dynamic variation being the most conspicuous failing. The side offering the solo works, including the impressive variation-patterned G Minor Ballade, comes off somewhat better, especially in the less dynamically demanding pieces such as Erotik (the most accurately reproduced piece of the lot, I should judge).

The sound of the reproducing piano is well recorded, on the whole, though the last chord of To Spring on my review copy was marred by a curious pitch fluctuation. As for the Grieg reading of the Grieg Concerto, we may yet get one done when the pianist was still in top form, from a 1944 Hollywood Bowl performance with Stokowski conducting—at least the International Piano Library promises same to its members as its next special release.

D.H.

**HANDEL:** Oboe Concertos: No. 1, in B-flat Major; No. 2, in B-flat Major; No. 3, in G Minor. Concerto Grosso in D Major. Overture in D Major. Alfred Sou (oboe); Jozef Brejza, Bernhard Leguillon (horns); Schola Cantorum Basiliensis, Hans-Martin Linde cond. DEUTSCHE GRAMMOPHON ARCHIVE 2533 079 $6.98.

**Performance:** Stylish

**Recording:** Excellent

The unusual repertoire here does not consist of the three oboe concertos, which have been recorded often previously, but the two additional items, an interesting, isolated overture with a slow movement for solo instruments (including flute, presumably played by Linde) plus an isolated concerto grosso with some elaborate horn writing. The playing throughout is extremely stylish, though the oboe concerto embellishments are a trifle conservative, the conducting, which leans towards lively temps in the fast movements, has a predominantly lyrical quality to it (English chamber orchestras are apt to be more bouncy in their Handel), but the performances on the whole are highly satisfying. The recorded sound is thoroughly satisfactory.

I.K.

**IVES:** From the Steeples and the Mountains (see RUGGLES)

**KAYN:** Cybernetics III. Roland Kayn and Marno Zucchini (tape realization). NONO: Contrappunto dialettico alla mente. Liliana Poli (soprano); Cadigia Bove, Marisa Mazzoni, Elena Vicini, and Umberto Troni (speakers); RAI Chamber Choir. Nino Antonielli dir.: Luigi Nono (artistic direction). DEUTSCHE GRAMMOPHON 2543 006 $6.98.

**Performance:** Electronic

**Recording:** Excellent

Cybernetics III is another of those contemporary pieces to which the activity of music...
criticism seems totally irrelevant. In his note, Roland Kayn, who was born in Germany in 1933, declares that his main object in this electronic-manipulative piece "was to control several independent sound sources in such a way that density of information corresponds to certain entropy values." Not being versed in judging entropy values, I am perfectly happy to believe that he and his collaborators at the electronic studio of the Milan radio have succeeded in that aim. Otherwise, presumably, the record would not have been released. For what it is worth, purely aesthetic inspection of the piece suggests to me that it has no particular formal or textural interest, and that it also lacks any connection with even the most broadly conceived field of human values, as I, in my fuddy-duddy way, continue to think music should.

No one could accuse Luigi Nono of evading human issues. His piece, described as "in a certain sense a 'tribute' to Fauchier" (the composer, in 1608, of the madrigal comedy known as Il festino), has much more to say than Kayn's. But in its various combinations and transformations of vocal and other sounds, it still seems to me to fall far short of his distinguished nonelectronic works in its ability to conjure a new and coherent sound-world. Here, at least, is a degree of emotional power and an evident ear for continuity and contrast. Yet, in the long run, even Contrappunto is just another in the seemingly endless succession of "noise" pieces.

I am depressed to learn from the liner-note that Nono has turned increasingly to electronic composition in recent years. The composer of Sul ponte di Hiroshima and some of the Lorca-inspired pieces is one we can little afford to lose to the blandishments of mere manipulation. The liner, by the way, says "English translation continued on enclosed leaflet," but it wasn't enclosed in either of the two copies I have seen. The recording is vivid.

B. J.

RECORDING OF SPECIAL MERIT

LISZT: Sonata in B Minor; Benediction de Dieu dans la solitude (Harmonies poétiques et religieuses No. 3); Walserrauschen; Giunonne-reigen. Claudio Arrau (piano). PHILIPS 6500 04 $5.98

Performance: Stunning Recording: Exceptional

LISZT: Sonata in B Minor; Dante Sonata; Mephisto Waltz No. 1. Alfred Brendel (piano). TURNABOUT TV S 34424 $2.98

Performance: Stunning Recording: Excellent

Claudio Arrau's pianism has never sounded more beautiful than it does on this disc. An splendid collaboration between two difficult arts—playing the piano, and recording the piano—the record is a delicious experience throughout, with the piano sounding rich and sweetly brilliant to an extent it rarely does, and Arrau's command of Liszt's ideas so firm and comprehensive that it really takes the mind (and the ears) by storm. It would be redundant to go into comparative details about these performances, for they are all achieved on a level that can only be called transcendent, technically, musically, and philosophically. Arrau's originality of viewpoint is present, but delicately, in nuances (of great importance) rather than large, structural areas. One senses not only his love of the music but his exuberant joy in the piano as a technical difficulty. Starting from that premise, he flows through the music the way a fish swims through the ocean—with total adroitness. His sense of the music is as astonishing as is his technique. "Total" would be the only appropriate word.

But what can possibly be wrong with the thinking of the people who produced this record? They give not one word of information about the performer himself in the liner notes. I have been distressed for years about liner notes that headline and advertise performances of artists, while totally downgrading the composers of the music. Here we have the opposite situation, and it's equally bad. Music is a collaborative art.

L. T.


Performance: Superb Recording: Excellent

The Mahler songs have been available in stereo. (Continued on page 86)
Dick Sugar's been playing his Miracord 10H's 18 hours a week for 7 years.

We built our new 660H for people like him

Dick "Ricardo" Sugar broadcasts Latin music over New York's WHBI-FM, six days a week, three hours a day, from his own private studio. For the past seven years—6500 hours of broadcasting—his studio turntables have been Miracord 10H's.

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The ELAC/Miracord 660H, $139.50, less base and cartridge. Another quality product from Benjamin. ELAC Division/Benjamin Electronic Sound Corp., Farmingdale, N.Y. 11735/a division of Instrument Systems Corp. Also available in Canada.

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One reason for this is that the Crown line is a professional line of tape recorders and players—that is, designed for audio pros who make their living by recording. Crown does not bow to the popular philosophy of "planned obsolescence", where the manufacturer automatically outdated last year's line by bringing out all new models each year. Indeed, since Crown first introduced modular solid state recording in 1963 (four years before any other manufacturer), the basic design has not been significantly altered—so advanced was its concept. State-of-the-art currency is maintained by incorporating new features into current models, only when they mean an advantage in either performance or price.

But even these are not the reasons a Crown owner would give for treasuring a venerable old model. He would say it's the sound—that matchless recording and playback fidelity that has become synonymous with the Crown name. For example, the SX724 4-track stereo deck at 7 ips delivers a frequency response of ±2dB 30-25,000 Hz, with hum and noise at -60dB, and maximum wow and flutter of 0.09%. (When comparing specifications, keep in mind that, unlike most hi-fi manufacturers, Crown guarantees its specs for minimum long-term performance; actual operation is often even better.)

If you would like your tape deck to record as good years from now, as when new, we suggest that you visit your local Crown dealer soon. (Just don't expect to find a used Crown—at any price.)

Miss Baker's performance for some time as a filler for the late Sir John's recording of the Mahler Fifth Symphony. The Elgar Sea Pictures, as sung by Miss Baker, appear for the first time in the United States, though they were initially released in England in 1965, coupled with Jacqueline Du Pré's performance of the Elgar Cello Concerto.

The Mahler is the thing here: I cannot imagine a more poignant and sensitively fanciful communication of these most intimate of Mahler's songs, completed in 1904 at the peak of his creative maturity. Ich atmet einen lodoten Duft and Ich bin der Welt abgannen gekommen are sung here far transcends for me the category of mere listening experience. One is truly transported into other worlds by Miss Baker's artistry and by Barbirolli's infinitely sensitive collaboration, aided by exquisite playing from the New Philharmonia.

The Elgar Sea Pictures cycle starts off most promisingly with Sea Slumber Song, the elemental slow rise and fall of which anticipates Vaughan Williams' Sea Symphony. Regrettably, the remaining pieces (In Haven, Sabbath Morning at Sea, Where Corals Lie, and The Swimmer) proceed from sentimentality and bathos to chest-thumping bravado—all unconvincing.

Miss Baker, however, is her impeccable self artistically throughout, and the recorded sound, good as it is in the Mahler, is even better here, most notably in the opening song of the cycle, with its impressive use of bassdrum pizzicato.

RECORDING OF SPECIAL MERIT

MAHLER: Lieder eines fahrenden Gesellen; Kindertotenlieder. Hermann Prey (baritone); Concertgebouw Orchestra of Amsterdam, Bernard Haitink cond. PHILIPS 6500 100 $5.98.

Performance: Superb

Recording: Superb

If, in the final analysis, my preference remains with other versions of both these Mahler song cycles, that judgment should not obscure Hermann Prey's really outstanding achievement on this disc. He sings exquisitely throughout, with the kind of artistry that never draws attention to itself. His approach offers an almost ideal blend of vocal smoothness and interpretive insight—there is no trace of the occasional blandness that mars Yvonne Minton's beautiful but too uniform singing of the Gesellen cycle in her recent version with Georg Solti. At the same time, Prey is less insistent than Fischer-Dieskau on every last verbal nuance. Indeed, if you find Fischer-Dieskau too fussy, I am inclined to think that these new Prey performances offer a clear first choice among modern versions of both cycles, backed as they are by first-rate orchestral work under Haitink and a splendid recording.

Personally, I find Fischer-Dieskau's 1952 Gesellen recording even more bewitching. With Furtwängler finding an endless wealth of felicities in the score, and with the help of a recording that still sounds excellent, I prefer Fischer-Dieskau's version even to the moving but not always accurate or perfectly controlled performance by Heinrich Schlusnus available on Heliodor. As for the Kindertotenlieder, please forget all about high-fidelity sound and send $5.00 to Parmassus Records, Phoenixia, N.Y. 12464, for Parmassus 4. Along with fine performances of some individual songs by Schlusnus and Kerstin Thorborg and a reasonably good Gesellen cycle sung by Eugenia Zareska, it contains the greatest performance of Kindertotenlieder I have ever heard. Heinrich Rehkemper recorded it in 1928, and it is probably the earliest available example of the work of one of our greatest living Mahler conductors, Jascha Horenstein.

B.J.


Performance: Brilliant

Recording: See review

This first set to come out of London Records' sessions at the Krannert Center of the University of Illinois in Urbana must regretfully be characterized as a great recording that didn't quite make it. Even aside from the disservice thus done to a notable performance, my own personal regret is the sharper because I was one of those who suggested Krannert as a recording site when Solti and his London team decided that Medinah Temple—the scene of most recent Chicago Symphony recordings—did not meet their needs.

The Great Hall at Krannert Center is acoustically by far the best modern hall I have come across anywhere in the world. I still believe it is potentially a magnificent recording hall, too, and my experience of the sessions at which this Mahler Seventh was done last spring supported the belief. There had been problems at the outset, as there are bound to be with any complex recording project in an unfamiliar location. But David Harvey, Gordon Parry, and the other members of the London team had solved them to general satisfaction. Solti himself was delighted, and the feeling most of us shared as we listened to tape playback in the control room was that this was the finest sound London—probably anyone, for that matter—had ever put on tape at a Chicago Symphony recording session.

It was not the kind of sound I would myself have tried to get, since my preference is (Continued on page 90)
Mr. Hirsch goes on to say: "The FM tuner section of the AR-1500 was outstandingly sensitive. We measured the HF sensitivity at 1.4 microvolts, and the limiting curve was the steepest we have ever measured. The FM frequency response was literally perfectly flat from 30 to 15,000 Hz. Image rejection was over 100 dB (our measurement limit)."

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"...virtually all the circuit boards plug into sockets, which are hinged so that boards can be swung out for testing or servicing without shutting off the receiver. An 'extender' cable permits any part of the receiver to be operated in the clear — even the entire power-transistor and heat-sink assembly! The 245-page manual has extensive tests charts that show all voltage and resistance measurements in key circuits as they should appear on the receiver's built-in test meter..."

"With their well-known thoroughness, Heath has left little to the builder's imagination, and has assumed no electronic training or knowledge on his part. The separate packaging of all parts for each circuit board subassembly is a major boon..."

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"Real surprise came when we spent some time listening to AM... This new AM design is superb. We still have one classical music station that has some simultaneous broadcasting on its AM and FM outlets and that gave us a god opportunity to A-B between the AM and FM performance of the AR-1500. There was some high-frequency roll-off to be sure, but BOTH signals were virtually noise-free and we were hard pressed to detect more THD from the AM than from the FM equivalent. Given AM circuits like this (and a bit of care on the part of broadcasters), AM may not be as dead as FM advocates would have us believe..."

"Rated distortion [0.24%] is reached at a [continuous] power output of 77.5 watts per channel with 8 ohm loads (both channels driven). At rated output (60 watts per channel) THD was a mere 0.1% and at lower power levels there was never a tendency for the THD to 'creep up' again, which indicates the virtually complete absence of any 'crossover distortion' components. No so-called 'transistor sound' from this receiver, you can be sure. We tried to measure IM distortion but kept getting readings of 0.05% no matter what we did. Since that happens to be the 'limit' of our test equipment and since the rated IM stated by Heath is 'less than 0.1% at all power levels up to rated power output' there isn't much more we can say except that, again, the unit is better than the specification — we just don't know how much better..."

"As for the amplifiers and preamplifier sections, we just couldn't hear them — and that's a commendation. All we heard was program material (plus some speaker coloration, regrettably) uncluttered by audible distortion, noise, hum or any other of the multitude of afflictions which beset some high fidelity stereo installations..."

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Discwasher in the evening

...for a setup of far fewer microphones than London uses. But within the terms of the London approach, it was an eminently satisfactory result — rich, warm and exciting, ample in resonance yet full of lucid detail.

How is it, then, that almost all of those admiring qualities are missing from the final product? The rumor is that the finished tapes were flown to the London studios in Vienna, there to have reverberation artificially added. It seems to me a credible explanation. For what has happened is a sort of ironing out of the music's natural dynamic range. Instead of standing out in sharp and brilliant contrast as they did in the hall and on the master tape, Mahler's vivid instrumental lines now seem muffled, as if emerging from a uniform hozc of resonance.

Now that the Seventh is available in versions by all of the four major conductors—Bernstein, Haitink, Kubelik, and Solti—who have lately been engaged in finishing complete recordings of the nine standard Mahler symphonies, some kind of critical summary is clearly required. If London had not so comprehensively fallen down at, as it were, the last hurdle, the overall picture would be much less confusing. For of its powerfully individual, consumingly energetic kind, Solti's reading is a tour de force, and the contribution of the Chicago Symphony surpasses the playing of any other orchestra that has recorded the work. In particular, the smooth unanimity of the large horn section, even in the most hectic passages, puts all competitors in the shade.

But since all this emerges so imperfectly from the speakers, I find myself less willing than I might otherwise be to ignore the weaknesses in Solti's conception of the score—most noticeably, a failure to evoke much of the magic that lies beneath the surface of the two Nachtmusik movements. The first of them is played in a curiously prosaic manner, and the second suffers badly from the sense of four heavy eighth-note beats to the measure instead of the requisite flowing 3/4 meter. The Schattenhaft scherzo, too, ignores Mahler's emphatic, underlined direction "Flowing, but not fast," and at times betrays a surprising lack of interpretive character. The one forte marking in the timpani part on the first page of the movement, for instance, goes for nothing, and the short pauses in the variant of the passage at figure 148 are glossed over as if they did not exist.

Kubelik, perhaps surprisingly (for his cycle, apart from a superb First Symphony, has been something of a disappointment), manages to beat Solti at his own game in this scherzo. If you favor a hell-for-leather view of the movement, you will probably like Kubelik's unflaggingly demonic treatment. Kubelik's first movement, too, benefits from the kind of crisp accentuation that has been lacking in some of his other performances. Solti is also magnificent here, and in the rumbletiest finale his breathtaking speeds (leaving the listener no time to worry about the seams in the music) and the quality of the Chicago orchestra combine to give him a decisive advantage over Kubelik.

In my judgment, however, Bernstein's remains the most comprehensive and sympathetic statement of the symphony on record, particularly because of the enchantment he works in the Alan's movements and because of the genuinely spectral character of his much slower scherzo. And if you find Bernstein too insistently frenetic in the first movement, then Haitink, full of architectural pose in the outer movements and lyrical in an archly serious Nachtmusik, offers the best alternative.

The moral to be drawn from the relative failure of the London recording is one that will probably not find favor with many recording engineers. It is that recording is an art best fostered and nurtured at the studio moment you start trying to override the characteristic of a hall in an attempt to produce the kind of sound you are carrying in your head as some sort of ideal—usually derived from other, quite different environments—then you have lost the contest. The losers in this case are the members of the Chicago Symphony, who did everything that could possibly have been required of them, and, of course, the collector.
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KOSS STEREOPHONES

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Kohon Quartet.

a welcome bonus.

the alternate baritone aria "Scorn, fume" as principal roles). Like London, RCA provides trimmings, written by Daniel Gregory Mason.

an all but forgotten but ingratiating quartet in and Charles Ives; atmospheric urbanism of the late Thirties from Aaron Copland; and an all but forgotten but ingratiating quartet in pre-WW I Romantic style with folk

venues, written by Daniel Gregory Mason.

a welcome contrast to the concerto, and there is always organized in large, on-going melodic and contrapuntal phrases, and that is its not-so-secret secret. The long-range approach, the sense of balance, is highlighted by the absence of the kind of frenetic activity and tension that so often destroy the larger sense of modern-music performances by dissipating the energy far too quickly. These are all highly expressive pieces, and these are

Charles Ives' "cosmic tower music" for and German-trained, Xaver Scharwenka (1850-1924) was one of the many bright stars of the post-Lisztian piano galaxy who made a mark as virtuoso, composer, and pedagogue. He was in the U.S. for a time in the early 1890's, but his career was centered in Germany, though he returned to these shores regularly for concert engagements and to tend to the affairs of the New York branch of the Kindworth-Scharwenka Conservatory.

I have enjoyed a fair amount of the virtuoso music that has been resurrected in recent years as part of the so-called "Romantic revival." The Paderewski Concerto, as performed by Earl Wild, and the Henselt F Minor, recorded by Raymond Lewenthal, come most immediately to mind. I can't say as much for the concerto or the solo pieces by Scharwenka on the present disc, despite Michael Ponti's razzle-dazzle fingerwork. Save for the folk-flavored rondo-finale, the Concerto is pretty empty stuff—an awful lot of notes with very little thematic or developmental substance. The "light-fantastic" ambience of the piece from Op. 5 makes for a welcome contrast to the concerto, and there is a certain fascination in the rhythmic vitality and minor-major shifts of the Novellette. The Polonaise strikes me as not very successful imitation of the great Chopin F-sharp Minor.

The solo piano recording is clean and ample full throughout the disc; the orchestral accompaniment and balance in the Concerto are adequate.

D.H.


Performance: Excellent Recording: Excellent

The quartet-in-residence at La Salle University in Cincinnati is well known in Europe for its remarkable performances of twentieth-century music. They have recorded nearly all the music for string quartet by the "modern Viennese school," the founding fathers of dodecaphonism and serialism. As far as I know, only an early movement for string quartet by Webern is missing, included in the early Webern Quartet and the pretty little Brahmsian Quartet of 1897 by Schoenberg (try it on your friends and make them guess the composer; they'll never believe you when you tell them). The genius of the La Salle Quartet lies in their ability to make chromatic, disjunct music sound like music. They accomplish this by extracting and shaping the key element of this art form: linear phrasing. As we can now see and hear quite clearly, Expressionism was a last direct outgrowth of—not a reaction to—the Romantic tradition, and the twelve-tone idea of Schoenberg was intended to restore classical formal sense to the new expressive chromatic vocabulary. This music is always organized in larger, more logical and contrapuntal phrases, and that is its not-so-secret secret. The long-range approach, the sense of balance, is highlighted by the absence of the kind of frenetic activity and tension that so often destroy the larger sense of modern-music performances by dissipating the energy far too quickly. These are all highly expressive pieces, and they are distinctly not "crazy modern music" but highly elaborated and disciplined works directly in the grand tradition. By finding their just proportions, true dynamic balance, and on-going flow, the La Salle Quartet will undoubtedly help reach many people with the realization of these as the last examples of the big symphonic chamber form.

I have a few negative comments, mainly about the rather annoying use of portamento—it often occurs where it is not desirable. In general, the quartet does not completely succeed with the actual scoring, and did not, in the early Schoenberg in particular. On the other hand, the last two quartets of Schoenberg, the two masterpieces of Berg, and most of the Webern are impressive; even the lengthy and awkward scherzos and rondos of Schoenberg's late work is now very phrased in a most convincing manner, and (Continued on page 96)
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A new Columbia release tells a little of how it is in cloud-chamber land

By Eric Salzman

COLUMBIA RECORDS has finally given us, in Delusion of the Fury, one of the major music-theater rituals of Harry Partch in a realization adequate to the imagination and invention of one of this country's great originals.

Perhaps a little background is in order before we get to the music: Harry Partch was born in Oakland, California, in 1901 and was brought up in Arizona and New Mexico. His parents were Presbyterian missionaries who had spent ten years in China, and something of both the missionary spirit and the Orient seems to have rubbed off on their son. Partch spent the years of the Depression literally on the road — long before the Beats and the Hippies got there. Indeed, until recently, he has spent his whole life moving from place to place seeking the means to realize his extra-ordinary ideals. Partch's creative vision began with renunciation of the "artificial" Western tempered system (as well as the destruction of all his earlier music) and the substitution of "natural" intervals and tunings. Toward this end, Partch, in the best tradition of do-it-yourself Yankee ingenuity, created not only a whole body of new music, but invented and built the instruments with which to perform it, developed the theory behind their construction and tuning, trained musicians to play them, and devised new performance forms to communicate these new ideas and expressions.

Partch's Chromelodeons, Kitharas, Harmonic Canons, Bio-Boy, Cloud Chamber Bowls, Marimba Eroica, Crychord, Zymo-Xyl, Mazda Marimba, Gourd Tree, Eucal Blossom, Quadrangularis Reversum, and all the rest are unique creations, works of art in and of themselves. To perform a work of Partch one must therefore import instruments, musicians, and all. Clearly, it is only through recordings that his work will ever get to be widely known, and this one substantially enlarges our view of his accomplishments. His reputation has been largely that of a percussion composer vaguely associated with the orientalizing movements — centered largely on the West Coast — of the Thirties and Forties. But now we can hear him in his central role as the creator of a kind of ritual music theater of tremendous impact.

The roots of Delusion of the Fury, although partly Oriental, are in fact as diverse as the instruments themselves. The first act is based on a Japanese No drama, the second on a West African folk tale. The form of the whole is that of a tragedy followed by a satyr play (the reference to Greek theater is not unusual in Partch's work). There is a religious, ritualistic atmosphere to it all which, in a seemingly artless and naive way, deals with the age-old themes of guilt, sin, and redemption. The ritualistic aspects of a work like this are of course emphasized in a staged performance, which incorporates mime and dance, requires Oriental costumes, and integrates singers, chorus, and instruments in the closest possible manner. The instruments, moreover, are the set; the singers themselves also play small hand instruments, and all the instrumentalists are encouraged to move.

The sense of all this ritual, of magic and incantation, comes through in the present recording with complete success. Rhythm and timbre carry the main sense of the drama, the voices emerging only occasionally across the strong rolling pulse of rhythms, cross-rhythms, and metrical shifts. The soloists, in fact, are not identified, and it is a possible criticism of this recording that the voices are so submerged. On the other hand, the main lines are clear and beautifully integrated into the whole. And when, in the second part, the vocal lines are necessary to help define the change from the supernatural to the comic, the voices carry very well. It is, in fact, extraordinary how well the character of the different sections is drawn within the distinctive and on-going rhythmic and timbral quality of the whole. The strokes of ritual storm that initiate the final incantation are an example of how a sound ritual can be invested with meaning in the simplest, most direct way.

It is surprising how much this music relates to the minimal pattern music of some of the younger composers. Partch, in spite of his extreme isolation and originality, would appear to be something of a link between generations. His life style, his opposition to specialization, interest in ritual expression, aesthetic connections with non-Western cultures, do-it-yourself invention and construction of new instruments, and involvement with young people in a kind of communal ideal of music-making — all have helped his work and philosophy gain adherents among the younger generation. There is something "down home" about Partch and his music, and at the same time, his ideals are also highly spiritual. Delusion is a striking and powerful work — perhaps his masterpiece — and its web of sound, pulse, edge, and thrust are superbly conveyed by this recording.

The two-disc album includes a folder with color pictures of the instruments and a twelve-inch record of Partch introducing his instruments and commenting generally on his work. The pomposity of some of his remarks is only partly mitigated by their naiveté; they may put some listeners off. One can only point out that he speaks with the kind of candor and belief in his own ideals that permitted him to carry on all those years when he could find no sources of strength outside himself. In spite of his "historical" position (which we can understand now better than we could even a couple of years ago), there is a great deal of fundamental truth in his offquoted statement: "I have never been involved in anything with the development of modern or avant-garde music. I have always been a loner. There is nothing like my work in the modern world that I know of."

PARTCH: Delusion of the Fury, a Ritual of Dream and Delusion. Ensemble of Partch's instruments. Daniele Mitchell cond. COLUMBIA M 2 30576 two discs (with "A Glimpse into the World of Harry Partch:"

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the rather dry Webern Op. 28—the one doggedly non-expressive piece of the lot—emerges as much less abstract than usual. Excellent recordings and pressings.

E.S.

SCHUMANN: Concerto for Cello and Orchestra, in A Minor (see BLOCH)

RECORDING OF SPECIAL MERIT


Performance: Glittering

Recording: Good

The Scriabin boom continues apace. My notes indicate that only a handful of his solo piano pieces have yet to be recorded; we also have all the sonatas and all the major orchestral works; and now here is a first stereo recording of the early (1892-1897) but well-fashioned Piano Concerto. The end movements don’t go much beyond a pastiche of Chopin, but the slow movement, cast in variation form, is a beauty—one of Scriabin’s finest essays in post-Chopin style.

The Fifth Sonata, a ferocious one-movement affair, is the plum of this record, and gets a dazzling performance from Michael Ponti. The Poème satanique is glittery in Ponti’s reading here, but more emphatic and, to my taste, more convincing in Hilde-Somer’s Mercury recording (SR 90525). Another first stereo recording by Ponti is the enigmatic Op. 38 False, far removed in spirit from either Chopin or Johann Strauss, let alone Tchaikovsky. The most popular and accessible Scriabin is heard in the two left-hand pieces of Op. 9, played here with great elegance.

The recording throughout is bright and clear, but a mite bass- shy in the solo piano pieces.

D.H.

RECORDING OF SPECIAL MERIT


Performance: Impressive

Recording: Superb

With this disc there are now a full half dozen available recorded versions of Scriabin’s Fourth Symphony, subtitled Poem of Ecstasy, and something like two dozen of Tchaikovsky’s Romeo and Juliet. Abbado and the Boston Symphony, thanks to superb engineering, have come up with a disc realization that stands with the very best.

The acoustical ambience of Symphony Hall and the essentially lean and brilliant sound of the Boston Symphony do much to relieve the turgidity of some of Scriabin’s music, and with a performance of the most compelling urgency. Only Zubin Mehta’s recording for London is in the same class, but he is not quite so lucky in his recorded sound—good as it sounded at the time of its release. The Abbado reading of Romeo and Juliet is no less compelling and urgent. A fine and exciting disc for devotees of super-charged Romanticism.

D.H.

SHANKAR: Concerto for Sitar and Orchestra. Ravi Shankar (sitar); London Symphony Orchestra, André Previn cond. ANGEL SFO 36806 $5.98.

Performance: The original

Recording: Excellent

Ravi Shankar has never been a pure exponent of ancient Indian art as much as an innovator and mediator with the West. His very position as a sitar virtuoso is untraditional in a culture in which vocal music is overwhelmingly dominant. From an Indian point of view he is a very contemporary figure, and his numerous film scores, his concerts with Yehudi Menuhin, and, now, his composition of a concerto are up to-date developments. I’m not sure how meaningful it is for us Westerners to stand by and wring our hands because the natives won’t stay down in their picturesque villages.

SHANKAR

A Marshchallin of rare vocal beauty

On the other hand, the danger that Shankar’s music will end up as pop-concert Kirch is real. When Western instruments take up Indian motifs there is an effect of crudity; the intervals are rounded off, the ornamentation and rhythmic subtlety is missing. This is due not so much to Shankar’s lack of ability at handling a Western orchestra as to the character of Western instruments, which are built and played for harmonic integration—as opposed to Eastern ones, which are built and played for harmony’s sake. Shankar succeeds where others have failed because he shapes West to East, not the other way round. His orchestral writing is simple: this is due not so much to Shankar’s but rather more extroverted, and addresses some of Strauss’s already theatrical events with further, external heightening of their theatricality. The results in both cases are performances which well represent the two conductors’ personalities as we know them.

It must be said, however, that this is not one of Bernstein’s stellar performances. At times there is an unaccountably off-hand quality about it, and the orchestra is sometimes noticeably out of tune. In this respect the Boston recording is distinctly superior. However, the flaws in Bernstein’s performance are certainly not great enough to take it from the field as a serious competitor.

L.T.

RECORDING OF SPECIAL MERIT


Performance: Excellent

Recording: Excellent


Performance: Good, but not the best

Recording: Good

The music critic Virgil Thomson once said with great wisdom that it profited critics nothing to beat dead composers over the head. With that in mind I will restrain myself, saying only that it is this month’s special Thornton irony to have to review not one but two recordings of Richard Strauss’ Also sprach Zarathustra, which is, if not the composition I admire least in the literature, then very close to that. (Having so revealed myself, I anticipate some rather lively repartee from space-minded readers).

There is no crucial choice to be made between these two recordings, in terms of performance quality. As one might expect, Steinberg’s reading is a little more internalized and (if you’ll excuse the term) credulous; Bernstein’s, again as one might expect, is rather more extroverted, and addresses some of Strauss’s already theatrical events with further, external heightening of their theatricality. The results in both cases are performances which well represent the two conductors’ personalities as we know them.

It must be said, however, that this is not one of Bernstein’s stellar performances. At times there is an unaccountably off-hand quality about it, and the orchestra is sometimes noticeably out of tune. In this respect the Boston recording is distinctly superior. However, the flaws in Bernstein’s performance are certainly not great enough to take it from the field as a serious competitor.

L.T.
Der Rosenkavalier is not only in itself the most "Viennese" of all operas; the theory persists (though mainly in Vienna) that it takes a Viennese to interpret it authoritatively and to appreciate it to its full extent. Such eminent Austrian conductors as Clemens Krauss, Erich Kleiber, and Herbert von Karajan lend support to this theory—until we remember that Richard Strauss himself was a Bavarian. He that as it may, it takes either extraordinary brilliance or extraordinary chutzpah for an American to conduct this opera outside of Vienna. And he, too, must be a lion's mouth, so to speak, and to have it permanently documented on records. Leonard Bernstein, of course, has both of those essential ingredients.

And he achieves considerable success with this sumptuously produced set of records. True, he has conducted a virtually identical cast at the Staatsoper before, charming the Viennese out of their seats with the Bernstein magic of enthusiasm and showmanship. But recordings, of course, are something else again; visual appeal is missing, and though the critical listener is pleased, he is not overawed.

But there are several minor cuts in this recording, concomitant to Viennese performance practices. Karajan also observes these cuts in the Angel set, but Georg Solti, to his everlasting credit, performs the opera uncut. I like much of this Rosenkavalier. Fifteen years ago, it could have been a landmark recording. Today, handicapped by an inadequate Octavian, and decidedly topped by Schwarzkopf/Karajan on Angel and Crespino/Solti on London, it is not.

G.J.

TCHAIKOVSKY: Romeo and Juliet—Overture-Fantasia (see SCRIBA: Poem of Ecstasy, op. 54)


Performance: inadequate

Recording: Very good

Tito Gobbi was the original choice for the title role of this recorded Macbeth, and a good one. He took sick shortly before the sessions, however, and another superstar was persuaded to step in to save the costly enterprise. I know that it is blackheartedly villainous of me to say so, but cancellation of the project would have been the preferable course. What we have here is an uncut Macbeth (the only really complete recorded version), but the kind of performance that will be a source of great frustration to Verdians.

It is not all bad, however, and when Luciano Pavarotti and Nicolai Ghiaurov are heard shaping their pleasing voices around the music with a true understanding of its spirit and with a flowing, unfrocked lyricism, we are allowed oases of delight. But such joys are brief: Banquo is assassinated on side three, and Macduff has little to do besides his aria "Ah, la paterna muna." This is an opera built around Macbeth and his Lady, and therein lies the problem.

His impressive list of Italian roles notwithstanding, Dietrich Fischer-Dieskau was never right for Verdi and Puccini, not even in his best vocal estate. As always, there is keen intelligence in his work, interpretive understanding and sound musicistically. But the style is undiluted, the ranges insufficient, the tone forced and finessed, the declamation overstressed, the entire sound wrong, dead wrong. Elena Souliotis is at her best in the Sleepwalking Scene, which she wisely models on Callas. But it's the same old story with her: great promise unfulfilled, a voice sounding Ochs, but admit that others may prefer a riper, deeper, more lachrymose sound. Berry revels in the higher part of the tessitura, manages the low notes skillfully, and, as a native Viennese, masters the dialect in an easygoing, natural manner. Placido Domingo contributes a luxuriant-sounding tenor aria. Murray Dickie and Margarita Lilowa are a splendid pair of conspirators, and Karl Terkel is outstanding as the Innkeeper.

The minor roles are handled by experienced Staatsoper specialists: the Duenna of Emmy Loose is rather unpleasingly shrill, the others are adequate or better.

There are several minor cuts in this recording, concomitant to Viennese performance practices. Karajan also observes these cuts in the Angel set, but Georg Solti, to his everlasting credit, performs the opera uncut. I like much of this Rosenkavalier. Fifteen years ago, it could have been a landmark recording. Today, handicapped by an inadequate Octavian, and decidedly topped by Schwarzkopf/Karajan on Angel and Crespino/Solti on London, it is not.

G.J.
composed not of registers but tiny compartments and at the mercy of undisciplined art and insufficient technique.

_Macbeth_ is not an easy opera to put over, even under the most auspicious circumstances, because Verdi's later improvements, occasioned by the 1865 Paris revival, are not fully harmonized with the work's original (1847) spirit. There are magnificent pages in the opera, but the music for the Witches is quite silly, and whether the warriors are Scottish or English, they march musically under Garibaldi's banner. And you need real Verdi singers to bring off such pedestrian music as the duet between Macbeth and his Lady that ends the third act. Lamberto Gar- delli is a fine conductor who does his best to minimize the crudities and to serve the impressive portions of the music. He has Pavarotti, Ghiauor, and a group of worthy _comprimarii_ on his side, and a very fine orchestra and chorus. It is not enough, unfortunately. The preferable recorded version of _Macbeth_ remains RCA Victrola 6121, with Leonard Warren and Leonie Rysanek.

_STEREO REVIEW_ 98

_G.B._

_WEBERN: Five Movements for String Quartet, Op. 5; String Quartet (1905); Six Baggeltes; String Quartet, Op. 28 (see SCHOEN-BERG)

_COLLECTIONS_ 99


_Performance: Adept and often moving Recording: Excellent_

One of the hazards of being a professional record pundit is that one develops an aversion to certain types of recordings that is out of proportion to their real offense to music. Some of these are so obvious as to require no more than an imaginary title to identify: "Sir John Sargent Plays Great Moments from Tchaikovsky," and "Far-Out Bach on the Fender Bass." Another is represented by this new release featuring the Spanish soprano Pilar Lorengar—the "Donna Assoluta Sings Arias from Caccini to Carlisle Floyd" kind of thing. Few artists can do more than suggest their capabilities, given the circumstances under which such recordings are made. Is it fair to expect much of Mme. Assoluta—not to mention the orchestra and conductor—when she is rushed into the studio between engagements, allowed only a runthrough or two, and asked to impersonate a medieval German noblewoman one moment and a _fin de siècle_ Parisian soprano the next? Small wonder that interpretive authority is in short supply on these discs, and that Caccini and Carlisle Floyd come out sounding almost exactly alike.

I am happy to report that the present disc cannot be held up as a case in point, for Miss Lorengar has largely avoided these pitfalls. For one thing, the program, intended as an homage to the _prima donna_ who sang the music of "ten of the city's favorite composers" in Vienna, was cannily chosen to include roles she has sung on stage, and to display her considerable virtues as a singer at their best. Among these virtues are an innate feeling for the lyrical line and for rhythmic suppleness and swing—the latter very much to the good in the opera selections here. Her voice does not contain many different colors, but she compensates for this intelligently by varying the pressure she puts on it to suggest changes of mood. In quality, it is characterized by a fast vibrato that can momentarily obscure true pitch in the midrange, but it is endearing and effortlessly produced, and when it soars into the empyrean, its purity and freedom must startle the listener. Among the opera arias here, three stand out. "Dove sono" is beautifully rendered, with an introspective glow and aristocratic poise, and the duet from _Arabella_, in which she is joined by Ariene Auger, is evidence that Miss Lorengar might become an Arabella to rival Lotte Lehmann. Best of all is Agathe's long scene from the second act of _Der Freischütz_, touching and thrilling by turns. Did this aria profit from the fact that she must have been preparing the role for the Metropolitan Opera's new production last fall when she made this recording?

The opera selections are a special delight. If you find it difficult to imagine Miss Lorengar as a gypsy, you will no longer after you hear her sing into the aria from Johann Strauss' _Zigeunerbaron_ and Lehár's _Zigeunerliebe_. She cannot match the insinuating suavity of Elisabeth Schwarzkopf in the familiar "Schenkt mir sich Rosen in Tirol," but at least we get it here unmarred by the older artist's sometimes mannered changes of attack and color. And the lovely aria from Lehár's _Eva_—a kind of summation of the underlying philosophy of all opera— is simply done to perfection, that's all.

_PILAR LORENGAR_

_Her considerable virtues heard at their best_

_Production: Pro Musica sampler Recording: Excellent_

The jacket notes for this collection read as follows: "The roots go deep, penetrating layer after layer of musical sediment, sending out sensitive feelers to feed on the rich nourishment of the 14th Century—and beyond. The young voices of the New York Pro Musica, and their mastery of authentic instruments of the period, bring to contemporary life the incredible variety of the music of that distant time." There follows a list of the instruments heard: recorders, wooden flutes, krummhorn, shawms, kothol, rauschpfife, sackbuts, viola da gamba, vielle, bagpipes, psaltery, portative organ, regal, lute, harpsichord, and percussion. Then there is a listing of the contents, pretty much as it is printed above, except that the singers are identified only as soloists without indication of voice types. That's all. I mean there is nothing else.

The fact is, of course, that this full-priced disc is a sampler drawn from about eight of the New York Pro Musica's previous releases. The earliest appears to be Decca DL 9400 ("Music of the Medieval Court and Countryside for the Christmas Season"); the mono selection, stereophonically enhanced quite effectively here, is Brayton Lewis singing _Riu, Riu_, with members of the old New York Pro Musica Antiqua, including Russell Osterlin, in the background). There is the Fanfare and Ductia from the _Pay of Daniel_, an extract from the Pro Musica production of the _Play of Herod_, and excerpts from such texts as "The Kynge's Musick" (DL 79434), "Spanish Medieval Music" (DL 79416), and _"Ah, Sweet Lady"_ (DL 79431), and _"Petrucci, First Printer of Music"_ (DL 79435). The point is that though the contents are sung and played (in about equal parts) in the usual professional Pro Musica manner, the presentation is so poor for this type of album that in order to get anything out of the music other than background pap, one must go back to the original albums, complete with all texts, translations, full titles, and complete listings. I would not like to hazard a guess as to what group Decca is pitching the present release toward, but it's a total loss to any potential Pro Musica enthusiast.
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MOSE ALLISON:  Western Man.  Mose Allison (piano and vocals); Chuck Rainey (electric bass); Billy Cobham (drums).  Western Man: Ask Me Nice; Tell Me Something; Meadows: Night Club; Do Nothing Till You Hear from Me; Benediction; How Much Truth; and three others.  ATLANTIC SD 1584 $5.98.  © M 51584 $6.98.  Performance: Thrilling  Recording: Excellent

Although Mose Allison has been one of my favorite singers and jazz musicians ever since my early college days, when I first heard him do the legendary Parchman Farm and Back Country Suite, he is very difficult to write about because he is so hard to peg. Basically, his roots are in the backwoods Mississippi mud, which makes him a rugged pioneer in the primitive tradition of Bill Broonzy and Pigmeat Markham. Like Scott Joplin, he has the stuff of raw genius, but like many geniuses, he's always being forgotten and rediscovered. Nobody quite knows where to place him in the musical scheme of things. He got out of the back country and played all the great clubs (one song in the collection, Night Club, tells it from his viewpoint) where he heard all the jazz greats. It rubbed off, and today he's best described as a traditionalist with progressive leanings. Certainly he has had his influence on others. If you asked as diverse a group of singers as Joe Williams, Bobby Scott, and David Clayton-Thomas of Blood, Sweat & Tears, they'd probably admit having listened closely to Mose Allison.

On this new collection, he has written nine tunes he has composed here are compelling and complex. Mose Allison has drawn from all facets of his musical knowledge, but cool sophistication of Joe Derise on the Ellington tune. His piano shifts in mood from lusty riffs to dreamy chords to something that sounds like a guitar pick. An amazing amount of virility and taste comes out of this unique performer, and it is thrilling to hear. He is a first-rate composer as well, and the nine tunes he has composed here are compelling and complex. Mose Allison has drawn from all facets of his musical knowledge, but

Mose Allison

Compelling tunes from a unique performer

like all originals, he goes straight ahead, lighting his way with his own built-in musical headlight.

ALAN BOWN:  Listen.  Alan Bown (trumpet, flugelhorn, maracas); accompanying musicians.  Wanted Man; Crush Landing; Loosen Up; Pyramid; Forever, and four others.  ISLAND SW 9308 $5.98.

Performance: Avant-garde jazz-rock mess  Recording: Very good

Here's an example of what happens when musicians who aren't very good at playing rock are brought together with musicians who have difficulty with avant-garde jazz. Alan Bown is the trumpet-playing leader of this English group. Although his perspective is clear enough—he is trying to bring a Coltranesque free-jazz to rock songs and rhythms—neither he nor the other musicians in his eight-piece group have the chops to bring it off. Call it a good try.

RANDY BURNS:  Song for an Uncertain Lady.  Randy Burns and the Sky Dog Band (vocals and instrumentalists).  Sorrow's Children; Lisa; Randy's Song; Deegan Street; Child For Now; and seven others.  ESP 2007 $5.98.

Performance: Ragged  Recording: Good

Randy Burns himself wrote all the songs included here. When that job was done he decided to perform them, his second mistake. He sounds folksy, but in an808.3; 593.3x808.3; 45x34; MARCH 1972; 101; Explanation of symbols:  = reel-to-reel stereo tape  = stereo cassette  = quadrasonic disc  = reel-to-reel quadrasonic tape  = eight-track quadrasonic tape  = eight-track stereo cartridge  Monophonic recordings are indicated by the symbol M.  The first listing is the one reviewed; other formats, if available, follow it.
Sylvia’s Four Strong Winds disclose its special sadness by slowing down the tempo, getting some beautiful, brief guitar-piano breaks, and contriving a nice “choral” finish. She converts Bob Dylan’s Just Like Tom Thumb’s Blues into a near-jazz thing by flattening certain notes, playing a semi-boogie piano, and changing the tempo. Judy’s previous wussie was unquestionably a qualified success; this but is an almost startling new experience. Her own Song for Judith sounds fine, and two strangely frightening songs by Leonard Cohen, Joan of Arc and Blue Rainbow, are handled with rare insight (I find I’ve grown very fussy about how Cohen’s songs are sung). Chelsea Morning should have been replaced with something else; Judy seems to be trying too hard to stare off boredom with it. There’s still an outside chance that Judy Collins isn’t the greatest singer in the world—maybe I just think she is. Maybe there’s something in the water in Colorado, the place she and I both consider home. I don’t remember drinking any water when I lived there, though.

THE DOORS: Other Voices. The Doors (vocals and instrumentalists); various other musicians. In the Eye of the Sun; Variety Is the Spice of Life; Ships in Sails; Tightrope Ride; Down on the Farm; and three others. Performance: Anemic. Recording: Very good.
The Doors weren’t exactly a super group when they had a legitimate poet, Jim Morrison, doing the heavy work. In this first release since Jim’s death, the Doors sound like other voices, all right, and as if they’re in other rooms, too. That is, they sound different, but not better. Morrison’s style called for the instrumental backing to have a stultifying if not mesmerizing effect, mainly provided by Ray Manzarek’s maddeningly rhythm-instrumental lines. Here Manzarek spends more time with the piano than the organ, and percussion generally is the principal element in other “new” sounds. On the occasion when they try to get back into the old groove—on Tightrope Ride—they sound disconcertingly like the Rolling Stones. That’s because of the sound itself. I think which brings me on a roundabout way to speculate that the Doors can no longer write “Doors’ songs.” There’s a half-hearted attempt at Morrison’s sexual-excess ethos in Variety is the Spice of Life, but it’s quite pale. It’s puzzling, since guitarist Rob Krieger used to write that kind of song fairly well. At any rate, these songs are a pretty weak lot, and the Doors seem to have lost the one thing everyone conceded they had—a good strong image.

JEANNIE GREENE: Mary Called Jeannie Greene. Jeannie Greene (vocals and piano); other accompanists. Yes, I Do Understand; You Know Who You Are; Put Your Good on the Line; Thank God He Came; Like a Road Leading Home; Swaziland Remembered; and seven others. Performance: White gospel. Recording: Excellent.

With folk-rock, jazz-rock, and blues-rock already upon us, can white gospel-rock be far behind? Nope. Here it is, very much in the style already made familiar by Leon Russell, Jeanie Greene sounds like a cross between Rita Coolidge and Bonnie Bramlett and Merry Clayton and all the other heavy-vibrato, gospel-style back-up singers who have taken the solo plunge. Her songs have a lot to say about Jesus and the prophets and inspiration and stuff like that, and I don’t mean to be sacrilegious or inconsiderate, but I find most of them bloody dull. I’m sure Jeannie Greene is sincere (although I’ve got some reservations about the album’s title), but devotion and an average-size talent just aren’t a volatile enough combination to produce really good music.

CAROLE KING: Music (see Best of the Month, page 73).

BONNIE KOLOC: After All This Time. Bonnie Koloc (vocals); Phil Upchurch and Sid Simmons (bass); Norm Christian (drums); Ron Scroggin and Liz (guitar and harmonica); Stu Heiss (guitar); Allen Barcus (piano). Devil’s Eliminapist-Scotts-ballad flavor which comes out fully on her adaptation of an old folk song. The Devil’s Eliminapist-the best cut on the album. Got to Get What You Can is a rolling blues that would have been better as an opening cut instead of being buried on side two. Jazzman, written by Ed Holstein, one of the Chicago gang, is okay, but I can’t get used to a folk-blues style in which the first-person character is a man. No chauvinist I (well, not much of one), but when, for instance, Joan Baez, in singing The Night They Drove Old Dixie Down, declares, “Virgil Kane is my name,” cold logic must apply. “The hero...

There are some nice moments in the other tunes, most of which were written by Miss Koloc, but they are inconclusive, and the accompaniment, which is competent, doesn’t and/or don’t do much to define a self-composed material is supposedly obligatory these days for reasons of sincerity, hipness, and prestige, but it doesn’t always work. I would like to hear Miss Koloc singing better material on a better album, because she’s got something, even if she isn’t quite sure what it is yet.

RECORDING OF SPECIAL MERIT

LED ZEPPELIN: Zoso. Led Zeppelin (vocals and instrumentalists); Dixon, Goodman, who is lavish in his praise of other musicians. This is a quadraphonic disc (EV matrix), recording; very good. Performance: Excellent. Recording: Excellent.

One of the most fascinating things about pop culture of any kind is that though its forms seldom last very long—nor are they intended to—they almost always define an era more sharply than the so-called “serious” work of the same period. Rock as a phenomenon belongs to the Sixties. In the Seventies we have gained perspective on it, and it is now used by a great many talented people as a legitimate style for misspelling sacred and secular “serious” works. But it is my conviction that it has ceased to exist as a developing musical style. It continues as a major influence, and we will certainly continue to hear a lot of it for a while, but its dynamic period is over.

Still, excellent rock performances continue to be released. The Who’s last album proved that, and so does this new recording by Led Zeppelin. And it makes great listening. It received a gold record even before its release, and it is beautifully performed and recorded. But it is not what’s happening today. I don’t mean that in the cheap sense of what is “in” or “with it,” but as having to do with growth of a genre. Zeppelin does what it does superbly, but in 1972 it hovers always near déjà vu. Although the album is a marked departure from their previous huge concentrations of sound—everything is quieter, more controlled, and more romantic—it remains a glorious elaboration on a now fully developed style. In light of the success of Beccaloni’s Tura dolata is one last great spangled fossil of nineteenth-century Italian opera—written in the Twenties.

Rock, as pop culture, can only now tell us what we were in the Sixties. Not what we are today.

LINDISFARNE: Nicely Out of Tune. Lindisfarne (vocals and instrumentalists). Down;
This is an English group that seems to confuse energy and decibel count with music-making. *Float Me Down the River* is the only track here that made me do anything except hope that it was soon coming to an end. That one, however, is a fairly good song, and the group does a good job on it. The rest is mostly meaningless racket.

NILS LOFGREN: *Grin 1 + 1.* Nils Lofgren (vocals and guitar); orchestra, White Lies; Soft Fun; Slippery Fingers; Just a Poem; End Unkind; and five others. SPINNZZY 7 11038 $4.98.

Performance: Promising
Recording: Good

One side of this album is called the "Rockin’ Side" and the other the "Dreamy Side." It is the latter that is the more interesting, for here Lofgren shows a real talent for rock-inflected ballads, both in composition and performance. The ones on this disc sound rather commercially oriented toward the popular groups, but none, at any rate—sometimes—is first-class in every respect. I think Lofgren is someone to watch carefully; his big hit ballad can’t be said for the “Rockin’ Side,” which sounds self-conscious and stiff. Lofgren has found his thing. He shouldn’t bother wasting his talent in an area where he is only one among many.

JOHN MAYALL: *Memories.* John Mayall (harmonica, rhythm guitar, twelve-string guitar, piano); Jerry Gerry (guitar, dobro steel guitar, sitar); Larry Taylor (bass). Memories; Wish I Knew a Woman; The City; Home in a Tree; Separate Ways; and five others. POLYDOR PD 5012 $4.98. © M 5012 $6.98. © F 4072 $6.98. © F 4072 $6.98.

Performance: Reminiscing in the blues
Recording: Very good

In his late thirties, and a force on the British blues scene for a decade or so, John Mayall keeps plugging along. I haven’t been overly impressed with most of the recordings Mayall has made in this country—too much California gold dust seemed to be drifting in and out of the music.

This latest outing is a distinct improvement, however. Even though it was recorded in California, the biographical content of the songs gives them a feeling of reality (necessary, after all, to good blues) missing in much of Mayall’s other recent work. The program has a vaguely sequential quality: Memories and Home in a Tree are songs about the joys of childhood; Wish I Knew a Woman is a tale of the trials of puberty; The Fighting Line and Back from Korea depict the soldier’s day.

The whole thing holds together remarkably well. Mayall’s jazz-tinted, Mose-Allison-influenced voice has always sounded pleasant to me. I am less enamored of his harmonica playing, but he puts all his skills together just as well here as I can recall.

JUDY MAYHAN. Judy Mayhan (vocals, piano); various musicians. Forest Fancy: I’ve Been the One: Mythical Kings and Incarnus; Dolphins; Sweet Reason; Kerosene Lantern; See Here; and three others. DECCA D1. 75287 $4.98. © 65287 $6.95. © 735287 $6.95.

Performance: Droopy
Recording: Very good

Year Judy Mayhan turned out a beautiful album for Atco. This year she has produced a dud for Decca. So it goes. In part the problem is with the arrangements; whereas someone at Atco sensed that Judy’s low-pitched, trembling vocals needed something approaching counterpart, someone at Decca saw fit to provide harmony rather than contrast. The arrangements are low-key and spartan—if Judy didn’t play the piano, she’d be out of luck entirely. Another problem is in the songs. The program lacks variety to such a degree that I could almost get away with saying there are only two melodies in the whole program, the one in Bob Darin’s Sweet Reason and the other one in everything else. But I won’t try that.

MELANIE: *Gather Me.* Melanie (vocals); orchestra, Roger Kellaway arr. Little Bit of Me; Some Day I’ll Be a Farmer; Steppin’ Brand New Key; Ring Around the Moon; Railroad, Kansas, Baby Days; Tell Me What and four others. NEIGHBORHOOD NRS 47001 $5.98, © M 85003 $6.98, © M 55003 $6.98.

Performance: Poignant
Recording: Good

The Melanie cult is a relatively new phenomenon on the music scene that I had not fully understood until I heard this disc. She always seemed like a noisy, tiresome voice coming from a car radio that was tuned to a bad rock station. But it made a promise to sit down and pay close attention to Melanie on this recording, to try to understand the reasons behind the sudden stardom of this brusquely young star who provides the ramshackle voice.

I did listen, and there is no cause for alarm. Melanie does seem to me, under perfect recording conditions and excellent playback equipment, to be one of the more interesting girl singers around now. She doesn’t have much of a voice—rather like a singing Brenda Vaccaro. Her phrasing is sometimes arch, sometimes ramshackle, and sometimes flat. But there is delicacy and humor behind those hoarse tones, and wisdom, too. Roger Kellaway has done such an excellent job of arranging the mixed bag of material Melanie has written for herself here that every deficiency is beautifully masked by his charts. On the Living Bell/Light medley, the voices chant at just the places where Melanie seems to be running out of gas. It is a perfect blend of star and supporting cast. On the wistful Little Bit of Me, the voice softens to a hoarse whisper that is cradled by a tiny cluster of strings at those moments when Melanie seems to be on the verge of impatience. And on the delightful Some Day I’ll Be a Farmer, the music is a distinct improvement. Melanie did seem to me, under perfect recording conditions and excellent playback equipment, to be one of the more interesting girl singers around now. She doesn’t have much of a voice—rather like a singing Brenda Vaccaro. Her phrasing is sometimes arch, sometimes ramshackle, and sometimes flat. But there is delicacy and humor behind those hoarse tones, and wisdom, too. Roger Kellaway has done such an excellent job of arranging the mixed bag of material Melanie has written for herself here that every deficiency is beautifully masked by his charts. On the Living Bell/Light medley, the voices chant at just the places where Melanie seems to be running out of gas. It is a perfect blend of star and supporting cast. On the wistful Little Bit of Me, the voice softens to a hoarse whisper that is cradled by a tiny cluster of strings at those moments when Melanie seems to be on the verge of impatience. And on the delightful Some Day I’ll Be a Farmer, the music is a distinct improvement.

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There is such a vital warmth and such aggressiveness to her singing that, even though she's not in the same league with either Laura Nyro or Carole King as a songwriter, there is a joyous response in the ears of her listeners. Melanie is fun to have around, and this new album is her best to date.

R.R.

Mickey Newbury

Mickey Newbury (vocals); orchestra. Mobile Blue: An American Trilogy: Remember the Good; Swiss Cottage Place: How Many Times; and six others. Elektra EKS 74107 $4.98.

Performance: Duck! Here comes another angel!

Recording: Semi-celestial

Mickey Newbury writes good songs (Mobile Blue), sings well, and is several cuts above run-of-the-mill Nashville. But the person responsible for backing him with something called the Nashphilharmonic, which is the damndest collection of swooping strings and "heavenly" voices heard since Aimee Semple McPherson's twice-nightly vaudeville ascensions, ought to be sentenced to two years at hard labor in a nongay factory. The only time "heaven" gets a rest here is during two interludes, which show off Newbury's strong gospel style. The rest is a holy mess.

P.R.

Olivia Newton-John

If Not for You. Olivia Newton-John (vocals); John Farrar (guitar); Dave Richmond and Herbie Flowers (bass); Brian Bennett (keyboards); Alan Hawkshaw string arr. Me and Bobbi McGee; If Banks of the Ohio; In a Station Love Song; If Not for You; Lullaby; If I Gotta Leave; and four others. Uni 73117 $4.98.

Performance: Amateurish

Recording: Okay

Cole Porter once cautioned the world to beware of girls with hyphenated names. He must have sensed Olivia Newton-John was on her way. This very beautiful girl should be a movie star, occasionally sings, not a singer who makes records that bore us all to death. She slaughters Me and Bobbi McGee, turns Banks of the Ohio into audition material for a campfire group at Knott's Berry Farm (complete with corny Lee Marvin bass dropping out of tune and out of sight behind her whispers), and leaves Kris Kristofferson's Help Me Make It Through the Night looking like the carnage after Custer's Last Stand. About the best thing I can say for this girl is that she sings in tune, although her voice is so weak it often trails away with limpid moans on the ends of notes like Joni Mitchell. The arrangements are execrable, and the whole album is monotonous. Come back, Janis Joplin!

A.R.

Bonnie Raitt

Bonnie Raitt (vocals and guitar); A. C. Reed (tenor sax); Junior Wells (harmonica); Willy Murphy (piano); Douglas Spurgeon (trombone); Freebo (fretless bass and tuba); Voyle Harris (trumpet); others. Bluebird; Mighty Tight Woman; Finest Love; Mississippi; Big Road; Danger, Heartbreak Dead Ahead; Since I Fell for You, and six others. Warner Brothers WS 1953 $4.95.

Performance: Oil and water

Recording: Sets the mood

Miss Raitt's notes describe this album, recorded in a makeshift way at an empty summer camp near Minnesota, as an attempt to get closer to the interplay of musicians in a way sometimes not possible in studios. Her backup is a motley group that includes the blues "harp" (harmonica) player Junior Wells and tenor saxist A. C. Reed, brother of the blues singer and harp player Jimmy Reed. What comes out instrumentally as they work their way through a variety of rock-pop, introspective-pop, blues, and near-blues is fine, especially on Big Road, when Wells and Freebo (playing tuba and piano) get a wonderful ascending riff going. Most of the trouble in the album is Miss Raitt, who may project a low-down image in person, but who doesn't have it for most of this album.

By the time she gets to the soul-pop-Motor- town-diner Heartbreak Dead Ahead, she's fine, and she gets progressively better on side two. But for most of one side, the band is playing a swell mixture of blues, Chicago jazz, and sloppy folk, and Miss Raitt is singing in that straight-ahead, pure-tone, nondiction voice that nearly all female singers have used since Baez and Collins. It doesn't work here. If Miss Raitt could have absorbed (Continued on page 108).
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Dear Bill:
I'm listening to Paul and Linda McCartney on the radio (their new "Wings" album, which doesn't sound bad to me) and trying to think about Glenn Campbell and Anne Murray. That's the way I work, much of the time. My attention given to at least two things at once. If I unleashed my full powers on one single subject, something would have to give.

Yes, I sort of agree—"Anne Murray/ Glen Campbell" is in many ways a fine album, certainly an excellent piece of production. Anne Murray's part in it is flawless, as far as I can tell—my question about her is, how did so straightforward a singer, a singer with such an unerring feel for pitch and timing and so free of the quirks and mutations generally misread by producers as "style," ever get discovered in the first place? As for Campbell, I think he does a better than average job on all these songs, and his and Anne's voices do blend well, but these—with the exception of By the Time I Get to Phoenix and We All Pull the Load—don't seem to me exactly the sort of songs that Glen Campbell ought to sing. What I'm saying, of course, is that I, in my infinite subjectivity, want him to keep on finding songs like Wichita Lineman. I want him to keep on making the kind of impression he made on me the first time I heard Phoenix—and I cannot adequately describe that effect, except to say it was reinforced by Lineman. In my mind, in those very early days of my exposure to him, I romanticized Campbell as a sort of hip cowboy—somebody, I suppose, a little like me, a fellow who has covered some geography and met some diverse and weird people but who is, basically, a country lad and therefore a good and trustworthy old boy under all that hair. You have to understand the gut-sprung reaction of instant trust that country boys have for one another to understand that, I suppose.

Naturally, therefore, I was dismayed when Glen Campbell went on television—and in a series, to boot. It would have been all right if he'd had one show and done, say, Phoenix and Lineman and Gentle on My Mind and got off. But I knew, if it was a series, that sooner or later they'd have him singing Blue Moon, because everybody who has his own series does, and they'd have him introducing those various shades of Myron Cohen who have the gall to call themselves comedians—not just introducing them, but bragging on them, selling the songs of bitches. So one of the things I did was to stop watching the Glen Campbell show after about the fourth week. He was already getting into the Lorne Greene-as-singing-non-singing-guest-start bit even by then.

So that's my objection, my major objection to the album—the use it makes of Glen Campbell. It is a totally unrealistic objection. It is totally unrealistic to expect Campbell to keep finding Wichita Lineman-type songs. Or one thing, and not to become bored with them if he could find them, for another, and for me to avoid getting bored with them if he could find them and sing them with a straight face, for a third. But nobody asks me to be a romantic; one just is or isn't. The only way, someone said (accurately, I think), a performer can satisfy people like me is to die—dramatically, if possible—at the height of his glory, before grey hairs appear or before he moves on to something else out of choice or necessity. Still, an argument can be made that some move too fast—that they move to cash in while they're hot. Maybe most performers don't realize that after a few weeks on TV they'll become something entirely foreign to themselves and to their early followers, but I realize it well enough.

Beyond that, I found the album mostly delightful—one of the finest country albums of the year—solely because of the way the two voices blend. Like real butter and warm sorghum molasses on a cold morning, they come together to buff up the tradition that encompasses the Carter Family, Wilma Lee and Stoney Cooper, and many a memorable jamboree. The combining of Jimmy Webb's Phoenix with Burt Bacharach's I Say a Little Prayer is one of those rare strokes of middlebrow genius; it works beyond what any producer could reasonably expect because of the way Anne Murray sings her prayer—Campbell doesn't have to make any very great adjustments with Phoenix here, but Murray has to have incredible timing and discover terrifically subtle melody changes to make her song work properly. Her earlier albums have been, to pinch Pete Townshend's phrase, tinny music for tinny radios. In this release, I find her "ear" for what she is doing almost scary.

One of the arrangement coups of the year, I thought, graced Canadian Sunset. It's nothing very complicated—one of those things that, now that someone has done it, you say, "Oh, yes, of course, that's the way to do it." Just a little juggling around with the beat, but it certainly makes a difference. Without that, the song wouldn't merit being included. Randy Newman's
Love Story is the clinker here, not just because Nilsson has already done a near-perfect job with it, but because someone didn't allow Campbell and Murray to sing it as well as they could. The chorus—if that's what you call the "you and me" part—has been done the hard way. The subtle timing differences between this one and Nilsson's have considerable effect on how satisfying the results are. My only other general objection is that the strings, most places on the album, don't really need to drip quite as much honey as they do. The strings behind Campbell on the original version of Phoenix, fairly well duplicated on that particular cut here, were a definite asset, but this sort of thing has to be watched, I think: Campbell's is essentially a sentimental voice to start with, and we don't want it to get too drippy.

The whole thing impresses me as a superb job by two real professionals who know what their job is. Professionalism is often praised and then moments later lambasted as commercial slickness by the same critic, but there is one aspect of its meaning—doing a job—that I think everyone admires, and that's what I'm thinking about in connection with this recording. The teamwork is little short of incredible, and I think it's particularly significant that the two voices together sound much better to me than either alone. The vocal harmonies on such songs as My Ecstasy, Let Me Be the One, and We All Pull the Load constitute the best boy-and-girl singing this side of Ian and Sylvia.

I've run on at such length mostly because I wanted to write a long letter, I suppose. I'm down a bit; just found out today (quite late, I realize) that Duane Allman is dead. Odd, because the deaths of Joplin, Hendrix, Morrison, et al., didn't affect me at all, as nearly as I can remember, but this felt rather like being hit hard in the stomach. He was the greatest slide guitar player I ever heard, but I never even saw him in person, and I certainly wouldn't claim the Allman Brothers Band has done enough yet to have finished proving itself. Maybe it's the fact that I found out about it so late, and so accidentally—almost off-handedly, it seems—that bothers me. Maybe I didn't have enough Vitamin A today. Who knows? The other reason this is so long is that your note didn't say whether you wanted any prose about the Murray-Campbell album. I've learned that people tend to want things awfully fast sometimes, when they do want them, so if you get in a bind of that sort, a good part of this letter might qualify with very little doctoring. (Yes, this has been the Old Tom Wolfe Letter Trick!) But, as I say, mostly I wanted to communicate with someone other than the garbage man.

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more of the looseness of the band, this would have been a better album. Maybe next time.

J.V.


Performance: Luke-warm borscht
Recording: Very good

Ivan Rebloff, with his four-octave voice and fruity Russian style, burst on the West's musical air like a flashy rocket a couple of years ago and seemed to sputter out just as abruptly. Record reviewers apparently were more impressed with his voice as amplified in the studio than concert audiences who heard him without electronic enhancement. As one of those who found Rebloff's voice a rather arresting instrument when I first heard it on the phonograph, I am sorry to have to shake my head negatively and a bit penitently after listening to his latest album. Part of the trouble is the material—those arthritic old numbers about Moscow nights and galloping cos-sacks and gypsies, all dragged out and hastily dressed in balalaika arrangements for this sentimental concert. Compounding the difficulty is the fact that Mr. Rebloff has elected to give us the stuff this time in English translation, which pushes what has always bothered me in his vocal makeup which causes the excitement of an expertly sung ode to vodka-drinking like Hey, Andrushka to fall just a tiny bit below the necessary level of intensity, and his Volga Boatman crawls so sluggishly down river I was sure he's never make it to the Caspian.

The singer's fans, however, will not find themselves deprived of specimens of the vocal virtuosity that made Rebloff famous, including the basso profundo that can stoop "below C below middle C," as the liner notes put it, and of course the famous falsetto. The program closes with Eyes of Midnight, which turns out to be our old friend Orli's Chornya. It does not fail, too, to include the title song, "deed golden cor-r-rrn is high in da fiel-l-lds" and even "dee wine" is as "rad as da son-satt." Then too, there is a strange stolidity in his vocal makeup which causes the excitement of an expertly sung ode to vodka-drinking like Hey, Andrushka to fall just a tiny bit below the necessary level of intensity, and his Volga Boatman crawls so sluggishly down river I was sure he's never make it to the Caspian.

There's no question that Scruggs is one of the best banjo players ever, no question that he has expanded the possibilities of the instrument by refusing to confine it to country or folk tunes, as well as inventing technical accessories for it. All banjoists defer to him, including the three finest besides Scruggs—Lester Flatt was one of the highlights of more recently, with his own groups. His partner in the Asylum Choir, Marc Benno, has a sterling reputation among musicians but is little known by the wider public. Logically enough, therefore, Russell and Benno decided to have a go at a second Asylum Choir recording. About half the pieces were written by the duo, the balance by Russell alone. The problem is that the down-home, groovy-gospel rhythms that sounded so fresh and alive a couple of years ago have now become virtual parodies of themselves. Russell's fabled boogie style, a hold-over from Little Richard and Jerry Lee Lewis, is, as good as ever, and a touch or two of his less well-known bizzare whimsy helps a lot, too. But the end result is less legendary than plain old contemporary rock music. That's okay, too, but it won't do much to sustain the Asylum Choir myth.

EARL SCRUGGS: His Family and Friends. Earl Scruggs (banjo); Randy and Steve Scruggs (guitars); Gary Scruggs (bass); Jody Maphis (12-string guitar); Lee Jane Berinati (piano); others. "Guest artists": Joan Baez, Bob Dylan, Doc Watson, The Byrds, Gil Tyrshal and the Morris Brothers. Foggy Mountain Breakdown; Last Thing on My Mind: Nashville Skyline Rag; You Ain't Goin' Nowhere; On Top of Old Smoky; Lonesome Reuben; and seven others. Columbia C 30584 $4.98.

Performance: Distracted
Recording: Variable

There's no question that Scruggs is one of the best banjo players ever, no question that he has expanded the possibilities of the instrument by refusing to confine it to country or folk tunes, as well as inventing technical accessories for it. All banjoists defer to him, including the three finest besides Scruggs—Pete Seeger, George Paeumr, and Obray Pamey. Scruggs has such a distinctive style that it is always on the verge of overwhelming a tune; that it never does, except when he's playing a personal showpiece, is testament to his good taste. He spits notes and peppers tunes with a clarity and authority that is like no one else, and his long career with Lester Flatt was one of the highlights of
the folk boom of the late Fifties and middle Sixties.

There are any number of albums that show Scruggs at his best. This album isn’t one of them. nor. I guess, it’s not what he want to be. The soundtrack of a later NET-TV special, it has Scruggs with sons, friends, and superstar friends and admirers. It shows Scruggs as a very nice man, very gentlemanly. respectful of other people’s talent, friendly and—I use the word only because this album seems to have been issued to prove the point—“hip.” He moves with equal ease in the company of the Byrds, Baez. Dylan. Doc Watson, and the Morris Brothers (with whom he is warmer and more relaxed, by virtue of age and originality), and even down with a Moog.

I didn’t see the TV special, and there may be a call for this album based on viewer response. But I would guess that Columbia thought it would be valuable as a promotional album—that this is the motivation for its issue. Scruggs’ work here is good—he’s never bad—but he never really gets a chance to stretch out and play. He is associating with the “great,” and that is supposed to make us rush out and buy the first real Scruggs album to appear in a while. Dylan’s “appearance” by the way, is confined to his barely audible “okay” when Earl suggests they play Nashville Skyline Rag, for his supporting rhythm guitar is inaudible. J.V.

GEORGE “HARMONICA” SMITH: Arkansas Trap, George Smith (vocals and harmonica); J. D. Nicholson (keyboards); Gregg Shafer and Bubby Reed (guitars); Jerry Smith (bass); Dick Innes, Jr. (drums); Mike Van Hoven (percussion, backup vocals). Situation Blues; Fire Exit; Blue Fog; On My Mind; McComb, Mississippi; and six others. DERAM DES 18059 $4.98.

Performance: Okay Recording: Good

Small-band or combo blues, as opposed to orchestral blues, isn’t very complex musically; it depends somewhat on execution and mostly on intensity of feeling. The latter is sometimes hard to discern through all the howling, for blues freaks will pull out over almost anybody. Discovering combo blues is indeed exhilarating, but one soon finds there are only a handful of men who really play it well. Many of them, alas, are dead, but their records are easily available (in fact, there aren’t so ten years ago, or even five years ago). Anyway, a great deal of blues recording has been done in the last few years, and what most of it proves is that everybody is playing the same riffs and figures and solos, often in imitation of the best, since this type of thing is aurally based on the respect which the Who always prove that. If anyone else who listens to the album will become a Who fan, if he can tolerate rock at all, for this is a cross-section of the work of one of the best rock bands that ever existed. It shows, I think, from Magic Bus to Pinball Wizard and The Seeker, that the Who always understood rock in and, more importantly, what it is and which means they’ve always been conscious they were working within a genre. This hasn’t constricted their work, but rather liberated it. Their vocal and instrumental inventiveness, and Peter Townshend’s unorthodox song themes (listen again to I’m a Boy and Substitute), prove that. If you’ve been putting off introducing yourself to the Who, the time has come: you won’t likely find this many goodies in one basket again.

MARCH 1972
After a long silence, Miss Williams returned to the piano in 1971, in a recording which she herself supervised and which appeared on the Columbia label. It was titled From the Heart. This disc is a kind of autobiography. Miss Williams' music, anyway, is a smorgasbord of styles which doesn't really get in the way of the music. Miss Williams' smorgasbord with its honest simplicity. Sad to report, however, the old contradictions remain. Composer-pianist John Lewis' obsessive attempts to translate the focused harmonic procedures of Baroque music into jazz have simply never proved themselves worthwhile. On this record (the MJQ returned to Atlantic), Lewis includes three such pieces, Variations on a Christmas Theme, Piazza Navona, and England's Carol. To my ears, they sound studied and pretentious—a complete mismatch of culture, style, and temperament. Walkin' Stomp almost, but not quite, saves the day with its honest simplicity. The argument's been made so many times in the past that it's hardly worth mess- ing with again, but here it is. The MJQ can play, and has played, some of the finest jazz in the history of the art. But they have also wanted valuable energies (as they do here) finding their way out of creative cols de sac of their own devising. D.H.

RECORDING OF SPECIAL MERIT

MARY LOU WILLIAMS: From the Heart. Mary Lou Williams (piano). Night Life: Cloudy; Little Joe from Chicago: The Scour- let Creeper: Scratchin' in the Gavel: For the Figs, and five others. CHARIOSCURO CR 103 $5.98 (available by mail from Chiaroscuro. 15 Charles St., N.Y., N.Y. 10014).

Performance: Excellent.

Recording: Okay.

By all accounts, from musicians to awed listeners, Mary Lou Williams is one of the important contributors to the enrichment of jazz as musician, composer, and arranger, and has never lost sight of the purpose of jazz—which is to offer pleasure in good times, comfort in bad. She herself has always been ready to play when and where she thought it would do the most good for the audience—an attitude not prevalent among jazz musicians since the end of the middle Forties.

Technically she can keep up with anyone. She is not emotional in her playing; rather she offers a piece she plays (most of which she has written) like a fatherly hostess who has set out a very tasty and tasteful buffet for her guests. As the guest, the listener may take whatever he likes, and if something sounds strange he can pass it up. But the listener always goes away well fed, always feeling he has had a good time and that, of all the people at the party, the hostess has paid special attention to him (without slighting anyone else).

So it is on this disc, from a small and pre- sumably service-minded label. Their good intentions excuse the underlying tape hiss, which doesn't really get in the way of the music, anyway. Miss Williams' smorgasbord of styles shows some of the good-natured-ness of Fats Waller on Night Life. Bix Bie- derbecke, who always hungered to be an accomplished pianist-composer, would have liked Miss Williams' Clouds, with its melancholy romanticism and modernistic probing. Little Joe from Chicago is a nice urban character portrait, containing another expert boogie. There's a lot going on in Miss Williams' music. The best way to hear this LP is two or three bands at a time until familiarity sets in. Then go back and listen for the currents beneath the waves.

D.H.
THE BOY FRIEND (Sandy Wilson). Original sound-track recording. Twigg, Christopher Gable, Max Adrian, Tommy Tune (singers); Peter Maxwell Davies arr. and cond. The Riviera: A Room in Bloomsbury; I Could Be Happy with You; Sur Le Plage; Won't You Charleston with Me; and others. MGM 1 SE 32ST $6.98.

Performance: Boring
Recording: Good

Sandy Wilson's delicate takeoff on the Twenties was first performed eighteen years ago with a cast of eight on a tiny stage. Ken Russell's confused, elaborate movie version presents a truncated Boy Friend that serves as a vehicle for a store-window dummy named Twigg who can't sing, can't dance, and can't act, but tries all three with disastrous results. The results are more than two hours of camp based on camp, and the effect is rather like sticking your finger down your throat.

This soundtrack album is a thumping bore. The score is no great shakes to begin with, but the insertion of two senile old Arthur Freed-Nacio Herb Brown tunes, All I Do Is Dream of You and You Are My Lucky Star, that do not belong in The Boy Friend in the first place only adds to the unbroken mediocrity. The person who does the lead on this record does not sound even vaguely like Twigg (although nobody at MGM will say who her voice has been dubbed). I don't know which is worse—Twiggy's Daffy-Duck giggle and slaughter of the King's English, or the pleasant, sparrow-like voice on this record that drones sweetly out of tune. Neither is a cause for rejoicing. The big numbers are conducted and arranged with a hatchet instead of a baton, and originality is a stranger throughout. All in all, this is one you can pass up, even with your perfect collection of original-cast albums.

R.R.

RECORDING OF SPECIAL MERIT

FIDDLER ON THE ROOF (Jerry Bock-Sheldon Harnick). Original sound-track recording. Topol, Norma Crane, Leonard Frey, Molly Picon, others (vocals); Isaac Stern (violin); orchestra, John Williams cond. United Artists UAS 10900 two discs $9.98, ® P 10900 $9.98, ® U 5013 $9.98, © K 5013 $9.98.

Performance: Very, very big
Recording: Very, very broad

Fiddler on the Roof, the most successful musical comedy of the century, has been seen by more than thirty-five million people throughout the world in its stage version. It has now been diluted and updated in a spectacular screen version that will probably be seen by three times that number. United Artists' film-soundtrack release is another triumph for a show that the wiseacres pegged as simply another "ethnic" hit at its opening.

The story of Tevye and his life's tribulations is about as "ethnic" as Hamlet; its success in Istanbul and Tokyo, if nothing else, ought to prove that. The world of its author Sholem Aleichem was a universal one of family troubles, of both immediate and threatening battles for survival, and of mindless oppression. Yet, with all this, he was able to capture the essential sweetness of life, those offhand moments when everything clicks and you burst with joy, or the sad-sweet moments of watching your child go on to a happiness that won't include you. It was this gut reverence for life and its comforting continuity that the show captured so beautifully, and that is probably why it will find a place on the world's stages well into the next century.

The score and its hits (Sunrise, Sunset, If I Were a Rich Man, Matchmaker) are probably as familiar to you now as nursery rhymes, but until you have heard them in this opulent soundtrack version you won't have realized how splendid they are. The sheer size of the sound produced by the orchestra and singers may stagger you, but I loved every Panavision moment of it. The best way to describe it is to say that it sounds like a better-engineered successor to one of those Russian folk ensemble or Moiseyev Ballet albums: the same infinite spaciousness, the same crisp focus, the same wonderful "live" presence.

The last bit of good news is the emergence of a great star: Chaim Topol in the role of Tevye. He may lack the evil-Cupid aspect that Zero Mostel brought to the part, but that is about all. (He himself says about Mostel: "We all wear his shoes, and they are comfortable shoes.") He is a commanding, strong-voiced singing actor who constantly brings inflections of true patriarchal strength to the part. His Tevye may dream or complain or scheme, but you know he will keep his family together as long as they need him. Norma Jewison, the director, has said that when he first saw Topol he "felt that he had Tevye in his genes." It sounds, on the recording, exactly like that. I hope the picture wins an Oscar, and this recording a Grammy, and that Tevye in some incarnation or another is still around in 2001 to remind us that while life is not always—indeed, is too rarely—beautiful, it's all we've got, so let's make the joyful best of it.

P.R.

FIDDLER ON THE ROOF (Jerry Bock-Sheldon Harnick). Original London cast recording. Topol, Miriam Karlin, others (vocals); orchestra, Gareth Davies cond. Columbia SX 30742 $5.98, ® SA 30742 $6.98.

Performance: Very good
Recording: Excellent

This record is mainly a souvenir for those who saw the London production of Fiddler. Topol registers just as strongly here as he does on the film soundtrack. But the disc is limited to the souvenir category, because anyone who saw the show anywhere but the West End won't be able go along with a chorus of supposed muzhiks who shout their joy at "middle-of-middle" instead of "miracle of miracles." The recorded sound, however, is excellent.

P.R.

(Continued on next page)
CHEECH AND CHONG, Cheech and Chong (players). Blind Melon Chiliion; Wink Dickerson; Acapulco Gold Filters; Vietnam; Trippin' in Court; Emergency Ward; and five others. ODE SP 77010 $4.98.

Performance: Nitty-gritty comedy
Recording: Very good

Hard rock comedy? My God, what next? But of course the hard rock identification is as valid—or invalid, depending on your point of view—as Lenny Bruce's and Mort Sahl's association with jazz.

Cheech and Chong (a Chicano and Chinese, respectively and, I hope, obviously) are two young West-Coast comedians who seem to be the first genuine skit-style humorists to emerge from the rock-music counterculture movement of the late Sixties and early Seventies. They acknowledge no taboos, do dialect humor and religious satire, and try their best to follow Lenny Bruce's instruction to insult everyone in sight. They need to work a bit on their material, pruning the stuff that is obviously too low, and deleting the bits that simply don't work. But the raw talent is there, most noticeably in such utterly hilarious numbers as Acapulco Gold Filters, which documents an imaginary recording session that is making a commercial for marijuana cigarettes. "Bad ass weed," indeed.

LES CRANE: Desiderata. Les Crane (readings): instrumental and vocal accompaniment. Desiderata: Vision; Friends; Beauty; Hapiness; and five others. WARNER BROTHERS BS 2570 $5.98.

Performance: Kitsch
Recording: Very good

This sounds like an updated version of Norman Vincent Peale with musical accompaniment. In this case, it consists of readings by someone named Les Crane (the old TV talk show star?) backed with some studio-sounding rock music. The rock is about as plastic as might be expected under the circumstances—not bad or poorly played, just plastic. The readings are adaptations by the recording's composer-arranger-conductor Fred Werner, from Thoreau, Gorky, Crane, etc. The texts need help from Werner and Crane about as much as Howard Hughes needs another limousine.


Performance: A stately study
Recording: Excellent

In the year 1360, at the age of twenty-eight, an Englishman by the name of William Langland started writing a long allegorical poem called A Vision of William Concerning Piers the Plowman. He spent the next thirty years of his life working on it in London, revising and expanding this one great sprawling poem. Three widely varying texts of the work exist, and none of them is accessible to the modern reader unless he's an expert in medieval English. Even then, it's likely to be far easier to follow Chaucer than Langland.

Luckily for us, however, Nevill Coghill has given us a superb version in modern English which retains the feel of Langland's alliterative, unrhymed verse. It is Coghill's splendid version from which excerpts are recited in this two-record set by a fine cast of English players. The poem opens high in the Malvern Hills, where Langland is believed to have been born. The poet falls asleep in the hills on a pleasant summer morning and dreams a vast dream which takes him on a journey through a world of Dantesque proportions, though less schematic than Dante's: "... I wandered in a wilderness, would I could say where! As I beheld into the East, high in the sun / I saw a tower on a hill-top, of true workmanship/A deepening dale beneath, and a dungeon within it./With deep ditches and dark, and dreadful to see." He comes upon a "fair field full of folk" made up of "all manner of men, the meaner and the rich er/My heart and wandering, as the world asks of them..." The "fair field of folk" turns out to be our temporal world; the tower is the Tower of Truth; the dungeon is a Well from which the Devil ultimately must be routed out in a confrontation with God.

Along the journey, the poet sees a vision of the Holy Church; he meets the Seven Deadly Sins; he lives through the day of Christ's crucifixion. At length he comes upon Piers the Plowman, a humble fieldhand, not without sin, who has been sent to "plow the whole earth." As the dream continues, the poem, using all the devices of literature from realistic imagery and satire to the multiple meanings of religious symbolism, becomes a mighty protest against self-indulgence, hypocrisy, and pettiness, and a vision of what the human race might be if ever the nobler side of its nature should triumph. Whereas Chaucer is the great secular allegorist, Langland is the master of the form in religious terms. The selections heard on the recording are fascinating and should cause many who have never opened the book to inquire into it—it is a poem for today.

The performances, as in the Argo Shakespeare series directed by George Rylands, are models of clarity and stately declamation, but never burst through the formal style the director favors to flare into pulsing life as this listener suspected they well might with an approach less reverent and more caught up in the vision. The variety of men's and women's voices, however, prevents monotony, and did succeed in holding my attention rapt to the end when, in the section called "The Harrowing of Hell," the souls of the damned are freed and Piers, prototype of all men who must live by the work of their hands, is pardoned for his failings.

P.K.
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MARCH 1972

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Performance: First-rate
Recording: Good
Playing Time: 51'20'

Despite its high opus number, the Beethoven sextet for strings and two horns is an even earlier work than the 1801 string quintet—it was written in 1795. Both are amiable and highly entertaining pieces, the sextet being something of a horn-players' nightmare, considering its virtuoso demands. In the finale of the quintet, the relatively easygoing Beethoven becomes something of a tiger, reveling in the dynamics normally associated with his musical language—hence the sobriquet "Storm" Quintet that is sometimes applied to this score.

The performance is echt Wienerisch in the best sense of the word: warm-toned, flowing, and amply vital in rhythm and dynamics. London gives us fine recorded sound all the way, but an awful lot of tape had to be run "fast-forward" on my review copy to get to the start of the quintet. There were no program notes with the cassette, and there is no excuse for that.


Performance: Hard-bitten
Recording: Very bright
Playing Time: 35'40"

There is no cassette competition for the Entremont readings of the Chopin Scherzos, though if one turns to disc there are formidable alternate choices by Rubinstein and Ashkenazy. The Chopin Scherzos may how to the form in a general sort of way, but save for the somewhat less hectic E Major, they are really demon-haunted keyboard tone poems (the opening dissonance of the B Minor is still literally hair-raising for me). I wish I could be more enthusiastic about Philippe Entremont's readings. They are super-virtuosic, suggesting the way Liszt might have played these pieces in one of his more satanic moods, but I find the element of lyrical contrast and organic flexibility of phrases almost totally absent. The very bright reproduction of the piano undoubtedly adds to the total effect. Though the immediate impact of Entremont's attacks gives an impression of close microphone placement, the rather extended decay time at the end of fortissimo chords adds a curious aura of sonic unreality to the whole. Columbia's cassette offers no program notes—nor does it even mention the artist's first name! D.H.


Performance: Expansive and sensuous
Recording: Good
Playing Time: 38'10"

Why, I wonder, did Columbia choose not to include all three of the Respighi Roman tone poems in this newly recorded package, as was done with Ormandy's disc recordings of a decade ago? The result here is a rather short $6.98 cassette. But the competitive Munch-Philharmonia cassette on London offers no better value, so it boils down to a matter of interpretation and sonics. Ormandy's is the more expansive in terms of both pacing and acoustic ambiance. The Fountains score profits best by this treatment; the Pines seems a bit indolent in its end movements, though the "Catacombs" episode is impressively somber in its effect, and the "Janiculum" is wonderfully sensuous. The reverberation seems more natural in the Fountains than in the Pines.

The Dolby cassette processing is exceptionally fine in its full-bodied sound and wealth of instrumental detail. D.H.


Performance: Expansive and sensuous
Recording: Good
Playing Time: 33'50"

Richard Strauss already had written Macbeth when he turned to the subject of the legendary Don Juan, but the free fantasia on the character of the libertine was published as his first tone poem. What a work it is! You don't need a written program to follow this passionate fellow through his emotional adventures. These are love scenes that depict a desire for more than flesh—a restless, unquenchable rummaging of the spirit through all the world's gifts in a vain hunt for abso-lute beauty. Then, suddenly, it is all over. At first Till Eulenspiegel would seem the most inappropriate of companions for such a fellow, but strange similarities between the lover and the prankster are evident. Till is as insatiable in his practical joking and scalawag exploits as Don Juan was in his search for sexual perfection; his end is as sudden and inexorable.

These swiftly soaring, gigantically orchestrated works are a challenge to any orchestra and conductor. Toscanini could rise his way through either score with utter conviction, and there have been some satisfactory recordings made in Germany by Karl Bohm and others. On cassette, however, this one by Henry Lewis is in a class by itself. What performances, and what a recording!

The first listing is the one reviewed; other formats, if available, follow it.

**Explanation of symbols:**
- = reel-to-reel stereo tape
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Monophonic recordings are indicated by the symbol M.

STEREO TAPE

Reviewed by NOEL COPPAGE • DAVID HALL • IGOR KIPNIS • PAUL KRESH

MARCH 1972
sound of the Royal Philharmonic is broad and sumptuous. Lewis here favors a leisurely, expansive sound, and he opens all the stops at the right places to convey the gigantic music of the Straussian conceptions. He is also alert to every nuance of orchestral punctuation, and can rouse these superb players to keyed-up stretches of glowing fervor. Don Juan has never sounded more obsessively driven by his passions, nor Till more lusty in his demonic prankshe. The recorded sound is Dolbyized, histrionic, and amazingly three-dimensional.

P.K.

COLLECTIONS

RECORDING OF SPECIAL MERIT

THE BEST OF THE VIRTUOSO INSTRUMENTALISTS. Cimarosa: Concerto for Oboe and Strings. Vivaldi: Concerto in A Minor for Two Violins and Strings, Op. 3, No. 8; Concerto in C Major for Piccolo and Strings, (P. 79); Concerto in C Major for Two Trumpets and Strings, (P. 75); Concerto in C Major for Guitar and Strings, (P. 134). Weber: Concertino for Clarinet and Orchestra, Op. 26. Mozart: Concerto No. 1, in G Major, for Flute and Orchestra, K 313. Julius Baker (flute); Andre Lardrot (oboe); Jan Tomasow and Willi Boskovsky (violins); Helmut Webisch and Adolf Holler (violoncellos); Jannick Lagrue (clarinet); Diz guitar); Solist di Zagreb, Antonio Janigro cond.; Vienna State Opera Orchestra, Mario Rossi, Hans Swarowsky and Felix Prohaska cond. VANGUARD © M 509/10 $6.95.

Performance: Well-gilded treasury

Recording: Excellent

Playing Time: 82' 19".

This "double-play" cassette supplies a generous concert of mostly pre-Romantic music that is long on grace and charm. The continuously enticing program opens with the Cimarosa Concerto for Oboe and Orchestra, as arranged by Arthur Benjamin. There's a big-hearted supply of Vivaldi, pieces in concerto form showing the resources of the resoundingly solo instruments he understood so intimately: the singing violins, clowning piccolos, glittering trumpets. There is even a concerto for guitar, an instrument he didn't write for (he specified lute) but which sounds fine here and in a super-studio with all sorts of unheard-of knobs on the consoles and, as an afterthought, someone asked the Four Tops to join the general noise. Not even Levi Stubbs can outshout it. I was curious to see what the Four Tops could do with such unlikely songs as ‘Cherish’ and ‘Walk Away Renee.’ I still am.

JERRY GARCIA & HOWARD WALES

Jammin' up some impressive sounds

SHA-NA-NA. Sha-Na-Na (vocals and instruments); Yakety Yak; Jailhouse Rock; Duke of Earl; Tell Laura I Love Her; Blue Moon; I Wonder Why; Great Balls of Fire; Rock and Roll Is Here to Stay; and six others. KAMA SUTRA © M 52034 $6.95, © M 82034 $6.95.

Performance: Used camp salesmen

Recording: Good

Playing Time: 41' 10"

People seem to think it is funny to watch. (They’ve made various big festivals) take off on Fifties rock-and-roll tunes—mostly people too young to remember how disgusting it all were, before an audience that seemed to be having a good time. Most of side two, however, was done in a studio and uses the songs of Scott Simon. On these, the group sounds like a reasonably agile, but fairly conventional, rock band. The best songs is called 'Top Forty' and addresses this question to all those pious rock stars who recently found Jesus in order to make themselves richer: “Are you on the Top Forty of your Lordy, Lordy. Lordy/Will you be a hit in heaven?/Because you were a hit on earth?” It has a tune something like that of ‘Olde from Muskogee.’ Well, that particular little instantly-fabricated biot of hypocrisy needed just such a puncture. But outside of that deft jab. Sha-Na-Na proves mostly that it should be seen and not heard.

N.C.

RECORDING OF SPECIAL MERIT

SONNY TERRY AND BROWNIE McGhee: Hometown Blues. Sonny Terry and Brownie McGhee (guitar and instrumental); Mean Old Frisco; The Woman Is Killing Me; Meet You in the Morning; Stranger Blues; Forgive Me; Sittin’ on Top of the World; and five others. MAINSTREAM © M 5308 $6.95.

Performance: Home-cooked and filling

Recording: Good

Playing Time: 29' 57"

Two masters of the blues (in the genuine, folk-music sense) team up for a fascinating encounter here that can chill your blood like the barely sound of a train passing through a midnight countryside, and then the next moment send your spirits soaring. Both sing, and they supply their own accompaniments, with Sonny Terry making his famous harmonica do all but talk and Brownie McGhee putting his guitar through paces as remarkaledge as a tiger leaping through fiery hoops at a first-class circus. It’s hard to single out individual items for praise in this continuously praiseworthy recital, but this listener was particularly struck with the driving persuasiveness of Meet You in the Morning; the desperation of Cryin’ the Blues with Terry’s harmonica turn in the midst of it, and Man Ain’t Nothin’ But a Fool, one of those half-talked, half-sung affairs that only the real old-timers like Terry and McGhee seem to be able to handle gymnastically.

P.K.

HOWARD WALES & JERRY GARCIA:

Hootertoll. Howard Wales (keyboards); Jerry Garcia (guitar); other musicians. South Side Street Trip To What Next: Up from the Desert; DC-502; One A. M. Approach; Uncle Martin’s; Da Birg Song. DOUGLAS © ZT 30859 $6.98.

Performance: Good

Recording: Excellent

Playing Time: 26' 32"

Since I have the disc version of this one, I was able to do some A-B comparison switching to check on the quality of this cassette. Made by Columbia and Dolbyized (my cassette deck is not Dolbyized). My ears tell me the cassette has become an amazing device. Very high sounds—cymbals, for example—were sharper on the disc, but only by a tiny margin. The exercise also seems to have changed my opinion of the music put together by Howard Wales at piano and organ and Grateful Dead guitarist Jerry Garcia. Hi-fi tinkering teaches (or conditions) one to listen for the "sonic experience," not "pure" sound exactly but "impressive" sound. This recording contains some impressive sounds. I still think the songs are a bit cerebral, for the most part, and my favorites are still Up From The Desert and Da Birg Song, which coax something emotional out of Garcia, but the whole session is a jam of some importance.

N.C.

STEREO REVIEW
WHICH WAY FOUR CHANNEL?

If the four-channel merry-go-round has you confused, you have lots of company. Discrete or matrixed. Compatible or non-compatible. This system or that one.

Now Sansui offers you total-capability QR Receivers that will transport you into the four-channel world to day and can handle every variation to the four-channel game that anyone's dreamed up for tomorrow.

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And exclusive phase modulators duplicate the live sound field.

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It boasts 240 watts of total IHF power (continuous power per channel of 38 watts at 4 ohms, 27 watts at 8 ohms) with less than 0.5% TH or IM distortion at rated output and normal response of 20 to 30,000 Hz ±1dB. In a walnut cabinet, $599.95.

You'll find the same universal four-channel versatility in all Sansui QR Quadphonic Receivers, including the QR1500, with 100 watts of total IHF power (20 watts continuous per channel at 4 ohms). With walnut cabinet, $299.95.

THIS WAY

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MARCH 1972

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MARCH 1972

CIRCLE NO. 50 ON READER SERVICE CARD

119
TAPE-HEAD ALIGNMENT

Tape-head wear is an insidious process that begins by causing loss of high-frequency response. If severe enough, it can end in permanent damage to tapes. Even a brand-new tape head, however, cannot perform satisfactorily unless it is positioned with absolute precision along the path of tape flow. Heads may have been properly aligned at the factory (though I insist on checking them myself even with a new machine), but time, wear, or jostling during shipping can adversely affect the adjustments. What's worse, though a worn head provides visible—even palpable—evidence of its condition, a misaligned one can wreak its sonic damage unobserved. People have been known to record whole libraries which could thereafter be played back satisfactorily only on the machine they had used!

Fortunately, a simple test will show whether three of the four alignment parameters are within adequate tolerance. Take a "Magic Marker" (one of the so-called "permanent" types, not the "watercolor" variety) and evenly "paint" the head faces with it. Then take the reel of "white box" tape you purchased in a weak moment and play it, stopping every fifteen or twenty seconds. The tape will scrub off the marker ink, revealing a definite "wear pattern." Here's what to look for:

1. Wrap angle. Just how far the tape head should jut out into the tape path—reflected in the width of the wear pattern—depends on head and machine design factors, but the head gap should be in the center of the pattern. How long it takes the marker ink on each head to wear through will show the relative tape-head pressure. In all probability the middle head (i.e., the record head) in a three-head machine will register slightly less pressure than the one nearest the rubber idler roller. But if you use good tape and find that there are more dropouts on recordings you make than on those made with other decks, the pattern may disclose that your record head is not far enough into the tape path to ensure adequate contact.

2. Height. If a head's gaps are either too high or too low, they will "scan" inappropriate areas of the tape as it passes. With a four-track recorder this can lead to hearing one of some track on side two backwards when you're trying to play the tracks on side one. The wear pattern should show the upper edges of the pole pieces either flush or slightly inside the tape edge, except for the erase head, whose wider track may just protrude above the pattern.

3. Tilt or Zenith. The head face should be perfectly parallel to the tape path, not jutting out more at the bottom than at the top. Misadjusted zenith can cause drop-outs and variations in frequency response through the length of the reel. In this test, head tilt shows up by creating a trapezoidal rather than a rectangular wear pattern.

When you've finished running your wear patterns, clean the heads, guides, capstan, and puck-roller with an alcohol-moistened cotton swab and discard the scrap tape.
Introducing the definitive Dolby: the TEAC 350

This stereo cassette deck represents the best of TEAC's two worlds of tape technology — bred from the combined talents of our Audio Products and Data Products Divisions.

The result: a new standard in Dolby decks. In fact, we're so certain this is the Dolby cassette of the decade, that its high-density ferrite TEAC heads carry an original-owner lifetime guarantee.

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The VU meters on this deck are another TEAC exclusive. We've designed them with expanded scales. This feature, combined with the on-line. Peak-level indicator assures distortion-free recording at optimum levels and signal-to-noise.

The 350 is packed with user convenience: strobe-type tape-run indicator...standard phone jacks for professional 600 ohm mics and 8 ohm headphone monitoring...light-touch fingertip pushbuttons...

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PROBLEM:
Two stereo phono cartridges are about equal in tracking ability, and all other pertinent specifications are about on a par. Both are priced in the $65-70 range. Which one should you choose?

You have chosen a highly-rated, very popular cartridge. But to get flat response at home, you'll have to add a capacitor to each input, or measured lengths of cable of specific capacity. This will "kill" the peak you see here, but the Hi-Q mechanical resonance that caused it will remain. It won't sound bad, but it could be better!

Congratulations! You have chosen the newest magnetic cartridge on the market. The dual-magnet STEREO-V Model V140E by Electro-Voice. It offers flatter response with no need to monkey around with capacitors or special cables. And it equals or exceeds every other performance specification of its famous rival. Because STEREO-V cartridges are new, and sound so great, they may be in short supply. Even so, don't accept a substitute, no matter how well-known. Fame is no guarantee of perfection.

NOTE: Response shown from 500 to 50,000 Hz (limits of the CBS STR-120 test record used). Response below 500 Hz essentially identical and flat for both cartridges. Curves shown are typical. Both channels shown (high-frequency channel difference as characteristic of test record). Cartridges terminated with 47,000 ohms, 200 pf (a normal capacitive load). Output displayed on a General Radio 1521A chart recorder.

If you would like to know more about STEREO-V™ cartridges, we have a new catalog describing the complete line, each designed to give you optimum performance no matter what kind of record player you use, or what your budgetary limits are. It's at leading sound showrooms, or write ELECTRO-VOICE, INC., Dept. 324F, 616 Cecil Street, Buchanan, Michigan 49107.

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