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A sophisticated matrix system developed by CBS Laboratories for encoding four channels into an ordinary (compatible) record groove. The four channels can be decoded with a greater retention of separation and localization than with other techniques of matrixing.
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   (both accepted by the Fisher 601 with future SQ adapter)

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A SIMPLE GUIDE TO ALL EXISTING AND PROPOSED SYSTEMS OF 4-CHANNEL REPRODUCTION.
**Discrete 4-channel.**
The four channels of information are processed to retain full separation throughout, from the microphones right up to your four speakers.

- 4-channel tape.
  - Four parallel tracks on the tape keep the four channels completely separate.
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- FM multiplex 4-channel.
  - The present stereo multiplex system can be extended to carry four (instead of two) channels of information, with full separation on playback.
  - The system is under consideration by the FCC and will be reproducible on the Fisher 601 (with plug-in replacement circuit board to be furnished by Fisher)

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  - Four original channels are encoded into two, with the intention of 4-channel playback.
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First test reports on the Zero 100 by the industry's leading reviewers

Brief excerpts reprinted below. Let us send you the full reports.

**HIGH FIDELITY**  Sept. 1971

Altogether, this new arm strikes us as an excellent piece of engineering; it probably is the best arm yet offered as an integral part of an automatic player.

Operation is simple, quiet, and reliable.

All told, we feel that Garrard has come up with a real winner in the Zero 100. Even without the tangential-tracking feature of the arm, this would be an excellent machine at a competitive price. With the novel (and effective) arm, the Zero 100 becomes a very desirable "superchanger" with, of course, manual options.

**AUDIO**  July, 1971

The Zero-100 performed just about as we expected after reading the specifications. Wow measured .08 per cent—that is in the band from 0.5 to 6 Hz. Flutter, in the band from 6 to 250 Hz, measured .03 per cent, both of which are excellent.

Thus, the Garrard Zero 100 is certainly the finest in a long line of automatic turntables which have been around for over 50 years. We think you will like it.

**The GRAMOPHONE**  August, 1971

Reproduction quality was excellent with no detectable wow, flutter or rumble under stringent listening conditions. End of side distortion, which is always a possibility with pivoted arms, was virtually absent, due no doubt to the tangential tracking arm.

**Audio**  August, 1971

One could go on cataloguing the virtues of the Zero 100 indefinitely.

**Popular Electronics**  August, 1971

Our lab measurements essentially confirmed the claims made by Garrard for the Zero 100. We used a special protractor with an angular resolution of about 0.5°, and the observed tracking error was always less than this detectable amount. The tracking force calibration was accurate, within 0.1 gram over its full range.

The Garrard Zero 100 operated smoothly and without any mechanical "bugs."

**Stereo Review**  July, 1971

Indeed, everything worked smoothly, quietly, and just as it was meant to. If there were any "bugs" in the Zero 100, we didn't find them. Garrard's Zero 100, in basic performance, easily ranks with the finest automatic turntables on the market. Its novel arm—which really works as claimed—and its other unique design features suggest that a great deal of development time, plus sheer imagination, went into its creation. In our view, the results were well worth the effort.

**ROLLING STONE**  Sept. 16, 1971

This unit has every imaginable gadget and gewgaw one might possibly desire, and it works. And considering how much it does, and how well it does it, at $190 bucks it doesn't even seem expensive. The changer has so much in it that an analysis of its innards is almost a case study in record player design.

**UNIVERSAL**  Fall, 1971

For 8-page test reports booklet and a 12-page brochure on the Zero 100 and the entire Garrard series mail to British Industries Company, Dept. K 31, Westbury, N.Y. 11590.

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A genuine step upward in automatic turntables

**GARRARD ZERO 100**

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Incl. base and cartridge

CIRCLE NO. 103 ON READER SERVICE CARD
ON VOTING WITH THE FEET

It was, as I recall, some time in 1944 that I attended my first New York concert on a ticket that came into my hands through the courtesy of the New Friends of Music and the USO's horn of plenty for servicemen at 99 Park Avenue. The occasion was a recital in Carnegie Recital Hall by pianist Julius Goldstein-Hererdorf, who opened his program (remember, it was wartime) with his own variations on The Star-Spangled Banner. These were loud, long, and ornate, and I do not remember whether the audience actually stood during the whole time needed to get them over with. I do remember, however, that I and a few other sensitive souls could not stand for much of what followed: Paul Hindemith's Ludus Tonalis ("a game of tones"). a work I have heard nothing of since. It may be that my young ears were somewhat unused to such all-out musical assaults, but that was also the first concert I ever walked out of. Ludus Tonalis, written in 1943, is, of course, "modern" music; it needed friends in 1944, and perhaps needs them still. This is rather ironic, for Hindemith himself was among the first critics to deplore the gulf he saw developing between the creators of music and its consumers. At any rate, audiences have since become more sophisticated; they no longer walk out of modern-music concerts—they simply don't. Such concerts are given, to be sure, and they are attended—by, I presume, the race of addicted neophiliacs still amongst us, by friends and relatives, and by colleagues, critics, and other enemies of the composer. Record companies, moreover, will guiltily consent to record a modern work from time to time, knowing as they do that they might more efficiently dispose of the money by sailing the requisite number of $5 bills out their office windows. For, sad truth to tell, during all the time there has been such a thing as "modern music", no audience has been found or created that will listen to it.

People who take the art of music with slightly more seriousness than they do the latest weather report are led from time to time to spill a little ink on the subject of the "consumption gap" between modern composers and what ought to be their audiences. Henry Pleasants went over the ground with some thoroughness in 1955 with his book The Agony of Modern Music, and I have recently noticed signs of a new examination (perhaps cyclical?) of the subject in articles by New York Times critic Harold Schonberg in Harper's Magazine, by modern composer Charles Wuorinen in the Times, and, coincidentally, by critic Eric Salzman in his article on Igor Stravinsky in this issue. To me it all boils down to a question of insulation: the modern composer is maximally insulated from his potential audience (an economic phenomenon), and there is practically no insulation at all between him and his fellow composers (a technological phenomenon). It ought to be just the other way around.

A composer's allegiances these days are more likely than not to be owing to a series of foundation grants, fellowships, resident composerships, and academic appointments, none of which really care what he writes (though there may be some little attention paid to just which musical sect or heresy—aleatory, electronic, synthetic, tonal, atonal, microtonal, and the like—is pleased to claim him). The church of old, a foundation grants, fellowships, resident composerships, and academic appointments, none of which really care what he writes (though there may be some little attention paid to just which musical sect or heresy—aleatory, electronic, synthetic, tonal, atonal, microtonal, and the like—is pleased to claim him). The church of old, such as Prince Nicolaus Esterhazy of late may at times have been unreasonable in their demands, but at least they had to be pleased with what they were paying for; whatever else may be said about the system, it did result in a lot of glorious music. Today, since composers are, after all, only human, they must go elsewhere for their approval. That elsewhere is to their fellow composers—a technological phenomenon). It ought to be just the other way around.

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Cassettes
- Stereo Review performed a fine service to the cassette-using public with Ralph Hodges' September article "What Causes Cassette Malfunction?". Showing pictures of the innards of the Philips compact cassette will familiarize the user with this assembly, and their intricacies and precision may impress him sufficiently that he will use his cassettes with due respect! If I may suggest a few corrective actions:

1. Sometimes only a few tape windings are sticking out of the tape pack and are causing the binding. Cassette binding caused by an uneven tape pack can be cured most of the time by rapping the cassette sharply on a flat surface, preferably in the direction opposite the binding ("stepped") side. The action on the tape is the same as straightening a stack of cards by tapping it edgewise on a table. Keep rapping until the hubs are loose enough that they fall down by gravity alone when lifted with a pencil.

2. The article did not mention cassette failure due to looping. This is caused by insufficient braking action by the equipment in Fast Forward or Rewind modes. If the winding tape pack stops and the unwinding pack is not braked at the same time, the tape will spill internally and may get caught between the roller guide and the tape, causing the tape to fold. One characteristic of this type of failure is that the hubs are free-falling and that one of them can be rotated. The condition can sometimes be cured by first taking off the tape tension by unwinding the free hub. Second, wind the locked hub again while rapidly tapping the cassette on its edge. The rapid taps prevent the tape from being caught, and the cassette is free-moving again.

3. Fast Forward is an undesirable mode—especially for C-120 cassettes—because it leaves steps in the tape pack. Instead of using Fast Forward, turn the cassette over and use the Rewind mode. Stepping is thus prevented most of the time.

- I read with great interest the article "Cassette Packaging" by Igor Kipnis in the September issue. I thought that you might be interested in my solution to this problem. I bought two-piece plastic boxes from Allied Radio Shack for thirteen cents each and then went to the local stationery store where I found 2" x 4" self-adhesive labels, which I used on the boxes to record all pertinent information. Should I decide to change a recording, these labels peel off easily. For the cassettes themselves, I bought boxes of self-adhesive file-folder labels in contrasting colors to indicate what side of the tape I was on. I typed two or three lines of information on them and placed them in the space above the tape hubs. These labels cost about a penny apiece. For storage, I managed to rescue discarded typewriter-ribbon boxes from the trash, and found that they fit perfectly with my equipment on shelves and that, when covered with contact paper, they looked rather handsome. So, for an average outlay of under $3.50, I can record two full-length albums with reasonable quality and package them to boot.

Anthony P. VogelPoel
North American Philips Corporation
New York, N. Y.

- I bought two-piece plastic boxes from Allied Radio Shack for thirteen cents each and then went to the local stationery store where I found 2" x 4" self-adhesive labels, which I used on the boxes to record all pertinent information. Should I decide to change a recording, these labels peel off easily. For the cassettes themselves, I bought boxes of self-adhesive file-folder labels in contrasting colors to indicate what side of the tape I was on. I typed two or three lines of information on them and placed them in the space above the tape hubs. These labels cost about a penny apiece. For storage, I managed to rescue discarded typewriter-ribbon boxes from the trash, and found that they fit perfectly with my equipment on shelves and that, when covered with contact paper, they looked rather handsome. So, for an average outlay of under $3.50, I can record two full-length albums with reasonable quality and package them to boot.

Gordon McElroy
Columbus, Ohio

Rubinstein in Bratislava
- I found Fritz Kutner's translation of Moriz Rosenthal's article "The Night Rubinstein Played Bratislava" (August) delightful. I especially enjoy anecdotal articles, and I hope that you will run many of them.

J. Philip Shamberger
Albuquerque, N.M.

Grand Funk
- When is Stereo Review going to hire a record reviewer who can judge hard rock music fairly? I refer specifically to Noel Coppage's review of the Grand Funk Railroad album "Survival" (August). When a great group such as Grand Funk is constantly given poor reviews, the reviewers obviously do not appreciate hard rock. So why bother? Such reviews don't tell the hard-rock enthusiast which albums to buy, and so serve no purpose. You might as well get Lawrence Welk to review rock albums.

B. Butler
Rochester, N. Y.

Mr. Coppage replies: "Mr. Butler's logic wouldn't dazzle even the Lennon Sisters at their most naive. If Grand Funk is constantly given poor reviews, it does not necessarily mean the reviewers don't appreciate hard rock.

(Continued on page 8)
**new**

**holiday**

**offer**

Tested and acclaimed in an initial market test a few months ago—quality Wabash audio tape is now offered to readers at a special introductory price for a limited time only.

**Quality you can see.** New Primus quality audio tape comes from the same laboratories that designed and produced the superb digital tape which alone met strictest government requirements. Check its surface for flaking and straight fall-off against your present tape...you'll quickly see the quality difference. You'll see other quality benefits—in the snap-lid plastic box, the warp resistant reel, the convenience of index calendars, library labels and, in cassettes, extra shipping labels.

**Quality you can feel.** The soft feel of Primus tape means fine head-to-tape compliance. Will not twist, cup or cinch. You'll see little or no oxide shed on your recorder head.

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<td><strong>12 Primus 60 min. Cassettes</strong></td>
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...the cleanest, most natural sound for your dollars. Indeed, we believe you will have difficulty finding a speaker at any price which is significantly superior for use under domestic conditions.

This combination of economy and excellence is achieved by the hyper-critical matching of the separate components that go to make up the 303AX System. The woofer, tweeter, crossover, cabinet, even the grill cloth, have been specifically developed to complement each other to produce the finest possible performance for a system of this size.

Gimmicks have been eschewed. Instead, you have very smooth response, wide dispersion and low distortion — all essential if you are to be conscious of the music rather than the speaker.

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<tr>
<td>Nominal Impedance...8 ohms</td>
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<td>Response...37Hz to 20kHz ± 3dB in average listening room</td>
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<tr>
<td>High Frequency Driver...2½&quot; viscous impregnated cone with 1½&quot; Dia. effective radiating surface</td>
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<tr>
<td>Low Frequency Driver...10&quot; viscous coated cone with a high compliance suspension and long voice coil</td>
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<td>Midrange Switch...Approx. 3dB change over the band from 2kHz to 2kHz</td>
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<td>Treble Switch...Approx. 3dB change over the band from 2kHz to 20kHz</td>
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<tr>
<td>Enclosure...Oiled walnut air-tight cabinet 23½&quot;H x 13&quot;W x 11¾&quot;D. Filled with controlled sound absorbent material. Shipping weight approx. 37 lbs.</td>
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<td>Write for further details about this and other ADC speakers from $50.00 to $160.00.</td>
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PLAY ON, Grand Funk! Play hard, heavy, loud, LOUD! Don't pay any attention to what STEREO REVIEW or the press says about you or your music. You don't need them: you never did and never will. Just continue making great music and albums like you have always done. You're great, and you have made millions of your brothers and sisters feel good with your music. Terry Knight, your producer, believes in you, I believe in you, and millions of your brothers and sisters throughout the world believe in you. Freak us out with your voice and guitar, Mark. When Jimi Hendrix said you were good, he knew where it was at. Give us that deep, heavy beat with the bass, Mel. Take us away, Donnie, with your magical drums. STEREO REVIEW and a lot of the press will still put you down but you will still be the best heavy musicians around, and you will continue to outsell any other artists.

FREDERICK RUPEL, Sgt., USAF |
APO New York, N.Y.

And cry all the way to the bank.

Correction

We at Ampex were gratified to see mention of our new 155 and 335 cassette decks in STEREO REVIEW (‘New Products,’ September). Unfortunately, we realized too late that our press release announcing the products contained incorrect frequency-response specifications. Frequency response is 30 to 12,000 Hz ± 3dB with the better iron-oxide tapes; chromium-dioxide tapes yield a response of 30 to 15,000 Hz ± 3dB.

I'd also like to emphasize that the Model 335 cassette changer has continuous automatic record as well as playback capability for the twelve cassettes its loading tray accommodates, and to mention that the unit has two motors, one for the transport and one for the change mechanism.

WILLIAM CRAWFIELD |
Ampex Corporation |
Elk Grove, Ill.

Firesign Theater

I would like to say how much I appreciated Eric Salzman's fine review of the Firesign Theater ("The Firesign Theater Strikes Thrice," July). It was probably the first time these geniuses from East L. A. have been written up in a publication other than Rolling Stone or various other rock tabloids. I’m sure that the rest of the brotherhood of Firesign freaks around the country appreciated it, too.

Having listened to the Firesign Theater for over a year now, I find that watching the book tube has become a more enjoyable pastime. All I do is imagine that the show is a Firesign satire, and watching TV becomes a gas.

Firesign fans might like to know that their heroes are now working on their first film, The Big Suitcase of 1969, and a new album, "I Think We're All Bozos on This Bus."

JIM MANION |
Eddyville, Ky.

I had to read Eric Salzman's review of the Firesign Theater albums twice to discover that the real review was buried beneath the surface:

"...trailing off into childhood...the final triumph of bubble-gum hip...a weakness for bad, bad puns." Mr. Salzman says that he doesn't expect to be revered, I don't think there is any danger. The Firesign Theater will be considered "a major creative force in performance media today" at just about the same time Mad magazine wins the Pulitzer Prize for poetry. If the language of the alternate culture is baby-talk, apparently it has a lot of growing up to do.

MRS. LA DONNA POOL |
Gardner, Tex.

STEREO REVIEW

Recording Studio Philosophy

I have just installed a difference-signal speaker in the rear of my living room according to the Hafler system as described by Ralph Hodges ("Multi-Channel Listening," April) and I'm delighted with the results. My candidate for your list of records that are enhanced by the system is Mercury SR 90199, Respighi's Ancient Airs and Dances, with Antal Dorati conducting the Philharmonica Hungarica. I have long considered this disc to be, from a sonic standpoint, one of the best ever made. Although it was recorded in 1958, it has a naturalness and honesty of clarity and balance that are unfortunately all too rare. My difference-signal speaker adds ambience and an all-pervading bass, and even increases clarity; it would be hard to imagine a better or more accurate sound in my living room. You can understand my chagrin, therefore, when I read John Eargle's article on record defects (June).

The chief engineer of Mercury Records says that the techniques that produced this glorious sound are out of date and will probably never be used again.

In the last decade engineers have developed some marvelous new recording techniques, primarily through experiments in recording pop music. Human nature being what it is (there is a technique to be used or a knob to be twiddled, the tendency is to use it or twiddle it), these techniques have crept into the recording of concert-hall music. But it is a mistake for someone like Mr. Eargle to assert that because new techniques are being used, the results are better than those produced by an old-fashioned technique such as hanging two microphones carefully, setting the levels, and then forgetting them. My car tells me that the Mercury record mentioned above sounds more like an orchestra playing in a good hall (the Grosse Saal of the Wiener Konzerthaus) than most records made since. If Mr. Eargle has not listened to this record recently, I urge him to do so now, especially with a difference-signal speaker, and let his own ears tell him how good it really is.

All this is not meant to cast any disparagement on the new techniques pop music is giving us. The possibilities these techniques are unlocking are staggering and it is obvious that recording engineers now have the means to be...
The end of the fidelity gap between cassette and open reel.


The biggest reason for our lower noise and wider response is also the smallest. Panasonic patented a Hot Pressed Ferrite head with one of the world’s narrowest, most precise gaps. You get a 25% broader frequency response with ten times the life of conventional heads.

A separate fast-forward and rewind motor means we don’t have to spin wheels with our drive motor. The motor that drives the tape drives it directly. No belts to give you the slip. No gears to start fluttering and wowing. The speed is constant. So is the lack of noise. Our patented drive motor is DC and brushless. No AC hum. No brushes to spark up static.

We’re quiet in other ways, too. There’s a special noise suppression circuit with its own switch. And a tape equalization switch for the newest low-noise super tapes.

Nobody else has all these low-noise, wide-response features in one great cassette deck.

And that’s just for starters. You’ll find solenoid push-button operation for electrical, not mechanical switching. A “memory rewind” button that pre-sets the tape to stop right where you want it to. Two big VU meters. Separate output volume level controls before the signal goes into your amplifier. Optional remote control. And a walnut base as part of the deal.

When you’re ready to get serious about a stereo cassette deck, see your franchised Panasonic Hi-Fi dealer for the RS-275US. The one that gives you reel sound.
Mr. Hodges replies: "I've taken the liberty of replying for Mr. Eargle, who was not available to comment. I share Mr. Krueger's enthusiasm for many recordings mixed according to 'purist' techniques and have a number of special favorites myself. But, alas, alongside these in my collection are at least an equal number of unmarketable recordings made by exactly the same techniques. I won't pretend to know why these respective triumphs and disasters occurred. I am told, however, that the acoustics of the recording site, the skill and taste of the technical personnel, the time allotted for the project, and the factor of just plain luck are variables of more than enough scope to account for almost any result.

"On the subject of the 'modern' recording techniques, I don't think the procedures in use for classical music are always as radical as Mr. Krueger suspects. In a paper published in the Journal of the Audio Engineering Society (April 1971) on 'Processing of Two- and Three-Channel Program Material for Four-Channel Playback,' John Eargle describes a suitable microphone configuration for stereo recording that is quite similar to the classic 'purist' approach, with only two or three carefully placed microphones picking up most of the sound that goes onto the master tape. The 'modern' aspect of the technique involves several more microphones spotted close to or within the orchestra. These serve to highlight certain details in the score and add a trace of high-frequency brilliance when required. However, the contribution of the extra microphones is usually kept to a minimum, so that only the slightest trickle of signal from their outputs is mixed into the finished recording.

"After reading Mr. Krueger's letter I was eager to make the acquaintance of the recording he recommends, and borrowed a copy from a friend's extensive collection. I must admit that on first hearing my expectations were not entirely fulfilled: the recorded sound seemed to have a touch of excessive brightness that sometimes verged on the harsh. Acting on a hunch, I purchased a fresh copy from a record store and found—to my not very great surprise—that the tonal balance was quite different. Among other things, the highs were comparably subdued and the bass somewhat rounder and fuller, and this from the master tape was markedly decreased. What had obviously happened was that, sometime in its history (late 1968, Mercury believes), the release numbered SR 90199, along with a number of other Mercury releases, was re-mixed, re-equalized, and re-mastered at the studios, and then rereleased in its original jacket with no indication of the additional processing it had undergone.

"Of course it is pointless at this time to speculate on whether the older or the newer version is more faithful to the original master tape (I couldn't be sure whether I preferred the clarity of the first or the fullness and 'bloom' of the second, although a fellow-tester immediately pronounced the new recording 'more realistic'). Yet I think it is plain that, no matter how 'pure' the intentions, engineering manipulation must always be inserted somewhere along the line. And just as we are guided by taste in choosing the kind of sound (the kind of 'reality,' if you will) we prefer, so the engineer's hand is guided by taste in producing the kind of sound he thinks is best.'

Name Calling?

The business of name-calling is often profitable, but hardly fitting for a so-called serious musical journal. In one grand, clean sweep, Rex Reed has claimed that a certain recording "... is guaranteed to make even hard-hats and hawks gag!" ("C. Company Featuring Terry Nelson," August). It does not require much imagination to go on and indite all such people with the crime of not having Mr. Reed's priceless taste, let us say, in music, though the innuendo is clear that Mr. Reed views this sector of human society from the "safe," end of a ten-foot pole. His next serious contribution should be a basic listing of acceptable beliefs in all matters musical and non. I am sure all hard-hats and hawks will be inspired to mend their sinful ways.

RALPH T. CROSS
Cambridge, Mass.

Varese

Whether or not Edgard Varese is an American composer is certainly not debatable if one understands the English language. If Varese is a composer and if he is a citizen of the United States, he is an American composer, since the United States is part of North America. There can be no argument with that statement. There is, however, a vast difference between being an American composer and being a composer of American music. Here is where the knowledge of English comes in: apparently too few really know the English language.

EDWIN SCHWARZ
Warwick, R.I.

Library of Classics

I have noticed that in past issues of STEREO REVIEW there have been many letters about the "classical crisis." Some say the crisis was brought on by poor marketing, or too much selection, or a public ignorant of what to buy. I think this last is the biggest problem. The only way one can know what to buy is to listen to classical music stations or make use of the public library's record collections, which is what I do. The library is a good place to develop your taste in classical music, to compare composers, artists, and recorded versions. It is a good way to be sure that when you buy a classical record, you won't be stuck with something that you can't stand. I am seventeen, but I've already gotten interested in classical music by way of the library, if they put a record store next door to it, my troubles will be completely over!

GARY STEPHENSON
Bellingham, Wash.

STEREO REVIEW
No need to Compromise
Bozak Quality Costs Very Little More

Of course you can always trade-in for a TEMPO 1, later. — But why?

When you buy a first-rate stereo system, you expect first-rate sound — rich, vibrant bass, smooth crystal-clear strings and voices, the open flow of all the music without tonal coloration.

For very little more you can have it to start with — in a Bozak TEMPO 1.

TEMPO 1 inherits the superior qualities of its larger ancestors. It is a true Bozak in every way. Every part that could make the slightest tonal difference is made only at the Bozak factory. Bozak, for example, is one of the very few manufacturers who make all of their own loudspeaker cones rather than settling for commercially-available units.

This fine three-way bookshelf loudspeaker has the same costly drivers found in the most luxurious Bozaks. The variable-density bass cone, developed by Bozak, is made from a unique highly-damped material processed into a lightweight but structurally-rigid piston that is free of coloration. In the midrange speaker there is a critically-damped aluminum cone with excellent transient response. The entire diaphragm of the treble speaker, of thin spun aluminum, rests on a bed of soft resonance-damping foam. All cones, together with their generous ceramic magnets and precision-machined pole structures, are assembled on solid cast frames — not sheet-metal stampings.

Bozak's traditional excellence in craftsmanship is further apparent in the smart enclosure, where the warm beauty of select wood grain is brought out by careful hand finishing.

Quality tells. TEMPO 1 gives you rich big-Bozak sound from a superbly engineered bookshelf system. The longer you live with this fine speaker the more you will appreciate what a difference true quality makes.

Not every dealer is permitted to sell TEMPO 1. If you can't locate your authorized Bozak Dealer, write for our list of the fine audio showrooms in your area. The R. T. Bozak Manufacturing Company, Darien, Conn. 06820, USA. Overseas Export by Elpa Marketing Industries Inc., New Hyde Park, New York 11040, USA.
WE CALL IT TOTAL ENERGY RESPONSE

It's more than the way our woofers, tweeters and purring mid-ranges sound. It's the way they're designed to sound. Total Energy Response is the design concept that gives each one of our six new Jensen Speaker systems a fuller, richer sound than ever before.

It's a difference you can hear when you compare our systems to any others. So much so that we believe our new systems give you the best performance per dollar on the market today. Consider the new speaker systems from Jensen. They're backed by the best 5 year warranty in the business.

**Model 1.** It's what happened when we crossed a woofer with a tweeter. And got a two element, full range system with an 8" driver.

With Jensen Flexair suspension, Model 1 sounds so good you won't believe it costs only $30.


At $48, you get a lot more than you're paying for.

**Model 3.** Perhaps you noticed the deeper woofering? Right. There's a 10" Jensen woofer with a 4 layer coil and our lyrical 3½" direct radiating tweeter, in a Tuned Isolation Chamber. Plus Flexair suspension, special crossover, walnut cabinet. Incredible at $75.
Model 4. A three way system introducing the first purr in speakers: Jensen's purring mid-ranges. It's supported by a 10" woofer and our Sonodome® ultra-tweeter. There's a four layer coil on the woofer; Tuned Isolation Chamber enclosing the mid-range.

With our Flexair suspension.
Special crossover.
Two balance controls. Walnut cabinet.

It's possibly the finest system in America at just $99.

Model 5. What a cast of characters. A three way system with a bevy of beautiful speakers. A 12" woofer, two purring 5" mid-ranges, Sonodome ultra-tweeter.

With our exclusive Flexair suspension and crossover networks.
A four layer woofer coil. Tuned Isolation Chambers on the mid-ranges. Two balance controls. Walnut cabinet.

This outstanding system is yours for a paltry $147.

Model 6. This swinging four way system includes a huge 15" woofer, 8" purring direct radiating mid-range, 5" direct radiating tweeter, Sonodome ultra-tweeter.

There's a four layer coil on the woofer, Tuned Isolation Chambers on the mid-range and tweeter.

This system includes Jensen Flexair suspension, our exclusive crossovers, and a walnut cabinet with console base. For $198, you're getting one of the finest systems available at any price.
NEW PRODUCTS

BASF “SM”
Chromium-Dioxide Cassettes

- BASF’s chromium-dioxide cassette tape, available in C-60, C-90, and C-120 lengths, comes in a newly developed cassette mechanism designated the “SM” (Special Mechanics) system. Externally identical to conventional cassettes and therefore usable on all current cassette machines, the SM cassette has the standard internal tape-guide system plus a pair of internal pivoted arms with tape troughs on their outer surfaces. The guidance arms lead the tape directly to the take-up hub, thereby assisting in correct alignment of the tape layers and preventing jamming and excessive friction that can result from raggedly wound tape packs. The SM C-120's also have internal rocker arms that exert a gentle force on both hub packs to help keep the tape in place. Like other chromium-dioxide tapes, the new BASF cassettes are recommended for use on cassette machines that can be adjusted for their special bias and equalization requirements. The cassettes have provisions for automatic switching of future specially equipped machines into the chromium-dioxide mode upon insertion. Prices: C-60, $3.89; C-90, $5.99; C-120, $8.29.

Circle 146 on reader service card

EPI Model 601 Speaker System

- EPI has introduced a new speaker system, the Model 601, designed to propagate sound both directly and indirectly by reflection from wall surfaces. Its six-sided enclosure, 24 x 16 x 15 inches, has a front-facing 6-inch woofer and 1-inch tweeter, while two of the rear surfaces, each angled 45 degrees from the speaker's frontal plane, have an 8-inch woofer and 1-inch tweeter apiece. The ratio of direct to reflected sound can be controlled by means of a three-position switch that adjusts the output of the front drivers for full or attenuated operation, or turns them completely off. There is also a continuously variable level control for the rear-facing tweeters. Twenty watts per channel is the recommended minimum amplifier power for the EPI 601's. The rated power-handling capability is 100 watts continuous. Frequency response of the system is 40 to 18,000 Hz ±3 dB. The enclosure of the Model 601 is finished in walnut with a dark grille cloth. Price: $249.

Circle 147 on reader service card

Koss K2+2
Four-Channel Headphones

- Koss has brought out a four-channel headset, the Model K2+2, with two dynamic elements—front and rear—in each earcup, and a ten-foot, coiled, eight-conductor cable terminating in two stereo phone plugs. Both plugs are inserted in the two phone jacks of four-channel amplifiers and receivers for four-channel listening; only one plug is used with two-channel equipment, and a switch on the headphones parallels the two drivers in each earcup for conventional stereo. The dynamic elements have 1-inch voice coils and Mylar diaphragms with 4 square inches of radiating area. Removable fluid-filled cushions are used on the earcups, providing a seal that attenuates outside noise an average of 40 dB over the audio band. The adjustable stainless-steel headband is fitted with a foam cushion. The headphones have a frequency response of 10 to 20,000 Hz and medium efficiency. Headphone jacks with specified impedances between 4 and 10 ohms can be used to drive the phones. Power-handling capability is 5 volts continuous, with brief peaks of greater intensity allowed for. The K2+2 headphones weigh 22 ounces and come with a carrying case. Price: $85.

Circle 148 on reader service card

3M 206 and 207
High-Output/Low-Noise Tapes

- 3M’s 206 and 207 high-output/low-noise tapes have the same bias and equalization requirements as the popular 202 and 203 formulations, but provide 2 dB more sensitivity and 3 dB more output for the same distortion and noise levels. Because the increase is uniform over the audio-frequency range, the 206 and 207 tapes can be used on machines adjusted for 202 and 203 and driven with a 1-dB higher recording level for a 3-dB improvement in signal-to-noise ratio. The new tapes have black textured backings that contribute to better tape-drive characteristics and uniform winding on the reel. The backings are electrically conductive and do not accumulate static charges. A new binder resists oxide shed and scratching. 3M 206 and 207 are available in 1/4-inch widths wound on 7-inch reels. A reel of 206 provides 60 minutes playing time when recorded at 7 1/2 ips in both directions (about 1,125 feet). Price per reel: $6.75. A 207 reel plays for 90 minutes and costs $8.55.

Circle 149 on reader service card

STEREO REVIEW
AR COMPONENTS ARE USED BY EXECUTIVES AT ANGEL RECORDS TO HEAR FIRST PRESSINGS OF NEW RELEASES.

A new Angel record is the sum of the creative efforts of many individuals. Orchestra, soloists, and engineers must be scheduled many months in advance and are frequently brought together over great distances to make the recording. Engineering at the recording session and during the transfer from tape to disc requires great care and precision. Each stage of the process, and the way in which it is carried out, influences the musical values in the recording finally released.

As responsible executives at one of the world's largest recording organizations, the men who conduct Angel's operations can afford any equipment except that which distorts or falsifies the quality and content of a recording. The executive conference room at Angel Records is equipped with AR high fidelity components.

Suggested retail prices of the AR components shown: AR amplifier, $250; AR turntable, $87; AR-3a speaker systems, $225-$250, depending on cabinet finish.

Acoustic Research, Inc.
24 Thorndike Street, Cambridge, Massachusetts 02141, Dept. SR-11

Please send a free copy of your illustrated catalog, as well as specifications of AR components, to

Name_________________________
Address______________________
Remember Pandora's Box?

Remember the lady whom Zeus sent down to earth with a little box full of plagues and troubles? Next time you buy a tape cassette remember Pandora's box: unless it says TDK on top, you never know what problems you are bargaining for. Sticking, jamming. Tape tangling and breakage.

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Only with a TDK Super Dynamic cassette can you be sure, sure that you have a cassette that will never let you down.

And that gives you ultra-wide frequency response, high output and extended dynamic range, negligible noise and distortion and, overall, the world's finest quality.

Next time you buy cassettes think of Pandora's box—and buy a box of TDK. Reliability is no hit-or-myth proposition.

TDK offers Super Dynamic, Deluxe Low Noise, Maverick Cassette and Super Dynamic reel-to-reel recording tape.

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For all the specifications, write for our free full-color catalog, c/o Virginia Lamm, Dept. SR-4.

But hearing is believing. You can hear Koss Stereophones at your favorite Stereo Dealer or Department Store. At a believable price from $19.95 to $150. Small price . . . to live and let live.
There are two ways to pick a receiver: by examining your budget, or by using your ears. They both can work—but the best approach is a combination of the two.

For example, you could simply decide which of the four Sony receivers best matches your budget: the low-priced 75-watt Sony 6045; the moderately-priced 100-watt Sony 6055 and 220-watt 6065; or the top-of-the-line Sony 6200F with 245 watts of power (and many other goodies).

Taking that approach you're bound to get good value for your money, but not necessarily the best value for your circumstances. You could wind up buying a little less Sony than you need—or shelling out for a Sony that more than surpasses your requirements. But you should be able to narrow it down, on price alone, to two or at most three Sonys. From there on, you have to use your ears and your intelligence.

First, look for a Sony dealer fairly near you; that's not only for convenience, but so his FM reception problems will be just about the same as yours. Then visit him, carrying a record that you know and love (if you've loved it to death already, get a fresh copy).

Test first for general sound quality. Using the same speakers you have at home (or ones of similar efficiency), play the loudest portion of your record at the loudest volume you're likely to listen to. See which Sony sounds cleanest to you (though, thanks to our direct-coupled circuitry, they all sound very clean); that tells you which have enough power for your needs. (But remember, if your room's noticeably bigger than the dealer's, or you're planning to switch to a less efficient speaker, you may need a bit more power still.)

Now try to tune your favorite stations. Even if the dealer's on your block, reception conditions won't be absolutely comparable. But the receiver that brings your station in most clearly
some similarities:
all four sony receivers have: 70db signal-to-noise ratios, and such features as linear tuning dials, headphone jacks, switchable loudness contour and hi-filters. fet front-ends and solid-state if circuits, dual power supplies and direct coupled outputs, speaker selector switches. all but the 6045 have: muting switches, front panel aux jacks, quick-disconnect din tape recorder jacks, and center-tuning meters (the 6045 has a signal-strength meter instead; the 6200f has both types). all but the 6200f have 80db ifh selectivity and 1.5db capture ratio (6200f has 100db and 10db respectively).

some differences:

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but if you would prefer to sit at home and pick your sony by its specs, go ahead. you'll find the basic ones in the box above - and you can get the rest by sending for our pocket-sized sony selector guide. all you'll miss will be the fun of playing with the units themselves at your dealer. sony corporation of america, 47-47 van dam street, long island city, n.y. 11101.
We invite you to see the BSR McDonald 810 Transcription Series Automatic Turntable.

Only your personal inspection of the 810 can reveal its overall excellence. From its Sequential Cam System that antiquates the conventional noisy cam gear and swinging plate to its Synchronous Power Unit, the BSR McDonald 810 is designed to match or exceed the performance of any automatic turntable currently available.

Some other highlights of the 810 include a Variable Pitch Control, a 12" dynamically balanced turntable platter, a viscous-damped cue and pause control with an exclusive friction Cue Clutch to keep the tone arm cued over the exact groove, an automatic tone arm lock to eliminate accidental damage to the stylus or record, a Concentric Gimbal Arm Mount and featherweight push-button operation featuring the widest selection of operating modes.

But again we must suggest a personal inspection. Your BSR dealer will be pleased to arrange one.

The 810 will sell for $149.50. Yes, $149.50. From BSR. The world's largest manufacturer of automatic turntables.

BSR (USA) Ltd
Blauvelt, N.Y. 10913
Jammed Cassettes

Q: I read with interest Ralph Hodges' piece on cassette malfunction (September issue). Assuming that you have a well-made cassette to start with, is there any way to minimize such problems as these?

JERRY FADER
Bronx, New York

A: The best (and only) advice I've seen on the subject was a slip of paper packed with one of the Japanese cassette machines passing through my office. It read exactly as follows:

TO USE CASSETTE TAPE FOR A LONG TIME

When the same cassette tape is played several times or on both sides and then set into the slot.

If the same tape is played several times continuously, some cassette tape (Especially a thin tape such as a C-90) might be wound too tightly; the side of the cassette is overlapped, and causes a defect in the tape; an uneven rotation and a trouble on winding mechanism.

Disregarding the language difficulty, the advice seems sound. "Patting" as illustrated on the slip means slapping the flat side of the cassette gently against a hard surface to loosen up the binding tape pack.

Multiplying Frequency Range

Q: I recently read a statement in an old audio publication that for "maximum musicality," the response of an amplifier, and possibly a speaker, should be so arranged that the product of the upper and lower frequency limits is 400,000 Hertz. I assume this to mean that the response, for example, that is from 20 to 20,000 Hz (20 x 20,000 = 400,000) is therefore desirable. Does this rule still hold?

PHILIP SCHANZ
New York, N.Y.

A: No, and I don't think it ever did. I remember being impressed by its apparent profundity when it was first intoned to me in the 1950's. However, anyone with access to an Acousta-Voicette room-contouring device or a frequency-balance control unit can test the theory. I find that if frequencies of about 150 Hz (and somewhat higher) are depressed, the music begins to sound thin. However, with most systems, if you chop off the frequencies below 100 Hz or so, the effect will not be that audible. In fact, if you have known the bass was present on the original program material, you would never be aware of its absence in the reproduction. If we use the 400,000-Hz formula, a roll-off below 100 Hz requires an equivalent high-frequency roll-off above 4,000 Hz. This is audibly absurd. If orchestral chimes are struck, cymbals clashed, or strings plucked, the reproduction will be totally unnatural because of the loss of the upper harmonics. When there are frequency-response deficiencies at one end of the audio band, adjustments at the other end (depending upon the slopes involved) will sometimes make for more pleasant listening, but you had best do the adjustment by ear without the aid of a magic multiplication factor.

Speakers and Room Acoustics

Q: How much consideration should be given to room acoustics when choosing speaker systems?

VINCENT SANCHEZ
Scarsdale, N.Y.

A: The acoustic environment both in your home and in the showroom can strongly influence the sound of a speaker. For example, if you audition a pair of speakers in a showroom with thick carpets and drapes, and then use the speakers in a finished basement, you'll find distinct differences in the bass/treble balance in the two environments. What's more, if the speaker is a shelf model, and the dealer has placed it on the floor, make sure that you get a chance to audition it in a reasonable approximation of the local-
SINATRA'S ARTISTRY

Ring-A-Ding-Ding! FS 1001
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Sinatra and Swingin' Brass FS 1005
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The Concert Sinatra FS 1009
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It Might As Well Be Swing FS 1012
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September of My Years FS 1014
My Kind of Broadway FS 1015
Sinatra: A Man and His Music 2FS 1016
Strangers in the Night FS 1017
Moonlight Sinatra FS 1018
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The Sinatra Family Wish You A Merry Christmas FS 1026
Cycles FS 1027
My Way FS 1029
A Man Alone FS 1030
Watertown FS 1031
Sinatra & Company FS 1033

Available on Reprise records (and tapes, via Ampex).

Avoiding Print-Through

Q. I have heard that if recorded tape is not played for a period of time, print-through occurs. I was told that to prevent this, the tape should be played at least once a month and that shuttling it through on fast wind would be sufficient. Is this true?

RAY C. ANDREWS
APO New York

A. Print-through occurs during tape storage because the magnetic patterns on one layer of tape impinge upon the adjacent layers and after a while leave a permanent magnetic impression, so to speak. The degree to which any specific reel of tape is prone to the problem of print-through has to do with: (1) the tape thickness—triple-play tapes suffer more print-through than normal tapes; (2) the amplitude and frequency of the signal on the tape (the stronger the signal and the lower its frequency, the more likely it is to print through, particularly if the signal on the adjacent layer is weak); and (3) the specific formulation of the tape's oxide coating. It has also been stated that a tape that is tightly wound (as occurs when it is fast forwarded or rewound) is more subject to print-through. For this reason, it is common practice in recording studios to leave master tapes on the take-up reel with their "tails out." At the time the masters are to be played, they are then rewound.

The purpose of frequent play therefore would simply be to shift the layers of tape around to prevent the impingement of any strong magnetic signal field on the same adjacent tape layer for any extended period of time. But, judging from studio practice, it is probably best not to fast wind the tape before storage as a print-through preventive.

Because the number of questions we receive each month is greater than we can reply to individually, only those questions selected for this column can be answered. Sorry!
Only yesterday music lovers swore nothing could ever replace the reel-to-reel tape recorder for true high fidelity sound reproduction. They were right, of course.

Today the buffs are changing their tune. Now Sony has the first and only stereo cassette tape deck that gives you the best of both possible worlds. Gives you the true fidelity of reel-to-reel with a closed-loop dual capstan tape drive system combined with pop-in cassette convenience.

This major breakthrough has been accomplished by Sony's technical wizardry in their new 160 stereo cassette deck. It allows you to switch from standard cassettes to the new advanced chromium dioxide cassettes for optimum high fidelity recording. And costs just $199.95.

But if a tight purse string is holding you back, let your Sony/Superscope dealer turn you on to the full line of great Sony stereo cassette decks starting as low as $99.95 for the Model 122. Or if times are a little better step up to the Model 127, a high performance deck at the medium price of $149.95, and suitable for custom mounting.

Whatever the price, whatever your needs, visit your Sony/Superscope dealer and see a Sony stereo cassette deck. You'll be glad you did.
FREE! '72 Edition
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1000's of Items
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THE buying guide for kit builders, Hams, CB'ers, installers, experimenters, fix-it men, hobbyists, electricians, anyone in electronics in any way. It lists 1000's of things most stores don't stock. Things that keep equipment working, or make it work even better, or do even more. Use this catalog to find what you need, then go to our store near you and get it. Or you may order by mail.

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INCLUDING OUR SCIENCE FAIR
AND KNIGHT-KIT LINES

Get a copy at your nearby store—or send in coupon today!

26 STEREO REVIEW
Why we decided to put a spec sheet on this page instead of an ad.

Because we know the facts about this product mean more to you than any advertisement we could run. Frankly, we think this pre-amplifier is the best buy on the market. And when you finish reading this spec sheet we think you'll feel the same way too.

Precision solid state electronics, virtually distortionless performance, and dozens of unique JVC innovations. S/N ratio is 100 dB. IM distortion is under 0.1%. You get eight outputs, pink noise generator built-in and JVC's exclusive Sound Effect Amplifier, the only system that allows perfect acoustical adjustment to any room for maximum stereo realism and the finest response possible in the home. And when coupled with our model 5111 power amplifier you've got a system with maximum versatility and flexibility.

Seven-Element S.E.A. with Switchable 40Hz/60Hz Control
A unique system that divides the sound spectrum into seven bands, 40, 60, 150, 400, 1,000, 2,400, 6,000 and 15,000 Hz. Superb control to perfectly match the acoustics of any room! The S.E.A. permits you to change the amplifier gain at the seven frequencies and compensate for irregular room acoustics. The fact that the first control can be switched to either 40 or 60 Hz goes a long way toward obtaining a finer adjustment.

5110/MCP-105E Stereo Pre-Amplifier

Pink Noise Generator Built-in
Another JVC exclusive. The pink noise generator enables phase checking in speaker connections and matching of the output levels of amplifiers and speaker systems acoustically with the S.E.A. controls.

Lowest Intermodulation Distortion
Thanks to advanced solid state circuitry throughout (Darlington complementary SEPP-OTL circuits and very carefully selected pair transistors are employed), the distortion levels are so low that ordinary commercial equipment cannot measure them. By minimizing intermodulation distortion, the harmonic distortion has also been improved. Thus, the reproduction of clean sound becomes possible.

Other special features
High S/N ratio; Phonos: 80 dB, Mike: 85 dB, Aux: 100 dB. Unparalleled flexibility of inputs and outputs. Inputs include high and low phone, mike, tuner, two aux lines and two tape inputs, and four sets of outputs are ideal for now and perfect for whatever future developments stereo may bring. The use of a three-stage direct-coupled NF type equalizer amplifier provides an extra-large dynamic range. Wide frequency response ranging from 18 to 100KHz. Ultra-modern design with instant-action slide switches.

SPECIFICATIONS 5110/MCP-105E

- Inputs: PHONO 1, PHONO 2, MIC, TUNER, AUX 1, AUX 2, TAPE PLAY 1, TAPE PLAY 2.
- Outputs: PRE OUT 1, PRE OUT 2, REC. OUT 1, REC. OUT 2.
- Output Level: 0-5 V adjustable.
- Output Impedance: REC. OUT 1 47k, REC. OUT 2 10k.
- Frequency Response: MIC 18 Hz - 50 kHz ± 0.5dB
- PHONO RIAA: 0.5dB

THD: Less than 0.01% at 1V 1KHz
IM Distortion: Less than 0.1% at 1V 1KHz
Signal to Noise Ratio: PHONO 85dB, MIC 85dB, AUX 100dB
S.E.A. Center Frequency: 0-60Hz, 150Hz, 400Hz, 1KHz, 2KHz, 8kHz, 10KHz.
Power Source: AC 100V, 120V, 220V, 240V, 50/60 Hz selectable.
Dimensions: 5-3/8" (H), 16 15/16" (W), 13 3/8" (D).

(Circle No. 34 on Reader Service Card)

JVC America, Inc. 30-35 56th Road, Maspeth, New York 11358.
The new Miracord 650 and 660H are built the same way as yesterday’s Miracords: Not just to last, but to satisfy throughout their lifetime. To be delicately sure-footed in the way they treat your records, yet rugged enough to maintain their delicate precision for years of faithful service, years of value.

But if you’re going to keep a turntable as long as most Miracord owners do (letters tell us of 1952 Model XA-100s still in tip-top shape) it had better be a turntable you and your records will like. That’s why we gave the new 660H so many features and refinements. For example, its motor is the hysteresis synchronous type that broadcast and recording studios rely on for speed accuracy—even in the face of today’s power fluctuations. It also maintains precise speed under heavy, 10-record loads. And it turns a beefy, 4½-pound turntable that’s dynamically balanced for low wow and flutter.

The 660H’s tonearm is dynamically balanced, too. Patterned after that on our renowned 50H, this arm can track faithfully at forces down to 1/2 gram. That’s better than today’s cartridges can do, but the 660H will be around to see tomorrow’s cartridges. And the arm’s adjustments are remarkably easy: a knob-controlled rack-and-pinion counterweight for precise arm balancing, an anti-skating control in the arm’s base, and an exclusive single-screw overhang adjustment for the lowest possible tracking distortion. (The overhang-adjustment guidepost also holds a brush that cleans the stylus between plays.)

Manual operation—a stepchild in some automatic turntables—is as convenient as automatic operation. The turntable starts when you move the arm towards the record—no “start” or “auto/manual” switches to manipulate. A cue control that’s damped in both directions floats the stylus safely to the record, and lifts it just as gently.

For automatic operation, just the slightest pressure on a push-button automatically sets the arm down at the beginning of a record. You don’t even have to adjust a record-
and 660H. They’re built to last.

size control.

Play a stack of records and discover more advantages of our pushbuttons:
a button stops play in mid-stack without bringing all the other records down. Then you can begin with either the next record in the stack or with the one you interrupted.

All of these features have been thoroughly performance-proven in such Miracords as the 50H. What’s new about the 660H is the price at which we bring them to you: $139.50!

And for only $99.95, there’s the new ELAC/Miracord 650. Its basic features and construction are the same as the 660H’s, but its motor is a high-quality induction type, turning a lighter, pressure-formed (but still carefully balanced) platter. The 650’s arm is the same dynamically-balanced, delicately-tracking arm used in the 660H; the only difference is its overhang adjustment, a simple gauging point and slot instead of the 660H’s post and leadscrew.

Whichever Miracord you buy (and there are others, at prices ranging up to $225*), you can be sure it’s built to last. Visit your dealer today.

ELAC/Miracord. Another quality product from Benjamin. ELAC Division, Benjamin Electronic Sound Corp. Farmingdale, New York 11735/division of Instrument Systems Corp. (Also available in Canada).

CIRCLE NO. 13 ON READER SERVICE CARD
In the current Module competition we enter the Garrard thoroughbred... complete ready to play... at only $99.50.

Complete with these Blue Ribbon Features

- Synchronous 3-speed automatic turntable with magnetic cartridge, base, and dust cover.
- Synchro-Lab synchronous motor for absolutely constant speed
- Dynamically-balanced tubular aluminum tone arm
- Adjustable stylus pressure control
- Patented sliding weight anti-skating control
- Viscous-damped cueing/pausing and tone arm descent
- Fingertip tab controls
- Safe 2-point record support
- Oversized balanced turntable
- Interchangeable spindles for manual and auto play

This superb instrument, the finest of its class, combines the dependability and professional features of the top Garrard automatic turntables, with the special convenience of Garrard's pre-assembled modules. The SLX-3 comes equipped with a full range magnetic cartridge, high compliance elliptical diamond stylus, coordinated base and dust cover — and is packed and delivered pre-assembled, ready to plug into any TV, radio, tape or cassette system with appropriate preamp.

SLX-3 is one of four Garrard Modules, designed for every taste and budget. Starting at $39.50, the entire series reflects the highest standards of Garrard construction and performance. For color literature, see your dealer, or write to British Industries Company, Dept. 31K, Westbury, N. Y. 11590.

Garrard WORLD'S FINEST
Mfg. by Plessey Ltd. Dist. by British Industries Co.
CIRCLE NO. 81 ON READER SERVICE CARD
MOSFET's, FET's, AND IC's: Advertisements for audio components make frequent reference to FET's, MOSFET's, and IC's. These terms describe semiconductor devices that, in the right application, can actually contribute to the performance of components above and beyond what is achieved by conventional bi-polar transistors. For example, the "FET" (field-effect transistor) resembles a bi-polar transistor externally, but it has many of the desirable properties of the "old-fashioned" vacuum tube combined with the advantages of the transistor. In particular, the FET has a very high input impedance and low internal noise as compared with most bi-polar transistors. A "MOSFET" is a metal-oxide semiconductor field-effect transistor, a definition which has to do with its specific method of fabrication. Among transistors, MOSFET's have the highest input impedance, and, in specialized forms such as the dual-gate MOSFET, they provide superior r.f. amplifier and mixer performance in FM-tuner front ends, for example. Most FET's currently used in hi-fi products are MOSFET's.

Although FET's are widely used in AM and FM tuners, they are rarely encountered in audio amplifier circuits, where their low noise might seem to be especially advantageous. The audio circuits that handle the weakest signals—and should therefore be the quietest—are the phono and, when present, "tape-head" preamplifiers. However, with one exception, I have never seen FET's used in these circuits. The signal coming from a magnetic phono cartridge, even when it is playing an unmodulated record groove, contains more noise than is generated in a well-designed preamplifier using selected conventional bi-polar transistors. Tape hiss is even more obtrusive than record noise, so the same situation exists for the input stages of tape-playback amplifiers. One recent cassette recorder features FET input stages, but our tests did not show significantly lower noise when compared with results for other good-quality machines using bi-polar transistors. Some deluxe preamplifiers use FET inputs, but the audible improvement over the conventional approach is not apparent.

Even the high input impedance of an FET is of no special value in input circuits, since both phono cartridges and tape heads are low-impedance devices, and bi-polar transistors are easily able to meet their requirements. The capacitor microphone (or the similar electret microphone) is a notable exception. In pre-transistor days, these devices required a sub-miniature vacuum tube built right into the microphone case, since the capacitor microphone element had to be loaded by the highest possible resistance and lowest possible capacitance. Bi-polar transistors are quite unsuitable for this application, but the FET is an ideal solution, and all modern capacitor microphones have built-in FET amplifiers.

In order to provide a wide range of frequency-response variation (without going to very large capacitors), tone-control circuits usually operate at a fairly high impedance level. Most amplifiers still use bi-polar transistors for this purpose, and scale down the impedance of the control networks to be compatible with the transistor input impedance. However, there is a growing tendency to use FET's, together with the high-impedance controls formerly used in vacuum-tube amplifiers. Quite frankly, we have found nothing in our measurements of any tone-control circuits to indicate any significant advantage in the use of high-impedance FET circuits. Perhaps there are benefits to the manufacturer, but they are not immediately obvious to the user—or tester. The FET's characteristics fit it particularly well for use in switching or as electrically variable resistors. They are therefore found in muting and volume-compression circuits, and in voltage-controlled filter applications.

The term "IC" refers to the integrated circuit. This is a combination of many transistors, diodes,
resistors, and capacitors formed as a unit on a tiny silicon chip. In its packaged form, the IC occupies little more space than a single transistor, but it can do the work of tens of transistors and most of their associated circuit components.

The IC is widely used in FM tuners for i.f. amplification and limiting, where it offers superior performance at considerable savings in space and cost. The IC multiplex demodulator is even more impressive, replacing most of the rather complex stereo-FM decoding circuitry with a single IC and a handful of external components—and doing a better job in the bargain.

In audio amplifiers that we have tested so far, we have seen IC's used in only three instances. One was a stereo phono preamplifier, which unfortunately had a limited signal-handling capability although it was otherwise quite satisfactory. The others were operational amplifiers, usually referred to as "op-amps." An op-amp is a high-gain direct-coupled amplifier module with external negative-feedback circuits. Its gain, frequency response, and input impedance can be easily, accurately, and permanently established by the feedback components. The IC op-amps can deliver a large voltage output (20 volts peak-to-peak or more) with extremely low distortion. Their output impedance is as low as a few ohms, giving the circuit designer considerable latitude in his choice of the following circuits. Formerly too expensive for use in home-entertainment equipment, IC op-amps are now becoming economically practical.

From an electrical standpoint, the IC does nothing that could not be done with a large number of discrete transistors and other components, but it does it far more cheaply and in much less space. For example, the Crown IC-150 preamplifier (reviewed in this issue) uses a single IC op-amp in each channel for virtually all its amplification and tone-control functions, and achieves state-of-the-art performance. A high-quality receiver, now under test, takes advantage of the low output impedance of op-amps to drive a specialized, low-impedance multi-band tone-control system.

Since the power amplifier is the bulkiest part of an amplifier or receiver, it would be nice if power-amplifier IC's were available. They are, but the problem of dissipating internally generated heat remains, and the necessary heat sinks are far larger than the IC's themselves. Perhaps future technological advances will alter this situation.

In summary, it appears to us that FET's and IC's, per se, cannot be expected to produce lower noise, less distortion, or other audible benefits automatically. However, to the extent that they make it possible to incorporate novel or useful auxiliary circuits, they can make possible a more satisfactory product. The IC's, in particular, offer great potential for economy of space and reduced assembly cost. As their use increases and prices fall (which has been the pattern in the semiconductor industry since its inception), we can expect to see more of these devices taking the place of conventional circuits and adding to the operating functions of new equipment. The benefit to the consumer will be improved performance at lower cost.

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EQUIPMENT TEST REPORTS
By Hirsch-Houck laboratories

Heath AR-1500 AM/Stereo FM Receiver

- The Heath AR-15, in the five years of its existence, established an enviable reputation as an unusually powerful, sensitive, and flexible receiver. As fine as its specifications were—and it fulfilled them easily—the AR-15 was not without its limitations. Unlike most transistorized amplifiers, it delivered less power into 4-ohm loads than into 8 ohms. This was unfortunate, since many low-efficiency speakers, which need all the power they can get, have 4-ohm impedances. Its AM tuner was rudimentary, in sharp contrast to its FM tuner, which was a state-of-the-art design. Finally, construction of the AR-15 kit was a laborious undertaking (even when it was a labor of love), and servicing it could also be discouragingly difficult for a layman.

The AR-15 has recently been replaced by the new AR-1500. It is roughly the same size as the AR-15, and has many similarities with it in appearance and features. But virtually every circuit in the AR-1500 is new, and its construction is radically different from that of the AR-15.

Heath's complete specifications for the AR-1500 are far too lengthy and detailed to list here. Briefly, its very conservatively rated continuous-power output (with both channels driven) is 60 watts per channel into 8 ohms, 100 watts per channel into 4 ohms, and 40 watts per channel into 16 ohms. Corresponding ratings for the AR-15 were 50, 45, and 35 watts, respectively. Rated FM sensitivity (IHF) is unchanged at 1.8 microvolts, but selectivity, image rejection, and i.f. rejection have been improved by 10 to 20 dB over the older model. In stereo FM, distortion is slightly reduced, filtering of 19- and 38-kHz signals from the outputs has been improved by 10 dB or more, and the SCA program suppression has been improved by 20 dB. The totally new AM tuner has much improved frequency-response.

(Continued on page 34)
Empire’s top of the line cartridges now feature new high performance parameters designed for 4-channel capability. With even greater frequency response and compliance than ever before, these cartridges will track at forces so low they barely touch your records.

**999VE/X Professional**—Recommended tracking force ¼ to 1¼ grams. List price $79.95.

**1000ZE/X Measurement Standard**—Tracks as low as .1 gram in laboratory playback arms. List price $99.95.

Each 1000ZE/X and 999VE/X cartridge is individually adjusted to have a flat frequency response within ±1 dB from 20-20,000 Hz. Stereo separation is better than 35 dB at 1 Hz and remains 25 dB or better all the way out to 20,000 Hz. Overall frequency response is a phenomenal 4-40,000 Hz. There are no electrical or mechanical peaks and total 1M distortion at the standard 3.54 cm/sec groove velocity does not exceed .05% at any frequency within the full spectrum. Uses a .2 x .7 hand polished miniature diamond for exceptionally low mass.

Empire cartridges are enthusiastically acclaimed by the experts; for example:

- **Stereo Review Magazine** who tested 13 different cartridges rated the 999VE tops in lightweight tracking ability.
- **Hi Fi Sound Magazine** called the 999VE “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.”
- **High Fidelity Magazine** said of the 1000ZE “the sound is superb. The performance data among the very best.”
- **Records and Recording Magazine** stated emphatically that the 999VE stereo cartridge is “a design that encourages a hi fi purist to clap his hands with joy.”
- **FM Guide** wrote “…using the 1000ZE. It works beautifully... giving great results.”
- **Audio Magazine** observing a remarkable 35 dB stereo spread between left and right channels in the 999VE said “Outstanding square waves. Tops in separation.”
- **Popular Science Magazine** picked the 999VE hands down as the cartridge for “the stereo system I wish I owned” designed by Electronic Editor Ronald M. Benrey.

X designates newest improved version.

For further details write: Empire Scientific Corp., 1055 Stewart Avenue, Garden City, N.Y. 11530.

**Approved for 4channel**

Mfd. U.S.A. World Famous Long Playing Cartridges

CIRCLE NO. 21 ON READER SERVICE CARD

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sponse as well as better image-rejection characteristics.

The AR-1500's FM tuner uses two FET r.f. stages and an FET mixer, three IC i.f. stages, and two permanently Tuned L-C filters replacing the crystal filters of the AR-15. The multiplex section uses an IC for most of its functions, although there are a number of added transistor stages for mixing and other auxiliary operations. The AM tuner uses the latest semiconductor devices for the r.f., oscillator, and mixer stages. The three i.f. stages feed an emitter follower that drives a low-impedance full-wave detector. And there's a 10-kHz "whistle filter" in the audio output of the AM tuner to reduce interstation interference.

The preamplifier and control-amplifier sections are similar to those of the AR-15, except for the two-stage tape-output amplifiers that deliver several times as much output-signal voltage as the former circuits and have an unusually low (50 ohms) output impedance. This insures against loss of the higher frequencies even when very long shielded cables are used for tape-recorder connections. The power amplifiers are direct coupled, not only from the output stages to the speakers, but all the way from the input stage to the speakers. The output transistors are electronically protected against speaker-line shorts or signal overdrive.

Like other Heath receivers, the AR-1500 has a "blackout" dial face. Pushbuttons are used for input and mode selection. The usual inputs are provided—phono, AUX, tape recorder, AM, and FM. An FM STEREO mode causes the receiver to respond only to stereo broadcasts. The BLEND button, by sacrificing some channel separation, reduces noise on weak stereo-FM signals. There is switchable loudness compensation, a tape-monitor button, and a tone-control defeat button that cuts out the tone-control circuits. Either or both of two pairs of speaker outputs can be energized by pushbutton switches. There are two headphone jacks on the panel, plus a small knob that adjusts the FM interstation-noise muting threshold.

Two illuminated meters aid in tuning. The zero-center meter is used on FM, and the signal-strength meter is used on FM and AM. It also serves as a test meter, with built-in circuits, switches, and leads for aligning and servicing the receiver. The dial scale and meters are lit in soft green, and the legend FM STEREO appears in red when the receiver is tuned in. Aside from the tuning knob, there are only four knob-operated controls on the AR-1500. These are in a square panel to the left of the dial, and adjust bass, treble, balance, and volume.

Across the entire rear of the AR-1500 is a massive finned heat-sink radiator for the output transistors. Below it are all the input and output jacks and terminals. The speaker connectors are five-way binding posts, with the standard 1/4-inch spacing for laboratory dual banana plugs (supplied with the kit). These make speaker connection and phasing a simple and foolproof process. The antenna inputs are for 300-ohm or 75-ohm FM antennas, and for an AM long wire if needed. The built-in AM ferrite-rod anten

tenna is adjustable in orientation for best reception since it is installed outside the case.

The input connectors, in addition to those for the front-panel inputs mentioned previously, include tape-monitoring inputs and outputs. The preamplifier outputs and power-amplifier inputs are brought out separately and are normally connected together. By breaking the connection, an external electronic-crossover network or equalizer can be inserted in the signal path. An unusual and desirable feature is the provision of oscilloscope output jacks—vertical and horizontal—for displaying FM multipath distortion on an external oscilloscope. There are two a.c. outlets, one of which is switched.

The Heath AR-1500 weighs 331/2 pounds and measures 18 1/8 inches wide, 14 inches deep, and 5 3/4 inches high. It is supplied with a metal cover. An optional walnut cover provides an attractive appearance without adding to the overall dimensions. The Heath AR-1500, which is available only as a kit, sells for $349.95. The AR-1500-1 wooden cover is $24.95.

1 Laboratory Measurements. The FM tuner section of the AR-1500 was outstandingly sensitive. We measured the IHF sensitivity at 1.4 microvolts, and the limiting curve was the steepest we have ever measured, with essentially full quieting and minimum distortion for any signal level exceeding 2 microvolts. The muting threshold was adjustable from 1 to 3 microvolts. The FM frequency response was literally perfectly flat from 30 to 15,000 Hz. There was hardly a trace of 19- and 38-kHz signals in the outputs. Stereo separation was about 34 dB at mid frequencies, and 20 dB at 30 and 15,000 Hz. Image rejection was over 100 db (our measurement limit), which is the Heath rating. AM rejection was 51 dB, also essentially as rated. The ultimate quieting was 75 dB. We measured the capture ratio as 2.2 dB, and FM distortion at about 0.76 per cent for all signal strengths over 3 microvolts. Since these last two figures approach the limitations of our test equipment, we assume from our other measurements that our sample meets Heath's specifications.

The FM tuner has an automatic frequency control (AFC) circuit that is not defeatable, but is so designed that it will not interfere with reception of very weak stations adjacent to stations with stronger signals. Muting action was perfect, with no thumps or noise bursts.

The AM tuner was a pleasant surprise, with exceptionally clean sound and a frequency response down only 5 dB at 22 and 6,500 Hz. It sounded very much like the FM tuner, with distinct sibilants and a quiet background, and was easily the best-sounding AM tuner we have had the pleasure of using. In the audio sections, the tone controls had conventional characteristics, as did the loudness compensation, which boosted both high and low frequencies at low volume-control settings. Since the level of each input is separately adjustable, with controls accessible through holes in...
The $95 Misunderstanding.

It seems there's been some confusion about the price that appeared in our first ad for the new KLH Model Thirty-Two loudspeakers. To clear up any misunderstanding, the price is, indeed, $95 the pair ($47.50 each). If you're wondering how we could make a KLH loudspeaker for $47.50, it's really quite simple.

We had two choices. Either we could make a fair speaker and a lot of profit. Or we could make a lot of speaker and a fair profit. We chose the latter. We always do. That's why KLH speakers sound like KLH speakers.

Of course our Model Thirty-Two won't deliver as much bass response as, say, our Model Seventeen. But the basic listening quality of the new KLH Thirty-Two is superb by any standard. In fact, we'll match the Thirty-Two against any speaker in its price class: even against most speakers costing twice its price. For when it comes to making reasonably-priced speakers that deliver an inordinate amount of sound, that's really what KLH is all about.

And about that, there can be no misunderstanding. For more information on the Model Thirty-Two, write to KLH Research and Development, 30 Cross St., Cambridge, Mass. 02139. Or visit your KLH dealer.
NEW LAFAYETTE LR-440

FEATURES...
- 170 Watts ± 1db (42.5 W/Ch) at 4 Ohms
- Automatic FM Stereo Indicator
- "ACRITUNE" Indicator Lamp for Precise FM Tuning
- 4-Channel Tape Input and Output Jacks
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170-Watt Compatible 4-Channel FM/AM Stereo Receiver...
Plays Discrete 4-Channel Stereo Program Material, Derives and Plays 4-Channel Stereo From Your Present Stereo Records, Tapes, and FM Broadcasts.

4 Separate Amplifiers for Discrete 4-Channel
Exclusive "Composer" Circuitry For Deriving 4-Channel Sound
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4-CHANNEL STEREO

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Only $521.95
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Same as above, but includes Garrard Model 408 Automatic Turntable, matching base, and Lafayette/Pickering Phase 44 Elliptical Stereo Cartridge with diamond stylus.

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CIRCLE NO. 38 ON READER SERVICE CARD
the bottom cover, all input levels can be matched and set for the most effective use of the loudness compensation. This valuable feature is rarely found on high-fidelity receivers and amplifiers. The loudness compensation can be switched off if desired.

The phono equalization was perfectly accurate (within our measuring tolerances), being within ±0.5 dB from 20 to 20,000 Hz, although the characteristic is defined by the RIAA only from 30 to 15,000 Hz. An input of 47 millivolts (0.047 volt) was required at the AUX inputs for 10 watts output, and the noise level was 78 dB below 10 watts. The magnetic phono-input sensitivity was adjustable from 0.62 millivolt to about 4.5 millivolts, with a noise level of -66 dB, which is very low. Phono overload occurred between 21 and 150 millivolts, depending on the setting of the phono-level adjustment. When properly set up, it would be impossible to overload the phono inputs of the AR-1500 with any magnetic cartridge.

The AR-1500 is the most powerful and sensitive receiver we have ever measured, and it significantly bettered Heath's conservative specifications. Into 8-ohm loads, with both channels driven, the continuous power at clipping level was 81.5 watts per channel. Into 4 ohms it was 133 watts per channel, and even with 16-ohm loads the receiver delivered 46.5 watts per channel. Needless to say, the AR-1500 can drive any speaker we know of, and with power to spare.

Distortion was somewhat lower than we had measured on the AR-15, and was comparable to that of the best of the separate amplifiers. At 1,000 Hz, harmonic distortion was well under 0.05 per cent from 1 to 75 watts per channel (below 1 watt the distortion was too low to measure, being masked by noise). The IM distortion was under 0.05 per cent at levels of a couple of watts or less, and gradually increased from 0.09 per cent at 10 watts to 0.16 per cent at 75 watts. At the rated 60 watts per channel, or at any lower power level, the distortion was under 0.1 per cent from 20 to 20,000 Hz, and was typically less than 0.05 per cent. The heavy power transformer is evidence that there was no skimping in the power supply of the AR-1500, and its performance at the low-frequency extremes clearly sets it apart from most receivers.

Comment. Our test receiver was built by Heath to "prove out" their assembly-manual instructions. Examination of a preliminary manual, and of the receiver, gives convincing evidence of its careful engineering. 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.
Seagram's V.O.
For people who make every moment count.

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.

Seagram's V.O. Canadian
Infinity 2000A Speaker System

- The Infinity 2000A is a floor-standing three-way speaker system with notably smooth, wide-range frequency response and excellent dispersion. Its woofer, 12 inches in diameter, is rear-loaded by a highly damped acoustically resistive pathway terminating in a port. The principle used is that of an acoustic transmission line, and it has certain technical advantages over the bass-reflex design it superficially resembles. At 300 Hz, there is a crossover to a 4-inch mid-range driver with a lightweight cone. Four electrostatic tweeters take over above 1,700 Hz. They are oriented vertically along the right side of the cabinet, with the two upper units angled slightly upward. The cabinet is open to the rear behind the electrostatic tweeter so that their rear radiation can be reflected from the adjacent wall and dispersed through the room.

- In the rear of the cabinet there is a continuously variable mid-range level control with a total range of 3 dB. The tweeter level is controlled by a three-position switch, with "normal" and +3 dB settings. The third position, called "protect," inserts a small resistance in series with the tweeter transformer primary when the speaker is being used with amplifiers whose stability is marginal with resistive loads.

- The Infinity 2000A has an a.c. power cord (for the electrostatic-tweeter polarizing-voltage supply) that can be left plugged into a wall socket at all times since it draws negligible a.c. power. The system carries a 4-ohm nominal impedance rating, and an amplifier with a rating of at least 35 watts continuous power per channel is recommended. The speaker will handle up to 125 watts of program material. The 2000A is 26 inches high, 18 inches wide, and 12 inches deep. An optional pedestal base is available, increasing the height to 29 inches. The speaker system, finished in oiled walnut, is priced at $289. A rosewood-finished enclosure is available for about 15 per cent more. The pedestal base is $5.

- Laboratory Measurements. The Infinity 2000A had a very uniform power output across its frequency range; our multiple-microphone "live-room" measurement showed a total variation of about ±5 dB from 28 Hz to 15,000 Hz, the upper limit of our microphone calibration. If we discount a slightly emphasized output in the 60- to 70-Hz region (which room acoustics may enhance or diminish) the response was even smoother: ±3.5 dB from 120 Hz to 15,000 Hz. The dispersion was good at all frequencies, although this was best judged by listening since the output above 1,800 Hz was about 50 per cent reflected and not amenable to our usual procedure of close-up measurement of polar response.

- The low-frequency distortion was very low down to 50 Hz, rising gradually to 6 per cent at 40 Hz and 10 per cent at 50 Hz. These measurements were made at a 10-watt test-signal drive level, which produced an impressive acoustic output down to the lowest frequencies. Tone bursts at low and high frequencies were reproduced almost perfectly—the latter being a recognized characteristic of good electrostatic speakers, and the former attesting to the effectiveness of the loading technique used with the woofer. We experienced difficulty in getting good tone-burst response in the mid-range, apparently because of interference effects between the mid-range and high-frequency drivers, plus the reflections from the rear radiation. Subsequent extensive listening convinced us that this was a problem of measurement rather than a characteristic of the speaker.

- The measured impedance of the system was about 7 ohms over most of the mid-frequency range, with a broad rise to 10 ohms at 40 Hz, a minimum of 4 ohms between 2,000 and 4,000 Hz, and a maximum of 25 ohms at 13,000 Hz.

- The simulated "live-vs.-recorded" test confirmed what we had deduced from our measurements—the Infinity 2000A is one of the finest reproducers we have tested. Its highs and middles were not only present in the proper amounts, but were so well dispersed that it did a well-nigh perfect job of "imitating" the original program at off-axis angles as great as 60 degrees. Considering that few speakers can do as well on axis, and most show a pronounced loss of extreme highs at moderate off-axis angles, this qualifies the Infinity 2000A for an A+ rating in our subjective evaluations.

- Comment. The real proof of a speaker's quality is its (Continued on page 42)

Tone-burst response of the Infinity 2000A, shown at (left to right) 100, 3,000, and 8,000 Hz, was generally excellent. The apparent ringing at 3,000 Hz is believed to be due to measurement difficulties.
If the loud in your stereo gives her a pain in the head get a Marantz.

It's not that she's got super-duper sensitive hearing (like that spotted beagle two doors down), it's because most women hear better than men, so when she screams turn down the sound what she really means is turn down the damn distortion because the distortion is driving her bananas.

Not so with Marantz stereo. Take the new Marantz 2270 stereo AM/FM receiver for $499. It delivers a walloping 140 watts RMS power at less than 0.3% distortion, which means virtually NO DISTORTION. And because Marantz measures distortion at continuous full power through the whole listening range—it won't bring tears to her eyes or a pain to her head. NO MATTER HOW LOUD. Other companies measure power and distortion only in middle listening range. So they quote their highest power and lowest distortion only in the middle. But on the low and high sides their power is down and their distortion is up. So if you pay for 140 watts be sure you get 140 watts at both ends and in the middle.

With Marantz you get exactly what you pay for. If all you need is 30 watts, take our model 2215 for $199. Want twice as much power? Our model 2230 gives you 60 watts RMS for $299. And our model 2245 at $399 delivers 90 watts RMS. ALL CONTINUOUS POWER throughout the entire listening range.

No matter which model you choose, remember this. You're getting Marantz quality. The same quality that goes into the magnificent model 19 FM stereo receiver (shown) that costs $1000. YES. A cool grand. But it is the absolute, ultimate, very best there is.

Visit your Marantz dealer. And take your wife along. (Or that spotted beagle two doors down.)

Marantz Cr, 40 Rue de Charette 1050 Brussels, Canada Electroniques Ltd. Send for free listing.

CIRCLE NO. 78 ON READER SERVICE CARD
ability to give satisfaction over a long period of time. We had a pair of 2000A's in our listening room, together with a number of comparably priced speakers, for several months. When the time came to make room for new arrivals, we always preferred to remove one of the others and continue to enjoy the 2000A's for a while longer. As its measurements suggest, it is an uncommonly smooth, balanced wide-range system. The "live-taped" tests do not permit evaluation of response below 200 Hz, but our ears tell us that there is a solid, almost palpable low bass output from this speaker, even at low listening levels.

Although it does use reflected sound to some degree, the Infinity 2000A is nevertheless quite tolerant of room placement. In fact, we used it at distances varying from 3 inches to 5 feet from the wall and did not find any significant change in its essential sound character.

Our own experience confirms the manufacturer's recommendation for the associated amplifier. Some medium-price receivers and amplifiers, in the 25- to 30-watt-per-channel range, produced dismal sound when driving this system, and their overload protection circuits often tripped. The 2000A is quite inefficient, but when driven by a really good 50- or 60-watt-per-channel amplifier, the results can be described conservatively as truly impressive.

For more information, circle 157 on reader service card

**Crown IC-150 Stereo Preamplifier**

- **The** Crown IC-150 stereo console is a highly flexible preamplifier/control center with state-of-the-art performance which complements that of the well-known Crown power amplifiers. As the "IC" designation suggests, the preamplifier uses integrated circuits to achieve its impressive electrical performance with a minimum of discrete components. The front panel of the IC-150 presents a simple, uncluttered appearance. The input selector has positions for tuner, two high-level auxiliaries, two tape recorders, and two magnetic phono cartridges. To the right of the input selector are the volume and balance controls, with a pushbutton switch adjacent to the volume control for loudness compensation.

Next is the PANORAMA control, a novel approach to stereo separation adjustment. Its fully counterclockwise position gives normal stereo operation. As it is turned counterclockwise, the channels gradually blend, reaching full mono (A + B) at the center position. Further rotation increases separation, with the left and right channels interchanged, to a full reverse stereo mode at the clockwise limit. Completing the row of front-panel knobs are the bass and treble tone controls, each a concentric pair for individual channel adjustment. Between them is a pushbutton switch that bypasses all tone controls. The remaining controls are a row of five pushbutton switches. Two are tape-monitor switches, since the IC-150 can control and operate with two three-head tape decks. Programs can be dubbed from either deck onto the other or onto both simultaneously from any input source. Adjacent to the tape-monitor buttons are the low- and high-cut filters and the power switch.

In the rear of the IC-150 are all of its inputs and outputs. The main outputs are in duplicate. Adjacent to the phono inputs are screwdriver-adjusted gain controls for the phono preamplifiers, so that phono levels can be matched to those of other inputs. A pair of binding-post terminals normally connected by a jumper wire can be connected to a remote switch located at the user's listening position. The switch then mutes the preamplifier for phone calls or other interruptions. Associated with the on/off switch is a built-in four-second time delay to eliminate any warm-up "thumps" from the loudspeakers. Finally, there are four switched a.c. convenience outlets and one unswitched outlet. The overall dimensions of the Crown IC-150 are 17 inches wide, 8½ inches deep, and 5½ inches high. It is furnished with a metal dust cover. The price is $269; a walnut cabinet is $33 additional.

- **Laboratory Measurements.** Our test unit was accompanied only by a preliminary instruction manual and schematic, but was without detailed specifications. On the test bench (and when connected into a music system), the Crown IC-150 left no doubts as to its superior quality, whatever the manufacturer's specifications might be.

The tone controls had good, fairly conventional characteristics, with the bass control having a sliding-infection-point (Baxandall) response. Considerable control was possible at frequencies below 200 or 300 Hz with negligible effect on higher frequencies—a characteristic that we favor. The treble-control curves "hinged" at about 1,000 Hz, with a shelved curve for moderate boost or cut and sloped curves at more extreme settings. The center settings of the knobs produced a perfectly flat response (+0.25 dB from 20 to 20,000 Hz) even when the tone-control bypass switch was not used. Crown's factory procedure calls for individual alignment of the tone-control knobs for flat response at their center positions, and the test results bear this out. Beyond the audio limits, we found the frequency response to be down only 0.3 dB at our test instrument's lower limit of 5 Hz, and −1 dB at 225,000 Hz. The −3-dB point was just a little short of half a megahertz.

The RIAA phono equalization was so accurate (+0.25 dB) that we may have been checking the residual errors of our test setup. The loudness compensation progressively boosted frequencies below about 200 Hz as the volume-control setting was reduced, and provided a constant boost at frequencies above 8,000 Hz. The low-frequency filter had a 6-dB-per-octave slope below 70 Hz, and the high-frequency filter a 12-dB-per-octave slope above 10,000 Hz.

For more information, circle 157 on reader service card.
When it comes to fine stereo receivers...

a Marantz is a Marantz is a Marantz.

That means Marantz not only makes the finest most expensive stereo equipment in the world, but also the finest least expensive stereo equipment. Take the Marantz Model 2215 FM/AM stereo receiver for only $199.00. You’re getting 15 watts RMS per channel, and exclusive Gyro-Touch tuning. You’re also getting the same Marantz prestige, the same craftsmanship, and the same Marantz quality offered in our most expensive equipment. $199

If you’re a purist and willing to pay for perfection, then you want the finest, most expensive stereo FM receiver in the world. The Marantz Model 19. Yes, it is $1000. It is the best stereo FM receiver money can buy. And will more than justify your investment. $1000

Same name, same quality—regardless of price. That’s Marantz’ superior quality, inherent in the full line of components priced from $1200.00 to as low as $139.00. And to complete your system, choose a Marantz Imperial speaker system.

Three Sony/Superscope Cassette Decks

- We have just tested three new Sony/Superscope cassette tape decks in three price levels (the TC-122, TC-127, and TC-160) that are perhaps as interesting for their differences as for their similarities.

TC-122

The TC-122 cassette deck is a relatively inexpensive machine and is about as simple as a cassette recorder can be. It has no controls other than the basic transport levers. Instead of recording-level controls, it relies on a fast-acting audio limiter to prevent overload despite wide variations in input-signal level. Playback levels (as on the other two machines discussed below) are fixed. The TC-122 has a stereo headphone jack and two miniature microphone jacks as well as a pair of recording-level meters, but lacks a pause control and index counter. Like the top-priced TC-160, it has the tape pilot, a spot of light that moves across a small window as the tape plays. When the tape stops, so does the spot, alerting the user to shut off the mechanism (none of these machines has an automatic shut-off). The normally green tape pilot glows red when recording.

(Continued on page 46)
Each of these stubborn Norwegian engineers thinks he designed the world's best tape recorder.

Will you help settle the argument?

Leif insists that the only tape deck to own is the Tandberg 6000X. And we can't quarrel with that. For $499.80, it does more things better than decks that cost twice as much. And both High Fidelity and Stereo Review ranked the 6000X in a class by itself.

But when Per makes his case for the Tandberg 3000X, we can't dispute him, either. After all, if a home recordist doesn't need professional features like a limiter, stereo echo effects, and peak reading meters that show playback levels, why should he pay for them? Per swears that if he blindfolded Leif, he couldn't tell the sound of the 3000X from the 6000X. And it only costs $349.90.

Then Gunnar starts a whole new fight. He says the most practical way to enjoy Tandberg sound is with the 4000X recorder. That way, you get all the quality of a Tandberg deck plus a built-in Tandberg amplifier and two Tandberg speakers. All for just $459. And it's portable.

We say they're all right. Every Tandberg is the best Tandberg. And all the arguments in the world won't settle a thing.

Because the only person who can decide which Tandberg is the best for you is you. Settle the question with your Tandberg dealer. Soon.

TANDBERG
TANDBERG OF AMERICA, INC., 8 THIRD AVENUE, PELHAM, NEW YORK 10803
In Canada Tandberg distributed by Engineered Sound Systems, Toronto, and Clifco Electronics, Vancouver.

NOVEMBER 1971
cording. Although the deck provides no control over recording levels, the meters indicate when a signal is present, and when they swing to the red region, it shows that the limiter is in action. Price: $94.95.

- **Laboratory Measurements.** The TC-122 had a very smooth but somewhat limited record-playback frequency response. It was essentially flat from 200 to 7,000 Hz, and was down 3 dB at 100 and 9,000 Hz with Sony extended-range cassettes. The response with a BASF C-60 cassette was quite similar, except that the output at frequencies above 1,000 Hz was down several decibels. Playback response, measured with a Nortronics AT-200 Standard Test Cassette, was ±2 dB from 55 to 10,000 Hz.

The audio-limiter circuit responded rapidly to excessive levels, but took many seconds to recover from any appreciable overload. If care is taken to keep average recording levels below the red area of the meters, the limiter has negligible effect on the recorded program. However, since the limiter went into action with line inputs as low as 54 millivolts, or a microphone input of 0.17 millivolt, it would be desirable to have some external control over incoming signal levels—which is not available at the tape-output jack of component amplifiers or receivers.

The distortion of the TC-122 could not be made to exceed about 2 percent, even with a 20-dB overload. A 20-dB increase in signal (in the limiting region) produced only a 3- to 5-dB increase in the playback output. The signal-to-noise ratio, referred to 0 VU on the meters, was 48 dB. The output signal for a 0-VU input was 0.66 volt. Flutter was 0.16 percent, a very good figure for a cassette machine in this price range. In fast-forward or rewind modes, a C-60 cassette was handled in 70 seconds.

**TC-127**

The TC-127 is a conventionally equipped deck, on which recording levels are set by two slider controls and monitored on the calibrated meters. A switch activates a limiter circuit similar to that of the TC-122, which affects only signals exceeding the 0-VU meter marking. A TAPE SELECTOR switch adjusts the recorder for CrO₂ tape by changing only the recording equalization; bias and playback equalization are unaffected. The transport controls include a PAUSE lever, and there is a three-digit index counter with pushbutton reset. Price: $139.95.

- **Laboratory Measurements.** The input sensitivity of the TC-127 was similar to that of the TC-122, and its output was 0.44 volt. When the limiter was used, its action appeared to be similar to that of the TC-122. The reference 3 percent distortion level was reached at a +3 dB input with Sony tape and +2 dB with CrO₂. The signal-to-noise ratios at 3 percent distortion were 53 dB with Sony tape and 49 dB with Memorex CrO₂. The flutter was 0.18 percent, and a C-60 cassette was handled in 100 seconds in fast forward or rewind.

The middle-priced TC-127 also had a very flat frequency response between 70 and 10,000 Hz, and was down 3 dB at 45 and 11,500 Hz. With CrO₂ tape, the high-frequency response was maintained to 15,000 Hz, although it had dropped about 6 dB from the mid-range level at that point. The playback response rose below 200 Hz to +3.5 dB in the 30- to 40-Hz region, but dropped off rapidly above 4,000 Hz. At 10,000 Hz, the output was down 13 dB from the mid-range level.

**TC-160**

The TC-160 features a unique closed-loop tape-drive system. Unlike other cassette mechanisms, which drive the tape with a single capstan and pinch roller, the TC-160 has two capstans and two pinch rollers, with one set of each before and after the tape heads. The second capstan encountered after the heads rotates slightly faster than the first capstan, thereby maintaining a positive and uniform tension in the tape as it passes over the heads. This reduces flutter and noise that result from imperfect contact between the tape and the head. The record/playback head of the TC-160 is an improved design with a 1.5-micron gap and a hardness and polish that are claimed to extend head life. The input stages of the record/playback amplifiers use FET's to improve their noise and distortion characteristics. The Sony TC-160 has all the control functions and features of the TC-127, plus the TAPE PILOT indicator. Its twin meters read playback as well as recording levels. Although the line playback levels are fixed, there is a two-position headphone-level switch. Price: $199.95.

- **Laboratory Measurements.** The TC-160 had somewhat greater input sensitivity than the other two units and
The Advent Loudspeaker Was Intended to Match or Exceed the Bandpass and Freedom from Distortion of Any Loudspeaker System Used in the Home, Regardless of Price.

The following excerpts are from reviews of the Advent Loudspeaker:

**ELECTRONICS WORLD** (Julian D. Hirsch):

"The shape of the curve above 6 kHz corresponds almost exactly to the calibration curve of our microphone, which indicates that the true response of the speaker is virtually flat to well beyond 15 kHz.

"The low-frequency performance of the speaker system is even more impressive than its high end. The flat, extended response to below the lowest audible frequencies is genuine, not the result of added distortion products which can make an inferior speaker seem better than it really is.

"In designing this speaker, the manufacturer had the goal of producing a speaker comparable in performance to the best acoustic-suspension types previously available, at a substantially lower price. We feel that the company has essentially achieved its aims. It has a silky smooth, balanced sound with well-dispersed highs, and lows which can really be felt, rather than merely heard. We can't recall having heard another speaker in its price class that can match it."

**AUDIO**:

"...the frequency response was flat, with only ±3 dB variations over the major portion of its range. What is more important is that the 45-degree off-axis response follows the on-axis response to a remarkable degree, denoting excellent high-frequency power response....

"One could say that at twice the price the Advent speaker would be a good value, but at $116 it is a bargain."

**THE STEREOPHILE**:

"After several weeks of listening [to the Advents] we still hadn't found anything to complain about. We couldn't even find any sonic characteristics to hang adjectives on, in order to try to describe their sound. They were, in fact, the least-colored loudspeakers we have ever heard, and this includes the highest-priced systems currently available....

"By all the accepted standards of evaluation...the Advents are as accurate reproducers of sound as any top-line system we have heard."

**STEREO REVIEW**:

"The lows...remained strong and clean all the way down to 20 Hz with very low distortion....Without a doubt, the Advent is one of the smoothest and widest-range speaker systems we have had the pleasure of testing...

"The tone-burst response was excellent throughout, ranking with the best we have seen from any speaker....

"The extreme low-bass reproduction, which is one of the most expensive characteristics to build into a speaker system, sets the Advent speaker apart from anything else in its price class. In this respect it can only be compared to the best acoustic-suspension speakers selling for twice its price—or more."

The Advent Loudspeaker is available in walnut finish at $116, and in a simpler vinyl-clad walnut cabinet at $102. Both prices are slightly higher in the west.

For complete reviews and the names of nearby Advent dealers, please write:

Advent Corporation, 195 Albany Street, Cambridge, Massachusetts 02139.
The recording controls on the TC-127 are grouped where the eye can readily note the setting of each. The small rectangle behind the meter window lights up when the machine is in the record mode. The recording-level controls are of the slider type.

required input signals of 40 millivolts (LINE) or 0.1 millivolt (MIC) for a 0-dB recording level. The corresponding output signal was 0.72 volt. Distortion reached 3 per cent at +3 VU, at which point the signal-to-noise ratio was 49 dB with Sony tape and 47 dB with CrO₂ tape. The limiter action was similar to that of the other two recorders. In fast forward or rewind, a C-60 cassette was handled in about 73 seconds. The dual capstan drive proved its worth, with the measured 0.11 per cent flutter being the lowest we have yet encountered in a cassette transport.

The record-playback frequency response of the Sony TC-160 was ±2 dB from 38 to 11,500 Hz with Sony tape—good, but not outstanding. With the CrO₂ tape, the response was the same over those limits, but sloped off much more gradually at higher frequencies. For example, at 16,000 Hz, the output with Sony tape was well below the 1,000-Hz level. With CrO₂ tape, the output was down only about 3 dB at the same frequency. The playback response, as measured by the Nortronics test tape, had a low-frequency rise similar to that of the TC-127, but was down only about 3 dB at 10,000 Hz.

*Comparative Comment.* It is obvious from the test data above that these recorders provide overall performance in proportion to their prices, which is as it should be. They all acquitted themselves well in listening and use tests. The limited measured frequency response of the TC-122, to our surprise, had very little audible effect on its actual sound. This may have been, in part, a result of the good balance between high and low frequencies in its response. On direct comparison with the recordings used for dubbing our test programs, the loss of top-end highs could be heard, of course. However, one did not tend to judge its sound as deficient when heard by itself. With all three machines, the headphone outputs, supposedly designed for 8-ohm phones, did not provide more than a moderate level with medium- to low-efficiency phones.

The TC-127 and TC-160 sounded very much like each other—and like the original program. The low flutter and wide frequency response of the TC-160 would seem to put it in the class of many good reel-to-reel recorders. Although the signal-to-noise ratios of these machines might not seem too impressive on paper, we can report that they all sounded very quiet and rarely added any audible hiss to the programs we recorded on them. All in all, the three Sony recorders represent good values at their respective prices.

For more information, circle 159 on reader service card.

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**It's anything but standard.**

Read what Stereo Review said about our SR-T178DK in their November, 1970 article:

"The sound of the Standard SR-T178DK was unusually good—one of the best of this group of decks."

"The frequency response of the SR-T178DK with 3M Type 271 tape was flatter than average."

"The low-frequency response was better than that of any of the other decks."

"The quiet background came surprisingly close to matching that of the Dolby machines."

Now, we've made it even better by adding an SD/NS (super dynamic noise suppressor system) and a chrome dioxide switch. And we call it the SR-T180DK. Otherwise, it's the same superior unit with the same outstanding features, including automatic off control and ALC defeat switch, in the same handsome, walnut-finished wood cabinet.

The difference between standard and Standard? Come in and hear us out.

---

STANDARD RADIO CORP., 60-09 39th AVENUE, WOODSIDE, N.Y. 11377; 13518 SOUTH NORMANDIE AVENUE, GARDENA, CALIF. 90249.

CIRCLE NO. 59 ON READER SERVICE CARD

STEREO REVIEW
Straight talk about a stylus

Listen carefully and you can still hear some audiophiles refer to the record stylus as... “the needle.” Although we are not about to quibble over semantics, we would like to go on record, so to speak, as observing that the stylus of today bears no more resemblance to a needle than it does to a ten-penny nail. In fact, it is probably the most skillfully assembled, critically important component in any high fidelity system. It must maintain flawless contact with the undulating walls of the record groove — at the whisper-weight tracking forces required to preserve the fidelity of your records through repeated playings. We put everything we know into our Shure Stereo Dynetic Stylus Assemblies — and we tell all about it in an informative booklet. “Visit To The Small World Of A Stylus.” For your copy, write:

Shure Brothers Inc.
222 Hartrey Ave., Evanston, Ill. 60204

CIRCLE NO. 57 ON READER SERVICE CARD
A new concept in tape decks: Superior Sound/Low Noise

They’re so good, TEAC heads carry a life-time guarantee.

Meet the revolutionary Superior Sound/Low Noise (SL) Series by TEAC, the only tape decks in the world designed to fully exploit the superior recording characteristics of the new low noise/high output tapes. As such, they are the most advanced, most professional tape decks that money can buy.

To understand what makes them so different from past tape decks, it is necessary to look at the recording requirements of the new low noise/high output tapes. These tapes require greater recording bias current, higher recording signal level, wider frequency range and residual preamplifier noise to perform to their full potential.

Until now, these requirements were beyond the capability of virtually all recorders. Here’s how TEAC’s industry-leading engineering has changed all that in the new SL Series.

New front panel bias switch

Controlling both bias and recording equalization, this front panel switch reduces noise and hiss to a level below audibility, permits a greatly improved signal-to-noise ratio, wider dynamic range and residual preamplifier noise to perform to their full potential.

( Relation of noise to recording tape )

Run your favorite tape through an SL Series decks and you’ll notice a vast improvement in performance.

New meter level switch

To handle the higher recording signal levels demanded by the new type tapes, this control permits expanded scale operation by an additional 3 dB to ensure a better signal-to-noise ratio and dynamic range expansion. This is TEAC’s new engineering innovation developed exclusively for low noise tapes.

Large expanded scale VU meters

Tied in with the meter level switch, a pair of professional, semi-linear, expanded scale VU meters is used on all SL Series decks. Meter accuracy and sensitivity are assured when recording or playing back at higher recording signal levels.

New high density ferrite heads

SL Series tape decks (6010SL, 7010SL, 7030SL) are equipped with newly developed high density ferrite heads that are so good they carry an original-owner lifetime guarantee. Composed of an extremely hard ferrite material impervious to wear, they permit TEAC engineers to design and manufacture heads to a degree of mechanical precision not possible with laminar construction techniques. This extends all the way down to polishing. With their sparkling, mirror-like finish, the heads prevent dust and tape oxides from adhering to head gap thus assuring continued high frequency response over extended periods of time.

New low noise preamplifiers

Designed for the low noise concept, SL Series tape decks incorporate new record and playback preamplifiers built to professional standards with wide dynamic margins of performance. Selected low noise IC and silicon transistors are used throughout to reduce residual noise to new lows.

These revolutionary SL Series features are available in the following models: 4010SL $499.50, 6010SL $699.50, 7010SL $899.50, 7030SL $799.50.

If you’re ready to make the move to the new generation of recorded sound, audition one of these great new tape decks today at your nearest TEAC dealer.
MUSIC—WITH PICTURES

The first International Cartridge TV Conference took place in Cannes in the summer of 1970. It was attended by more than seven hundred interested parties, representatives of equipment manufacturers, TV and motion-picture producers, lawyers, etc.—the expected group. But out of that sizable crowd there were no more than fifteen representatives of record companies. That information came out at the International Music Industry Conference at Montreux this past summer, and in all the talking at Montreux about video (and there was a lot of it), one feeling was again and again reinforced: the record companies are frightened of the video medium.

First, a little background information. Home video tape or discs is, in the minds of most experts, at least five years away from being a commercially viable medium. There are a multitude of different systems—the CBS EVR system, RCA’s SelectaVision, Teldec’s video disc, different cartridge systems by Sony, Philips, Ampex, and Avco, and a film system by Kodak. None of these systems are compatible with one another.

In addition, there has been, for five or six years now, a promotional oversell on the whole concept of cartridge or disc TV, an oversell on the imminence of it. We were told back in 1965 to warm up our TV sets, things were that close. But to date we still do not have a home system purchased for under $500, we do not have anything resembling national or international standards, we do not have a channel of distribution for software, nor even general agreement as to whether rental or outright purchase of programs by the consumer is the more feasible method. In other words, there are a hell of a lot of details to be worked out yet.

But all this really has little present import for software manufacturers, those who will choose the video repertoire and produce the video recordings. Program material, after all, once recorded, can be made available in any format the market calls for. Nor is it what is frightening the record manufacturers, who, one would think, would be out there taping away at every opportunity, building up a catalog of material for the future. They aren’t.

There are two things scaring the record companies. First of all, they have no previous experience with video and they think that they are going to get trampled on by the motion picture and TV interests, who have the experience (and who also have huge backlogs of previously used material which might prove to have new commercial significance). This, of course, in a favorite term of the day, is a “self-fulfilling prophecy.” The more the record companies stay out of it, the more the field will be dominated by others. In the whole discussion at Montreux of what record companies might bring to the video field, the only generally approved suggestion was distribution, the weakest point of the record business today.

The second thing that scares the record companies about the video field is that they have no idea what to record. Perhaps nothing gives a better idea of the state of the business today than that fact. The companies reason as follows: we have to record today what we might be selling five years from today. Do we know who the superstars of tomorrow will be? No, we don’t. Will today’s big stars be big stars still in five years? Probably not. Even five years from now, initial sales will be slow. Then what do we do?

Gentlemen, I have a whole new kind of music for you, even several new kinds of music, all with video potential. One of them is called opera, and one is called opera, and another is called ballet, and still another is called musical comedy, and still another is called incidental music—incidental, that is, to a video or a dramatic element. Nothing could be more illustrative of the month-to-month vision of record companies today, of their almost total lack of long-range planning, than that they have forgotten that there is some
If you've been saving up for a Pioneer AM-FM receiver you just got a break.

A price break that is. On the Pioneer SX-1500TD and SX-990 AM-FM stereo receivers, two of our most sought-after models.

The versatile SX-1500TD, with a powerful 180 watts, offers the unique microphone mixing facility. It provides six sets of inputs and accommodates three speaker systems. Sensitivity is a superb 1.7 microvolts. The new price, including microphone and walnut cabinet is $359.95. That's a saving of forty dollars off the regular price.

Or, you may wish to see the SX-990. Its 130 watts of IHF power is ideal for the most sophisticated stereo system. Providing many refinements found only in much more expensive units, it's completely flexible with inputs for 2 phono, tape monitor, microphone, auxiliary and main amplifiers. Regularly priced at $299.95, it can be yours for only $269.95, including a walnut cabinet.

Your Pioneer dealer has a limited allotment of these two receivers at these attractive new prices. So visit him now for a demonstration while his supply lasts.

U.S. Pioneer Electronics Corp.,
178 Commerce Road,
Carlstadt, New Jersey 07072

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- Empire 990—world’s most perfectly balanced playback arm.
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CIRCLE NO. 30 ON READER SERVICE CARD

music that has a commercial life span of more than half a year. And nothing could be more illustrative of their lack of understanding of their own strengths and weaknesses than that they cannot see they have it all over the film and television companies in the experience and know-how of recreating these musics for home consumption, and feel instead that their only entrance into this future billion-dollar business and media revolution is through the back door of distribution.

I suppose that what we are talking about here is TV as a medium of adult entertainment. Granted, it isn’t a huge initial market. Granted, St. Janet of the Pimples (as Stan Cornyn of Warner Brothers christened today’s dominant record buyer) will have no interest in a medium that has to offer at first only opera, operetta, musical comedy, ballet, and drama. But it is going to be a long, long time before St. Janet has enough money to buy a cartridge TV unit for herself. In the meantime, it might be beneficial to everyone if someone else could be persuaded to put such a unit in the house. Her parents, perhaps?

Would you pay X dollars to be able to see a performance of Don Giovanni whenever you wanted? Of Swan Lake? Of Annie Get Your Gun? Have you ever seen a performance of Le Sacre du printemps, of Babes in Arms (My Funny Valentine, Where or When, The Lady Is a Tramp, etc.), of Countess Maritza? Could you imagine a performance of Monteverdi’s Poppea videotaped in a Florentine palazzo, of Handel’s Fireworks Music performed in Green Park, London (with the fireworks)? Would you buy it if you could?

I have a strong feeling that someone besides me should be thinking about these things just now. Someone should be out recording them, because as recordings they make economic sense. They almost never get done on television because the costs of production (for a one-time showing, remember) plus the costs of air time are simply too great to present anything not immediately comprehensible to the lowest common denominator. They are never done in films for similar reasons. But to have them permanently on tape, to be able to sell them over a period of ten years or more, to be able, in addition, to lease them for public telecast makes sense to me.

Please, won’t somebody in the record industry stop thinking that he’s being asked to make a movie, a gigantic, multi-million-dollar spectacular of the sort that might put his company in the red permanently? You are being asked to make a record, like many records you’ve made in the past—only it’s got a video track. And for God’s sake, get started before the whole medium gets typecast as a showcase for old Gene Autry flicks and summer reruns of I’ve Got a Secret.
For $79.95 you have a choice of great speakers from AR, Advent, Dyna and Pioneer.

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Listening to music is such a personal thing. So when we recommend that you listen to several brands of speaker systems, it's because we want you to hear the conspicuous differences in their sounds. After listening to other $79.95 speakers, we'll bet you select the new Pioneer CS-E400. Because if you're like most people, you want natural sound, sound that mirrors the original studio recording. The CS-E400 neither augments nor diminishes the quality of the original performance. It provides smooth, uncolored sound, free of distortion. The secret lies in Pioneer's newly developed and unique Free Basing cone. It's used for both the advance design 8-inch woofer and dome-type tweeter.

The compact, 2-way, 2-speaker system is completely versatile. Handling up to 30 watts smoothly and effortlessly, it's ideal for either conventional 2-channel or the new 4-channel stereo. Its handsome, dark walnut cabinet is perfect for wall mounting or bookshelf installation.

So ask your Pioneer dealer to demonstrate the CS-E400 along with other comparably priced speaker systems. Compare their sound quality with our natural sound. There's a difference. And that difference is what high fidelity is all about.

U.S. Pioneer Electronics Corp.,
178 Commerce Road,
Carlstadt, New Jersey 07072
For $279 we give you engineering. For an extra $20 we throw in some furniture.

To call the Rectilinear III a piece of engineering is a rather vigorous understatement. The equipment reviewers of leading hi-fi and other technical publications have gone on record that there's nothing better than this $279 floor-standing speaker system, regardless of type, size or price. (Reprints on request.)

But engineering is all you should expect when you buy this original version of the Rectilinear III. Its cabinet is 35" by 18" by 12" deep, handsome but utterly simple. For $279, you get quality and taste but no frills.

However, if you're the last of the big-time spenders, you can now escape this austerity for an extra $20. Because, for $299, there's the stunning new lowboy version of the Rectilinear III, 28" by 22" by 121/4" deep, with a magnificent fretwork grille.

Mind you, the actual internal volume of the enclosure is the same in both versions. So are the drivers and the crossover network. Only the cabinet styles and the dimensions are different. In the dark, you can't tell which Rectilinear III is which. They sound identical.

That's engineering.

(For more information, including detailed literature, see your audio dealer or write to Rectilinear Research Corp., 107 Bruckner Blvd., Bronx, N.Y. 10454. Canada: H. Roy Gray Co. Ltd., Markham, Ont. Overseas: Royal Sound Co., 409 N. Main St., Freeport, N.Y. 11520.)

Rectilinear III
Igor Stravinsky spent the years of World War I in Switzerland, and though the musical life of much of Continental Europe was at a standstill, he continued to compose. Two of his most colorful and exotic scores, *Les Noces* and *The Song of the Nightingale*, were produced during that period, along with music for piano duet and several song collections. Not surprisingly, the imagination of Stravinsky the expatriate was strongly affected by Russian fables and folk literature. One in a collection of soldier stories by the Russian writer Alexander Afanasiev had made a particular impression on Stravinsky, and in the summer of 1917 he first began to ruminate on a theater piece based on Afanasiev’s tale.

The final form of the libretto was fashioned for Stravinsky by the Swiss writer Charles Ferdinand Ramuz, and the resulting work, *L’Histoire du soldat* (“The Soldier’s Tale”), the two collaborators described as a theater entertainment to be “narrated, acted out, danced.” Wartime conditions dictated economy in performing forces; hence Stravinsky scored the work for a small ensemble that nevertheless ingeniously afforded him the whole range from bass to treble in brass, winds, and strings. Trombone and cornet are the brass instruments; bassoon and clarinet are the winds; and violin and double bass are the strings. In addition, a whole arsenal of percussion instruments contributes color and spice.

In *Expositions and Developments*, one of the books of conversations between Stravinsky and his disciple Robert Craft (Doubleday, 1962), the composer stated:

My choice of instruments was influenced by a very important event in my life at that time, the discovery of American jazz... The instruments themselves are jazz legitimates, too, except the bassoon, which is my substitution for the saxophone... The percussion part must also be considered as a manifestation of my enthusiasm for jazz. I purchased the instruments from a music shop in Lausanne, learning to play them myself as I composed... My knowledge of jazz was derived exclusively from copies of sheet music, and as I had never actually heard any of the music performed, I borrowed its rhythmic style not as played, but as written. I could imagine jazz sound, however, or so I liked to think. Jazz meant, in any case, a wholly new sound in my music, and *Histoire* marks my final break with the Russian orchestral school in which I had been fostered.

The first performance of *L’Histoire du soldat* was given in Lausanne toward the end of September, 1918. The conductor was Ernest Ansermet.

Of the available recordings of the work as a dramatic entity, my preference is for Igor Markevitch’s rendition (Philips 900046) that formed part of the celebrations of the conductor’s fiftieth birthday in 1962. Not only does Markevitch lead a generally more pungent and characterful musical performance than Leopold Stokowski, his one surviving rival among complete versions (Vanguard 71165/6), but he has the advantage of a perfectly inflected narration spoken by Jean Cocteau and an absolutely incomparable portrayal of the role of the Devil by Peter Ustinov. This performance is, of course, in French—as is Stokowski’s, with Madeleine Milhaud as the narrator, Jean-Pierre Aumont as the Soldier, and Martial Singher as the Devil. Vanguard also packages the Stokowski performance in a two-disc album with the same three speaking principals in an English-language version by Michael Flanders and Kitty Black.

Of the several available recordings of the suite that the composer extracted from the work, Stravinsky’s own is far and away the most incisive and arresting, and his ensemble of seven West-Coast virtuosos plays with superb bite and spirit. The performance exists in several alternate couplings: with the composer’s *Pulcinella* Suite (Columbia MS 7093), with the Octet and the Movements for Piano and Orchestra (Columbia MS 6272), and in a five-disc Columbia album (DS 775) that also includes, among other things, his three great early ballet scores. A marvelous performance of the Suite was also once available on an RCA Victor disc (LM 1078) that featured an ensemble drawn from the Boston Symphony Orchestra conducted by Leonard Bernstein. Recorded at Tanglewood in August, 1947, that performance had a quality of sardonic diablerie that remains unmatched. It still sounds amazingly good, and should be a strong contender for reissue in RCA’s Victrola series.

Reel-to-reel tape collectors have available to them only the English-language version of the Stokowski performance (Vanguard C 1166).
We didn’t say this about our new electrostatic headset.

"The really important 'proof of the pudding' is in listening, and here the Isophase showed up as superb. If one were ever skeptical about the use of phones, these should cure him. Lows were solid like those from a large theatre-type speaker system, and highs were smooth and silky, with no raspiness and no harshness. In addition to sounding so good, the Isophase headset was comfortable to wear, even with glasses, for a long period of listening. The kid-like vinyl covering for the circumaural foam pads was as soft as a maiden's kiss—one of those things you can’t hardly ever get any more. Sure, we kicked out the circuit breakers several times, but we simply wanted to see how loud the phones would play. Loud enough, certainly, and even louder than one would consider adequate for comfortable listening. Operation was restored immediately by depressing the circuit-breaker reset buttons on the front panel of the polarizer. On the whole, these phones were well worth waiting for."

C. G. McProud

Audio Magazine did.

The Stanton Mark III Isophase Electrostatic Headset System

- offers frequency response from 20-18,000 Hz ± 2dB, and is designed to work from speaker output terminals of any amplifier of at least 10 watts rms rating.
- Headphones weigh only 15 ounces. Polarizer and headphones: $159.95.

STANTON Magnetics Inc., Terminal Drive, Plainview, New York 11803
FRANK SINATRA
a great vocal artist retires
By HENRY PLEASANTS

The man Rosalind Russell called "the greatest entertainer of the twentieth century" made his last public appearance in June at a star-studded Los Angeles charity gala for the Motion Picture and Television Relief Fund.
O, HE MEANS IT, ALL RIGHT," George London, then Artistic Administrator of the John F. Kennedy Center for the Performing Arts, told me a few weeks after Frank Sinatra had announced his retirement. "We asked him to be one of the Founding Artists in the Center's inaugural season, and the answer was a polite but firm 'No.'"

The former Metropolitan bass-baritone knew that this was not the kind of invitation an active Sinatra would turn down. For London, no further proof was needed that Frank would not be indulging in the "final tour" and "absolutely last public appearance" routine that has kept many great singers, most notably Adelina Patti and Nellie Melba, before the public when all that was left of their art and prowess was the memory.

Sinatra's decision, although certainly unexpected at the moment, cannot have come as too great a shock to those who noted the kind of song he had favored since his fiftieth birthday six years ago. Certain titles speak for themselves: September of My Years, Cycles, My Way, etc. They all have an autumnal flavor, especially My Way, with that sobering line "The end is near."

Others have sung My Way, of course, but only with Sinatra did one have the feeling that Paul Anka's song must have been written for him (which it wasn't), or even that he might have written it himself. It strikes the listener—and it obviously strikes Sinatra too—as pure autobiography. It's all there: the independent spirit, the breezy assumption that "my way" was somehow, and inevitably, an admirable way.

And in Sinatra's case it is pretty hard not to admire it, although the way has been strewn with words and deeds not always admirable. What remains in the public consciousness, when the marriages and divorces, the brawls, the adolescent antics and posturings of the Clan have been forgotten, is the voice, the way with song and audience, and the epic of a young champ who picked himself up off the deck and fought his way back to a far nobler and more enduring supremacy than he had enjoyed as the pied piper of the hobby-sxers in the early and middle Forties.

The face, today, and the voice, too, reflect the severity and the tensions of the struggle. And this makes it difficult, without recourse to old records and to the old photographs and caricatures, to evoke in one's mind's eye, or hear in one's mind's ear, the hollow-cheeked, skinny kid "with jug-handle ears and golf-ball Adam's apple," who, with his light, appealing voice, inspired the term "Swoonatra" and induced in the adolescent female population of America—and not only America—what someone at the time called a "Sinatract.

Those of us over forty-five remember the hysteria as one of the sociological phenomena of the century. Younger readers have seen it duplicated with the Beatles. Many psychological and sociological explanations were offered to account for it—he filled in for the sweetheart away in the service, he spoke for the adolescent against
an uncomprehending adult world, and so on. But there was, I suspect, something more fundamental, something that Sinatra and the Beatles had in common. That “something” was a suggestion of wistfulness, of tenderness, of innocence, of helplessness, and, most telling in Sinatra’s case, of vulnerability. Awaken the mother in young girls, and, given the right sound at the right time, you don’t have to be pied to pipe up a few millions—and inspire the envy and hostility of less fortunate males.

The catch is that it doesn’t last. For Frank Sinatra it lasted about five years, a long time for a fad, but not for a career. He started skidding toward the end of the 1947. There were a number of contributing factors. His bobby-soxers were growing up. The public’s taste in songs was changing, and new singers were coming along to sing the new songs: Tony Bennett, Perry Como, Vic Damone, Billy Eckstine, Eddie Fisher, Dick Haymes, Dean Martin, Johnny Ray, and Mel Tormé. And the old master, Bing Crosby, was, of course, still holding his own.

To make matters worse, Frank was having throat trouble. This was hardly surprising when one learns that in 1946 he had done as many as forty-five shows a week, averaging eighty to one hundred songs a day. At the Copacabana, in the spring of 1950, his voice failed him in the middle of a show. He had to cancel the engagement. And as if that were not enough, he was at the same time romantically involved with Ava Gardner, and his first marriage was on the rocks. By the end of 1952 he was without a movie contract, without a recording contract, and without a management.

The road back, as all the world knows, began with his non-singing role as Private Maggio in the movie From Here to Eternity (1953), which revealed the former singing sailor of such tawdry ephemera as Ship Ahoy and Anchors Aweigh as an accomplished actor. At about the same time, his move from Columbia to Capitol Records wrought the transformation of the swooner into the singer (the older sense), or at least a swinging balladeer. The frail, pleasing, moon-struck boyfriend was reborn as the confident, easy-riding, hard-driving, irresistible, and unchallenged Chairman of the Board, addressing himself now to an audience of all ages and both sexes.

It has been said that Sinatra reversed the usual procedure by moving from pop to jazz. But it may be doubted that he changed all that much. He had, after all, sung with Harry James from June 1939 until the end of that year and with Tommy Dorsey from January 1940 until September 1942. His early models were jazz musicians, notably Tommy Dorsey, of whom he has often said: “He acknowledged the influence of Billie Holiday. And, according to Tony Bennett, both he and Frank were listening carefully to Mabel Mercer.

What changed was not so much the singer as the song and the backing. Toward the end of his contract with Columbia he had complained about the kind of song material he was getting, and some sides he cut at that time with backings by Sy Oliver and Phil
Moore suggest that he sensed, even then, the need for livelier, more imaginative arrangements than those he had been getting from Axel Stordahl.

With the move to Capitol Records, Stordahl gave way to Nelson Riddle, Billy May, and Gordon Jenkins. Riddle, especially, according to Sinatra’s biographer Arnold Shaw, was “the major architect of the swinging Capitol Sinatra.” The languishing strings were not banished, but they were made to fit into a breezier, more buoyant context, and on up-tempo numbers the backing was big-band. A vocalist who could manage both the melancholy In the Wee Small Hours and the exuberant Anything Goes was predestined for that moment in American musical history when swing left the dance floor and moved in behind the singers.

Also new was the fact that Sinatra was now listened to as a singer. During his earlier incarnation people were more concerned with what he was doing to the bobby-soxers than with what he was doing with his voice. As far as singing was concerned, he was often regarded as a no-voice freak. Even with the earlier crooning styles of Rudy Vallee, Russ Columbo, and Bing Crosby fresh in their ears, most listeners found it impossible to take this gentle breathing and sighing, moaning and mooning (as it seemed to them) seriously as singing (although, oddly enough, RCA did bring out, as early as 1950, in its “Treasury of Immortal Performances” series for popular collectors, a 10-inch LP containing two songs each by Sinatra, Columbo, and Crosby).

Actually, what has been so admirable in Sinatra’s singing in the past twenty years can be heard, today, in his earliest records. Voice and style were not so mature then, of course, not so rich in the subtleties and refinements of phrase and diction, nor in the variety of vocal coloration. The voice was lighter, lacking the later dark warmth of the middle and lower registers. And the upper notes were sometimes ill-focused. But all the elements that subsequently combined to make him one of the greatest singers of the century were present, and can be heard, on the records he made with Harry James and Tommy Dorsey.

The one man who, from the very beginning, sensed his true worth and potential was—Frank Sinatra. Harry James, back in 1939, years before anything big happened, told a Down Beat staffer: “He considers himself the greatest vocalist in the business. Get that! No one ever heard of him. He’s never had a hit record. He looks like a wet rag. But he says he’s the greatest!”

E. J. Kahn, in a New Yorker profile in 1946, noted: “He regards his voice as an instrument without equal, and although he tries scrupulously to be polite about the possessors of other renowned voices, he is apt—if the name of a competitor comes up abruptly in conversation—to remark, ‘I can sing that son of a bitch off the stage any day in the week!’”

And Harry Meyerson, the RCA Victor a-&r man who supervised the two sessions in 1942 when Frank recorded Night and Day, The Night We Called It a Day, The Song Is You, and The Lampighter’s Serenade with the Dorsey band, recalls: “Frank was not

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STEREO REVIEW

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The time is 1935, the place the New York broadcasting studios of CBS radio, and lined up to be photographed during their appearance on Major Bowes' Amateur Hour are the members of the singing Hoboken Four: Frank Tamburro, Jimmy Petro, Patty Prince, and Frank Sinatra. As star of the Lucky Strike Hit Parade, Frankie became the idol of the bobby soxers—one of whom zeroes in on her target at a Chicago stage appearance in 1946.

Sinatra with his first Academy Awards Oscar in 1946 (with George Murphy, then President of the Screen Actors Guild). The Pied Pipers appeared with Sinatra on a bill at the New York Paramount that same year; a decade later Sinatra was back at the Paramount with Tommy Dorsey, with whose band he was vocalist in the Forties.

Sinatra worked very successfully with arranger-conductor Nelson Riddle during his days with Capitol Records, and he enjoys a splendid rapport with Dean Martin, based on sympathies that are perhaps part passano, part performer.
Frank Sinatra with his wife Nancy, Frank Jr., and young Nancy at a Stork Club outing in 1947. The same group ended up before the camera in 1963 at the Las Vegas singing debut of young crooner Frank Sinatra, Jr.

Frank and daughter appeared together in the CBS TV spectacular "Frank Sinatra—A Man and His Music" in 1965. Frank Jr. poses with his paternal grandparents in front of their New Jersey home (center), and father congratulates son after his Las Vegas opening (right).

Frank celebrates a recent birthday with his mother and with daughters Nancy and Tina. Right, with daughter Nancy at her 1970 wedding to Hugh Lambert in Cathedral City, California.
like a band vocalist at all. He came in self-assured, slugging. He knew exactly what he wanted. Most singers tend to begin with the humble bit. At first they’re licking your hand. Then, the moment they catch a big one, you can’t get them on the phone. Popularity didn’t really change Sinatra. He started out by having a good opinion of himself. On that first date he stood his ground and displayed no humility, phoney or real.”

Musicians were quicker than others to sense the musical genius behind the charisma. Jo Stafford, for instance, who was with Dorsey as lead singer of the Pied Pipers (little knowing that her new colleague would soon become the greatest pied piper of them all), remembers his first appearance with the band: “As Frank came up to the mike, I just thought ‘Hmmm–kinda thin.’ But by the end of eight bars I was thinking, ‘This is the greatest sound I’ve ever heard.’ But he had more talent. Call it you know he couldn’t do a number badly.”

And John Garvey, now on the faculty of the University of Illinois and director of the university’s famous jazz band, was playing violin with the Jan Savitt orchestra in 1943 when Sinatra did some dates with them. “The musicians were skeptical,” he recalls, “until one day, at rehearsal, Sinatra and the orchestra were handed a new song. Sinatra just stood there with the lead sheet in his hand, no music and director of the university’s famous jazz band, was playing violin with the Jan Savitt orchestra in 1943 when Sinatra did some dates with them. “The musicians were skeptical,” he recalls, “until one day, at rehearsal, Sinatra and the orchestra were handed a new song. Sinatra just stood there with the lead sheet in his hand, no humility, phoney or real.”

What stumped the less perceptive, and encouraged them to dismiss Sinatra as a singer, were, paradoxically, just those characteristics in his singing that brought him closer to the art of the classical singer than any other popular vocalist had ever come. What unsophisticated listeners, brought up on Rudy Vallee and Bing Crosby, heard as “mooing” was, in fact, the long line, the seamless legato of bel canto. And Frank knew it.

“When I started singing in the mid-1930’s,” he wrote in an article, “Me and My Music,” for Life magazine in 1965, “everybody was trying to copy the Crosby style—the casual kind of raspy sound in the throat. Bing was on top, and a bunch of us—DickTodd, Bob Eberly, Perry Como, and Dean Martin—were trying to break in. It occurred to me that maybe the world didn’t need another Crosby. I decided to experiment a little and come up with something different. What I finally hit on was more the bel canto style.”

Frank was actually working closer to bel canto than he knew, or than has been generally acknowledged by others to this day. Con-sider, for example, the following:

\[\text{Let him take care that the higher the notes, the more necessary it is to}\]
\[\text{touch them with softness, to avoid screaming.}\]
Let him learn the manner to glide with the vowels, and to drag the voice gently from the high to the lower notes.

Let him take care that the words are uttered in such a manner that they be distinctly understood, and not one syllable lost.

In repeating the air, he that does not vary it for the better is no great master.

Whoever does not know how to steal the time in singing [tempo rubato] is destitute of the best taste and knowledge. The stealing of time in the pathetic is an honorable theft in one that sings better than others, provided he makes a restitution with ingenuity.

Oh! How great a master is the heart!

If Frank Sinatra were ever to conduct master classes for aspiring vocalists, he might well address his students in just this fashion. Not in those words, to be sure. The language is far from his.

The advantage of singers, and the admonitions, recouched in his own North Jersey American, might stand as a tidy summation of the fundamental principles, the distinguishing characteristics, and even the specific devices of his own vocal art.

It is the more remarkable, therefore, and certainly the more significant, that the counsel set forth above, so pertinent to, and so admirably exemplified in, the art of this utterly twentieth-century and so utterly American man, should have been offered by Pier Francesco Tosi, of the Philharmonic Society of Bologna, in a book, Observations on the Florid Song, first published in Bologna in 1723.

Tosi's counsel does not cover everything in Sinatra's singing that looked back to bel canto. He was a master of appoggiatura (the insertion of an extra note between two other notes to give expressive emphasis and elegance to a cadence), knowing not only when and how to use it, but also when not to use it. His recording of One for My Baby offers many examples of both. He employed the slur and portamento (sometimes referred to as glissando in critical assessments of his singing) with exemplary propriety. A lovely example of portamento is the downward glide from G sharp to B on "wonderful sight" in the Capitol recording of I'll Never Smile Again.

The range he found a greater variety of shading and color and nuance. One cannot imagine Bing accomplishing the stunning

I Didn't Know What Time It Was 25 Sep. 57 W 912
I Don't Know Why 30 Jul. 45 CL 743
I Dream of You 1 Oct. 44 CL 1136
I Fall in Love Too Easily 1 Dec. 44 HS 11205
I Fall in Love with You Everyday 10 Mar. 48 CB 39459
I Get a Kick Out of You 6 Nov. 53 W 1432
I Get a Kick Out of You 10 Aug. 42 F 1009
I Get Along Without You Very Well 17 Feb. 55 W 581
I Got a Gift I Love 31 Oct. 48 CO 37231
I Got Plenty O' Nothing 19 Feb. 56 W 803
I Gotta Right to Sing the Blues 6 Mar. 62 W 729
I Guess I'll Have to Change My Plans 20 Nov. 56 W 903
I Guess I'll Have to Dream the Rest 27 Jan. 41 LPM 1569
I Guess I'll Have to Dream the Rest 9 Oct. 50 CL 935
I Hadn't Anyone Till You 20 Nov. 61 F 1004
I Have but One Heart 30 Nov. 45 CS 9372
I Have Dreamed 19 Feb. 63 F 1009
I Haven't Time to Be a Millionaire 10 Apr. 40 RCA 36806
I Hear a Rhapsody 7 Jan. 52 CL 1359
I Heard the Bells on Christmas Day 16 Jan. 64 F 2007
I Left My Heart in San Francisco 27 Jul. 62 CO 20107
I Like the Sunshine (W/Duke Ellington) 12 Dec. 67 R 1024
I Like to Lead When I Dance 2 Apr. 64 F 2021
I Love for Myself a Letter 30 Nov. 60 CL 1301
I Love for Myself a Letter 12 Apr. 60 W 729
I Love For You 30 Jul. 46 HS 1177
I Love For You 30 Nov. 56 W 903
I Love You 10 Apr. 62 F 1005
I Never Know 19 May 61 F 1002
I Only Had a Match 27 Aug. 45 HS 11390
I Only Have Eyes for You 3 Oct. 62 F 1008
I See It Now 14 Apr. 65 F 1001
I See Your Face Before Me 16 Feb. 56 W 581
I Should Care 6 Mar. 45 CO 36791
I Think of You 18 Sep. 41 RCA 27701
I Think of You 1 May 57 W 855
I Thought About You 9 Jan. 56 W 653
I Tend Myself a Letter 26 Jan. 41 RCA 27317
I Wanna Be Around 9 Apr. 61 W 1012
I Want to Thank My Folks 15 Dec. 48 CO 37521
I Wont Down to Virginia 25 Nov. 47 CO 38163
I Who Have a Happy Tune 22 Mar. 51 CL 1379
I Will Drink the Wine 26 Oct. 70 R 1033
I Will Wait for You 16 Nov. 66 F 1020
I Wish I Were in Love Again 20 Nov. 56 W 803
I Wish You Love 10 Jan. 64 F 1012
I Wished in the Moon 30 Nov. 65 R 1018
I Won't Dance 2 Oct. 62 F 1008
I Would Be Love (Anyway) 14 Jul. 69 R 1031
I Wouldn't Christmas 12 Aug. 68 R 1028
I'd Know You Anywhere 17 Sep. 40 CL 800
I'd Love Love Again 14 Jul. 49 CO 38572
I Forget You 30 Dec. 47 CL 1398
I Had You 15 Nov. 62 W 1083
I Have Dreamed 17 Feb. 55 W 581
I Have My Eyes on You 11 Aug. 47 HS 11705
I Have You 11 Apr. 68 W 1083
I Had You 30 Nov. 56 W 903
I Had You 12 Jun. 62 F 1088
I Loved You 1 May 45 CL 6
I Only Had a Match 26 Nov. 48 CO 36803
I Slept a Kid 4 Oct. 47 CL 2913
I've The Last Thing I Do 8 Mar. 56 N/R
I Still Miss You 21 Sep. 61 CL 935
I've But A Dream 14 Nov. 44 CS 9724
I've But A Dream 11 Dec. 57 W 982
I've Never Been to the Moon 20 Feb. 63 R 1019
I've Never Come to Me 31 Jan. 67 R 1021
I've Please 22 Jun. 43 CO 36879
I've Stubbed My Toe on the Moon 4 Jan. 68 CO 4117
I'll Be Around 8 Feb. 55 W 581
I'll Be Home for Christmas 17 Jul. 57 W 894
I'll Be Seeing You 15 Dec. 40 LPM 1332
I'll Be Seeing You 21 Mar. 61 N/R
I'll Be Seeing You 1 May 61 F 1003
I'll Be Some Day 11 Sep. 65 W 1767
I'll Buy That Dream A.C. Car. 186
I'll Follow My Secret Heart 12 Jan. 62 F 1006
I'll Make Up for Everything 22 Oct. 47 CO 39885
I'll Never Be the Same 4 Mar. 55 W 581
I'll Never Let a Day Pass By 23 May 41 RCA 27461
I'll Never Smile Again 23 Mar. 40 RCA 26628
I'll Never Smile Again A.C. Car. 186
I'll Never Smile Again 14 May 59 W 803
I'll Never Smi le Again 11 Oct. 65 2F 1016
I'll Only Miss Her When I Think of Her 23 Aug. 65 F 1015
I'll Remember April 12 Sep. 61 W 1767
I'll See You Again 17 Jul. 57 W 894
I'll Take Tallback 15 Feb. 42 RCA 27680
I'll Take Tallback 30 Jul. 42 R 1023
I'm a Fool to Want You 27 Mar. 61 CS 9312
I'm a Fool to Want You 23 Feb. 65 CO 39479
I'm a Fool to Want You 1 May 57 W 853
I'm Beginning to See the Light 16 Apr. 62 F 1005
I'm Getting Sentimental Over You 21 Mar. 61 N/R
I'm Getting Sentimental Over You 1 May 61 F 1003
I'm Glad There Is You 9 Aug. 47 CL 6
I'm Gonna Live Till I Die 13 Dec. 54 W 1184
I'm Gonna Sit Right Down and Write Myself a Letter 7 Apr. 54 W 1249

STEREO REVIEW

There was a time when merely being seen with Frank Sinatra was enough to make a girl grist for the rumor mill. Dancing actress Juliet Prowse (left) was reportedly engaged to the singer, but then there were all those dates with Jill St. John (center), Natalie Wood, and...

Film actress Mia Farrow (now Mrs. André Previn) was much in Frank's company (and therefore in the news) until she became his wife in 1966.
Frank in New York with Mayor LaGuardia in the Forties, with President John F. Kennedy at the 1961 inaugural Ball in Washington, and on the set in Hollywood during that famed visit of Russia's late Nikita Khrushchev (on balcony) that failed, to the Premier's disappointment, to include Disneyland.

Frank visiting with Princess Grace of Monaco, welcoming Princess Margaret as she arrived at Royal Festival Hall in 1971 to attend the first of two Sinatra charity concerts. Right, Sinatra, Crosby, and Martin: if not a dynasty, at least an Establishment.

An irregular meeting of the Holmby Hills Rat Pack in 1956: clockwise around the table, head rat Humphrey Bogart, producer Sid Luft, den mother Lauren Bacall, Judy Garland, New York model Ellie Graham (not a regular), agent Jack Entratter, the late Mike Romanoff (behind Sinatra), Mrs. Romanoff, and Mr. and Mrs. David Niven. The Clan, another informal organization boasting Sinatra membership, appeared in the film Ocean's 11: around S. Davis, Jr., are Sinatra, Martin, Lawford, and Bishop.
phrase carryover in Sinatra's recordings of *Put Your Dreams Away*, where Frank takes a breath between "make" and "a new start" before the sixteenth measure and carries tune and text over into the release, or bridge, breathing again after "when your dreams at night" at measure 18.

But the intimacy of his way with song and listener was something he owed to Bing and to Bing's way with a microphone. It may well be, of course, that by the time Sinatra came along, what Crosby—and Rudy Vallee and Russ Columbo—had minted was common currency. A young singer could easily be forgiven in 1940 for taking it all for granted. This was the singer's world he had grown up in. He knew no other.

Where Sinatra was probably most original—and it had a lot to do with the shaping of his mature style—was in his use of the microphone. Even as a young singer doing obscure and ill-paid dates in his native New Jersey, he carried his own sound system with him. He remembered him from his earliest photos, "the hands tightly gripping the microphone," as E. J. Kahn put it, "as if too frail to stand alone." Frank didn't need the mike to hold himself up. He may not even have needed it to make himself heard. To him it was—or became—an instrument on which he played as an instrumentalist plays a saxophone or a trombone.

That, at least, is the way the he thought of it, and I have heard Tony Bennett speak of it in exactly the same way. As Frank and Tony saw it, or heard it, where Bing Crosby had seemed to be *overheard* by the microphone, they played—or sang—*on* it, developing great skill in moving toward it, or backing away from it, learning to turn the head away when snatching a breath, avoiding popping consonants, and so on. With the development of the hand mike with lead wire, they could make the mic do the moving, and use it more effectively than ever.

I know that they and, doubtless, other singers think of the mike as an instrument; but I suspect that they may be deceiving themselves. I tend to think that the mike simply revealed to them what they might already have learned to create and control them. A young singer could easily be forgiven in 1940 release, or bridge, breathing again after "when your dreams at night" at measure 18.

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Johnny Mandel, who did the backings for "Ring-a-Ding Ding," the first of Sinatra's albums under his own Reprise label in 1961, was unwittingly echoing Vic Damone when he told me: "Frank's a kamikaze singer, a pressure singer. He's not a good reader, but he has a remarkable ear. He hears an arrangement once through, and he has it. And he has a marvelous feeling for what's right in lyrics and phrasings. He's not even a good singer, just a great artist; and he's well aware of his vocal shortcomings. And that's why he makes everything in one take if possible. He can't do the take-after-take routine."

Sinatra has, indeed, been aware of his vocal shortcomings, but he has also been very much aware of how they could be disguised or turned into virtues. And this has been, to a large extent, what his "way" was all about. Characteristic of that way was the lightness of the breath on the vocal cords, which contributed to a markedly "forward" vocal production. It also contributed to his exemplary enunciation and, probably, to a vocal longevity astonishing in a singer who, by his own admission, drank too much, smoked too much, and slept too little. I suspect—I do not know—that in Sinatra's case, as in that of others among the best popular singers, enunciation and a forward production have gone together, that the one has encouraged and facilitated the other.

What has been most singular in Sinatra's vocalism, however, is his handling of the tricky "passage" from the middle to the upper register—in his voice, the pitches C-sharp, D, and E-flat. The voice itself is a typical Italian light baritone with a two-octave range from G to G, declining, as it darkened in later years, to F to F, and with greater potential at the top than he was commonly disposed from G to G, declining, as it darkened in later years, to F to F, and sometimes did, depress the larynx and "cover," as I hear it, a charming example.

The avoidance of any impression of art was imperative to Sinatra's style, and his accomplishment in avoiding it has been the most compelling evidence of his stature as an artist. He wasn't presenting himself as an artist. He was presenting himself as, for example, Frank Sinatra, the kid from Hoboken, with a lot of hopes, a lot of problems—ethnic, social, physical, and sexual—and a lot
And a few of the movies: with Gene Kelly in On the Town (1949), Montgomery Clift and Burt Lancaster in From Here to Eternity (1953), and with Der Bingle singing Cole Porter’s Well, Did You Evah? in High Society (1956).

Sinatra, who was briefly (like everyone else) seen in Around the World in 80 Days (1956), on the set with director Michael Anderson and producer Mike Todd, with Sophia Loren in The Price and the Passion (1957)—it’s about this big gun—and with Shirley MacLaine and Maurice Chevalier in Can-Can (1960).

Frank’s guests on the set during the making of The Jester Is Wild (1957) included the late Joe E. Lewis (it was his story) and Jerry Lewis (no relation). Above, Ralph Meeker gets it from Frank Sinatra in The Detective (1968) in a dramatic scene reminiscent of some last well-documented public ones.
of frustrations, disappointments, and hangups. More than most singers, he has lived the life he sang about.

There are many who have loved and admired him as a singer but were put off by his lurid, widely (and wildly) publicized personal life and, inevitably, by some of the parts he played in movies. His generosity, his charity, his loyalty to family and friends, and his genuine concern for the underdog could not obliterate the image of one whose public behavior was too often both ill-considered and inconsiderate.

But in his case, I am satisfied, there was no separating art and artist, despite the fact that in musical matters his performance was always governed by fastidious taste. A different upbringing, or a successful psychoanalysis, might have made him a happier man, an easier man to live with and be with. But it would probably have destroyed what Arnold Shaw has described so aptly as “that constant counterpoint of toughness and tenderness.” It would have destroyed him as an artist just as a formal musical education might well have destroyed him as a musician.

“Being an 18-karat manic-depressive, and having lived a life of violent emotional contradictions,” he said in a "Playboy" magazine interview in 1963, “I have an over-acute capacity for sadness as well as elation... Whatever else has been said about me personally is unimportant. When I sing, I believe, I'm honest... You can be the most artistically perfect performer in the world, but an audience is like a broad—if you're indifferent, Endsville!”

His personal saga has always reminded me of other exceptional musicians whose genius was inseparable from personal traits, habits, and predilections at odds with social convention—Beethoven, Liszt, and Wagner; Maria Malibran and Wilhelmine Schroeder-Dervient; Edith Piaf, Billie Holiday, Hank Williams, and Al Jolson.

With all of them—except, possibly, Jolson—Sinatra shared the habit—or requirement—of creating a personal scenario embodying the emotional and social stresses and crises which he could translate into song. And with Jolson he shared the fate of being apparently unable to achieve personal fulfillment anywhere but on the stage, telling his story to a live, sympathetic, and adoring audience. Which is why, even in the recording studio and on the sound stage, he wanted and needed, as Jolson did, a studio audience.

A fellow movie actor, who has preferred to remain anonymous, said of him recently: “The only thing he knows for sure, for absolute sure, is that he's got a god-given talent. He can sing like nobody else. And that's when he's happiest, standing up there, holding an entire audience in sway. That's when he gets the love back; the love he thinks he should have all the time.”

It was this sense of personal relationship between singer and listener that distinguished him from any other singer of his generation. He was superior as a technician, too, and notably original. But other singers could ape his technical accomplishments and innovations, and just about every male popular singer of the past quarter-century, barring rock singers, has done so. But they
One I Love Belongs to Somebody Else, The
One Love
One Note Samba
One I Love Belongs to Somebody Else, The
Put Your Dreams Away
Put Your Dreams Away
Prisoner of Love
Pretty Colors
Poor Butterfly (w/Duke Ellington)
Polka Dots and Moonbeams
Polka Dots and Moonbeams
Please Don't Talk About Me When I'm Gone
Please Be Kind
Senorita
Second Time Around, The
Second Time Around, The
Saturday Night
Same Old Song and Dance, The
Right Girl for Me, The
Remember Me in Your Dreams
Rain in My Heart
Rain
Since Marie Has Left Paree
Should I
She's Funny That Way
She's Funny That Way
She's Funny That Way
She's Funny That Way
Should I
Should I
Should I
Silent Night, Holy Night
Silent Night, Holy Night
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Silent Night, Holy Night
Silent Night, Holy Night
Sinatra Was Never Happy, it has been reported, nor has he, in his own opinion, ever sung better, than in the series of charity concerts he gave in London in May and October of 1970. Single seats were priced at more than $100. Even at that price, there was a lively black market for tickets. Guy Roberts, in the Manchester Guardian, noted that "the man produced a distillation of excitement, a combination of vocal ingenuity, schmalz, insolent self-confidence and sheer theatricality which no other popular singer could match." And remembering a scalper who had offered him $240 for his ticket, he concluded: "That tout really had no chance. Some things money can't buy."

Not even such perceptions, however, get to the core of the matter. A letter from Mrs. Edna Haber, 8 Alverstone Road, Willesden, London N.W. 2, to the London Evening Standard did: "Sad, sad to learn that the prodigios, phenomenal Frank Sinatra has called a halt. I was one of those adoring teenagers many years ago, and now, as a grandmother, I feel he is still the greatest. With the announcement of his retirement I begin to realize how quickly the years have passed. The time I had his pictures pinned up on my bedroom wall, owned his every record, are the memories of those youthful teenage years which suddenly, today, seem a little more distant. Never can there be another Frank Sinatra. My collection of his records is even more treasured now. Thanks, Frank, for wonderful memories and the pleasure you have given me until this day."

Old Pier Francesco Tosi knew what he was talking about: "Oh! How great a master is the heart!"

Henry Pleasants is London Editor of Stereo Review, a regular correspondent for the Paris Herald Tribune, and author of a number of books on musical subjects, among them The Great Singers—From the Dawn of Opera to Our Own Time (1968).
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<th>Song Title</th>
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<td>3 Things</td>
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<td>There but for You</td>
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<td>There'll Never Be Another You</td>
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<td>That's No Business Like Show Business</td>
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<td>That's Nothing Missing</td>
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<td>That's Three Fish Things</td>
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<td>They Came to Cordova</td>
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<td>They Can't Take That Away From Me</td>
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<td>This Is A Love</td>
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<td>This Is My Song</td>
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<td>This Is the Beginning of the End</td>
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<td>12 Mar 40</td>
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<td>This Love of Mine</td>
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<td>This Nearly Was Mine</td>
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<td>This Town</td>
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<td>This Was My Love</td>
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<td>There Is That Sunshine</td>
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<td>There Is Your Heart</td>
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<td>That Lucky Old Sun</td>
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<td>That Old Black Magic</td>
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<td>Then Suddenly, Love</td>
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**Note:** The table lists various song titles and their recording and release dates. For more detailed information, please refer to the source material.
FOR MANY music lovers, myself included, the quest for the realistic reproduction of music in the home takes on an almost religious quality, and new technical developments sometimes seem to assume the aspect of revelation. For example, the most compelling part of the news about quadrasonics for us is the promise it holds for making possible another step toward the goal of perfect "recreation" through recordings of an original sonic event, the ability to reproduce an exact replica of the original sound waveforms that strike our eardrums when we listen to a live performance.

In two previous articles, "The Dynamic Range of Music" (June, 1968) and "The Sense of Hearing" (September, 1969), I looked briefly into the feasibility of "true-fidelity" recording, and also examined some of the curious aspects of how the ear turns objective phenomena like sound waves into the subjective experience of music. While doing the research for those articles, I met recurring references to a 1949 British Broadcasting Corporation study by Somerville and Brownlees. These authors reported that the preferred maximum sound level for reproduced music was 78 dB for the general public, 88 dB for musicians, and 90 dB for male program engineers. (References to decibels here all refer to a standard level with 0 dB as the threshold of hearing and about 120 dB as the threshold of feeling.)

On this same subject of loudness, RCA Labs' Harry F. Olson, reporting on later tests, concluded that the average listener in the home operates a sound-reproducing system at a peak sound-pressure level of 80 decibels, whereas the peak sound-pressure level of the sound of a live performance in a concert hall is about 100 decibels.

Just as quixotic as any other seeker after the Grail of Perfect Fidelity, I was not content to rest on these most reputable "secondary sources." I wanted to see for myself what data I could accumulate by making a highly accurate stereo recording using a pair of microphones on stage while simultaneously making precise measurements of the frequency responses and volume levels as heard at the listener's concert-hall seat. The second part of the project was to attempt to reproduce that recording in my home so as to obtain the original measured response characteristics at my chair in my study. Thanks to help from STEREO REVIEW and the generosity of many manufacturers of test equipment and audio components, I've been able to engage in just such an investigation. My observations do not, of course, radically contradict previous investigations, but like-minded enthusiasts may be interested in an account of my adventures along the road, and my findings as to the present state of the art (and science) of sound reproduction.
The first question to be decided was what musical material to use as the basis for my live-and-recorded experiments. Over the years I've made (with artists' permission) more than one hundred fifty "master tapes" of performances by professional musicians, from soloists to orchestra and chorus. But since none of these recordings were monitored by test equipment while being taped, they lacked "reference calibration" of the exact frequency response and levels of the original. (The need for such calibration will become clear shortly.)

Fortunately, the answer as to what to record as a reference lay close at hand. Lake Erie College, where I was then teaching, has an exceptionally fine pipe organ located in an acoustically superb 900-seat auditorium. And if the organ is the King of Instruments, my good friend and faculty colleague, David Gooding, also organist for the Cleveland Orchestra, is certainly a Crown Prince among players. David and I had collaborated before in producing one commercial release, and the tapes we made during our tests are being considered for a second and third.

Though most of my previous recordings had been made on top-grade audiophile equipment, this project seemed to call for even more precision. Crown International graciously consented to assist by lending me one of their fine CS-822 recorders, complete with case and a full complement of accessory preamplifiers. This allowed me to make 15-ips half-track stereo master tapes with a signal-to-noise ratio in excess of 60 dB. Similarly, Altec was good enough to volunteer a pair of their excellent M-51 professional capacitor microphones. So equipped, I could face the recording task without trepidation.

But even the best of master tapes made with such top-notch equipment wouldn't tell me exactly how loud the original sound in the hall was, thereby enabling me to calibrate my playback system to duplicate the sound level at home. A high-quality, conventional Sound Pressure Level (SPL) meter would have given some indication, but it would by no means have been definitive. In the first place, as we know, meter needles, because of their mechanical inertia, tend to underestimate the very brief musical peaks of greatest intensity: they just don't respond quickly enough. And there is a second problem with using an SPL meter that is even more serious.

Since a sound-level meter does not indicate the frequencies to which it is responding, but lumps them together to provide a composite-strength reading, I would have had no way of knowing how the acoustic environment of my listening room and the inevitable frequency-response irregularities of my equipment were affecting the frequency distribution on the tape. Even if the sound level was measurably the same as the original performance in my home, the frequency balance could be somewhat different. Under normal home listening circumstances, that might not matter subjectively, but when one is trying to objectively duplicate the original musical event, some means of monitoring the frequency balance heard in the hall—and adjusting the frequency balance in the home to match it—was needed.

What was required in the recording hall was a sound-measuring device that could read out the sound-pressure levels of many different frequencies separately and simultaneously, permitting me to "calibrate" the recording and accordingly adjust the subsequent playback to match. Such an instrument, known technically as a "Real-Time Analyzer" is available from several companies. One manufacturer, Hewlett-Packard, was generous enough to loan me not only their basic Model 8054a, but an accessory 8060a (to extend the analyzer's response to well below audibility) and a wide-range calibrated microphone as well. (I had to increase my homeowner's insurance while I had this equipment, for its total cost is over $13,000!)

Without question, Hewlett-Packard's analyzer is the most remarkable piece of electronic gear I have ever used, and without it my attempt at facsimile recording/reproduction would have been futile. The device separates the incoming signal from a calibrated microphone or other source into twenty-four banks, each 1/3-octave wide, with center frequencies from 50 to 10,000 Hz. It's as if one had twenty-four separate sound-pressure-level meters, each tuned to a different band of frequencies, and operating all at once. The H-P Analyzer goes a step further than this, however, by displaying all the bands simultaneously in vertical columns on the face of a single cathode-ray tube so that at a glance one can monitor the relative strengths of the different portions of the frequency spectrum and actually see the shape of the audio curve. Further still, at any time, by touching the HOLD button, one can freeze the pattern on the screen and "read out" the individual values for each band not only on the scope face, but on an electronic numerical indicator accurate to 0.1 dB. Thus, one can at leisure copy down the exact sound-pressure level of any 1/3-octave segment over almost all of the audio band. In addition, although a conventional sound-level meter does not respond quickly enough to catch "onset" and other transients that embody much of the information that our ears use to discriminate between musical instruments, the H-P Analyzer suffers from no such limitation. Simply press the button marked PEAK, and each of the twenty-four channels will react precisely within four thousandths
of a second. Again, since the eye won’t register such rapid fluctuations, the scope display automatically freezes at the maximum value of the twenty-four different peaks reached. For example, one can play a desired chord, and watch all the fundamentals and the harmonics reach and freeze at their maximum values. By using the digital readout provision, one can then copy down in decibels the exact amplitude values. By using the digital readout provision, one can then copy down in decibels the exact amplitude values. By using the digital readout provision, one can then copy down in decibels the exact amplitude values. By using the digital readout provision, one can then copy down in decibels the exact amplitude values. By using the digital readout provision, one can then copy down in decibels the exact amplitude values.

It can now probably be easily seen how I could assure myself that the sound levels and frequencies heard at home would be the same ones experienced in the concert hall. As I made the master recordings, I also set up the H-P Analyzer in the hall, its own microphone located at ear level in what experience had shown me to be the best seat in the auditorium. Then, during a specific short passage of the music, I switched on the PEAK reading function of the instrument, put it in HOLD at the end of that section, and wrote down the value registered for each 1/3-octave band. Upon returning home I set up the analyzer again, with its microphone located at my listening chair, and then, by playing back the same passage of the music and using the same procedure, I could see exactly how close the reproduced amplitudes and frequency distribution were to those that had been present in the concert hall. Thus, my master tape was “calibrated” for what it should reproduce in sound wherever it was played.

For my “calibrated” music I selected the concluding seconds of one of the works Mr. Gooding and I were recording for possible commercial release: the fugue on B-A-C-H by J. L. Krebs (J. S. Bach was Krebs’ organ teacher). This piece, though it gets very loud, does not quite reach the maximum acoustic output of the organ or of a symphonic ensemble.

Since all the measuring equipment was at hand, I decided to look into a couple of other questions as well as sound pressure levels. As an indication of the loudest sound a listener in at least this hall was likely to hear, I asked David Gooding to select an appropriate chord, and he chose the climax of the Saint-Saëns Organ Symphony (minus the orchestra, of course, in our case). The peak levels reached throughout the frequency spectrum (up to 10,000 Hz), as “heard” from the best seat in this particular house, are shown in the solid (fff) curve of Fig. 1.

I then asked the organist to play the original Saint-Saëns chord (shown in the solid curve) at a number of the reduced loudness levels conventionally scored in music texts. Space does not permit displaying each of them here, but the Saint-Saëns chord played softly (shown as a dashed curve, ppp) does give us a good basis for comparison. (Slight differences in the shape of the spectrum occurred because it was necessary to change stops as the volume was reduced, thus somewhat modifying the harmonic structure of the chord.)

Comparing the solid and the dashed curves in Fig. 1, however, the first of which was overwhelmingly “loud” and the latter exceedingly “soft,” we can see that the maximum difference between comparable parts of the frequency spectrum lies, in this case, in the “presence” range (i.e., from about 2,000 to 5,000 Hz), and that it amounts to approximately 40 dB. Significantly, as the loudness levels lower, the proportion of deep bass to treble rises. It appears that, as a trained musician, Mr. Gooding instinctively compensated for the well-known Fletcher-Munson effect, which demonstrates that for equal perceived tonal balance we require much more bass at low volumes than at high ones.

As a double check, I asked him to play through the Lake Erie college hymn (technically, the St. Anne Hymn, the tune ascribed to William Croft, but more familiarly known to us as O God Our Help in Ages Past) with all stops out. For this piece I left the analyzer to register the highest peaks in each frequency band throughout the work. Those results are shown as the dotted curve in Fig. 1. As can be seen, the only real difference is in the deep bass, the result of the different pedal chords used in the piece.

Next, to calculate the dynamic range which our home equipment would have to possess for “facsimile” reproduction, we can begin with the highest am-
amplitude encountered (at 31.5 Hz on the \textit{fff} curve) and compare it with the lowest amplitude sounded (at 10,000 Hz on the \textit{ppp} curve). The \textit{difference} is about 60 dB. The \textit{ppp} passage is not the softest musical sound of the performance, however. At the end of each chord there is a dying away of the sound in the form of reverberation, until the last faint echo sinks below the level of the hall’s natural “environmental noise.” (This omnipresent noise, measured on an “average” or “root-mean-square” basis from 50 to 10,000 Hz, is shown as a dot-dash line in Fig. 1.) The amplitude range between the loudest passage and the environmental noise—which determines the softest musical sounds that can be heard—works out to something in excess of 80 dB for our “peak-loud to dead-quiet” ratio. A look at the signal-to-noise specifications for home audio components reveals that such a figure is usually to be found only in good separate power amplifiers. Feeding them with any signal source available in the home we simply can’t achieve an overall 80-dB dynamic range.

Fortunately (or not), however, we won’t need all of the extra 20 dB or so for a reverberation “cushion,” because few if any of our listening rooms are as inherently quiet as a concert hall. Furthermore, not many live performances are given for an audience of one, such as occurred in this test case. The presence of a full audience would have raised the concert-hall noise-level (dot-dash curve) considerably. On the other hand, the pronounced drop-off in high-frequency sound energy radiated in the original performance shows us why even low levels of tape “hiss” can become audibly objectionable.

I was still determined, however, to look into some of the other “variables” that contribute to the sound we hear. All of us are aware, for instance, that “room acoustics” play a large part in determining the sonic character of the music as we hear it reproduced in our living rooms. Olson, indeed, has suggested that 

A FOOTNOTE TO DR. STARK’S DILEMMA

By Larry Klein, Technical Editor

Perhaps appropriately, Craig Stark’s investigations into sonic realism raise a number of quasi-philosophical questions (Dr. Stark is a professor of philosophy) that require further exposition. High-fidelity sound reproduction in the home is an unusually complex matter because it involves not only the obvious electro-technical questions, but must also be concerned coincidently with acoustics, psychoacoustics, and aesthetics.

First: is facsimile reproduction of sound in the home attainable? Assuming that it is attainable, is it desirable? I think it can be said (taking the questions out of order) that facsimile reproduction is desirable if what it means is having the same sound field impinge on your ears at home as you would have heard in the concert hall in some preferred seat. But is such a condition attainable by conventional means? I think not.

Anyone familiar with recording techniques for popular music, for example, is aware that there is no original “concert-hall reality” to be reproduced—this despite the dozens of rock recordings with such titles as “Live at the Fillmore,” “Live at Leeds,” or just plain “Live.” Anyone who has attended any rock concerts from which recordings were made (I’ve been to at least four) should be able to hear that the sound of the resulting disc played on a good stereo system has greater clarity, better balance between the instruments and vocalists, and a better frequency range (except for the power in the gut-shaking bass area) than was heard at the actual performance. There is no paradox here: it’s simply that electronically amplified instruments are an entirely different ball game for the recording engineer, that the problems they present, and the solutions available, differ greatly from those of acoustic (non-amplified) instruments.

Perhaps we can agree, then, that we don’t want to reproduce in our living rooms (even if we could) the actual sound heard at a rock concert. But how about facsimile reproduction of the sound heard at a classical concert? Not long ago, I was invited to inspect the new recording facilities DGG has installed in Symphony Hall in Boston and to attend a recording session of the Boston Symphony. For the recording, the orchestra was arrayed not on the stage (that’s where I was sitting) but on the parquet floor perhaps fifty feet in front of the stage apron (the Boston always sits there for recordings). There were microphones at various heights scattered among the performers and at locations off to the sides. There were several large baffle boards set up behind various groupings of musicians to reflect back some of the rear-propagating sound to the front recording microphones.

Could such a setup possibly produce recorded “concert-hall realism”? When monitored in four-channels in the control room downstairs, it certainly seemed to do so to my ears. The higher frequencies as heard on the monitor speakers rolled off very fast, probably even faster than those shown in Figure 1 in the accompanying article—and this despite the fact that the hall lacked a sound-absorbing audience and is, in addition, notoriously “live” (reflective). Thus, in order to provide the illusion of reality in the finished recording, the DGG engineers had deliberately set up an \textit{unalreal} recording situation. Obviously, the “reality” that were after was the sound quality heard fairly far back in the hall, where the direct, bright sound of the orchestra is pretty much overwhelmed by the duller reflected sound.

I t is just here, of course, where engineering taste or aesthetics enter in, and one could probably find a competent practicing recording engineer with a preferred sound balance equivalent to each row in a hall. I wouldn’t even be surprised to hear one or two argue for the conductor’s podium or for the standing-room section. But whatever the engineer’s preference in recording perspective, it is seldom if ever achieved by setting up a pair (or four) mikes in the exact area whose sound quality is to be recorded and reproduced.

In the case of engineer Stark, then, did he finally achieve true facsimile reproduction? I doubt it; at least in the sense that an exact \textit{duplicate} of the original concert-hall sound field (at a given location) was
the main reason why the average listener prefers a lower level of sound reproduction in the home than in the concert hall is that a given sound wave in a small room encounters—and so is reflected by—surfaces such as walls, ceiling, or floor far more frequently than it does in the cavernous reaches of the concert hall. James Moir, a British acoustician, amplifies this point: “A typical concert hall will have a volume of about 400,000 cubic feet and a small living-room one of about 1,500 to 2,000 cubic feet. The number of reflections per second arriving at the ear will thus be about six times greater in the small room.” It seems that these reflected sound components, reaching the ear much earlier and in much greater abundance than they would in a large hall, add considerably to the subjective sense of loudness.

Reflected sound introduced still another variable into my investigations. Because of the relatively small dimensions of any listening room, acoustic additions and cancellations at various frequencies and various places in the room arise from room reflections, causing loudspeakers to exhibit rather jagged frequency-response curves. Fortunately for me, the Altex-Lansing people came to the rescue with the loan of one of their “Acousta-Voicette” units. This device is designed to smooth out such peaks and valleys in the response by permitting independent level adjustment of each 1/8-octave band of the playback signal over most of the audio range. Since it is a stereo device, there are duplicate controls for the second channel. “Pink-noise” test signals are used for the adjustment process, which is tedious (without the H-P Analyzer I would have found it intolerable). But the overall result, shown for my left-channel speaker, can be seen in the (a) “before” and (b) “after” (Acousta-Voiced) curves of Fig. 2. As the curves show, the sound reproduction of the pink-noise signals after “voicing” was flat within about ±2 dB at my usual listening position. Standing behind my listening chair (that seat of honor was reserved for the H-P Analyzer’s microphone), I cued up my master tape and stood back to marvel.

The definition of the recorded sound was tremendous: I could practically see each of the organ pipes across the stage as it sounded. The problem was that, played at the original hall level, the reproduction, even to my hardened audiophile ears, sounded just too loud or, to be more precise, it was too “bright.” As Fig. 2 (c) shows, the playback response exhibited a tremendous high-frequency rise that was faithfully confirmed by the H-P Analyzer. What could have caused this?
Fortunately, I had encountered that high-presence peak kind of sound previously. You hear it, at lower volume, over headphones when monitoring a live-recording session. What you hear under such conditions is not what someone in Row 18, Seat 7 hears, but rather what the microphones themselves are picking up. I'd been transported to the concert hall, all right, but instead of being in the actual best seat in the house, I now found my head up between the suspended microphones, where only angels can hover. Why should this make a difference? An examination of two factors will help to explain it.

In the first place, a slight peak at the upper part of the treble range is characteristic of most professional capacitor microphones. This is perhaps a desirable trait, for the tapes they make will have to be re-recorded several times before the final commercial product is made from them, and in this process losses at the extreme high end are bound to occur. On the other hand, I, of course, was working directly with the master tape.

Second, and more important, is the fact that the frequency response of a typical concert hall—like that of a listening room—is not "flat." Fig. 3 shows the averaged response of four concert halls measured by the acoustical consulting firm of Bolt Baranek and Newman. The reason the halls do not have uniform frequency response, as measured from a listener's seat, is that high-frequency components in the reverberant (reflected) portion of the sound heard tend to be absorbed by walls, other people, and the upholstered seats much more readily than the low frequencies. Listeners in the concert hall hear a combination of direct and treble-attenuated reverberant sound. Microphones, in contrast, tend to be placed much closer to the performers, and so pick up a much higher proportion of the direct sound from the instruments. Measurements by Acoustic Research (see "Frequency-Response Tests of Typical Listening Rooms" in the August 1971 issue) indicate that the usual listening room also attenuates highs, but only about half as much as the concert hall. "Acoustica-Voicing" my speakers had defeated this natural treble absorption, yielding an excessively "bright"—that is, "loud-sounding"—tone.

Nothing daunted, however, I repeated the Acous-

Fig. 3. Averaged frequency responses of four concert halls as measured from "good seats" in orchestra sections (curve prepared from data obtained by Bolt Baranek and Newman Inc.).

ta-Voicing process, this time going back to the source, so to speak, and using the master tape itself as the calibrated source. The end result of this rather cumbersome procedure was sound reproduction at my listening chair that was measurably equal (±2 dB) to what the H-P microphone had "heard" from the best actual seat in the house. This, in terms of conventional two-channel stereo, is as close as one is presently likely to get to facsimile recording and reproduction in the home.

Played back at concert level, then, how did it sound? To my ears, and to those of a couple of professional musicians I brought in, it was "real" in respect to realistic levels and frequency response. But then, I like a front-section seat. My wife, on the other hand, likes to sit farther back in the hall, and, blindfolded, she picked at "realistic" a level which was in fact 4 dB lower, and she preferred a volume that was 6 dB lower. But other factors enter here that would make an article unto itself.

Something, however, was still lacking, and I suspect it relates to the point made earlier about the disparities between the reverberant sound fields of concert halls and listening rooms. Hooking up a four-channel matrix adapter to reproduce ambience information in my original recordings through an additional pair of speakers (keeping all levels the same) did contribute tremendously to the feeling of spaciousness that I had been missing during stereo playback. You might say that, in effect, it increased the ratio of recorded hall environment to home acoustic environment and thus brought me a bit closer to the reality I was trying to reproduce.

However, despite all these efforts, I can't in honesty say that I have solved all the problems involved in facsimile reproduction of sound in the home. Even the best of today's speakers and tapes exhibit many different kinds of distortion in varying degrees. The more critical our ears become, the harder it is to fool them into believing the goal of recreated reality has been achieved. My tapes had not been "Dolbyized," for example, and thus, on very soft passages, there was some hiss I had to struggle to ignore. Acoustica-Voicing and four-channel ambience recovery helped minimize the acoustical differences between the living room and the concert hall, but they did not eliminate them entirely. Listener location is still far more critical in the home than at a live performance. Nor have the effects of ultrasonic harmonics combining with each other to generate audible tones been assessed within the range of what I could measure. But I am not disappointed; if anything, my experiments have given me fresh hope. Absolute fidelity I've not yet achieved, but my ears tell me I'm coming closer!
INSTALLATION OF THE MONTH

TILT-TOP STEREO

Dr. Arthur P. Greenberg, of Falls Church, Virginia, wished to mount his stereo equipment combining convenience with technical efficiency in a piece of furniture that would harmonize with the furnishings of his home and not suggest a professional sound studio. He designed a generously proportioned console with all the important controls easily accessible and had it built to his specifications by a local cabinetmaker. Except for the turntable well, the mounting surfaces of the cabinet are canted slightly forward to improve visibility and keep the components within easy reach. A recessed portion at the base of the console provides foot room for a standing operator who wants to work very close to the controls.

Dr. Greenberg’s approach to good sound reproduction involves four speaker systems, located in his listening area at left front, right front, center front, and center back. The last two are Bozak B-312’s, driven by a McIntosh MC 60 mono power amplifier with a left-plus-right signal (the amplifier is hidden within the console). The side speakers—Bozak B-302A’s—are powered by the McIntosh MA 5100 integrated stereo amplifier visible just to the lower left of the turntable, which is an Empire 498 with a Stanton 681EE phono cartridge. The tuner, also by McIntosh, is the Model MR 67. Other visible components, clockwise from nine o’clock, are a Teac A-1500 stereo tape deck, a modified Heath oscilloscope for monitoring, a speaker/headphone switching panel, and an Advent Frequency Balance Control. Out of sight are an Advent B-Type Dolby accessory and a Tandberg 64X stereo tape deck.

Dr. Greenberg is a research fellow at the Department of Physiology and Biophysics of Georgetown University. In his stereo hobby he, like many audiophiles, started in a small way with an FM radio. His musical interests have matured along with his component system, he reports, and he is now concentrating on greater understanding of music. His tastes at present run to light and serious classics, some popular music, and movie soundtracks. —Paulette Weiss

NOVEMBER 1971

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I decided I was going to be a singer at age two

By ROBERT WINDELER

In the Twenties, Thirties, Forties, and Fifties, they came to Los Angeles, the little girls from all over the United States, the local beauty queens just out of high school (with or without diplomas), to find work in the movies, to be discovered. In the Sixties, the little girls came too, and so far in the Seventies they still do—not to become movie stars but rock stars, not to make pictures but hit records. They are no longer beauty queens, though looks certainly count for something in the pop-music world. Their experience has been singing or playing at high school dances, weddings, perhaps on local radio and television stations. Their life style may be different from that of their movie-oriented predecessors, but their percentage of failure to make it is just about as high.

Linda Ronstadt arrived in Hollywood seven years ago (without the high school diploma) from Tucson, Arizona. She was bra-less in a T-shirt, barefoot in her levis, and she crashed at the beach with some friends and started singing folk-country songs by herself and with whoever was around. Now, at twenty-five, she is still bra-less and barefoot as she sits onstage at the Troubadour in West Hollywood, rehearsing for engagements at which she will dress exactly the same way. "I'm about as casual as they get," she says. "This is my official uniform for travel or anything. I'm a real fashion plate of the industry. I do look in a mirror before I go on, mess up my hair a little bit, but it doesn't change anything.

Linda Ronstadt is, nonetheless, a genuine big star of the pop-music world, with hit records, best-selling albums, sold-out club dates, and fans running up to her on the street. One reason she's made it so big is probably that it never occurred to her she would do otherwise. "I never really thought for a minute I'd fail, not that I'm such a hotshot singer, but I thought everyone who came to Los Angeles to sing got a hit record. I had no idea what the competition was or the emotional things involved. I'm only sort of talented. I've got a lot of nerve is what I've got, to get up on a stage and sing. It's a good thing I didn't know or I'd never have come. I'd have stayed in Tucson in terror and been a housewife with four kids by now." Linda didn't have a famous brother to bring her along (like sister Kate Taylor), but her older brother did sing, and with an older sister, the three Ronstadts sang Bluegrass music on local television shows while Linda was still in high school. The three also did back-up singing for commercials, and even recorded a bit. "I decided I was going to be a singer at age two, I'm sure. I was committed. One reason, the main one, was that my Catholic school was such an unpleasant experience for me. I'm profoundly bitter about it. I suppose I don't hate those people any more, but they made me ill-at-ease, and I'm still ill-at-ease even in situations where it should be groovy. I never learned anything in school. Fortunately, my father taught me to read at home or I wouldn't even be able to read today. I still can't add. High school was almost worse: upper-middle-class, transient, rich, ugly kids—real hateful. And the teachers were all John Bircheres for sure. I had to jump into what I wanted to do right away. I've never ever had a job other than singing. If I couldn't sing for a living, I'd be stuck."

Home itself and parents were never a problem. "I
grooved on the comforts and security of home. My parents are real nice people, and I go to Tucson every chance I get." Her father's family were cattle ranchers forced into town during the Depression, and now Linda's father owns a hardware store. Tucson has lost its glow ("it's full of people from Ohio"), but the Southwest is in her blood as well as her songs. "The Southwest is a perfect mixture of the cerebral East coast thing and the physical pursuits of the West coast. Here in Los Angeles, people are beautiful, but too soft in the brain, with no energy. Southwesterners have a nice intelligence and an appreciation of the glories of nature. In the mid-West, where they should have everything, they don't have either."

Ocean Park, California was where it all came together (her sister and brother stayed behind in Tucson to marry and raise children), and Linda met the two boys who formed the Stone Poneys with her. The group did three albums for Capitol in two years, with a lot of breakups in between. Their giant hit, Different Drum, was a unique hit by accident. It was not released as a single, but so many disc jockeys plucked it from the album to play it on the air that the record company was forced to make a single release. Capitol, it turned out, had taken the Stone Poneys because they wanted Linda Ronstadt (she is still with the label), and that hastened the breakup. "Nobody understands what it was I was trying to do; that's probably because I didn't either. My roots are country and I started out singing folk-rock in L.A. but switched to acoustic rock for poverty reasons. Now I guess I do country rock, but I'm a ballad singer, a texture singer mainly. I have only four upbeat numbers and I have to keep them all in my act or I'd put everybody to sleep."

Linda is one of the rare rock stars of today who doesn't write at least some of her own songs; in fact, she's never written even one. Like many other singers, she sees an opportunity in other media, chiefly TV and movies. "Films are opening up nicely these days, and even the fan mags are forced to recognize pop stars. And since singers are basically more honest than actors, they can't get away with that French poodle, pink Cadillac, Hollywood phoney number, and that's a healthy influence on entertainment."

She finds less competitiveness among her singing contemporaries than among actors and older singers, and feels that they generally wish each other well. "If Poco gets a country rock hit, that helps me out; Carole King doesn't need any help, but that style of singing and playing your own music is helping others, like Neil Young. Anybody's success in our field contributes to our own."

Linda Ronstadt yearns for some order in her life and has taken to embroidery and knitting geometric designs, just to have some predictable ordered things to organize her mind. Her fantasy life is farming in a geodesic dome in one of the unspoiled portions of Hawaii, farming in that great greenhouse surrounded by friends. "Conviviality is the most precious thing to me, sitting with people, hanging out in a groovy natural situation. I won't settle for less. But it's hard work making a living farming. Humans are bound to toil and trouble, so we all have to work. I once thought that if I got a hit record, I'd never have to go to the laundromat. There's no way out of work, and the most important thing is not trying to fool yourself into thinking there is. Work is great therapy if it's done right. For me that means the material is fresh, the gig's right, and the band together."

"Linda laments her own lack—and what she sees as a general lack—of self-discipline. "All the discipline in this country is one person to another: parents spanking, a teacher or coach always on your back. But nobody teaches us how to discipline ourselves. We have no bloody security, we're emotional weaklings, easy to brainwash; it's easy to get our attention for a while with any new trend. Nobody learned a thing from the Manson trial, for instance. Those were really lame chicks, looking for somebody to tell them what to do, and there are a lot of that kind of people around. The Jesus Freaks [whom Linda lampoons with her We Need a Whole Lot More of Jesus (And a Lot Less Rock and Roll)] are like that. They really need something that takes over their lives completely."

"Linda Ronstadt borrowing—but never steals—from everybody from Bessie Smith to Merle Haggard, and she remains the only durable female singer of country-rock. Accompanying her there's acoustic guitar, piano, drums, electric guitar and bass—and the fiddle. "I'm not happy without a fiddle player, it's essential. A fiddle is the real link between heaven and hell. A fiddler can play the devil out of a fiddle and that's diabolical. And a violin can be celestial, heavenly. Nobody can ignore a good fiddle player, and a guitar player'll never make you dance like a good fiddle player will."
WELL, the old man is dead. Even Igor Stravinsky proved to be mortal in the end—at least as far as the flesh is concerned.

When Stravinsky was born in 1882, Brahms, Verdi, Dvořák and Tchaikovsky were alive and active, and the young composer actually studied with Rimsky-Korsakov. His early works, including the famous ballets and the extraordinary folk-and-theater works that followed, were written during the reign of the Czars. He started late and was never a "natural" or prolific talent. Nevertheless, his composing career lasted almost seven decades, and there are over one hundred works in his catalog, many of them of major proportions, some of them among the most influential art of the century.

No other single figure has had such a pervasive influence on the arts of the first half of the twentieth century. The rhythmic discoveries of Sacre and the attempt to draw strength from "primitive" roots, the building-up of new forms created out of blocks and planes, the invention of a new kind of chamber-music theater incorporating popular and folk elements, the stylization and reinterpretation of mythic and folkloric material, and the deliberate use and incorporation of the classical Western tradition within this new framework all set up reverberations that have not died out yet. Only in the work of Stravinsky's erstwhile friend and collaborator Pablo Picasso can one trace an equally remarkable pattern of development and influence. The careers of the two men are remarkably parallel, and in at least one major area, the development of the so-called "neo-Classicism," it was the musician who influenced the painter rather than the other way around.

Certainly no aspect of Stravinsky's career has been more influential (and more attacked) than his neo-Classicism. Shortly after World War I, the impresario Sergei Diaghilev commissioned Stravinsky to "arrange" some music of Pergolesi for a commedia dell'arte ballet. The motif of acrobats and clowns—obvious symbols for the alienated artist—had already been used by Picasso, Rilke, Schoenberg, and others, but until Stravinsky took the fateful step, none of this necessarily implied all the cultural baggage of tradition that was now to come with it. The unexpected result was not only a ballet, Pulcinella, but a newly developed enthusiasm for the Classical tradition and, most importantly, a whole aesthetic position based on detachment, craftsmanship, and the uses of the past. Stravinsky himself has put his position more clearly than any of his commentators:

"I was born out of time in the sense that by temperament and talent I would have been more suited for the life of a small Bach, living in anonymity and composing regularly for an established service and for God. I did weather the world I was born to, weathered it well, you will say, and I have survived—though not uncorrupted—the hucksterism of publishers, music festivals, recording companies, publicity, including my own, conductors, critics, and all of the misunderstandings about performance the word 'concerts' has come to mean. . . ." And further: "Were [T.S.] Eliot and myself merely trying to refit old ships while the other side—Joyce, Schoenberg—sought new forms of travel? I believe that this distinction, much traded—on a generation ago, has disappeared. Of course we seemed, Eliot and myself, to have exploited an apparent discontinuity, to have made art out of the disjecta membra, the quotations from other poets and composers, the references to earlier styles, the detritus that betokened a wreck. But we used it, and anything that came to hand, to rebuild, and we did not pretend to have invented new conveyors or new means of travel. The true business of the artist is to refit old ships. He can say again, in his way, only what has already been said."

What a combination of insights and self-deceptions these statements are! Stravinsky as a "small Bach"—he means a minor Kapellmeister in some small European town, writing music for daily use—is not a conceivable notion except as a metaphor for the anti-Romantic aesthetic of "objectivity," craftsmanship, the
making of beautiful things. But there is a fundamental contradiction here: the “small Bach” created his music out of his social context while Stravinsky, the rootless intellectual, created out of his. Stravinsky’s context was, of course, the very artificial international art world of St. Petersburg, Paris, New York, and Hollywood; his “craftsmanship” and classicism are those of the musical sophisticate dipping into the past and sampling it at leisure, not the hard-won products of the local soil, but the best and most expensive vintages of the finest old wines.

Were Eliot and Stravinsky merely trying to “refit old ships” while Joyce and Schoenberg sought new forms of travel? This is highly misleading. Joyce and Schoenberg were revolutionaries in externals but beneath the surface they were the real Classicists. Schoenberg’s music after World War I is organized according to strict Classical principles “evolved” into contemporary form. Joyce, you will recall, used classical myth and the whole apparatus of classical and scholastic learning. In these cases, “new” languages have been evolved through grammatical changes, but the “forms” are the old ones. With Stravinsky—and presumably Eliot—only the externals of Classical style are sampled and recapitulated; the essential forms have nothing to do with Classicism. “Kyrie eleison,” murmurs the rebel priest in his newly made “medieval” cassock, but the original form and meaning of the liturgy have vanished, perhaps forever.

Far from disappearing, the issue of the uses of the past and the search for the means to arrive at the future are still very much alive. When I was a student, the Mozartisms of The Rake’s Progress seemed an intolerable affectation. I’ve since gotten used to them, but just the other day Boulez memorialized Stravinsky by criticizing his uses of the past and praising cultural amnesia! The problem is complex and not yet well understood. Twentieth-century man lives more and more amidst the artifacts of his own past. Technology makes more and more of the past into part of the present; we have never had so much history on our backs as we do today. Since technology has made the means of cultural storage, transmission, and diffusion easily available, music has acquired a past it never had before. In all aspects of musical life today, cross-cultural, acculturated, and historical time-cross influences turn up at an astonishing rate. And therefore the aspect of Stravinsky’s work that sometimes seems the most artificial and most dated—his grab-bag of cultural history—is, in one sense, more characteristic and contemporary than his apparently contradictory insistence on stylistic limitation and unity. See the works of Eliot and Picasso for similar cases.

Of course, Stravinsky’s past is something quite different from the “past” we know today—as different as, say, Busoni’s Bach is from Igor Kipnis’. Stravinsky’s “historical” tendencies were a direct result of his particular position on the edge of Western culture at a time when it was beginning to turn back on itself. He was the product of a society that combined the conservative and the archaic with the most revolutionary tendencies. He became an émigré, an exile, living first in seclusion in Switzerland and then, later, at the very center of the Parisian world of fashion and taste-making. He surfaced at the other side of the globe amidst world cataclysm as a glamorous, eccentric foreign genius and ended up (not without some resistance on his part) as the Grand Old Man (the Pablo Casals of music, one is tempted to quip), himself mythologized and prepackaged as instant cultural history. Each of these stages in his life corresponds to a stage in his creative career: the classically trained Rimsky-Korsakov pupil, the “professional”

Stravinsky’s name is linked indissolubly with what some regard as the most romantic of the arts—ballet. Near right, he poses with Vaslav Nijinsky, who created his Petrouchka. Center right, a grim afternoon in Lausanne in 1915: Stravinsky, Tamara Karsavina, who first danced the Firebird, the ballet impresario Sergei Diaghilev, and designer Leon Bakst. Far right, Stravinsky backstage with choreographer George Balanchine and dancers Alexandra Danilova (seated), Frederic Franklin, and Maria Tallchief.
musical savage from Tartary, the creator of a new music-theater out of folklore recollected in tranquility, the "neo-Classicist" piping the tune to a couple of generations of composers, artists, and critics, the creator of serious symphonic works, Balanchine ballets, and pseudo-American Kitsch; and, finally, the composer of an old man's music, dry, bare-boned, personal, hermetic. Even this last heroic attempt at purity and ugliness did not prevent his deification by media. But at least he managed to outlive his own Requiem, his often-revised New York Times obituary, and even Columbia's 1966 memorial album—obviously prepared for his incipient demise and finally released last year while he was still alive!

Stravinsky liked to deny being an intellectual—again, the "small Bach" syndrome—and he was always heavily dependent on collaborators for the literary expression of his ideas; Robert Craft was only the last (and most musical) of a long series of literary collaborators. Nevertheless, the fundamental ideas of his works were nearly always his own, and his collaborators were brought in mainly to help with their realization. (André Gide's reluctance to let his talents and art be the personal vehicle for a typical Stravinskiad led to a famous and bitter public dispute over their collaboration on Persephone.)

All of Stravinsky's choices—the next note in a piece, the subject of the next composition, or the further evolution of his career—were made carefully and with great deliberation. Almost alone among major modern composers, he wrote at the piano, trying out and carefully weighing each possibility before setting it down. This procedure should not be confused with the Tin-Pan-Alley finger-poking trial-and-error method. For Stravinsky the process of composition was not a selection of material from a universe of infinite possibility, but a working out of the limited possibilities produced by an intentionally severe limitation of choice. And, indeed, we see that this notion of limitation was at the heart of Stravinsky's (historically wrong-headed) notion of "classicism" and craftsmanship.

"Classicism" for Stravinsky meant the creation of incontrovertible objects through drastic limitation and selection. It was not necessarily tied down to historical Classicism or to any particular period at all. Many of his so-called "neo-Classical" pieces are actually mixtures of elements of Classical and Baroque style (the original slogan of the neo-Classical movement was "back to Bach!") and, relatively early in the game, Stravinsky astounded his more literal-minded followers by producing a pastiche of Tchaikovsky—Le Baiser de la fée. Similarly, he made no secret of his admiration for Italian opera and, as he became acquainted with it, the music of the early Baroque and renaissance. On the other hand, he detested Wagner and Strauss and even criticized late Verdi. These views are based on a great deal more than whim or fashion (indeed, Stravinsky's pronouncements helped to set the fashion). The Tchaikovsky of the ballets and the salon music, the composers of the early nineteenth-century Italian operatic school did not operate heart-on-sleeve, but composed music to order in simple, clear, Classical closed forms. In fact, it was in the theater and in the salon that the traditional principles of closed form held out the longest, and these traditions were still very much alive in Stravinsky's youth. This accounts for the curious salon quality that pervades such presumably neo-Classical works as the Serenade in A for piano and the ballet Apollon Musagète. Similarly, it can account in part for the old man's sudden interest in twelve-tone music—not Schoenbergian Expressionism but the jewel-like music of Webern.

Webern was not exactly a "small Bach," but he was an ultimate draftsman working with the most intentionally limited material. Here is the best explanation for the apparent about-face of the serialists' arch-enemy. Every great composer has to have a "third period," and Stravinsky found the perfect subject matter for a hermetic late style in the tight, pared-down, Webernian version of twelve-tone music. Note that Stravinsky's "conversion" took place only after Schoenberg's death, only after the twelve-tone phenomenon had taken on definitely historical aspects. Stravinsky "neo-Classicized" Webern just as surely as he had earlier "neo-Classicized" Bach, Pergolesi, Mozart, Beethoven, Glinka, Bellini, and Tchaikovsky!

All these experiences are, of course, filtered through Stravinsky's own remarkable musical mind. In Le Baiser de la fée (one of the relatively few
pieces made up of actual quotations) the assimilation is thorough enough that it is impossible to make out where Tchaikovsky leaves off and Stravinsky begins. Elsewhere the process of cannibalization is even more complete. Works like Mavra and Oedipus Rex are almost indefinable mélanges of elements out of Handel, Italian opera, and Russian music. Agon, a late ballet, goes from C Major to twelve-tone and back to C Major in a curiously medieval way. Yet there is never any sense of discontinuity or eclecticism or stylistic confusion; quite the contrary, the pieces seem totally directed, organized, and Stravinskian. The reasons are not hard to define. All of this music—all of Stravinsky’s work after, at least, the early ballets—is art about art or, at any rate, about the experience of art. It is art once removed—art squared. More specifically, the subject is Stravinsky’s own experience of other art. This is partly a kind of insatiable connoisseurship: the desire to possess an experience and make it one’s own. Here, a Stravinskian concerto or symphony or opera tends to become Concerto or Symphony or Opera, an amalgam of all the gestures that mean Concerto, Symphony, or Opera—a kind of Platonic ideal of all those forms as realized through a contemporary expression of its elements. At its best, it is music about perception, how we experience and know music, musical tradition, and musical form.

In the end, however, this flirtation with the past, with tradition, is a dangerous affair. The danger is not that of falling in love with the past or even that of infatuation with one’s own pure art experience. The danger is that which must inevitably beset any art that is, by definition, once removed from life. This is not a question of realism but of context. The Egyptian artist did not copy life; he drew by looking not at things but at pictures of things. He did this not “for art’s sake,” but because that was a way of seeing that was generic to his culture. His art grew out of the social-religious context of the culture within which he lived and worked and which dictated the need, purpose, and scope of his art. This is the usual situation outside Western culture, and indeed in it before the late eighteenth and nineteenth centuries. The Romantic produced something new on the face of the earth: Art with a capital “A,” Kultur with a capital “K,” “art for art’s sake.” The alienation of the artist, hastened by the crushing Industrial Revolution, became a popular image.

Many of the early twentieth-century pioneers, including Stravinsky, tried specifically to reject this notion of art and the artist. Herein is the true meaning of Stravinsky’s nostalgia for the past, his yearning to be an anonymous Kapellmeister. Yet what composer’s art is more removed from the Kapellmeister “reality” than Stravinsky’s? Of all the music of the twentieth century, whose comes closer to being “just art,” art about art, “art for art’s sake”? The divorce of art (and in particular music) from other aspects of human activity and the search for aesthetic purity—perhaps more a rationalization than a cause—inevitably turns artistic activity in on itself. The arts today have come to be supported by an artificially created “art world” made of up the new upper bourgeoisie and its captive intelligentsia: critics and editors, directors of museums and culture centers, gallery dealers and festival directors, government or foundation officials, culture snobs and academics anxious to create or perpetuate their special ties. This micro-society thrives mainly in powerful economic centers that

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**ABOUT THOSE BOOKS**

Over the past decade or so, Stravinsky was the author (with Robert Craft) of no fewer than six "conversation books," sometimes preposterously wide-ranging in subject matter, usually sardonic, and often witty. But it has long been a matter of amused and sometimes contemptuous conjecture in musical circles as to just where the sense and the sensibility of Stravinsky leave off in these writings and those of his amanuensis Robert Craft begin. Critic Alan Rich, writing recently in New York magazine, expressed the opinion of one school of observers when he suggested that the best tribute to Stravinsky would begin with the immolation of these and other works of his last decade, the conflagration to include the Craft typewriter. It is a little deeper than that, however. It may be argued, and well, that a creative artist ought not to have “help” in his creating, even in his subordinate efforts. But most of Liszt’s extensive published writings were by others, and even Gluck had a little help from his friends. Stravinsky always made use of “collaborators” and “translators” in his work, and whatever may be the surrogate’s contribution in the formal sense, the core content is authentic Stravinsky. Or that, at least, is the opinion of another school of observers.
are slightly over the hill—like Paris and New York. It likes to create and perpetuate its fashions, its mysteries, its difficulties, its newness. It needs its own heroes and taste-makers: striking, a little iconoclastic, and not too intellectual if possible. Stravinsky, like Picasso, was at once its creation, its darling, and its captive.

Here, then, is the real contradiction in Stravinsky’s life: the anti-Romantic, the anti-bourgeois who yearns to be a “small Bach,” a craftsman serving his community and his God, but instead has to play the role of culture hero for the new bourgeoisie and who, in the end, becomes the foremost exponent of those most Romantic of all notions, art about art and art for art’s sake.

Many of Stravinsky’s late writings, including the statements quoted above, show an awareness of this contradiction. In contrast to his earlier (and more consistent) maker-of-beautiful-things position (“my feelings are my own business”), he recently confessed to certain connections between world events and his personal and even inner life and work. And, as one turns back and examines Stravinsky’s career, one sees a surprising pattern of search for context that begins after Sacre with the advent of World War I and the cut-off from Mother Russia. The notion of a small traveling popular theater and the creation of a mixed-genre chamber-theater form probably represents Stravinsky’s single most original and important contribution—one not always appreciated at its full value. In another way, many of Stravinsky’s best achievements—the Symphony of Psalms, the Mass, Threni—have a strong religious context, also a non-

pure, nonaesthetic element of “reality” in his work. Some few works—Les Noces, Oedipus, even Sacre—combine “popular” (i.e., folk), theatrical, and religious elements in a highly successful and original mix. Some of these works, though fully characteristic, are so distinct in Stravinsky’s output that they hardly seem to belong with the remarkably circumscribed and precious little world of his major output.

None of this changes one note of Stravinsky’s actual music, and certainly it is not intended to diminish the achievement of his greatest compositions. But, contrary to the Romantic view, value is not intrinsic in works of art; the products of human activity do not have built-in meanings apart from their contexts. One does not “explain” art works by social history, yet without a biological and social context there is no such thing as art. Every work of art is exactly circumscribed by the circumstances of its birth and its life span.

In effect, Stravinsky, yearning for a context he could not have, and despising the context within which he was forced to create, continuously attempted to make a work of art whose only context was other works of art, or artistic experiences, or merely itself. Such attempts represent, in fact, the final playing out of the deeper motifs of alienation and of the independence and purity of art that come right from the nineteenth century and are not at all a reaction to it. This is the tragic flaw, the contradiction, that permeates all of Stravinsky’s work. It is a typically twentieth-century tragedy, and although the cast of characters may change, the drama is far from being played out.
Charles Fernand Ramuz
Stravinsky's Sometime Librettist

The wistful and melancholy story of an unusual collaboration provides a wry footnote to the composer's legend

By Fritz Kuttner

MUSICALLY informed people in the English-speaking world may know that Charles Ferdinand Ramuz was the creator of the libretto for Igor Stravinsky's *L'Histoire du soldat*, but apart from this bit of information their knowledge of the Swiss novelist is likely to be negligible. Yet French-speaking Switzerland counts Ramuz among her most important and distinguished literary personalities, his collected works fill over forty volumes, and several of his books have appeared in English translations (*When the Mountain Fell, What Is Man?). Furthermore, *L'Histoire was not Ramuz's only collaboration with Stravinsky.*

In a little volume, *Souvenirs sur Igor Stravinsky*, first published in Paris in 1929, Ramuz wrote of his relationship with the late composer. The 137 small-size pages are most revealing about Stravinsky's working methods in the fourth decade of his life, and they afford touching insights into the subordinate and marginal role the librettist plays in a great composer's life and work. The enormous weight of international fame versus purely national or local celebrity is strongly in evidence in the limited Stravinsky-Ramuz partnership, and it is certain that both partners, in different ways, felt that weight.

In 1915, Stravinsky left Paris, where he had lived for several years, and took up residence near Lausanne, on the shore of Lac Léman in Switzerland, a neutral country seeming a preferable location for the duration of the war. He was, at that time, in his early thirties and already well-known in musical circles all over Europe as the highly successful, if somewhat controversial, composer of such works as *Firebird, Petrouchka, and Le Sacre du printemps*. The conductor Ernest Ansermet, who had worked since 1911 in Montreux and Geneva, soon became acquainted with Stravinsky, who in turn recommended him warmly to Sergei Diaghilev; thus, in 1915, Ansermet became the conductor of Diaghilev's famous Ballets Russes in Paris and toured with the company in several European countries as well as in North and South America. In this way Ansermet, generally a champion of modern music, soon established his reputation as a specialist in the performance of Stravinsky's orchestral works. In the fall of 1915, Ansermet introduced Stravinsky to Ramuz, and the three men met at the tavern of La Crochettaz in the steep vineyard hills overlooking the lake a few miles outside Lausanne. Here the collaboration had its beginning, and it seems that La Crochettaz has since become a place of pilgrimage for admirers of Ramuz and of Stravinsky—or of both.

From that day on, the two men met frequently, either alone or in the circle of artists and intellectuals to which Ramuz and Ansermet belonged. Early in 1916, Stravinsky moved to Morges, a small town about seven miles west of Lausanne at the lakeshore, and began composing *Renard*. The text for this "Burlesque Story after Russian Folk Tales" had been written by Stravinsky himself in Russian, and it was clear that a translation was needed for performance in Central and Western Europe. He offered the task...
to Ramuz, who accepted eagerly, and the writer's elaborate account of the joint effort forcefully establishes the composer's overwhelming perfectionism, precision, and patience in obtaining results of the highest craftsmanship.

Ramuz went almost daily to Stravinsky's large study in Morges, where the composer worked surrounded by a collection of percussion instruments: snare drums, kettle and brass drums, in fact practically every type of orchestral percussion instrument, including the Hungarian cymbalom. Stravinsky would read out the Russian text stanza by stanza, carefully counting the syllables of each line. Next came a literal word-by-word translation (which often did not make any clear sense but helped to convey a feeling of the imagery involved); then followed a free translation to establish the stanza's logical contents. All of this was noted down by Ramuz in a multilinear scheme for each line of poetry, and only then did the real struggle begin, not for a translation, but for a completely new creation of poetical lines which had to satisfy all the given circumstances of the musical score, the contents of the Russian original, and the laws of French poetry. Word and syllabic accents, long and short syllable sounds, and especially the problem of vowels had to be pondered and a solution found: this note had been composed for an "o," another one for an "a," that one for an "i." Most difficult of all was the reconciliation of accented word with musical accent. For hours on end Stravinsky would sing out the lines and play them on the piano, accompanying himself at times on the kettle drums. And each night Ramuz, catching the last train back to Lausanne, would take home his swelling bundle of notes to brood over the countless difficulties encountered during the interminable discussions of a hard day's work.

Considering the miserable quality one frequently encounters in the translations of operatic librettos and libretti and librettos, and especially the incredible care and energy spent on the French version of Renard is astounding. Equally revealing of Stravinsky's complex and fastidious working methods is Ramuz's description of the composer's techniques in preparing his final orchestral and vocal scores. Stravinsky's desk was equipped like the drawing board of an industrial designer or, in the author's words, like "a surgeon's instrument table." There were, in carefully planned order: various bottles of inks of different colors, blue, green, red, and two kinds of black (ordinary and Chinese black); several kinds of glue and gum; an assortment of shining steel tools such as rulers, erasing knives, scrapers, and penknives, guides for drawing lines of various shapes and curves, and finally some roller instruments (invented by Stravinsky) for drawing the lines of the musical staves. The various ink colors served for the written notes, the text (one for the Russian, another for the French version), for titles, and for the diverse instructions and indications that have to go with a score ready for performance. All notes were drawn (rather than written) with great clarity and neatness, all bar lines drawn by ruler, all errors carefully erased with scrapers. Thus, the complete manuscript of Renard (like all other Stravinsky scores, with its hundreds of large pages, constitutes a work of calligraphic art, a triumph of patient and painstaking penmanship which, to the best of my knowledge, has no equal in Western musical history in the last two centuries. Even Richard Wagner's clear and clean writing doesn't come anywhere near Stravinsky's calligraphic achievements, while the scores of Beethoven and some other great masters of the past were often a nightmare to copyists, engravers, publishers, and editors because of the countless legibility problems they presented.

It is obvious that the clarity and visual beauty so characteristic of Stravinsky's final scores must be paralleled by the patience and supreme technical craftsmanship that went into the draft stages of his composing process. Here we find confirmation—on another plane—of Stravinsky's obsession with leaving as little leeway as possible to conductors and performers for "interpretation" (i.e., individual or subjective distortion) of the composer's intentions. Here is also the basis for his frequent and harsh criticism or even contempt for quite a few famous conductors whom he accused of taking, in his opinion, unforgivable liberties with the scores of many composers past and present. Ironically, the abundance of highly explicit performance instructions in all his scores did not, apparently, help very much to prevent subjective distortions of his works, for there were very few performances or recordings of his compositions by conductors other than himself that really satisfied or pleased him.

The third of the nine short chapters in Ramuz's Souvenirs is a touchingly plaintive, melancholic reflection on his relationship with Stravinsky, which had by then (1928?) receded so far into the past that it had all but ceased to exist. "Where are you now, Stravinsky?" he calls out. "You are as far away from me in space as you are in time. . . . Hardly twice or thrice have I seen you again these past few years. . . . You are now a celebrity, you belong to the category of those whom the newspapers call 'persons of world-wide distinction'; . . . You are being interviewed. . . . Without your wanting it, you are surrounded at any moment by great ladies who inform each other by telephone of your move-
ments. . . . I don't care to make mention of you in this milieu if I happen to be there on rare occasions; if I am asked: 'Do you know him?' I answer, 'Oh, barely', . . . which means I disown the public personality that is the man one thinks you are, out of respect for the man I believe you are and who hardly resembles the other one.'

The entire twenty-three pages of this chapter are a continuous hymn of praise and admiration, a slightly intoxicated tribute to the great personality Ramuz has recognized in the composer whom he considers the fully liberated intellect. To him Stravinsky is the complete man who speaks an international, cosmopolitan, aristocratic language, as the true representative of the 'new music' of Europe.

All of this would be fully acceptable but for the persistent, plaintive (and perhaps slightly jealous) undertone of having been left behind, of having all but lost a greatly beloved friend, of being a relative small fry compared with the giant of the world's musical scene. It is easy to imagine Stravinsky's feelings of embarrassment when he read this chapter for the first time, for he was a cool, objective, and utterly unsentimental personality to whom such emotional effusions must have been quite distasteful.

The two artists next collaborated on another translation from the Russian, the text for Les Noces, 'Choreographic Scenes with Song and Music.' The work has been called a 'ballet chanté' by some, a 'grandiose cantata' by others. As in the case of Renard, the original libretto was written by Stravinsky, and the work of translation (or rather free poetic re-creation in French) must have been similar to the enormous effort invested in the earlier piece, and made even more difficult because of the much more complex text of Les Noces.

The performing apparatus was imposing; it contained, for example, in addition to the soloists and choirs, no fewer than seventeen percussion instruments, and the way Ramuz remembers it, it was 'scored in fortissimo, from beginning to end.' The work had been planned at one time for electrically operated mechanical piano and harmonium (in addition to the percussion and voices), but because of the technical difficulties involved Stravinsky had to settle for four pianos. During the translation sessions Stravinsky would demonstrate the musical contents at the piano, often playing with one hand only, the other hand beating the cymbals. There was a continual superimposition of choral groups upon each other or upon vocal solos and vice versa, and at times there were no fewer than four texts (both literary and musical) occurring at once. Ramuz recalls that the accommodation of all the syllables in the text, because of metric and bar complexities, required 'veritable arithmetic operations so as to find a common denominator.' The wartime conditions in small Switzerland didn't offer opportunities for performances of works requiring such vast resources. Thus, the orchestration was not completed until April 1923, and two months later the world premiere took place in Paris.

There is no mention in the Souvenirs of whether Ramuz received any cash compensation for the enormous labor involved in these two translations. Conceivably he may just have contented himself with a small percentage of the expected performance royalties; financially that would be an extremely meager reward, because neither Renard nor Les Noces has been performed with the frequency of some of Stravinsky's other works—a result, in part, at least, of their unusual scorings.

In one sense, the creation of L'Histoire du soldat was a direct consequence of the difficult wartime conditions in Switzerland in 1917 and 1918, and was based entirely on practical considerations. Diaghilev's Ballets Russes in Paris, Stravinsky's main source of income, had been suspended for the duration, and the composer's financial situation became increasingly precarious. The theaters were mostly closed. Ramuz himself was in similar trouble, unable to find outlets in France for his writings. Thus, the two men asked each other one day: why not do 'something simple,' why not create something together that would require no more than a few instruments and only two or three characters? A piece that could be performed with a minimum of stage decorations,
The collaborators on L’Histoire as seen by René Aubierjonis, who did scenery and costumes: top, Ramuz, Stravinsky, Ansermet; bottom, the artist and choreographer Pitoev.

presented in any kind of hall, and transported cheaply in the manner of a small road company?

Ramuz, who had no theatrical experience, suggested a “story” in narrative style. Stravinsky desired a musical frame completely independent of the text so that a “suite” could be taken from it for additional presentation in concert form. Finding a subject was easy. They started searching the volumes of a vast compilation of Russian folklore in which the devil almost always plays the main part, and soon they selected the story of a soldier and his violin. The main contents of the text were entrusted to a narrator; the characters were limited to three—the soldier, the devil, and the princess—and the music was scored for only seven players.

Composition of the text and the musical score progressed very fast, presumably because the extraordinary difficulties of translation didn’t enter into this case and the scoring required only a small ensemble. Yet, once the work was completed, getting a group of performers and instrumentalists together proved to be a formidable task. The musicians, being only seven, had to be all of soloist caliber. The princess, a silent role, had to be a dancer, and the speaking roles called for specialized and rather new performing techniques. The devil had to be cast in two parts, one a speaker, one a dancer. Finally, after many delays, the premiere took place in September 1918 in Lausanne under the direction of Ernest Ansermet. Ramuz does not say anything about its success or about critical evaluation by the press. Stravinsky, however, in his Chronicle of My Life, expressed complete satisfaction with the performance, preferring it to any he heard subsequently. But the well-prepared plans to send the show on the road for performances in many other towns collapsed because of unforeseen calamities. Six weeks later the war ended. The infamous Spanish grippe, a rather dangerous form of influenza, raced across Europe, killing thousands and incapacitating millions of people. One after another the musicians, actors, and stagehands were struck by the disease. Switzerland was hit by a railway strike. Thus, it took another few years for L’Histoire du soldat to get started on its international success; since then it has become one of the most popular and most frequently performed of Stravinsky’s works.

The brief final chapter of Ramuz’s book springs an odd little surprise. Stravinsky had left Lausanne in 1920, and contact between him and Ramuz had virtually ceased. “Today I have nothing left of you but a few letters,” wrote Ramuz. “At present you are in Nice, which is far from here. . . . Yet, it has brought you nearer to me, to the Mediterranean, after you lived so long near the shores of the Atlantic.

“I shall roll up this manuscript, slip it into a bottle which I shall tightly close with cork and sealing wax to make it waterproof. . . . then I’ll go down to the little port of Ouchy at the lakefront and rent a small boat, the bottle in my pocket. . . . All that is left to do then is to row out to the middle of the lake where the current of the Rhône River (traversing Lac Léman) makes itself felt, and there I’ll throw the bottle into the water.”

Then follows an outline of the route the bottle will travel: past the weirs at Geneva, and on downstream into France, passing on its way through Lyons, Tournon, Avignon, and Arles. Finally, it will reach the Mediterranean west of Marseilles, some 150 miles along the shoreline from Nice. The last sentence of the Souvenirs reads: “. . . and if it is not yourself who finds [the bottle] offshore, at least one of your grandchildren will find it one day when they go for a swim; they will forward it to you.”

To this sentence a footnote is added in small print in the 1954 edition (it may also have appeared in the first printing of 1929): “Your bottle has been forwarded to me and uncorked, in fact, by ‘my grandchildren,’ as predicted by you. (Note by Stravinsky.)” How disappointing this matter-of-fact, laconic, and dry acknowledgment by the composer! Not one word as to when or where the bottle was found and who the “grandchildren” were who opened it for Stravinsky. Obviously, the composer had little taste or understanding for such romantic or sentimental caprices. It sounds a somewhat saddening finale to the collaboration.
"TRISTAN is quite a trip," Jess Thomas assured me. Certainly the opera has taken him around the world. He has sung Tristan in San Francisco, Moscow, Vienna, and London. In November comes the Metropolitan Opera's new production in New York, and after that the Paris Opera's. He says he would be happy to sing the role in Peking—and yes, he plays ping-pong.

Standing six-foot-three, the American tenor dominated our corner of the bar where we met for the interview. He takes his physique seriously—travels with an Expandex, swims, rides, "can do a full lotus," stays an infinite distance from drugs, and remembers that Mario Lanza destroyed himself overeating. Wagner is strenuous; compared with twenty-two minutes that the tenor sings in Tosca, he sings sixty-five in Tristan—more if, as at Convent Garden this summer, the opera is performed without cuts—"which is inhuman," Thomas says. "It's never been done before outside Bayreuth. I learned twenty minutes of new music in Act Two. My contract demanded a minimum forty-five-minute intermission between the second and third acts...."

A long letter from an opera-lover had primed me for my Thomas interview. "A tenor," my friend Jorkins had warned, "is nothing but an athlete. He guards and nourishes his divine physical gift—his larynx—with ferocity and tenderness, but nothing distinguishes him mentally from the star sent out to kick the extra point and then 'come right back, now, to Coach.' If a tenor memorizes his cues, most of his lines (if these are in a foreign language, he may have no idea, line for line, what they mean), and where the prompter's box is, he has usually exhausted his mental capacity, and his interest in the opera as well."

How, I asked Thomas, can he sing Tristan two dozen times without going stale? "I probably couldn't with a lesser opera, but I find that of all Wagner, Tristan most bears repeating. I think Tristan is the most profound of all his texts. So no two performances are ever the same." New productions are particularly stimulating; Thomas compares them to the different frames he has seen on a certain Rembrandt he likes; each frame brought out different qualities in the portrait, and frameless it was something else. "And whether a Tristan production is on a very realistic basis, like Covent Garden's, or whether it's a Wieland Wagner production, enormously abstract, or somewhere in between, each one shows the work, and the artist, to a new advantage."

What kind of production does he favor? "I think in many ways people feel they have to do too much for Wagner. It's already very eloquently stated in the music. Tristan's music is ab-so-lute-ly Hea-ven. And unless every element in the picture fits, it's like having on a perfect outfit with uncomfortable shoes. But any truth can be observed from a lot of different sides. "The Met is very fortunate in having Professor August Everding for their new production. A lot of the really fine producers were retiring, and some of the newer ones were more retiring, so there was a vacuum in many ways when Wieland Wagner died. Everding's enormous musical background added to his enormous theater experience makes quite an exciting thing. Vienna hails itself as being more critical than Bayreuth or anyplace else, and Everding's new Tristan stunned them; the praise was unanimous."

"Covent Garden wasn't so lucky," I commented—one reviewer called producer Peter Hall a pipsqueak posturer..."
for such "absurdities" as Isolde's speaking about its being day on a stage dark as midnight.

"Peter is a fabulously interesting person to work with. I think he knew a new direction had to be found in Wagner and he was searching for it, with enormous courage. We think he knew a new direction had to be found in Wagner day on a stage dark as midnight. for such "absurdities" as Isolde's speaking about its being
times in Act II—dem Tage, dem Tage, dem furchtbaren
to be together. This darkness they're plunging themselves
what's keeping them apart. Whereas darkness and secrecy
and I was getting more skeptical of friend Jorkins by the
I know you will. But don't ever believe them, because if
my crib notes whispered, is the Met's Isolde. "I
and his own interpretations.
"It sounds terribly arrogant, but I know that I know this opera better than they do. Otto Schulman, my teacher, told
me at the start, 'I'd say you should never read reviews, but
in theatre. The lighting—look, Tristan and
I was for fresh bait. "Siegfried," Thomas' latest
Deutsche Grammophon recording, was conducted by Her-
von Karajan, whom some describe as a "tyrannical megalomaniac." How did Thomas compare Hans Knap-
pertsbusch (the conductor of Thomas' earlier London re-
cording of Parsifal) with Karajan?

"I can't sing a hymn of praise loud enough for Knapp-
pertsbusch," Thomas said—then sang one until I interrupt-
ed. "Karajan? He's a fantastic musician. It's fascinating
working with him. But there is an aura about him that
creates a climate in which it is an unnecessary strain for me
to work. I think it has to do with his absolute approach to
life, and it's simply because I'm not in tune with that."

"Have you worked with any absolutist producers? What
if a producer wants stage business from you which you
don't like?"

"I get along extremely well with all the people with
whom I work. I'm a great diplomat; I can talk him out of
it, usually. But if a thing is terribly important to him I say
'Okey, I'll try.' You know the word 'opera' in Latin means
work. I don't try it half-heartedly, to prove to him that it
isn't feasible, but I really try. If it doesn't work, then I'll
say 'No, I can't do it,' but if I was wrong, fine."

So there you are, Jorkins, and furthermore, Thomas is
still with his first teacher.

"He told me, 'You walk okay offstage, but when you go
on, you're clumsy.' So I studied dance and fencing."

I scented my last line. No man rises so high as Thomas
without being very competitive. This will come out in every-
thing he does. I would ask, "When fencing in an opera
whose script calls for you to lose, do you find yourself
trying to win?" and he would say "Yes." Impact, curtain.

So I asked, and he said "No. I am thoroughly profes-
sional." He is. He wants his solo curtain, not just because
'I'm a dead battery at the end of a performance and if
there isn't something coming back I think I would explode
or fold up," but 'because it's the only tool I have against
the direction.' (Even here, Thomas doesn't say weapon.)
"If he thinks I'm doing a lousy job, he can lower my salary
and I was for fresh bait. "Siegfried," Thomas' latest
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'I'm a dead battery at the end of a performance and if
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the direction.' (Even here, Thomas doesn't say weapon.)
"If he thinks I'm doing a lousy job, he can lower my salary
and the only tool I have against it is to say 'How can you,
when the public is for me?' My teacher once told me: 'Op-
era is a bastard form. If you can't bear it, get out.'"

"Bastard form?"

"This mating of art and business—"

At that moment the cash register on the bar behind us
went off like a pinball machine. Thomas laughed easily. At
this juncture in his career, with so many successes behind
him, he can afford to be light-hearted. Did he ever, in
fantasy, anticipate his current triumphs?

"My mother has told me that as a child I dreamed in Technicolor. But still I can say that many of my dreams
have been overtrumped."

Thomas laughed hardest when I read him Time maga-

"I hope, if that's true, it will stay true also. If opera ever
became anything other than that, it would be wrong. Be-
cause the ear must be raped, and—comforted. That's what
opera is."
HEINRICH SCHÜTZ’S RICHLY EXPRESSIVE RESURRECTION

Roger Norrington leads seasoned forces in a vivid and stylish re-creation of a worthy work.

ARGO’s magnificent new release of Die Historia der fröhlichen und siegreichen Auferstehung unsers einzigem Erlösers und Seligmachers Jesu Christi (that’s its full title) by Heinrich Schütz immediately joins Nonesuch’s two-disc set of Book 1 of the Kleine geistliche Konzerte in the very limited category of The Finest Schütz on Record. Not so much, perhaps, because of the music itself—this early (1623) Schütz oratorio is a great and richly expressive work, but every now and then it betrays a whiff of that Olde Musick feeling from which the “little sacred concertos” that came thirteen years later had completely freed themselves. I am not, of course, suggesting that a “late” style is necessarily better in any way than an “early” one, but merely that Schütz was more fully master of his own style in the concertos, and that consequently you have to listen to the Resurrection Story with that slight sense of “making allowances” which is never called for by, say, Monteverdi, an even greater composer.

What is particularly satisfying about the Argo release is the vividness with which both performance and recording recreate the stylistic and expressive terms of Schütz’s score. The pacing is always alive yet always dignified, and the textual realization is beautifully judged, with modest but telling embellishments in the vocal parts and a convincing response to Schütz’s suggestions for the handling of the four-viol group that accompanies the recitatives.

Choral and instrumental contributions are alike immaculate. Peter Pears evokes the utmost sensitivity and color from the Evangelist’s frequent incantations on one note, and without ever overstepping the bounds of the style. Philip Langridge and Ian Partridge are a mellifluous pair of tenors in the small but important parts of the Two Men at the Sepulchre, the Two Angels, the Young Man at the Sepulchre, and Cleopas and his Friend. The female roles are also well done.

The traditional two-voice setting of Jesus’ part brings me to my one reservation. John Shirley-Quirk sings the lower line movingly, but the allotting of the upper line to a tenor instead of an alto places an unfair strain on Robert Tear. Admirably though he may cope with the resulting resitura problems, the difficulty is apparent. But this is a small point. Far more vital are the imagination and conviction that inform the whole enterprise. And perhaps the most imaginative touch of all is the way conductor Roger Norrington and the Argo engineers have used purely aural perspectives to interpret Schütz’s notion that “the Evangelist alone should be seen and all the other persons hidden.” A wonderful performance, then, and most worthily presented.

Next year, incidentally, will mark the three-hundredth anniversary of Heinrich Schütz’s death. Perhaps this fact will have some slight effect on his currently poor representation in
the recordings catalog. Without being what the world calls a "major" composer, Schütz produced a considerable body of beautiful music, one in which it is difficult to find a single false note. Neglected he is, but in this case at least the neglect is undeserved.

Bernard Jacobson

Schütz: Historia der Auferstehung Jesu Christi. Peter Pears, Robert Tear, Philip Langridge, and Ian Partridge (tenors); John Shirley-Quirk (baritone); Jean Temperley, Gloria Jennings, and Pauline Stevens (sopranos); Charles Spinks (organ); Adam Skeaping (violone); Robert Spencer (chitarrone); Heinrich Schütz Choir; Elizabethan Consort of Viols; London Cornett and Sackbut Ensemble, Roger Norrington cond. ARGO ZRG 639 $5.95.

A PIANISTIC PRIZE-WINNER: IVAN DAVIS' RACHMANINOFF

Conductorial and orchestral empathy contribute to a splendid recording of the Piano Concerto No. 2

Pianist Ivan Davis and conductor Henry Lewis have achieved a performance of Rachmaninoff's Second Piano Concerto that is one of those rare and remarkable occasions in which absolutely everything goes so much better than right, when all hearts and heads and hands function instinctively and well. If the new London recording of this musical event doesn't win an award from somebody, I'll be very much surprised.

I have heard Davis play many times, but never quite like this. His tone is utterly gorgeous: rich, warm, ringing, and sensitive. His control of nuances—whether dynamic, rhythmic, or phrasal—is spectacular. Every big, singing melody and all the little fragments of counterpoint that abound in the solo part are etched with such refinement, such fervent love of their meanings, that one would have to be a stone not to be moved by his playing.

Henry Lewis and the Royal Philharmonic are every bit as remarkable as the soloist. Lewis' interpretation matches Davis' to the most minute degree, and their rapport seems not only intellectual but spiritual as well. In the orchestra, melodies and textures surge and flow—but not so much as to become maudlin. The blanket of sound that Rachmaninoff wanted is all there, but it is not produced at the cost of those important smaller details that temper the grandness of the gesture and keep it from becoming cheap. Empathy must have been in the air all 'round the day this recording was made: the orchestral sound is beautiful, the ensemble perfect. Such intimacy is usually reserved for chamber music. This is a splendid recording.

Lester Trimble


ONE MORE TIME WITH TINA TURNER

Should United Artists' new two-disc Ike & Tina album be sold in plain brown wrappers?

"Okay, you in for it now, honey!" Tina Turner is back, cooing, shouting, and gurgling through "What You Hear Is What You Get," her new double-record release for United Artists. It was recorded "live" at a concert in Carnegie Hall, and I doubt that the dowager of 57th Street will ever be quite the same again.

Tina doesn't make her appearance until about three quarters of the way through the first side of "What You Hear," having been prefaced by a vamp of Ikettes working almost frantically to warm up the
TINA TURNER: basically a skilled comedienne

audience for the entrance of the star. The audience's orgiastic rumble of satisfaction when she finally does appear produces in her voice a preening quality as she commands the multitude to shout "Hi" to her. "That's the way I like it," she says briskly as the roar subsides and she launches into her opening number titled naturally, Doin' the Tina Turner. For the rest of the evening she does just that—Tina Turner—and she proves again that there is no one else in the business quite like her.

She catapults through sides two and three with some fine material, such as Proud Mary and I Smell Trouble, but it is on side four, in her classic I've Been Loving You Too Long, that the recording comes closest to capturing her superb showmanship. In a steamy interplay between her and Ike she pants, she groans, she moans in a San Francisco earthquake of bawdy sound effects. Ike, the perfect straight man for her carryings-on, protests at one point, "I never tried doin' anything like that—but I'll try anything one time." Tina giggles ecstatically and then peremptorily and comically orders, "Try one more time!" It's funny, of course, and therein lies the strength of the act: Tina is basically a skilled comedienne, one who always recognizes that exact moment when bawdy alone becomes a bore and saves it with a deft, well-timed shaft of humor. Come to think of it, I've never seen Tina and Mae West together.

The album has been well recorded and communicates the excitement that the Turners are able to generate in their audiences. I know that Tina should really be seen to be believed, but this recording offers the best aural sample yet of her unique talents.

Peter Reilly

IKE AND TINA TURNER: What You Hear Is What You Get. Ike and Tina Turner; the Ikettes; orchestra. Introduction; Piece of My Heart; Everyday People; Doin' the Tina Turner; Sweet Soul Music; Ooh Poo Pah Doo; Honky Tonk Women; A Love Like Yours; Proud Mary; I Smell Trouble; Ike's Tune; I Want to Take You Higher; I've Been Loving You Too Long; Respect. UNITED ARTISTS UAS 9953 two discs $11.98, @ X04018 $7.98, @ XC 7018 $7.98.

70, GIRLS, 70: A FOUNTAIN OF YOUTH

Columbia's original-cast album rescues a delightful show unjustly condemned to Broadway's oullette

ACTRESS Ruth Gordon, who at seventy-five can still give any teen-age Lothario a run for his money, says age is just something they stamp in your passport—you're only as young as you feel, and all that jazz. I hope that when I'm seventy-five I'll think—and feel and act—the same way. And if I need any inspiration, I can always creak over to the record shelf and pull out Columbia's original-cast album of a musical called 70, Girls, 70.

This delightful show redefines the word "joy." Well, at least for a while it did. It has long since departed Broadway for the great Land of Music in the Sky, a victim of unfriendly reviews and no business. But while it was around, it brightened many hearts and set not a few toes to tapping. Now it has been preserved in what is probably the best original-cast album of the past season. After the disastrous recordings of Follies (so badly done by Capitol I can hardly bring myself to play it) and No, No, Nanette (in which a great deal of the music was deleted from the score and replaced by boring, superfluous dialogue), 70, Girls, 70 is an absolute delight in the annals of recorded show music. It is impeccably recorded, clear as rainwater, sparkling with sass and vinegar, and as much fun as a picnic. 70, Girls, 70 is about old folks who elect to make the most out of life, veteran stage and vaudeville performers with a lot to give.
and giving it all they've got. Based on the riotous British film *Make Mine Mink,* the story is a zany poem to senior citizens and a celebration of their not inconsiderable triumph in staying alert and alive. The plot—about how they decide to steal furs to refurbish (sorry about that!) their old folks' home, their ups and downs in the world of crime, and the new doors it opens in their mundane lives—need not burden us here. But the score John Kander and Fred Ebb have written for these nimble septuagenarians should plant a tickle in the toes of even the tiredest listener. It is through the joy and rhythm of this score (and the zest and razz-ma-tazz of the evergreen ladies and gents who bring it to life as though they were all twenty once more) that *70, Girls,* 70 will continue to live on despite its untimely demise on Broadway.

I don't see how anyone could fail to be charmed by the whole rooming-house-full of oldsters sitting in front of the TV set acidly dissecting Merv Griffin's faults in a song called *You and I, Love,* or how even the most jaded musical appetite could fail to come alive at the sound of Mildred Natwick, Hans Conried, and the indefatigable Lillian Roth (yes, the same L. R. who poured out her sorrows in the book *I'll Cry Tomorrow*) burning up the carpet to an upright piano on *Hit It, Lorraine!* Or the special glow that comes over a group of old-timers asking the audience *Do We?* ("You sit there wondering, do we still hit that bell./Eat your hearts out, kids, 'cause we'll never tell."). A faded femme fatale tap dances with a cheeky teenage bellboy and sings *Go Visit Your Grandmother*; the Mahalia Jackson of Tin Pan Alley, building-sized Lillian Hayman, blows the speakers out with a rousing show-stopper called *Coffee in a Cardboard Cup*; an ancient crone goes to the tennis courts in pleated shorts; a whiskered gent nibbles Gelusil and jitterbugs; a tap-dancing granny works the crossword puzzle in the *Saturday Review* in half the time it takes a college hippie—and all to banjo music. There is this and much more when these hams slightly past their prime take over this wonderful album of blues, jazz, Dixieland, polkas, ragtime, and good old-fashioned show-biz panache, turning it into a tribute to staying alive. Unlike *Follies,* which retches in horror at the thought of growing old, *70, Girls,* 70 not only accepts it, but teaches us how to rejoice in it.

There is more talent crammed onto the two sides of this happy album—some of it going back to Minsky's and Flo Ziegfeld—than in nine out of ten musical extravaganzas I've seen in the past ten years. Get up out of those wheelchairs and dig it; it's like a lifetime supply of vitamin B-12. Every time I play *70, Girls,* 70 I feel as if I've got squatter's rights next to the Fountain of Youth, and that's a treasure that simply has to be shared.

Rex Reed

This month, Columbia presents three concerts, a consort, and Harry Partch.

We give you three great concerts, by orchestras led by three great conductors: the Philadelphia, under Eugene Ormandy; the New York Philharmonic, under Leonard Bernstein; and the Orchestra, Chorus and Soloists of the Paris National Opera, led by Boulez.

And we give you a great consort of music (ke) rendered by (e) Glenn Gould. And then we give you Harry Partch.

The new Harry Partch album is hard to describe because he makes all his own instruments and it's like nothing you've ever heard before. Part concert, part consort, part Partch.

On Columbia Records®
ARENSKY: Trio No. 1, in D Minor, Op. 32. GLINKA: Trio Pathétique, in D Minor (1832). Igor Zhukov (piano); Grigory Feigin (violin); Valentin Feigin (cello). MELODIYA/ADRI. SR 40165 $5.98.

Performance: Scintillating Recording: Good

More than sixty years separate the dates of composition of these two trios, one by the prophet-patriarch of Russian art music, and the other by a son of the 'golden age' generation of Tchaikovsky and 'The Five.'

The relatively short Glinka work, composed originally for piano, clarinet, and bassoon but transcribed (and most often heard) for piano, violin, and cello by Jan Hlinky, has immense vitality, passionate expressive content, and charm, and is poles removed from the academically elaborated Arensky. There are none of the Slavic touches of Glinka's later operas, A Life for the Tsar (1836) and Russian and Ludmilla (1842), but rather a good deal of Italian operatic feeling, and, in the first movement, some surprising melodic contours that anticipate Schumann.

The music of Anton Arensky survives outside of Russia today largely by virtue of the lightweight but very lovely Variations on a Theme of Tchaikovsky, Op. 35a, in its string-orchestra version, and through occasional performances of the D Minor Trio. The end movements of the Trio are fully elaborated sonata-style structures, and there are cyclic elements in the finale, while the shadow of Schumann hovers over the opening pages of the first movement. The middle movements—a scintillating scherzo and a poignant elegy—offer the most personal musical utterance. It is worth noting here that Tchaikovsky established the tradition of the 'in memoriam' slow movement in Russian trio composition with his own 'Elegiac' Trio in memory of Nicolas Rubinstein. Arensky's is in the memory of cellist Karl Davidov.

The performances here are full of verve, if a bit shy on impassioned phrasing. Zhukov's playing in the Arensky scherzo is replete with sparkle, and Valentin Feigin's solo cello in the Glinka slow movement is a joy. Sonics are bright and just a shade overreverberant. D.H.

RECORDING OF SPECIAL MERIT

BEETHOVEN: Concerto in D for Piano and Orchestra, Op. 61a. Peter Serkin (piano); New Philharmonia Orchestra, Seiji Ozawa cond. RCA LSC 3152 $5.98.

Performance: Splendid Recording: Splendid

This recording rears buckets of nostalgia for me. The first album I ever owned, back when 78's were selling for $6.00 each, was the Beethoven Violin Concerto, with Joseph Szigeti playing the solo part and Bruno Walter conducting. That's when, as a teen-ager, I was playing the solo part myself. And rightly or wrongly, I have always recalled that Szigeti-Walter interpretation as an absolute ideal. Now this new recording comes along, and the orchestral conception is the closest thing to that old album that I've ever heard! Ozawa adopts what seem to me absolutely perfect tempos; he clarifies textures and emphasizes ideas with the precision only possible within those tempos; and the Concerto emerges with the full dignity and philosophical splendor which are its prime assets.

I have always been disconcerted to hear this concerto played by a pianist, even though Beethoven himself made the piano arrangement. An arraggegated triad does not signify the same thing on a violin as it does on a piano. But the workmanship and ideas in the work are so immensely strong that it is a monument in every version.

Peter Serkin does a splendid job. His musical personality is not in the least a carbon copy of his father's, though he shares some of the cleanliness and seriousness of musical demeanor that characterize the elder Serkin's playing. Technique he has to squander, and it makes for some beautifully liquid and flashy passages. His tone is lovely—neither warm nor cool, but somewhere between. Even if one did not know he was young, I think one would sense it from his playing. There is a special sweetness of disposition in many expressive passages which speaks youth (though not immaturity). At the same time, I have a tantalizing feeling that ten years from now Peter Serkin will play this same concerto even more strikingly, projecting depths and dimensions one can't even imagine. An immense capacity for growth seems implicit in every passage of his playing.

BERIO: Epitaphic: Folk Songs. Cathy Berberian (soprano); BBC Symphony Orchestra and Juilliard Ensemble, Luciano Berio cond. RCA LSC 3189 $5.98.

Performance: Excellent Recording: Excellent

Berio's 'Epiphanies' is a 'set' of short orchestral and vocal pieces on texts of Proust, Machado, Joyce, Sanguinetti, Simon, and Brecht. The order and even the selection of performed elements can be variable, with the avowed intention of creating different juxtapositions and illuminations. The order chosen here, however, reflects a very distinct weighting of some highly charged elements—from Proust to Brecht, from lyric expression to speech and speech-song, from a very personal lyric dimension to the point where even the necessity of art itself can be called into question. It takes half an hour and goes very far. These ephiphanies are a series of revelations, each more charged, more weighted, more disturbing than the preceding one—a brilliant work and, in all senses, an imposing one.

What a relief to turn to the other side! These arrangements of 'folk songs' are hardly arrangements in the conventional sense and have little to do with 'pure' folk art. At least four of the originals are composed songs: two by John Jacob Niles (you guessed it: Black Is the Color . . . and I Wonder as I Wander) and two by Berio himself. The others also suggest that special genre of arranged pop-folk of the now-familiar twentieth-century variety. No matter; the whole thing is really a Berio composition anyway and one of his subtler. Like the Epitaphic, this is one of his multi-lingual Cathy Berberian voice-and-instrument works, and it is also, in its way, a product of the ten-
ARE EUROPEAN PRESSINGS BETTER?

By Igor Kipnis

I N THE whole flux of argument, accusation, and attempted remedy of the problems of record quality in the United States, one ever-present consideration has been the comparative quality of records manufactured elsewhere. European pressings, in particular, have been held up by embattled American collectors as a standard to be matched by American companies, and although one comes across occasional screams of outrage in British and Continental record magazines about their local product, the European pressings imported into the United States in recent years have seemed to be at least a cut (no pun intended) above ours.

American record buyers now have an opportunity, if they are so inclined, to judge the difference for themselves on a one-to-one basis. Philips-Mercury is now in the process of converting its American catalog from American to European pressings, and, for a short time at least, both will probably be found in record stores. Collectors who already own American pressings of some of the titles may also want to take the opportunity to compare them with the new imported discs. Over the last few years, of course, all new Philips releases have been imported pressings, but what we are talking about now are the many discs issued here before that time, most on the domestic Philips label, but a few as well that were initially released on Mercury.

So far, there have been some twenty-five releases, including works that range from Bernard Haimkin’s Bruckner Symphonies (Nos. 0, 3, 4, and 9) through George Szell and the Concertgebouw (Mozart, Beethoven, Sibelius), Stravinsky Richter’s Liszt Concertos, the Bach Flute Sonatas with Maxence Larrieu and Rafael Puyana, the Debussy and Ravel Quartets with the Quartetto Italiano, and on to Colin Davis conducting Berlioz Overtures, Dvořák, mid-period Mozart symphonies, and the Mozart Requiem. It is a distinguished catalog, with performances that deservedly received high praise at their first issue. I have recently had the chance to compare directly the American and European pressings of about a dozen releases, and what I have found should be of considerable interest to collectors.

The difference between the domestic release and the import is often surprising; one might not readily believe that such a degree of difference in quality could exist between the two. A run-down of faults of the former might include noisy lead-in frequencies. The Grumiaux Trio’s Mozart Divertimento (K. 563) exposes a sometimes unpleasantly shrill violin in the domestic pressing; on the import, the sound is merely vivid and very smooth indeed.

Not every one of the imports, however, is ideal. Both domestic and imported versions of the Mozart ‘Coronation’ and ‘Sparrow’ Masses suffer from constriction, for example. But in the majority of cases the difference is remarkable. In terms of instrumental definition, one could not have a more dramatic demonstration than Monteux’s Swan Lake excerpts. The sides are lengthy, with the imported version containing more separating bands (each spiral takes up groove space) than the domestic. Yet the cymbals at the loud concluding section, as well as the triangle in the Dance of the Goblets, are infinitely clearer and the bass more solid in the European pressing.

Other advantages? Well, the imports have polyethylene-lined sleeves; the domestic issue-louder, and, as a consequence, exhibiting an emphasis on the high frequencies. The Goblets, are infinitely clearer and the bass more solid in the European pressing.

For all those interested in buying the imports, it should be noted that the price is the same. The single discs can be distinguished from the domestic Philips issues by the hole as in the domestic versions. In Sowjaz’s elegant Poulenc song recital, for instance, the final groove on side one of the import is about three-quarters of an inch further away from the center than on the domestic issue; consequently, there is no break-up on the loud penultimate song in the import. Overall, there is a greater transparency of sound on the imports, a mellower and more open quality—this in addition to a noticeable lack of pressing faults. Quite often one is aware, in comparing the two versions, that the level is higher on the domestic issue—louder, and, as a consequence of differing cutting characteristics, exhibiting an emphasis on the high frequencies. The Cremieux Trio’s Mozart Divertimento (K. 563) exposes a sometimes unpleasantly shrill violin in the domestic pressing; on the import, the sound is merely vivid and very smooth indeed.

The sense of expression and communication is ly vivid and very smooth indeed.

Sion between ‘reflecting’ and ‘doing’ that permeates all Berio’s work. Except for the rather cutey Azerbaijani finale—it brings down the house but could really be eliminated without loss—there is something very precise and very illuminating about this. It is as if an understanding of this kind of musical ‘culture’—as real and just as false as the high-brow musical culture for which most of his music is made.

Perhaps the significance of this record comes from the extraordinary presence of Cathy Berberian. I don’t know of any singer who could move with such presence and conviction from French to Spanish to English to Italian to German to Sicilian to Armenian (she won’t touch for her Azerbaijani and neither can I). And I don’t know of any other singer who could move with such ease and conviction from song to speech to song, from the high intensities and revelations of the Epitaphic to the simple grace and direct expression of more than half a dozen different folk styles—with no awkwardness or confusion or contradiction. The sense of expression and communication is always secure, and, although I have heard the purely vocal quality of her singing occasionally criticized (on irrelevant grounds, I suspect), I find her singing here exceptional. It is this singer singing of the most extraordinary kind. You have to hear her delicate French nightingale turn into a Sicilian fish lady to believe it! The BBC Orchestra and the Julliard Ensemble, both under the composer’s direction, perform admirably, and the sound is excellent. No text in any language.

E.S.

BOTTESINI: Grand Duo for Violin, Double Bass, and Orchestra (see PAGANINI)

RECORDING OF SPECIAL MERIT


Performance: Excellent

Recording: Excellent

This is an exceedingly fine album (essentially complete except for the rarely recorded piano version of La Boîte à Joujoux), and both pianist Beveridge Weber and Desto Records have taken justified pride in it. Interestingly, though, in the very first sentence of his liner notes, the pianist raises a question which had to be asked and had to be answered before one could settle down to a major project such as this.

‘I have been asked,’ he says, ‘Why all the piano works of Debussy?’ An easy (and, I think justifiable) answer is: Why not? . . . Certainly Debussy’s prolific piano production warrants and can withstand a ‘one-man show’. . . . And, indeed, one should expect no more monotony from the all-Debussy concert than from a ‘one-man show’ of Monet, Manet, Renoir, or Cézanne.’

To a large extent, I agree with this, as I also do with Webster’s statement that ‘... the outstanding characteristic of Debussy’s music is its variety.’ At the same time, it has to be said that this variety is to be found mostly in the realms of texture and harmony. Debussy’s firmly anti-Germanic, anti-developmental bent led him to organize his piano music along lines which, though they engendered a great variety from piece to piece, almost guaranteed a sense of sameness when the pieces are heard in the aggregate. These are all, to a greater or lesser extent, ‘salons’ or ‘characteristic’ pieces.

(Continued on page 104)
THE FOUR-CHANNEL EVERYTHING.

SANSUI BREAKS THE BOTTLENECK.

The “wait-and-see” period is over. You can go ahead and overwhelm yourself with the awesome power of the total four-channel sound field right now. And tomorrow too.

Sansui’s QR6500 Four-Channel Stereo Receiver makes it possible. Actually it’s an AM/FM Two-Channel and Four-Channel Stereo Receiver-Synthesizer-Decoder-Amplifier and Control Center. Add four speakers (you probably have two of them already) and live. That’s all there is to it.

As a synthesizer, it can ferret out the ambient signals already present in most two-channel stereo recordings and broadcasts and process them for astonishingly realistic rear-channel reproduction. Enhancing this effect is Sansui’s exclusive phase-modulation technique, which moves the sound about the listening area the same way nature propagates the live sound field.

As a decoder, it can accurately reproduce the four original channels of any compatibly matrixed four-channel recording or FM broadcast. And such discs and broadcasts are here now, past the experimental stage, becoming increasingly popular. In this mode, Sansui’s original phase-shift circuitry prevents the sound dropouts and lost sound-source localization that plague many matrixed systems. And the phase modulators are also at work to build up that “live sound field.”

As a straight-through four-channel stereo center, it can handle open-reel or cartridge four-channel tapes, or any other discrete four-channel source. It features 280 watts of total IHF music power (50 watts continuous per channel at 4 ohms; 37 watts continuous per channel at 8 ohms). Normal-level response is 20 to 30,000 Hz ± 1 dB. Distortion at rated output is less than 0.5%. IHF sensitivity of the high-performance FET FM tuner is 1.8 microvolts.

It has slide controls for front-rear and right-left balance, illuminated digital indicators for two- and four-channel modes, and a full complement of controls and accessory circuits for any two- or four-channel function you can think of. You can even “dial” the best speaker arrangement — four-corner style, front 2-2, or what have you.

It’s Sansui’s embodiment of the four-channel era. Model QR6500.

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NOVEMBER 1971

CIRCLE NO. 54 ON READER SERVICE CARD
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**RECORDING OF SPECIAL MERIT**

GIANNINI: The Taming of the Shrew
Kansas City Lyric Theater: Lowell Harris, David Holloway, J.B. Davis, Mary Jennings, Catherine Christiansen, Walter Jones, Walter Hoyal, Brian Steele, Adair McGowen, Charles Reedman, Stephen Knott, William Powers and Donald Nelson (singers); orchestra, Russell Patterson cond. COMPOSERS RECORDINGS INC. CRI SD 272 two discs $11.90.

Performance: Excellent
Recording: Decent

Although Vittorio Giannini was born in the twentieth century—in 1903, in Philadelphia—and lived until 1966, he might just as well have been of Schoenberg, Stravinsky, or any of the schools and theories of his time so far as his own music is concerned. He studied at the Juilliard School, and later taught at Juilliard and at the Manhattan School of Music in New York City, but his soul always resided in Italy, where he completed his early studies at Milan Conservatory. His style was firmly rooted in the musical language of his forebears—the scintillation of Rossini, the theatricalism of Verdi, Puccini's melodic emotionalism. Yet Giannini's music is always fresh and appealing. (Continued on page 110)
The new Revox A77 Mk III.

Nothing is.

But the new A77 Mark III is certainly the best recorder Revox has ever made. And that’s saying something.

The Mark III is an improved version of our critically acclaimed A77. The recorder that The Stereophile magazine (1-71) described as, “Unquestionably the best tape recorder we have ever tested...”

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However, at Revox we’ve never been content to rest on our laurels. We thought we should make the best even better.

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Not a radical transformation, but a program of rational development.

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For example, we’ve designed a new oscillator circuit for greater efficiency and lower distortion. Modified and strengthened the self-adjusting braking system. Devised a new hardening process to reduce capstan wear. Improved tape handling and spooling. And made a number of other changes. A total of eighteen... some major, some minor.

All in all, we haven’t created a revolution

We’ve just done what we set out to do... that is carry the art and science of tape recording a few steps closer to perfection.

And, in the process, we’ve given you eighteen more reasons why...

Revox delivers what all the rest only promise.
Introducing the Heathkit

The new Heathkit AR-1500 Stereo Receiver succeeds our AR-15. But the AR-1500 is no facelift. It embodies substantial improvements in every major area of the circuitry — resulting in more pure power, greater FM and AM selectivity and sensitivity, and a much easier kit to build. And in 1967 when we introduced what was rightfully called "the world's most advanced receiver", the technology somewhat overshadowed the fact that the AR-15 was probably the best value in audio. The new AR-1500, still at 349.95, is an even better buy!

**Better Power**, not just more of it, gives you better stereo listening. The AR-1500 provides 180 watts Dynamic Music Power, 90 watts per channel (60 watts RMS), under an 8 ohm load (120 watts per channel under 4 ohms), with less than 0.25% harmonic distortion all across a bandwidth of less than 8 Hz to more than 30 kHz, IM distortion is less than 0.1%. Direct coupled output and driver transistors are protected by limiting circuitry that electronically monitors voltage and current. And a completely regulated power supply for the preamp and tuner circuits offer better stability and noise characteristics.

**Better FM**, better phase linearity, better separation and less distortion result from two computer-designed 5-pole LC filters. Alignment is a simple one-step operation. An improved 4-gang 6-tuned circuit front end gives better stability. 1.6 uV sensitivity, 90 dB selectivity, 1.5 dB capture ratio, 100 dB image and IF rejection. There are four ICs, three in the IF, one in the Multiplex. And the patented automatic FM squelch is both noise and deviation activated, fully adjustable for sensitivity.

**Better AM**, the "once-over-lightly" section in many receivers, has been subjected to the same engineering scrutiny that was applied to every part of the AR-1500. The design incorporates two dual-gate MOSFETS in the RF and Mixer stages, one J-FET in the oscillator, a 12-pole LC Filter in the IF, broad band detector and an adjustable rod antenna. You get better overload characteristics, better AGC action, and no IF alignment.

**Better Looking**, with a new form that follows its function.

"Black Magic" lighting hides the AM and FM tuning scales and meters when the unit's turned off. A velvet-smooth flywheel-action knob tunes AM and FM, pushbuttons control all system modes. Panel and knobs are chrome-plated die castings. And there are outputs for two separate speaker systems, pushbutton controlled from the front panel; front-panel jacks for two sets of headphones; bi-amplification outputs for separable preamps and amps; connections for oscilloscope monitoring of FM Multipath. Conventional inputs for phono, tape, tape monitor and auxiliary sources all have individual level controls.

**Better to Build**, with 10 plug-in circuit boards, two wiring harnesses and extensive use of pre-cut wiring with clip connectors. Built-in test circuitry uses the signal meter to make resistance and voltage checks as you go along. Install your new, better AR-1500 in the low-profile walnut cabinet, in a wall or existing cabinet, or use the black-finish dust cover included with kit. It just may be the best stereo receiver you'll ever own!

Kit AR-1500, less cabinet, 42 lbs., mailable ............ 349.95*
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**AR-1500 SPECIFICATIONS** — **Tuner — FM section (Monophonic):**
- Tuning Range: 88 to 108 MHz. Intermediate Frequency (IF): 10.7 MHz. Frequency Response: -1 dB, 20 to 15,000 Hz. Antenna: Balanced input for external 300 ohm antenna. 75 ohm antenna input may be used between either FM antenna terminal and ground. Sensitivity: 1.8 uV. Volume Sensitivity: Below measurable level. Selectivity: 50 dB. Image Rejection: 100 dB. IF Rejection: 100 dB. Capture Ratio: 1.5 dB. AM Suppression: 50 dB. Harmonic Distortion: 0.5% or less. Intermodulation Distortion: 0.1% or less. Hum and Noise: 60 dB. Spurious Rejection: 100 dB. FM SECTION (Stereophonic): Channel Separation: 40 dB or greater at midfrequencies; 30 dB at 15 kHz. Frequency Response: -1 dB, 20 to 15,000 Hz. Harmonic Distortion: 0.5% at 1000 Hz with 100% modulation. 19 kHz and 38 kHz Suppression: 55 dB. AM SECTION: Tuning Range: 535 to 1620 kHz. Intermediate Frequency (IF): 455 kHz. Sensitivity: 50 uV with external input. 300 uV per meter with radiated input. Selectivity: 20 dB at 10 kHz. AM Antenna: Built-in rod type; connections for external antenna and ground on rear chassis apron. Image Rejection: 70 dB at 600 kHz, 50 dB at 1400 kHz. IF Rejection: 70 dB at 1000 kHz. Harmonic Distortion: Less than 3%. Hum and Noise: 40 dB. AMPLIFIER — Dynamic Power Output per Channel (Music Power Rating): 90 watts (8 ohm load); 120 watts (4 ohm load); 60 watts (8 ohm load).
We've improved the AR-15 and held the price! Still $349.95*

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AR-1500 Stereo Receiver

Heath has a better cassette recorder too!

The new AD-110 Stereo Cassette Recorder offers a typical frequency response of 30-12 kHz for full fidelity reproduction of all mono and stereo cassettes, including chromium-dioxide. The built-in record bias adjustment requires no external equipment, utilizes the front-panel meter and a built-in reference. Features include precision counter, automatic motor shutoff, preassembled and aligned transport mechanism. Compatible with any quality mono or stereo system.

Kit AD-110, 10 lbs. .................. 119.95*
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It is probably the closest approach to perfection in a record-playing arm that has appeared to date. Tracking-angle error is essentially nonexistent over the entire record surface, and distortion arising from this source is eliminated. Perhaps even more significant is the complete absence of "skating force" (an inherent problem with conventional pivoted tone arms), which eliminates the need for any form of anti-skating compensation.

In our tests, the arm of the Rabco ST-4 worked exactly as intended. Both output channels of the phono cartridge had identical waveforms when playing very highvelocity test records (the true criterion for correct adjustment of the anti-skating compensation of a pivoted arm), which also confirmed the absence of significant lateral arm friction.

The center of the rotating arm shaft (effectively the vertical-pivot axis of the arm) is almost exactly in the plane of the stylus and record, minimizing wow and flutter.

In our experience the arm certainly is as good as anything we have used, and we never found a trace of degradation, noise, or any undesirable effect that might have been attributable to its unique design.

In using the ST-4 we found that the arm mass was so low that it would track severely warped records without losing contact with the grooves. In this respect, it was better than practically all pivoted arms we have used, and almost as good as the Rabco SL-8 arm which is outstanding in this test.

The mechanical servo-drive system of the ST-4 tone arm is so simple that one's reaction is likely to be "Why didn't someone think of that before?"

The ST-4 is not critical with respect to leveling; in fact we operated it at angles as great as 15° to the horizontal with no decided change in its performance.

Makers of the only servo-driven straight line arm.

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CIRCLE NO. 49 ON READER SERVICE CARD

Here's What the Experts Say

Julian Hirsch
Stereo Review Magazine

Gordon Holt
Stereophile

A beautifully designed and constructed arm to gladden the heart of any audio perfectionist.

In short we don't expect to see this arm obsoleted for some years to come, and have adopted it as our new standard for subjective testing of universal type cartridges.

Norman Eisenberg
High Fidelity Magazine

There is no doubt that this type of tracking does reduce playback distortion and can extend the life expectancy of both record and stylus.

As a manual record-playing ensemble it is at least as good as, and in some important ways better than, anything hitherto offered.

If ever a product could be characterized as "state of the art" the new Rabco arm is it. In fact, you might even call it ahead of the state of the art.

It moves a pickup across a record in a true radius, with virtually no friction, negligible resonance effects, unprecedented low tracking force, no skating effects, minimum groove wear, and minimum stylus wear.

It is extremely well engineered.

Audio Magazine

Without question, the Rabco arm does what it is supposed to do, and does it nicely.

We know the principle is right, and we must admit that the embodiment of the finished product works perfectly, as far as we can see. It is a delightful device.

GLINKA: Trio Pathétique (see ARENSKY)

JENSEN: Piano Sonata in F-sharp Minor (see RHEINBERGER)

KHACHATURIAN: Concerto for Violin and Orchestra (1940). Wanda Wilkomirska

(Continued on page 114)
We've shortened the distance between you and the music.

Now you can really snuggle up to Schumann. When you get next to our new stereo receiver, the SA-6500.

Because we cut down the distortion. By cutting out the input transformer, the output transformer and the output capacitor. So instead of putting your music through a whole electronic maze, we put it right through. Via direct coupling. With less than 0.5% distortion. And an amplifier frequency response of 10 to 100,000 Hz—1dB.

And because the signal doesn't get capacitord and transformed to death, you get something else. Full 200 watts of power (IHF) all the time.

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Having brought you closer to the music, we also bring you closer to absolute control. With linear sliding controls for bass and treble. Low Filter, High Filter, and Loudness switches to shape the sound. An FM Muting switch to eliminate annoying inter-station noise. And pushbutton audio controls.

There's even more. Like a linear FM dial scale with maximum station separation, for easier tuning. And dual tuning meters to measure FM/AM signal strength and pinpoint FM stations. Plus Lumina-Band tuning to light them up. A full range of input and output jacks. Even a rich walnut cabinet.

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In 1968 almost every stereo enthusiast knew:

1. You couldn't reproduce bass notes through small speakers.
2. All the sound should come from the front of the speaker and none should be directed rearward toward the wall.
3. A speaker should never have associated electronics such as an active equalizer.
4. All good speakers should have crossovers, woofers and tweeters.
5. All speakers should be designed to give flat frequency response on axis.

By 1971 almost every stereo enthusiast has heard the BOSE 901.

A speaker which violates every one of the concepts above. Born out of 12 years of university research,* the 901 has become the most highly reviewed speaker, regardless of size or price.

Today we have a theoretical basis that explains why these concepts limit the performance of conventional speakers. But no theory can tell you how much better a new design will sound. To appreciate this, ask your dealer for an A-B comparison of the BOSE 901 with the largest and most expensive speakers he carries.

*For those interested in the 12 years of research that led to the design of the 901, copies of the Audio Engineering Society paper “ON THE DESIGN, MEASUREMENT AND EVALUATION OF LOUDSPEAKERS,” by Dr. A. G. Bose, are available from BOSE Corporation for fifty cents.

You can hear the difference now.

BOSE
Natick, Mass. 01760

BOSE 901 DIRECT/REFLECTING Speaker System—$476 the Stereo pair, including Active Equalizer. Slightly higher south and west.

CIRCLE NO. 17 ON READER SERVICE CARD
Ask your franchised dealer* to A-B the BOSE 501 with any speaker he carries that uses woofers, tweeters and crossovers.

There is an important reason why we ask you to make this test. There are inherent limitations of performance in the use of a woofer, a tweeter and a crossover—limitations covered in detail in earlier issues. The bypassing of these limitations played a large part in the advances which have made the BOSE 901 the most highly reviewed speaker, regardless of size or price.

We set out to design a lower priced speaker which would preserve as much as possible of the performance of the 901. Most important, we were able to design into the 501 much of the 901's great advance in spatial properties. The BOSE 501 is the second DIRECT/REFLECTING® speaker system.

But it became evident that there was no way to keep the advantages of multiple small full-range drivers and equalization. The cost problem was too great. We were forced to accept the woofer-tweeter-crossover combination as the only feasible compromise and set out to achieve the fullest possible realization of this design approach.

Our engineers designed a unique woofer with an unusually long voice coil which provides tight control of bass transients. They developed a new and different approach to crossing over the outputs of the woofer and the two tweeters. In the process they became convinced that $125 is about the limiting price for improving the performance of a speaker containing woofers, tweeters and crossovers.

The design goal of the 501 was to outperform any other woofer-tweeter-crossover speaker. You be the judge. If we have succeeded, the results will be obvious to you when you make the comparison.

*Literature sent in answer to your request will include a list of franchised BOSE dealers in your area who are capable of demonstrating BOSE speakers to their full performance.

BOSE 501 DIRECT/REFLECTING® Speaker System $124.80 ea. Patents applied for.

NATICK, MA. 01760
You can hear the difference now.

Performance: Good to outstanding Recording: Dated

Mahlerians are rendered valuable service by this collector's label in a nearly hour-long sequence of fondly remembered but long unavailable interpretations. The main attraction is the late Heinrich Rehkemper (1894-1949), whose warm, lyrical baritone and remarkable command of mezza-voce make a very special thing of the Kindertotenlieder. Dating from 1928, this was probably the first recording of the cycle, and the orchestral reproduction is rather demurring. Much of it is the Songs of the Wayfarer cycle, which dates from 1947 and saw circulation here in the pre-LP years. Though Eugenia Zareska's opulent voice thins out at the top, hers is a fine performance, beautifully accompanied by the Concertgebouw under van Beinum. The two songs from Des Knaben Wunderhorn are character-istics of Schlusnus's sensitive singing. Thorborg's contribution, less outstanding vocally, is enhanced by the presence of Bruno Walter at the head of the orchestra.

What with the likes of Dietrich Fischer-Dies- kau, Christa Ludwig, and Janet Baker in the current catalog, our own times need not defer to the past in Mahler interpretation. Still, this is a valuable disc, and it comes equipped with texts, translations, and copious notes and his- torical data by Walter Breen, all of great inter- est to the collector.

MOUSSORGSKY: Piano Music. Souvenir d'enfance (1857) [7]; Scherzo in C-sharp Mi- nor (1858) [1]; Improvisation passee (1859) [12]; Children's Games—Pass-a-the-corner (1859) [14]; Nurse and I (1865) [15]; First Pun- ishment—Nurse Locks Me in a Dark Closet (1865) [16]; Intermezzo in modo classico (1867) [10]; On the Southern Shore of the Crimea (Gurzuf) (1880) [14]; On the South- ern Shore of the Crimea (Capriccio) (1880) [11]; Meditation (Album Leaf) (1880) [12]; In the Village (1880) [9]; Scherzino: The Sea- Storms (1871) [3]; Une larme (1880) [8]; Gop- pak (arr. Moussorgsky) from "The Fair at Sorochintsy" (1889) [11]; Guettar Kriger (pi- ano). MUSICAL HERITAGE SOCIETY MHS 1130 $2.99 (plus 60¢ handling charge, available from the Musical Heritage Society, 1991 Broadway, New York, N.Y. 10023).

Performance: Good Recording: Good

The fourteen piano pieces from Moussorgsky's pen on this disc are of minor moment com- pared to Pictures at an Exhibition, the finest songs, and the operas Boris Godunov and Khovanschina; but if one takes the best of them as sketches from an artist's notebook, they do offer a certain fascination and provide insight into certain later, more developed works. The kinship between the Intermezzo in modo classico and both Bydlo and Catacombs from Pictures is reasonably self-evident. A few pieces do stand out. decidedly original is the union opening of the final piece on side two,
On the Southern Shore of the Crimea (Gurzuf). Moussorgsky’s flair for communicating gesture and movement comes to the fore in the Gopak from The Fair at Sorochintsy. Moussorgsky’s keyboard arrangement of the Gopak from The Fair at Sorochintsy differs substantially from the more familiar orchestral version. The remaining pieces, save for the Crimian sketch that opens side one (and which points toward Janácek’s Capriccio for Piano Left Hand and Chamber Ensemble), fall into the Schumannesque salon category.

The recorded performances by Günter Krieger are excellent in both execution and sonics. It should be noted that the titles indicated above differ somewhat from those on the record label and jacket: dates and titles here correspond to those in the Fifth Edition of Grove’s Dictionary of Music and Musicians, as corroborated by M.D. Calvocoressi’s Moussorgsky (Dent & Sons, Ltd., London, 1946) and J.L. and S. Bertensson’s The Moussorgsky Reader (W. W. Norton, New York, 1947). The order of their performance on the disc is indicated in brackets after each title.


Performance: Good to brilliant Recording: Good enough

Though Ruggiero Ricci is not quite on target at the end of the hair-raising flourish of the first solo violin entry in the Concerto, he goes on from there to justify in splendidly vital fashion his reputation as the foremost specialist in the works of Niccolò Paganini. The D Minor Concerto made its way into the recorded repertoire during the 1950’s via an Epic/Philips disc by Arthur Grumiaux, and it offers—notably in the dark-hued slow movement—considerably more musical substance than the other Paganini concertos I have heard. But even more interesting here is the first recorded performance of the fiendishly difficult Le Streghe Variations with the orchestral accompaniment. I won’t say that Ricci’s performance is totally accurate in every detail (that would be a miracle for any violinist save Paganini himself), but the piece as a whole is communicated with great vitality and atmosphere.

The prize item for me, however, is the violin-and-double-bass duo of Giovanni Bottesini, the Italian double-bass virtuoso and conductor of the mid-nineteenth century. Understandably, the music is decidedly in the post-Donizetti-Bellini operatic manner, superbly written for the solo instruments, and a delight to the ear. Francesco Petracchi is fully Ricci’s equal as a master of his instrument, and to hear him toss the tune with Ricci’s melodic line a third higher is enough to make any other would-be virtuoso turn green with admiration and envy.

The orchestral accompaniments under Piero Bellugi are nicely styled throughout. The recorded sound is clean, if a bit lacking in body. The prize item for me, however, is the violin-and-double-bass duo of Giovanni Bottesini, the Italian double-bass virtuoso and conductor of the mid-nineteenth century. Understandably, the music is decidedly in the post-Donizetti-Bellini operatic manner, superbly written for the solo instruments, and a delight to the ear. Francesco Petracchi is fully Ricci’s equal as a master of his instrument, and to hear him toss the tune with Ricci’s melodic line a third higher is enough to make any other would-be virtuoso turn green with admiration and envy.

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ten unbearably repetitious. By the end of part two you could swear that RCA had somehow managed the first forty-five-minute record side in the business. I thought, one more bubble or tone cluster and I start screaming and babbbling tone clusters unaided. Anyway, good performance, good recording, and lots of credits in the ledger book for good works.

E.S.

RACHMANINOFF: Piano Concerto No. 2, in C Minor (see Best of the Month, page 97)


Performance: Good
Recording: Satisfactory

The "Romantic revival" continues apace, although the returns are beginning to diminish a bit. Here are two big Romantic F-sharp Minor machines—both squarely (and I mean squarely) in the Schumann-Brahms tradition. Contrary to what is generally thought, the Chopin-Liszt lineage pittered out in late nineteenth-century virtuoso displays and salon music; the "serious" Classical-Romantic approach became dominant. Big-scale, carefully worked F-sharp-minor sonatas were a kind of standard set piece—both Schumann and Brahms wrote one. The compositions at hand are sturdy if rather second-hand examples.

Adolf Jensen, born in 1837 in Königsberg on the Baltic (now Kaliningrad in the USSR), knocked around Central Europe for most of his forty-two years without ever really establishing himself anywhere. His single sonata, the more original and striking of the two works, betrays to have been the principal motif of his life. Joseph Rheinberger, undoubtedly Liechtenstein's greatest composer, was born in Vaduz in 1839 but studied principally in Munich, where he settled down to a quiet life as a professor of music. And, sure enough, his F-sharp-minor sonata, written late in the century, reflects a comfortable, craftsmanlike kind of Romanticism. These works make a certain impression, but one wonders if the composers are actually at their best in these "required" pieces—even Brahms and Schumann were not!

Adrian Ruiz is a Los Angeles pianist with considerable ability, although not, I think, enough of the grand style to make these pieces even begin to work. The recording, also from Southern California, is clear and not unattractive, although, for once, a little sonic schmaltz wouldn't have hurt.

E.S.

SCHÜTZ: Historia der Auferstehung Jesu Christi (See Best of the Month, page 96)

RECORDING OF SPECIAL MERIT

RICHARD STRAUSS: Ariadne auf Naxos. Leonie Rysanek (soprano), Ariadne/Prima Donna; Jan Peerce (tenor), Tenor/Bacchus; Roberta Peters (soprano), Zerbinetta; Walter Berry (baritone), Music Master/Harlequin; Sena Jurinac (soprano), Composer; Murray Dickie (tenor), Dancing Master/Brighella, Mimi Coertse (soprano), Naiad; Hilde Rüsl (soprano), Maid of the Minotaur; Richard Strauss (piano). GENESIS (225 Santa Monica Blvd., Santa Monica, Cal. 90401) GS 3733.

Performance: Excellent
Recording: Satisfactory

The sentiments I expressed in these pages about the original incarnation of this recording on the RCA label more than ten years ago (January 1961) need modification in only one respect: what then seemed like spectacular sound has been rendered routine by ten years of technological progress. But, even from the technical point of view, this London reissue will eminently hold its own.

Artistically, its values are even more appreciated since the Karajan-directed mono set that was then, and still is, my favorite among Ariadne is becoming increasingly harder to find even though still listed in the active catalog. London's cast is strong all the way. Leonie Rysanek is an imposing Ariadne who revels in the role's high-flying tessitura. Sena Jurinac is just about ideal as the volatile and high-principled Composer. If Jan Peerce finds the trying music of Bacchus no more comfortable than do his recorded counterparts, he does bring to it a more flowing lyricism than they. As Zerbinett-

Erich Leinsdorf hears a playback:
flawless control for a remarkable Ariadne

ta, Roberta Peters displays commendable agility and spirit. Her tone tends to get fragile at times, but she sails through the tricky music with charm and accuracy.

There are no unimportant roles in this delicately wrought opera, and if I single out Walter Berry and Murray Dickie for special excellence, and Kurt Preger for making the speaking role of the Major-Domo so appropriately insufferable, I omit other credits only for lack of space. Erich Leinsdorf presides over this remarkable ensemble with flawless control, securing precise and rich-sounding playing from the Vienna Philharmonic. The set, then, is a strong contender for the honor of the best stereo Ariadne—its only current rival is Angel S 3733, and a detailed comparison of the merits of the two would take several columns. In any case, London rates thanks for this reissue and for having obtained permission to reprint Joseph Wechsberg's excellent essay in the original RCA set.

STRAVINSKY: Preludes; Pastoral; Ragtime for ten Instruments; Octet for Wind Instruments; Tango; Concertino for Twelve Instruments; Ebony Concerto. Israel Baker (violin), Benny Goodman (clarinet), Columbia Jazz Combo and Columbia Chamber Orchestra. GENESIS (225 Santa Monica Blvd., Santa Monica, Cal. 90401) GS 3733.

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Recording: Satisfactory

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Ensemble, Igor Stravinsky cond. Columbia M 30579 $5.98.

Performance: The composer's own
Recording: Best of the Sixties

The three major works here—the Rags, the Octet, and the Ebony Concerto—are all reissues. The remaining pieces don't add up to a great deal of music—not a third of the total. Nevertheless, even the minor bits and pieces of the Stravinsky legacy now assume a certain importance. No other composer in the history of music has had a comparable opportunity to bequeath his own ideas about the performance of his own music. Stravinsky outlived his own conducting career long enough for most of his recordings to come onto the market; he even outlived his own unpopular album, which must have been prepared in 1965 or shortly thereafter and which finally came out a year or so before his death.

There cannot be a great deal more in the cupboard. These last morsels were recorded in New York and Hollywood in 1953 and remained in the vault until now—obviously for lack of other album-filling material. Columbia can be criticized for repackaging the old with the new, but, at least, the old is of high quality and appropriate to its new surroundings. At any rate, these musical footnotes more or less complete the register.

All the 'new' pieces are arrangements. The tiny, odd Preludium for Jazz Ensemble, an almost unknown work, was written in the Thirties and revised in 1953 for the Los Angeles Evenings-on-the-Roof concerts. The sweet, early Pastorale was arranged in the Thirties as a vehicle for Stravinsky's tours with the violinist Samuel Dushkin. The Tango was one of Stravinsky's first Hollywood compositions—a curious, morbid, wildly unpopular pop piece originally written for piano. The Concertino, the biggest of the 'new' pieces, was written in 1920 for string quartet and arranged—quite elaborately—for chamber ensemble in 1952. It is one of those pieces that shows the links between Stravinsky's early, spiky, dissonant, proto-Classical 'experimental' style and his later conversion to serialism. The instrumentation is meant to bring this out and in, and, in process, Stravinsky turned it into an effective piece.

Of all the music, only the Octet really belongs to the 'mainstream' of Stravinskian compositional activity, and some of the rest really verges on the trivial. But Stravinsky enjoyed being casual and occasional, and there is a certain fascination in his very attempts to be vulgar in a high-class, dignified manner. One has to look elsewhere for Stravinskian masterpieces, but, in a curious way, nothing so becomes the man as his attempt at a common touch . . . and his utter inability to be commonplace.

E.R.

RECORDING OF SPECIAL MERIT

VARÈSE: Déserts; Hyperprism; Integrales;
Density 21.5. Michel Debost (flute); Paris Instrumental Ensemble for Contemporary Music, Konstantin Simonovitch cond. Angel S 36786 $5.98.

Performance: Intense
Recording: Excellent

I was a student when Déserts first turned up in New York—at a privately sponsored Town Hall concert—and it was the first time I met Edgard Varèse. I can't remember whether it was the composer himself or his music which made the more overwhelming impression. Déserts was one of the earliest pieces, perhaps the very first work, to combine 'live' instruments with tape, and that now familiar combination is just as radical as Varèse's earlier use of percussion. Déserts and its remnants in such earlier works as Hyperprism and Integrales, surely one of the most original and startling works ever to be bestowed on an unsuspecting public, was a major scandal in New York in 1924. Thirty years later, at the site of the Sacre premiere in Paris, Déserts (conducted by the German Hermann Scherchen) caused every bit as big a ruckus as its predecessors.

After all these years, Paris begins to make amends to her wayward native son. Konstantin Simonovitch is, it is true, an East European who studied with Scherchen, but he is a longtime resident of Paris and has long been active in the cause of contemporary music in France and elsewhere in Europe. Varèse has been one of Simonovitch's 'specialties,' and these large-scale, intense performances have real grandeur and epic strength. Personally I prefer the sound of American woodwind and brass in this music (the French sound is a little too refined and full of vibrato), and I think American percussionists attack this music with more accuracy and zing. But comparisons are more or less odious. Simonovitch achieves intensity with a striking build-up of levels, planes, and juxtapositions, and the excellent recording engineer has caught it all.

One question: can anyone explain what a large picture of Luigi Dallapiccola is doing on the cover of the program insert? I admit that (Continued on page 122)

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November 1971
Jugend auf in dem Kampfgebiet, hier; Wie glänzt der helle Mond; Nachtzaubersoli der Zorn; Herr, was tragt der Boden;

STEREO REVIEW

Bekehrte; Blumengruss; Epiphanias; Was Elfenlied; Phaenomen; Die Sprode; Die WOLF: Lebe wohl; Schlafendes Jesuskind; Placidino Domingo (tenor), Hion; Julia Hamari (contralto), Fatima; Hermann Prey (baritone), Serasmin; others; Bavarian Radio Chorus and Orchestra, Rafael Kubelik cond. DEUTSCHE GRAMMOPHON 2561 095/6/7 three discs $20.94.

Performance: First-rate
Recording: Excellent

When Carl Maria von Weber accepted J. R. Planchê's libretto for what turned out to be his last opera, Oberon, in 1826, it was with some serious reservations: "The whole thing is so foreign to all my ideas and maxims. The intermixing of so many principal actors who do not sing, the omission of the music in the most important moments—all deprive our Oberon of the title of an opera and will make him unfit for other theatres in Europe."

Those were prophetic words, and bring into focus the opera's glaring deficiencies. And it is a great pity indeed that the totality of Oberon is so inept, for the work abounds in inspirations of the highest order. These include not only the brilliant overture and Rezia's justly famous dramatic scene, "Ozean, du Ungeheuer," but also the rousing tenor aria "Von Jugend auf in dem Kampfgebiet," some beautiful music for Fatima, a delightful duet for alto and baritone ("An dem Strande der Garonne"), a fine vocal quartet, and so on. Weber's orchestral mastery is also revealed at its most inspired in its apt evocations of "fairy music," "Turkish music," and just about anything this ill-organized and absurdly overplotted and undercharacterized libretto can demand.

The performance is very praiseworthy. The music glitters in Rafael Kubelik's sympathetic hands: it is clear, lovingly paced, and presented with admirable control. Birgit Nilsson rather overpowers some of Rezia's music—the passages calling for an easygoing lyricism and florid command—but she delivers "Ozean" as only she can. Placidino Domingo is surprisingly close in the role of Hion: though he is not totally assertive with the German text, he renders "Von Jugend auf" with singular ease of vocal production and a degree of personal involvement few of her more recent recordings can match. The program itself was shrewdly chosen to range over an uncommonly broad compass of modes, from the playfulness of Effenspiel to the spirituality of Herr, was träger der Boden hier, from the humor of Epiphanias to the venom of Was soll der Zorn. Vocally, the high point in the sequence is the breathtakingly sung Nachtzauber. In many ways, this is a unique recital. At the Seraphim price, it is irresistible.

COLLECTIONS


Performance: Oh, to be in England, now that Elgar's there!
Recording: Documentary type

"The Proms" is the annual summer promenade concerts at Albert Hall in London, started in 1895 by Sir Henry Wood and continued in turn by Sir Adrian Boult, Basil Cameron, and Sir Malcolm Sargent. Now the baton has passed to Colin Davis, probably the best conductor in England, and it is fittingly destined for knighthood—and the tradition continues.

On the "Last Night of the Proms," the hall is decked out with streamers and balloons and the spirits of the young audiences in the packed house run high. They seem to have run away with Herbert Parry's "Land of Hope and Glory" in 1893, when this recording was made on the premises, and the atmosphere is surprisingly contagious. The music is mostly only sweet Elgar, but the way Davis whips it up with the B.B.C. Symphony, the stuff certainly turns its audience on. The kids whoop, stamp, and cheer, and join in the chorus of "Land of Hope and Glory" in the course of the Pomp and Circumstance No. 1 so lustily that it's enough to bring tears to the eyes of even an Anglophobe.

In the second half of the concert, Sir Henry Wood's Fantasia on British Sea Songs is presented uncut. Under ordinary circumstances, this is a work tailored, one would think, to the musical taste of aging admirals in retirement, but here the hornpipe sets the crowd to stomp- ing a jig in the aisles, and when seven thousand young voices all join in to sing "Britons shall never be slaves," one is moved to take them at their word and help hoist the nearest Union Jack. The evening concludes with a little speech by the conductor and a mass rendition of Hubert Parry's "Jerusalem" to Blake's text ("We shall build Jerusalem in England's green and pleasant land") in Elgar's best-official-manner arrangement, following which, one presumes, the participants, in their paper hats, all file out quietly to begin building.

DEAR FRITZ (The Beloved Melodies of Fritz Kreisler). Kreisler: Liebesfreud; Schön Rosmarin; Liebesleid; Prachtrum und Allegro; Tambourin Chinois; Caprice Viennais; Variations on a Theme by Corelli. Kreisler transcriptions: Lotus Land (Scott); Tambourin Chinois (Albeniz); Midnight Bells (Heuberger); Loodderrerry Air (anon.). Wanda Wilkomirska (violin); Antonio Barbosa (piano). CONNOISSEUR SOCIETY CS 2022 $5.98.

Performance: Not enough whipped cream
Recording: Very good.

The Fritz Kreisler legacy contains not only his irresistible compositions for the violin but also, via recordings, his own model interpretations of them. Never a swashbuckler among fiddlers in matters of technique, Kreisler wrote the kind of music that asked not for fireworks à la Paganini but for elegance, charm, and absolute purity of intonation, so that the passages in double stops might reveal the transparency of his harmonies. Miss Wilkomirska's playing, though unquestionably expert, does not possess these essential qualities to a sufficient degree. The piano accompaniments are fine, the engineering is excellent, but the cause of "Dear Fritz" is better served by the peerless engineering is excellent, but the cause of "Dear Fritz" is better served by the peerless

ALBERTA HURST: Tenor Violin Recital. J.S. Bach: Cantata No. 156; Aron: Trio Sonata No. 4, in A Major (G. 4); G.A. Brand: Suite for Recorder and Tenor Violin. Telemann: Trio Sonata in F Major. Alberta Hurst (tenor violin); Ralph Linsley (harpsichord); Ruth Adcock (flute).

Recording: Exceptional

The recording offers the major part of the recital given by Elisabeth Schwarzkopf and Wilhelm Furtwängler at the Mozarteum in Salzburg on August 12, 1953. It was presented within the framework of the Salzburg Festival, and honored the fiftieth anniversary of Hugo Wolf's death. As related in Walter Legge's informative notes, the great conductor had volunteered his services for the occasion, and prepared for the concert "with all the concentration of a student before his finals." Singer and accompanist seem to have exemplified the rapport here and, in matters of dynamics in particular, achieve spectacular effects in their collaboration. In 1953, of course, the soprano stood at her vocal zenith: she offers her familiar authority in this repertoire, but also an ease of vocal production and degree of personal involvement few of her more recent recordings can match. The program itself was shrewdly chosen to range over an uncommonly broad compass of modes, from the playfulness of Effenspiel to the spirituality of Herr, was träger der Boden hier, from the humor of Epiphanias to the venom of Was soll der Zorn. Vocally, the high point in the sequence is the breathtakingly sung Nachtzauber. In many ways, this is a unique recital. At the Seraphim price, it is irresistible.

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WOLF: Lebe wohl; Schlafendes Jesuskind; Effenspiel; Phaenomen; Die Spröde; Die Bekehrte; Blumengruss; Epiphanias; Was soll der Zorn; Herr, was träger der Boden hier; Wie glänzt der helle Mond; Nachtzauber; Wiegenlied im Sommer. Elisabeth Schwarzkopf (soprano); Wilhelm Furtwängler (piano). SERAPHIM 60179 $2.98.

Performance: Exceptional
Recording: Good

This unique recording offers the major part of the recital given by Elisabeth Schwarzkopf and Wilhelm Furtwängler at the Mozarteum in Salzburg on August 12, 1953. It was presented within the framework of the Salzburg Festival, and honored the fiftieth anniversary of Hugo Wolf's death. As related in Walter Legge's informative notes, the great conductor had volunteered his services for the occasion, and prepared for the concert "with all the concentration of a student before his finals." Singer and accompanist seem to have exemplified the rapport here and, in matters of dynamics in particular, achieve spectacular effects in their collaboration. In 1953, of course, the soprano stood at her vocal zenith: she offers her familiar authority in this repertoire, but also an ease of vocal production and degree of personal involvement few of her more recent recordings can match. The program itself was shrewdly chosen to range over an uncommonly broad compass of modes, from the playfulness of Effenspiel to the spirituality of Herr, was träger der Boden hier, from the humor of Epiphanias to the venom of Was soll der Zorn. Vocally, the high point in the sequence is the breathtakingly sung Nachtzauber. In many ways, this is a unique recital. At the Seraphim price, it is irresistible.

COLLECTIONS

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(3) The DC300 has the most complete protection of all commercially available power amplifiers. It is fully protected against shorts, mismatching, open circuits, RF overload and overheating.

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(5) The DC300 is backed by a complete three-year warranty covering all expenses - parts, labor and round-trip shipping. This warranty covers every unit ever made and has been in effect from the initial unit, providing ample record of DC300 reliability.

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I would guess that this anthology of Austrian keyboard music (Mozart, Poglietti, Fux, and Beethoven are played on harpsichord, the remainder of the program on clavichord) is a heretofore unreleased part of Igor Kipnis's series, originally issued on the Epic label, comprising one LP each of French, English, German, and Italian repertoire. I hope, in any event, that this release presages reissue of the currently unavailable Epic series on Odyssey, for the programs were ingeniously made, elegantly played and recorded, and just full of wonderful things to delight the ear, the heart, and the intellect.

Kipnis's Austrian program tends toward the light and brilliant side, save for the stately Ciacona (on harpsichord) of Fux and the lovely Haydn sonata (on clavichord). The Haydn is my special favorite because of its fascinatingly somber trio in the second-movement minuet and an extraordinarily lovely aria-style slow movement.

Kipnis holds forth on both zitheral and percussive instruments with the vitality and poise that we have come to expect, and with total stylistic mastery. The harpsichord is rather close-up in sound; the clavichord presence is both distinct in sound and warm in tone (mechanism and all).

D.H.


Performance: Good Recording: Good Agreeable singing and repertoire of uncommon interest earn a nod of welcome for this enterprising recording, even though it never quite attains the highest distinction. In music like this, comparison with Peter Pears is inevitable if perhaps unfair. Robert Tear is a younger English tenor who has been following in the master's footsteps and building a considerable international reputation over the past few years.

His voice is similar to Pears', and at times (as in the recent recording of Britten's The Prodigal Son) uncannily so. But though Tear's firm-
er production has enabled him to encompass not only the Pears repertoire but more heroic styles too, he cannot yet command the older artist's riveting way with words, the rare, creative precision of his intonation, or his penetrating scholarship.

Tear's regrettable willingness to compromise on stylistic matters is particularly evident in a piece like the German aria "Meine Seele hört im Schmerzen" by Handel. Both my instinct and the liner notes tell me that it is a da capo aria (I have been unable to find a copy of the music). Yet just when Iona Brown's embellishment of the violin part during the repeat of the ritornello has prepared us for the pleasure of comparable ornamentation by the singer, the performance stops—we are given a repeat of the ritornello, but no full da capo.

Nevertheless, what Tear does do, he does well. And the music ranges from the merely pleasant to the thoroughly captivating. The Handel pieces are lovely, and his German settings are particularly illuminating. For, in this language that he rarely set, his candid, tuneful style brings him closer to Schütz, or to the serene expressivity of Buxtehude or Tunder, than to the more convoluted line of Bach. Among his appealing innovators, and both of his cantatas are worth having. But even the short snatch of Boyce (taken from his setting of Dryden's "Secular Masque") is enough to demonstrate the stronger fiber of his inspiration. The Lass of Richmond Hill, a pop song of the day written for the Vauxhall pleasure gardens by James Hook (1746-1827), makes a charming envoi (it awakens dim memories of unison singing exploits with fifty other raucous children in an English grade-school when I was about ten years old).

The accompaniments Neville Marriner draws from his accomplished chamber orchestra are, like Tear's singing, ever so slightly off the stylistic mark. There is a little too much vibrato, and a little too much generalized Romantic expressivo, and the recording similarly, is a shade too resonant. But the flaws should not be exaggerated, and Simon Preston's lively harpsichord continuo adds a valuable mark on the credit side.


Performance: Fair to good

Recording: Good

Felicia Weathers' gifts—temperamental and stylistic affinity for Italian opera, a middle range of appealing quality and expressiveness, and an ability to communicate emotions—shine most impressively in the Boito, Giordano, and Cilea arias. Her "Vissi d'arte," vital and communicative throughout, suffers from a perfunctory ending, and the excerpt from La Rondine lies uncomfortably high for her. The Verdi arias come off still less happily, for they reveal deficiencies in tonal polish and inaccuracies of fioriture. But even here, in her best moments Miss Weathers sometimes achieves a Callas-like excitement. The orchestral backgrounds are generally effective.

G.J.
Gifts of peace

BEYOND THE BASIC REPERTOIRE

By ROBERT S. CLARK

STRAVINSKY'S CANTATA

I FELT a bit foolish when, sitting down to write about Igor Stravinsky, I was tempted to begin with a paraphrase of the famous pronouncement on Handel: “He bestrides twentieth-century Western music like a colossus.” It is so glib—the pundit rummaging in his bag of professional starters, those shopworn generalizations that have an air of authority and are safe enough not to require demonstration. But the truth of an assertion is not affected by the number of times it is made. And the magnitude of Stravinsky’s achievement has been brought home to me anew by a couple of months going systematically (well, almost systematically) through his recorded works. The freshness, variety, and individuality that characterize almost all of his music from the time of Pastorale (1907) and Fireworks (1908) right up to what he himself ruefully called his “last-ditch” period in the mid-Sixties have no parallel in the work of another twentieth-century composer. How will the future view him? We will have to wait until it gets here to know, I suppose. But if our orchestras, concert halls, and opera houses survive in anything like their present form, it is inconceivable to me that his music will not be frequently heard and enjoyed.

Several of Stravinsky’s most attractive works are seldom done because the combinations of performers they call for are difficult—and expensive—to assemble. One of these is the Cantata for soprano, tenor, female chorus, and an instrumental quintet consisting of two flutes, oboe, English horn (doubling second oboe), and cello. In a long program note for the first performance (1952), the composer wrote: “After finishing The Rake’s Progress I was persuaded by a strong desire to compose another work in which the problems of setting English words to music would reappear . . . . I selected four popular anonymous lyrics of the fifteenth and sixteenth centuries, verses which attracted me not only for their great beauty and their compelling syllabification, but for their construction which suggested musical construction.” There follows a detailed analysis of the work, and particularly of the two sections Stravinsky set in the form of ricercari (“not in the sense that Bach used [the term] to distinguish certain strict alla breve fugues . . . but in its earlier designation of a composition in canonic style”). All of this, coupled with the fondness of commentators for calling the Cantata a harbinger of Stravinsky’s conversion to the serial method, can lend the work a rather forbidding mien for someone who has not heard it. Actually, for all its complexity, it is quite direct and simple in effect, like its obvious stylistic source, the modal consort music of the late Renaissance. In this case, too, the prosody that results from Stravinsky’s questionable attachment to “syllabic values” is—except in the solo tenor line—fluent and straightforward.

The four poems are The Lyke-Wake Dirge, a description of the soul’s journey to Purgatory set for female chorus; “The maidens came,” for solo soprano, a somewhat obscure verse apparently dealing with a girl’s marriage rite, very likely a metaphor for the Church’s marriage to Christ; “Tomorrow shall be my dancing day,” a “sacred history” of the Saviour’s life, for tenor solo; and the quatrain Westron Wind, set for the two soloists. Two recordings of the Cantata are available, Stravinsky’s own (Columbia MS 6992) and Colin Davis’ (Oiseau-Lyre S 265). I acknowledge the special authority the composer’s own recording bears, but I prefer Davis’, which strikes me as a more finished performance. Stravinsky’s exudes the feeling of a thoroughly professional but not very committed run-through, and here and there in the Dirge there is a disturbing sense of tempo instability. Davis’ Patricia Kern is better than Stravinsky’s Adele Addison, and Alexander Young, the tenor soloist for both, sings “Tomorrow shall be . . .” more gracefully for Davis. But don’t take my word for it; try to hear both.
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*Manufacturer's suggested retail.
MICK ABRAMS. Mick Abrams (vocals, guitar, mandolin); Ritchie Dharmar (percussion); Bob Sargeant (keyboards, guitar, vocals); Walt Monaghan (bass guitar, vocals).

Greyhound Bus; Awake; Winds of Change; Why Do You Do Me This Way; Big Queen; Not to Rearrange; Seasons. A & M SP 4312 $4.98.

Performance: Versatile
Recording: Very good

If this one sounds vaguely familiar, it's probably because Mick Abrams was the first lead guitarist for Jethro Tull (and later for Badfinger Pig); he invented some of those famous "Tull riffs" and hasn't forgotten them. He plays all sorts of guitars well, sings fairly well, and is backed well, especially by drummer Ritchie Dharmar, but this band lacks that intangible something that Tull has—and those intangible somethings are vital to a rock band right now.

Two songs, Awake, a long, Moody Blues-type tour de force (Abrams works for Chrislalis, the Moodys' production company), and Winds of Change, an acoustic ballad, might sell the album. They're worth having. Four others are what I call FM-radio songs—the sort one is glad to hear on the radio but wouldn't buy an album for—and the other, Seasons, is one of those long jams (fifteen minutes) that always turn out to be more boring than exciting. Still, if you're interested in old-fashioned (I almost said "straight") rock, you could do much worse than this.

N.C.

ALIOTTA HAYNES: Jeremiah. Skip Haynes (guitars); Mitch Aliotta (bass); John Jeremiah (keyboards); Ron Zeto (drummer).

Long Time Gone; When I Was a Cowboy; Poppa Song; Leavin' Chicago. A.M.F.: Tomorrow's Another Day; and four others. AMPEX A 10119 $4.98.

Performance: Ugh rock
Recording: Very good

Anywhere between fifty and seventy-five records like this one pass over my desk every month. I suppose that's what you'd call conspicuous consumption. But the music is inconspicuous.

D.H.

THE BAJA MARIMBA BAND AND JULIUS WECHTER: As Time Goes By; Baja Marimba Band and Julius Wechter (vocals and instrumentals). As Time Goes By; Think of Me; Samba for Vicky; Two for Tea; Midnight Sun; Spanish Flea; Dansero; and four others. A&M SP 4298 $4.98, ® 4298 $6.98, ® 4298 $6.98.

Performance: Muzak
Recording: Very good

The only way to listen to this disc is as background sound near the pool while fifty tired businessmen holding daiquiris stand around talking about the market. I don't even have a pool, and I don't know fifty businessmen—and if I did I wouldn't want them tromping around on my bluegrass. Nobody can convince me that anyone in his right mind can concentrate on the Big-Band arrangement here of Two for Tea (written by Julius Wechter, incidentally) in this day and age. So I guess that means this is an album for people who are not in their right minds.

N.C.

EDWIN BIRDSONG: What It Is. Edwin Birdsong (vocals); various accompanists. The Uncle Tom Game; The Spirit of Do... Do; My Father Preaches that God Is the Father; It Ain't No Fun Being a Welfare Recipient; and seven others. POLYDOR 24 4071 $4.98.

Performance: Tries too hard
Recording: Excellent

What can I tell you? Birdsong sounds a little bit like Jimi Hendrix, a little bit like Marvin Gaye, a little bit like Wilson Pickett—you name it. Nothing wrong with any of those sources, of course, if they had merged into something that was convincingly original. They haven't, and I still feel uncertain about where Birdsong is, beneath all those traces of familiar styles.

Another problem: all the tunes appear to be new, most of them written by Birdsong and his wife (?) Michelle. Some of them—It Ain't No Fun Being a Welfare Recipient and When a Newborn Baby Is Born, the World Gets One More Chance are obvious examples—verge on parody. I'd like to hear Birdsong try a few rock standards and, perhaps, some originals written especially for his style (such as it is) by other songwriters. He sounds to me like a potentially promising interpretive singer, but there's too much clutter in the way here to be able to tell for sure.

D.H.

JAIME BROCKETT: Remember the Wind and the Rain. Jaime Brockett (vocals, guitar); orchestra. Blue Chip; Bag on the Table; Suzanne; Nowadays; One Too Many Mornings; and four others. CAPITOL ST 678 $5.98, ® 8XT 678 $6.95.

Performance: More wind than rain
Recording: Variable

Step right up and meet the newest free soul who has managed to wend his way into a recording studio. He's billed as "a fantastically complex and sensitive young artist who defies being categorized either by his music or the way he lives." Seems he grew up in a "small New England town full of 'Small New England People' with whom he had great difficulty communicating with [sic]." So naturally he split. (Someone should have told him never to talk down to midgets.) After that it was on-the-road for several years, until he settled down in Boston not long ago.

Brockett obviously thinks of himself as a Kerouac figure, and just incidentally, of course, there has been a big Kerouac revival on campuses within the last couple of years (for the first time all of his books are back in print). But Brockett misses by a mile the unselconscious nonconforming humor and essential broad romanticism that was at the core of Kerouac's work. In its place he substitutes an unfocused angry scorn or a mawkish sentimentality. For instance, Talking Green Beret New Super Yellow Hydraulic Banana Teeny Bopper Blues is supposed to be a corrosive portrait of...
a Middle-American teenager. Instead it is a condescending polemic based on the most superficial sort of observation. Legend of the USS Titanic actually sounds manic during part of its thirteen-minute length: it recounts how Jack Johnson was denied passage on the Titanic because of his color and the gleam which supposedly resulted when the ship sank. To me, that's not protest—that's just plain ugliness of spirit. When Brockett opts for tenderness, as in Remember the Wind and the Rain, the result is arrogant bathos. In fact, the only thing here that I found at all interesting was St. Botolph St. Grey Morning Dulcimer Thing, an instrument in which Brockett does a good job on the dulcimer.

What is wrong with Brockett's work is what is wrong with so much of today's deep-thinking, deep-feeling pop bards: they confuse narcissism with self-direction, political stances with basic humanity, and adolescent infatuation with romantic love.

MARIAN LOVE: I Believe in Music. Marian Love (vocals); instrumental accompaniment. I Believe in Music; Feel the Warm; Through a Long and Sleepless Night; Now That There's You; I'll Take Love; He's Not You; Go Now; and four others. A & R ARL 7100 005 $4.98, © M 87105 $6.95.

Performance: Belles the title
Recording: Good

Marian Love has a sparkle-plenty voice and an affinity for clipped phrasing that naturally calls to mind Dionne Warwick or Diana Ross, but here Marian is packaged and produced the way they package and produce Peggy Lee and Nancy Wilson. They're Alfred Newman's songs, not Randy Newman's, that she sings, and all the pre-rock pop mush—strings, horns, everything—is right there in the background. It should, as Stan Freberg would say, get further back; we can still hear it. Marian Love's voice is clearly good, clean, and precise, but the songs turn it off. Some may find them relaxing; I find them insipid survivors of Forties music, which should have died from anemia before 1950.

HENRY MANCINI: Mancini Concert. Henry Mancini and His Concert Orchestra. Portrait of Simon and Garfunkel; March With Mancini; Overture from 'Tommy' (a rock opera); Big Band Montage; Medley from 'Jesus Christ, Superstar.' RCA LSP 4542 $5.98, © P8S 1754 $6.95, © PK 1754 $6.95.

Performance: Shaky bridge over tired waters
Recording: Excellent

There seems to be a sinister movement afoot to seize new wine, dilute it, pour it into old bottles, and peddle it as vintage brew. These attempts to "musically bridge the generation gap" (the liner notes' claim for this album) between Lawrence Welk and the Carpenters makes for some pretty strange hybrid results in the record department, as when Liberace prowled through MacArthur Park on a disc not long ago. Now Mr. Mancini joins a hickhiking, and the results are sumptuous but awkward. The movie-music mogul's lush interpretation of songs from Jesus Christ, Superstar and the overture to the rock opera Tommy may help clear things up for Uncle Ned, but it is almost certain to send the younger members of the family flying off in the opposite direction. There then is his Portrait of Simon and Garfunkel, which item it is highly unlikely that those swinging young gentlemen would care to have hanging anywhere in their sight. Mr. Mancini and his 'concert orchestra' are more at home in interludes of marches and a 'Big Band Montage' of ancient favorites, an area of parody in which they run into strong competition from Enoch Light and the Light Brigade, who happen of late to have been working the same territory.

PAUL McCARTNEY: Ram. Paul and Linda McCartney (vocals); instrumental accompanists. Too Many People; 3 Legs; Ram On; Dear Boy; Smile Away; Heart of the Country; Uncle Albert/Admiral Halsey; Monkberry Moon Delight; and three others. APPLE SMAS 3575 $4.98, © 8WX 3375 $6.98, © 4WX $6.98.

Performance: Banal
Recording: Fair

The Lennon-McCartney partnership was, of course, long ago discredited. The two Beatles continued to publish songs under this convenient rubric after the group's breakup, but they hadn't actually composed together since they were all on tour, which now seems so long ago as to be almost prehistoric. But though all of McCartney's apologists hotly deny his dependence on Lennon, he himself writes songs that have no relation to anything the Beatles ever performed or wrote or even thought about—home-movie tripe. Now comes this new album, "Ram," which, although less simple-minded than McCartney's first solo efforts a year ago, is nonetheless curiously banal and mediocore.

(Continued on page 132)
Test reports in both HIGH FIDELITY and STEREO REVIEW prove the Altec 714A receiver is built a little better.

In February, HIGH FIDELITY magazine printed a detailed two-page test report (by CBS Laboratories) on the Altec 714A stereo receiver. The wrap-up comment reads as follows: "All told, the 714A is one beautiful piece of audio machinery, that should be given a long serious look by anyone in the market for a new high-quality stereo receiver". And in January STEREO REVIEW's equipment test report (by Hirsch-Houck Laboratories) stated, "In its general performance and listening quality, it is comparable to the best we have tested..."
If the Beatles developed at all, it was from a simple rock group who fell in love with electronic gadgetry to a group for whom the simplest things, although the most difficult to achieve, were often the most satisfying musically: from the straight no-nonsense four-in-a-bar of "A Hard Day's Night" to the hysterical slobber of "Sgt. Pepper" and back, once again, to their roots on "Abbey Road," their finest hour. If anything, McCartney, on his own, is still clutching at phase two. Ram On is as good as any song he has written, its harmonies and rhythmic patterns constantly shifting and delighting. But he seems unsure of the strength of his talent, because he mutilates it with all kinds of echo chambers, feedback, and lighting. But he seems unsure of the strength of his material, because he mutilates it with all kinds of echo chambers, feedback, and lighting. But he seems unsure of the strength of his material, because he mutilates it with all kinds of echo chambers, feedback, and lighting.

One rumor I picked up recently in London is that after the critical approval of George Harrison's solo album, Paul rushed back to New York to remix some of these tracks, including wedges of the New York Philharmonic to cover up the thinness of his inspiration. True or not, there is an excess of extra-musical detail which often obliterates the original idea, and the Philharmonic (or some orchestra) is definitely there, persistently flailing away. There is also too much reliance on the old sing-along melodies which once characterized a certain kind of Beatles laziness—the result, as on Hey Jude, was that if you couldn't think how to finish a song you just faded away into the distance. The end of Long Haired Lady sounds distressingly like the end of Hey Jude.

Another problem is that the lyrics are relentlessly mundane in this collection. It's not that the old Beatles songs ever said anything important, but they at least had some wit. Here the best McCartney can manage is a cynical "I could smell your feet a mile away," which I suspect is some kind of takeoff on the line in Bart Howard's song for Mabel Mercer, Would You Believe It, that goes "Today you can smell my Chanel a mile away." The change has not improved the idea, only cheapened it. 

R.R.

EUGENE McDIANELS: Headless Heroes of the Apocalypse. Eugene McDaniels (vocals). Welfare City Choir. The Lord Is Back; Jagger the Dagger; Lovin' Man; Headless Heroes; Susan Jane; Freedom Death Dance; and two others. ATLANTIC SD 8281 $4.98.

Performance: C+

Recording: Good

The Rev. Eugene McDaniels should get an A for the great deal of time, work, and effort that went into this project. He has written eight songs that deal with the problems of today—his main concern being the treatment of black people by whites. Each song in its own way is a minor sermon. There are several songs about God: The Lord Is Back also informs us that the Lord is black, and Lovin' Man deals with Jesus and how he might be accepted today ("God thing the pigs can't see him or he'd be stopped before he could start"). Supermarket Blues is almost painful to listen to in its soulful tale of the plight of a black man trying to exchange a can of peas for a loaf of bread who instead is beaten and kicked in the head by other shoppers. More questionable is McDaniels' intention in The Parasite, which blames racial prejudice and pollution on the Pilgrims who landed at Plymouth Rock. And downright loathsome is Jagger the Dagger, a plea for bisexuality with dirty lyrics.

The music is not bad; some of it is even exciting. The musicians are talented, especially Harry Whitaker on a throbbing piano high. But most of it is repetitious and hysterical. The points are made early and the door never closes. There is probably an audience somewhere for such simple-minded philosophizing, but this was not enough for me.

R.R.

RECORDING OF SPECIAL MERIT

THE MOTHERS OF INVENTION: The Mothers, Fillmore East—June 1971. The Mothers of Invention (vocals and instruments). Little Home I Used to Live In; The Mud Shark; What Kind of Girl Do You Think We Are?; Bwana Dik; Latex Solar Beef; Willie the Pimp; and five others. REFRIPSE MS 2042 $4.98.

Performance: Mothers "alive" Recording: Very good

It's a good thing we have Frank Zappa. Without his insane blend of rock, perversion, obscenity, theater, classical music, and aleatorism, the pop scene would be in sad straits. This lat-
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Audio Club of America
IF the recent death of Louis Armstrong (July 6, 1971) has not produced the rash of encomiums and reappraisals that one might have expected for a musician whose career spanned fifty years of jazz, the reason for it may just be that Armstrong, in a popular sense at least, has been appreciated and understood all along the line. Two new reissue albums, from RCA and Columbia, serve to underscore the point.

If Armstrong was a trail-blazer (and he was for a time) the direction of his development was apparent both to the musicians with whom he worked and to his audiences, and his experiments, rather than meeting hostility, provoked excitement, admiration, and emulation. When jazz styles changed and left him standing where he was, he was honored still as a forerunner. When he himself slipped to a followed position, however, and many of the small-group sides he made in the Thirties and Forties are quite on a level with his earlier work. They are different: less aggressive, less gutsy, less powerful, slicker perhaps, but no less imaginative. The second two-disc memorial album. But Armstrong's playing did not go suddenly into a decline after the Twenties. How he played was a matter of what year it was than of the tunes he recorded and the size and makeup of the band that played with him. With some of the later groups he often got smothered in the arrangement, or else he dealt with musical material so inimical to jazz feeling that the battle was lost even before the microphones were turned on.

He managed to get away from the big bands and the bad tunes at intervals all through his career, however, and many of the small-group sides he made in the Thirties and Forties are quite on a level with his earlier work. They are different: less aggressive, less gutsy, less powerful, slicker perhaps, but more assured, better controlled, and just as credible building of a solo across a span of time. One hears the innumerable interplay among instruments of equal importance could not contain what he wanted to do—and so he broke out of it. In virtually all of Armstrong's records after the Oliver days, the trumpet is the center of the ensemble and takes the major solos. And when Louis' horn was not at the center of interest, as often as not his voice was.

ARMSTRONG: TWO NEW MEMORIAL ALBUMS

Reviewed by JAMES GOODFRIEND

As a creative jazz musician Armstrong was very probably the greatest jazz musician to come out of New Orleans, but he also personified the death of the New Orleans style. First and foremost, Armstrong was a virtuoso: that is, practically the story of his career. The New Orleans style of contrapuntal interplay among instruments of equal importance could not contain what he wanted to do—and so he broke out of it. In virtually all of Armstrong's records after the Oliver days, the trumpet is the center of the ensemble and takes the major solos. And when Louis' horn was not at the center of interest, as often as not his voice was. Lawd, You Made the Night Too Long, for example, opens with Armstrong singing a few hallelujahs and the trumpet solo is an accompanying record, and proceeds to a trumpet solo, a vocal, and another trumpet solo, concluding with a trumpet cadenza—all, of course, by Armstrong. The other nine men in the band do nothing but accompany.

Armstrong also had that other common characteristic of virtuosos: the confusion of musical worth with technical ability. He admired a number of hack commercial musicians because of their technical prowess, and his comments on his own work frequently show more pride in his fingers and lips than in his musicality and imagination. Certainly he was an outstanding technician (a conductor of a leading American symphony orchestra once outraged his first trumpet by proclaiming Armstrong the finest trumpeter he had ever heard), but he was much more than that.

Just how much more, I think, is shown forcefully in these records. One hears the incredible building of a solo across a span of four choruses in I'm a Ding Dong Daddy, a building in terms of register, musical complexity, rhythmic drive, and sheer excitement. One is astonished at the incredible trumpet openings of Wild Man Blues and West End Blues and Armstrong's beautiful scat vocal behind and around the clarinet solo in the latter. One finds a rhythmic freedom and control to rival classical North Indian music in the interplay (and independence) of Armstrong and Hines on A Monday Date, and a remarkable up-dating of New Orleans style in Back o' Town Blues. And one hears in many places a superb organization of the group's variety of instrumental timbre, a continual newness of sound and relatedness of material that very nearly make the three-minute record side into an art form in and of itself. If one also hears a lot of leaden datedness, dreary commercial slickness, and self-burlesque, it seems, in perspective, to be a small price to pay for all the gold.

The Columbia album is very well annotated by Don DeMichael—a long historical ex-
say and complete and accurate notes on the recording sessions. For the RCA album Nat Hentoff has contributed a warm personal reminiscence, but the listing of titles and recording dates (personnel are not given except for vocals) is filled with errors. To correct only two, the version of Back o’ Town Blues offered here is not the one recorded in April, 1946, as the jacket states, but one done at a “live” performance in May, 1948, with totally different personnel. And there never was a group called Louis Armstrong and his Hot Six, as RCA calls them. It was the Hot Five, which contained sometimes five and sometimes six players; and (as here) the Hot Seven, which was sometimes seven, sometimes eight, and once, at least, ten. That Hot Seven of the Forties, by the way, included no one but Armstrong himself from the original Hot Seven.

The transfers from the original 78’s are superb. The techniques in this relatively unknown field have been quietly developed to a remarkable point in the last few years. Five years ago, quality like this would have been thought impossible. It is all the more reason to praise two fine albums and to urge those who do not already possess the music included in them to seize the opportunity now.

LOUIS ARMSTRONG: The Genius of Louis Armstrong, 1923-33, Vol. 1. Louis Armstrong (cornet, trumpet, vocals); Bertha “Chippie” Hill, Nolan Welsh (vocals); Clarence Williams’ Blue Five; Hot Five; Hot Seven; Carroll Dickerson Orchestra; Savoy Ballroom Five; Sebastian New Cotton Club Orchestra; Louis Armstrong Orchestra. Mandy; Make Up Your Mind; Lonesome, All Alone and Blue; the Bridwell Blues; Oriental Strut; Willie the Weeper; Wild Man Blues; Chicago Breakdown; Alligator Crawl; Potato Head Blues; Weary Blues; S.O.L. Blues; That’s When I’ll Come Back to You; Once in a While; Fireworks; A Monday Date; St. Louis Blues; I’m a Ding Dong Daddy; You Never Been Born; Hustlin’ and Bustlin’ for Baby; Sittin’ in the Dark; He’s a Son of the South; Some Sweet Day; Honey, Don’t You Love Me Anymore; Mississippi Basin; Tomorrow Night; Dusky Stevedore; I Wonder Who; Don’t Play Me Cheap; Linger in My Room Five; Sebastian New Cotton Club Orchestra; Louis Armstrong Orchestra. Mandy, July 4, 1900/July 6, 1971. Louis Armstrong (trumpet, vocals); Louis Armstrong and His All Stars. You’ll Wish You’d Never Been Born; Hustlin’ and Bustlin’ for Baby; Sittin’ in the Dark; He’s a Son of the South; Some Sweet Day; Honey, Don’t You Love Me Anymore; Mississippi Basin; Tomorrow Night; Dusky Stevedore; I Wonder Who; Don’t Play Me Cheap; Linger in My Arms a Little Longer; Whatta Ya Gonna Do; Joseph ‘n’ His Brudders; No Variety Blues; Back o’ Town Blues; Blues in the South; I Want a Little Girl; Sugar; The Blues Are Brewin’; Endie; I Believe; Why Doubt My Love; You Don’t Learn That in School; Fifty-Fifty Blues; Some Day You’ll Be Sorry; A Song Was Born; Lovely Weather We’re Having; Please Stop Playing Those Blues, Boys; Ain’t Misbehavin’; Pennies from Heaven; Save It, Pretty Mama; Rain, Rain; I Never Saw a Better Day. RCA @ VPM 6044 two discs $5.98.

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est installment from the work of his many traveling bands was recorded at the Fillmore East in June 1971. Don Preston and Ian Underwood are still around from past Zappa holocausts, but the rest of the names are new to me (except for drummer Aynsley Dunbar, leader of his own group). The manicafet of Zappa's diamond-bright talent is most prominent. If there are any young kids in your house not completely familiar with the sexual concerns of most teenagers, you'd better pre-listen to this record—assuming, of course, that censorship is your thing. Despite the language and the quite explicit storytelling, 1 find Zappa's stuff utterly charming and, in its own way, almost Victorian in its fascination with the specifics of sexual play.

The music, as usual, is superb. Zappa always starts from a base of technical excellence, and builds from there. The bits and pieces of instrumental playing, the references to Stravinsky and Varèse and Fifties rock-'n-roll are all here, and the singing is as good as ever. Zappa's talents have occasionally been pushed too far by well-wishers. I like him best when he is working as a soloist with composers, symphonic musicians and a responsive audience. This is Zappa at his best.

D.H.

ANTHONY NEWLEY: Pure Imagination. Anthony Newley (vocals); orchestral accompaniment. The Candy Man; Pure Imagination; Little Golden Clown; Pop Goes the Weasel; Cheer Up, Charlie; and five others. MGM SE 4781 $4.98.

Performance: A rampant cuteness
Recording: Good.

Anthony Newley brought us all to our feet cheering when he sang What Kind of Fool Am I? in Stop the World—I Want to Get Off back in 1961. Ever since then, he seems to have been trying with every fiber of his being, his considerable energy, and the help of his composer-collaborator Leslie Bricusse, to get us stirred up in the same way. He hasn't made it, and the trouble may well be that this performer, ever since his appearance as the insouciant Littlechap in Stop the World, has just been trying to belt things out too hard. When he starts one of his big buildups for the climax of a song in the throttled, breathless manner that is his trademark, he sounds here more like a man who's gagging than a singer about to bring down another house. The material itself is dreadful, a box of stale sweets from that movie with the sticky name Willy Wonka and the Chocolate Factory and similar sources. The program is presumably directed to an audience of children, but I suspect that songs like Cheer Up, Charlie and Pure Imagination are as bound to turn off a toddler as they are to exasperate an adult. What we have in Mr. Newley this time around, I fear, is not a Pied Piper but a Party Pooper.

P.K.

BUCK OWENS AND HIS BUCKAROOS: Bridge over Troubled Water. Buck Owens and His Buckaroos (vocals and instrumentals) Catch the Wind; Homeward Bound; I Am a Rock; San Francisco Town; and six others. CAPITOL ST 685 $5.98, ® M 685 $6.95; ® M 8XT 685 $6.98, ® 4XT 685 $6.98.

Performance: Buck's wobbly Bridge
Recording: Amok in the echo chamber

Buck Owens has finally figured out the reason for the popularity of Paul Simon, Donovan, and Dylan: theirs are 'all really country songs in disguise!' Armed with that perception, and an echo chamber apparently the size of an aircraft hangar, he plows into several well-known songs such as Catch the Wind, Love Minus Zero-No Limit, and I Am a Rock, and pretty well lays them waste. Aside from sounding as if he were singing in a cave, Owens sheds no light at all on his material and in several cases actually almost smother it in his idea of "class." Foremost among his delusions is that he can change the Buckaroos into some sort of 60s version of the long-ago Les Compagnons de la Chanson. Their celestial caroling in Bridge over Troubled Water at times does capture the tenorish nasality of that French group, but that's about all. When they crash in as the chorus on one of Owens' own songs, The Devil Made Me Do That ("Oh, the devil made me [him] do that!") they do so with all the grace and style of a tipping hippopotamus.

I'm sure the younger generation is grateful to Owens for letting them know what they are actually doing. Now the question is, what is Owens doing on this album-bum-bum?

P.R.

PATTI PAGE: I'd Rather Be Sorry, Patti Page (vocals); orchestra. I'd Rather Be Sorry; Give Him Love; Absence; Farther Along; I Won't Mention it Again; Words; and five others. MERCURY SR 61344 $5.98.

Performance: Mechanical
Recording: Very good

Billed as 'the world's all-time best-selling female vocalist (over 60,000,000 records sold),' Patti Page has returned to Mercury, where she made her first hit, The Tennessee Waltz, in the Fifties, and also to Nashville, to moo her way through a c- & -w set. She glides stolidly through such things as I'm Scared to Death You'll Go and her recent "country" hit Give Him Love with the well-remembered mechanical solo. Solely on the basis of her record sales, she has to be considered something of a phenomenon. That she achieved stardom during the Fifties when the plastic people (Tab and Rock and Debbie and Rhonda) seemed to be taking over the entertainment industry is not surprising. That she was able to hang on into the mid-Sixties as a top attraction is surprising. She hasn't changed her style since the days of Tennessee Waltz, a performance that was scarcely a triumph of style in the first place. Her emotional volatility remains at the Doggie in the Window level.

But she does have an audience. It is the same audience, I suspect, that mourned the waning of Lawrence Welk and his Champagne Lady. As for me, I was always convinced that the latter lady, judging by her performances, drank it out of a brown paper bag.

RECORDING OF SPECIAL MERIT

TOM PAXTON: How Come the Sun. Tom Paxton (vocals, guitar); David Horowitz (piano, organ, melodica, synthesizer, vocals); various other musicians. I Had to Shoot that Rabbit; Icarus; Little Lost Child; General Custer; She's Far Away; Prayin' for Snow; Louise; A Sailor's Life; How Come the Sun. REPRISE RS 4443 $4.98, ® M 86443 $6.95, ® M 56443 $6.95.

Performance: Excellent
Recording: Excellent

Tom is doing good work these days, and so is David Horowitz on the keyboards behind him. (Continued on page 139)
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STEREO REVIEW
Tom Paxton may have mellowed in the last few years, and here General Custer seems a bit too trendy, lacking the bite of such earlier satire and/or propaganda songs as Jimmy Newman and Forest Lawn. Possibly he has been working harder on other things. One of these is to write songs so pretty they almost handcuff themselves—Little Lost Child, She's Far Away, Sailor's Life, songs so skillfully drawn that the listener gets caught up in the dynamic of the song-making process and never quite appreciates the song itself.

Still, there is ample variety and satisfaction in the album. The allegorical I Had to Shoot that Rabbit, the bluesy Prayin' for Snow, and the title song, with its viewpoint at once childlike and world-weary, are songs of substance. The arrangements, heavy for the Paxtons we always knew, are tasteful, and don't intrude. This is an excellent example of the kind of quality album we keep hoping for—but seldom get—in pop music.

N.C.

The Man; Casablanca; and two others. RE-PRIZE 6442 $4.98.

Performance: Disgusting

Recording: Fair

At first I thought this junk must be somebody's idea of a sick joke, something like Jo Stafford and Paul Weston's funny Jonathan and Darlene Edwards records. Unfortunately, the mournful wailing contained on this disc is really the way Tom Rapp sounds. He is also the composer-lyricist of some of the easily forgettable songs I suffered through here, in addition to which he has the gall to include a soiled arrangement of Leonard Cohen's Nancy and Jacques Brel's Seasons in the Sun, with his sick morgel screeching. Instead of 'Adieu Emile, my trusted friend,' 'we hear 'Eh-do000 Eee-meal, ma trusted free-and.' Although Rapp swallows most of his words like lumps, I was occasionally able to hear such scintillating lines as 'What does a raindrop know,' or 'My talking was only words, my smile was only teeth.' Third-grade doddling. And the unforgivable audacity of song-singing Shakespeare's sonnets is like Walter Brennan reciting a Hamlet soliloquy. Tom Rapp is a horrendously vulgar no-talent whose very presence on records gives me pause about the rock-bottom tastes and motives of the talent scouts at Reprise Records. Hang your heads, gentlemen.

R.R.

Jerry Riopelle. Jerry Riopelle (vocals, piano, guitar); various musicians. We Can Go the Distance; She My Woman; Darlin' Daughter; 100 Proof Hi-Way Romance; Promenade; Elaine; Take a Chance and four others. CAPITOL ST-732 $5.98.

Performance: Wearisome

Recording: Good

This album struggles toward an abortive blues style. Jerry Riopelle plays what he calls 'stomp piano' and puts his voice through various awkward maneuvers, spending a great deal of time singing in falsetto about the joys and sorrows of boozing. The instrumental playing is good, but the songs are as unimaginative and unmusical as the singing is unintelligible. If they ever need a score for a movie called 'I Was a Teen-Age Rummy,' they've got it.

N.C.

Steve Skeele Span: Please to See the King. (vocals and instrumentals). The Blacksmith; Prince Charlie Stuart; Boys of Bedlam; Female Drummer; The King; and five others. Big Tree BTS 2011 $4.98.

Performance: And a fa-la-la to you

Recording: Good

Here is a group called the Skeele Span with a collection of old English ballads that make very dull listening. The songs, slightly updated and not for the letter, range from a dolorous Boys of Bedlam and a wisty Lark in the Morning to a ragged Prince Charlie Stuart. Maddy Prior, the only female in the group, seems to have a better grasp on her material than the others, which might only be expected from a girl who does not spend her time on tambourine, and spoons. (Spoons?) This attempt is no more successful than several other recent attempts by English groups to breathe new life into a form that has always struck me as precious, and in modern dress verges on the cloying.

P.R.

TOM RAPP: Pearls Before Swine/City of Gold. Tom Rapp, Elisabeth and David Noyes (vocals); instrumental accompaniment. Sonnet #65; Once upon a Time; Raindrops; City of Gold; Nancy; My Father; Seasons in the Sun; Good.

Recording:

PG&E. PG&E (vocals and instrumentals). Rock and Roller's Lament; One More River to Cross; Death Row #172; See the Monkey Run; When the Sun Shines; and four others. COLUMBIA C 30362 $4.98, @ CA 30362 $6.98, @ CT 30362 $6.98.

Performance: Good

Recording: Good

PG&E used to be Pacific Gas & Electric, but I guess things are getting tough even for utilities. PG&E, through some new member additions, is now, to all intents and purposes, a soul band starring singer Charlie Allen. He's good. He has a rich, commanding soul sound and a dramatic, vivid performing style. He really tears out on The Time Has Come, and the result is an excellent three minutes of musical fireworks. The new PG&E really seems only to serve as a back-up for Allen, but they do it with a certain amount of stylishness and a great deal of enthusiasm. I heartily recommend this one.

P.R.

STEPHEN STILLS: Stephen Stills 2. Stephen Stills vocals, guitar, piano; various accompanists. Change Partners; Sugar Babe; fishes and Scorpions; Open Secret; Know You
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Got to Run; Relaxing Town; Singin' Call; Ecology Song; and four others. ATLANTIC SD 7206 $5.98, © M 87206 $6.95, © M 57206 $6.95.

Performance: Inconsistent
Recording: Very good

Steve Stills is bright, obviously, and also independent and undisciplined, we are told, but I still think he does his best work in a group. His voice is beautiful—over a range of about five notes in the upper half of its higher register. Going low, it is harsh and unpleasant, and the very high notes it simply won't make. When he had Graham Nash spearheading those high ones and David Crosby helping with the lower ones, Stills the songwriter had a much broader world to work in.

This album is considerably better than his other solo album, but too much of it is big-name, big-production nonsense. (Eric Clapton may cease to be a big name if he continues to appear on nineteen mediocre albums a week, especially if his sound is as completely buried as it usually is in this one.) Change Partners you've heard, and Fishes and Scorpions and Know You Got to Run are good songs of the same sort. Marianne is best of too many, mostly tuneless, rockers. Singin' Call is a nice ballad, but not for Stills' voice (for Crosby's, perhaps). Word Game is not a song but a chant. And finally, Ecology Song is done with screaming trumpets and a badly mixed chorus. It works in a roundabout way to help alert us to a specific ecological problem: noise pollution.

STRAWBS: From the Witchwood. Strawbs (vocals and instrumentals). Witchwood; Thirty Days; Flight; Cannondale; A Glimpse of Heaven; and five others. A & M SP 4304 $5.98.

Performance: Interesting and complex
Recording: Excellent

Last time out I wasn't really very impressed by Strawbs. This time I'm impressed, but I'm not sure I like them any more than I did before. It seems primarily a question of unexciting material. Everything else, however, has improved enormously. The five-man group has developed a massed vocal sound that is unusual and interesting, but the big news is some truly superb arranging and engineering. One band, Shepherd's Song, in which the group has used everything, up to and including a Moog synthesizer, is a stunning example of record-making. In Amongst the Roses is another fine job. Indeed, all through the album there is a consistently creative approach to every aspect of record-making. But, alas, the songs, all written by members of the group, are so lame that the total effect eventually becomes that of a lush demonstration record. I wish that the amount of obvious care and expertise that has been lavished on everything here could be put in the service of stronger material. Until then, I fear that the Strawbs will remain an interesting but unsuccessful group.

P.R.

TEN WHEEL DRIVE WITH GENYA RAVAN: Peculiar Friends. Genya Ravan (vocals and harp); Ten Wheel Drive (vocals and instrumentals). Peculiar Friends; The Pickpocket; Love Me; No Next Time; and five others. POLYDOR 24 4062 $4.98.

Performance: Strong
Recording: Good

Someone (possibly Miss Ravan and the Drive themselves) got the idea that what the world...
needs is a second Janis Joplin. Only on one band here does Miss Ravan reveal what she essentially is; on Shootin' the Breeze, she displays the strong, musical voice and the commanding presence of a straight-on commercial pop singer who could probably make it big on that basis alone if the market were different. As it is, she has unwisely chosen to shout, growl, and scream through the rest of the songs, not only not invoking the shade of Joplin but becoming more artificial with each number. Granted, the songs by Aram Schefrin and Michael Zager aren't all that much help, but about the third or fourth time she began to whoop and scream, I felt I was listening to something like one of those religious hysterics who go into convulsions on cue from the faith healer.

Ravan is, by evidence of that one band, able to create a lot more than sound and fury, and I hope she gets an opportunity to do so very soon. Ten Wheel Drive gives its usual hyperthyroid treatment to it all, along with their customary high degree of professionalism. P.R.

TUCKY BUZZARD. Tucky Buzzard (vocals and instrumentals). Ace the Face; Whiskey Eyes; Rolling Cloud; My Friend; Gu Gu Gu; and five others. CAPITOL ST 787 $5.98.

Performance: Dated
Recording: Good

At its best, Tucky Buzzard achieves a pale early-Beatles glow, and at its worst, it sinks to boring Monkee-shines. Old-time English rock isn't quite ready for a revival yet—at least not in the versions heard here. The best thing on this one is Rolling Cloud, which has a nice free feel about it. And no one sounds as if he is trying to impress anyone. As a consequence I was impressed—mildly. P.R.

IKE AND TINA TURNER: What You Hear Is What You Get (see Best of the Month, page 97)

RECORDING OF SPECIAL MERIT

JIMMY WEBB: And So On. Jimmy Webb (vocals); orchestra. Met Her on a Plane; All Night Show; Laspitch; One Lady; See You Then; and five others. REPRISE RS 6448 $4.98, © M 86448 $6.95, © M 56448 $6.95.

Performance: Terrific, as usual
Recording: Excellent

What do you say after you say that Jimmy Webb continues to be one of the most imaginative and fertile talents in American music? Not much, I guess, except that it remains a mystery how there can be so many dreamy imitators of him who miss his intentions by a mile. Those intentions should be fairly apparent by now: he is a storyteller with a gift for placing himself in the center of the action, so that while he acts as a conduit for other people's feelings, he also comments on his own reactions. He is not—repeat, not—an adolescent narcissist who has stored up a collection of threadbare and not very original impressions about "life." He does make one or two mistakes on this disc. Laspitch is given too heavy a treatment for its kind—bland side. But the whole album is so clearly superior to most of what is being released these days that I can recommend it to all without hesitation. P.R.

(Continued on page 144)

November 1971

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Performance: Affable
Recording: Very good

This pleasant little show, which opened at an off-Broadway theater in November 1970 to a warm-hearted welcome (The New Yorker found it "irresistible" and The Village Voice called it "keenly lovely"), has a curious history. It all started at a commune in the Pennsylvania hills, when a group of youngsters decided to put on an entertainment in a barn used as a summer theater. Kenn Long wrote the book and Jim Crozier the music. Then they sent for Amy Saltz, "a young directress from New York," who came out to the commune, directed the book, and directed. The results were so promising that the participants named themselves "The Plowright Players" and came to the Big Town, where the show was quite a success.

It all sounds like an old-fashioned Judy Garland movie musical and, in its way, it is an old-fashioned movie musical—sold in the idiom of Hair but with all the innocence of Summer Stock. It's about itself—that is, it's about these kids out of big cities who form a country commune, are ostracized by the local community, called freaks and accused of being drug addicts when "their acid is no more than pure air, Eden-like surroundings, and the strong love that has flowered among them." These wholesome, promising children are indeed irresistible, forthrightly singing their Whitmanesque ballads like Come to the Road and Reaching, Touching in the fast-moving first act, then setting down in the second to some beautiful balladic material including Quiet Country, Garden Song, and a new-fashioned old-fashioned love song of affecting simplicity called Watchin'. Of course it all builds up to a Confrontation Song after the "townies" give the kids the cold shoulder at the Hasseltown Memorial Square Dance, but ends with "the birth of hope" in a cheerful finale called Alphagenesis. If all of this sounds deadly and pat, it really isn't, thanks to an appealing score and the open, fresh quality of a sunny, talented cast. Lyrics of the songs are supplied, a sweet bit of generosity that is typical of the whole enterprise and the sonic quality is very good.

P.K.
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RECORDING OF SPECIAL MERIT

BACH, J. S.: Sleepers, Awake; Violin Partita No. 3, in E Major; Gavotte; Well-Tempered Clavier: Preludes Nos. 1, 6 and 9; Sheep may safely graze; Prelude and Allemande in E-flat Major (BWV 998); Cello Suite No. 5: Gavottes I & II; Cello Suite No. 6: Gavottes I & II; Jesu, joy of man's desiring. Christopher Parkening (guitar). ANGEL © 4XS 36041 $7.98

Performance: Attractive 
Recording: Excellent 
Playing Time: 35' 12"

This is a pleasant collection of (mostly) familiar Bach in transcriptions for guitar. Christopher Parkening gives no evidence that some of the repertoire is exceedingly difficult to play; his style, moreover, is not only effortless but unaffected. It is a thoroughly musical approach in the best sense. One might wish for a bit more individuality here and there, more performing profile (such as Bream and Williams bring to their Bach), but Parkening is still very young. It will be interesting to hear how he develops. The reproduction on cassette is quite satisfactory.

I.K.

COPLAND: Billy the Kid—Suite; Appalachian Spring. Philadelphia Orchestra, Eugene Ormandy cond. RCA © RK 1170 $6.95.

Performance: Musical fresh air 
Recording: Excellent 
Playing Time: 45' 15"

Nothing in the whole of American concert music can match the outdoor side of Aaron Copland for lifting a listener's spirits, and these two ballet scores (along with Rodeo) are justifiably among his most popular orchestral works. Billy the Kid celebrates the career of one William Bonney, who was born in Brooklyn and grew up to terrify the Wild West until a sheriff caught up with him. It was first performed by the American Ballet Caravan in 1938, and has been bringing down ballet houses ever since. The suite abounds in cowboy tunes and lively musical incidents, including a shoot-out and a scene in a saloon featuring a nickelodeon, but I do wish somebody would undertake to record the whole ballet score in stereo (Ormandy's mono disc for Columbia was only recently dropped from the catalog), for there are further treasures buried there.

Appalachian Spring, composed in 1934-44 for Martha Graham, is all about a pioneer celebration connected with the building of a farmhouse in Pennsylvania one spring during the nineteenth century. Originally the work was scored for a chamber orchestra of thirteen instruments. In its full orchestral dress, culminating in a set of changes rung on an old Shaker hymn tune, the ballet builds and soars grippingly. Both scores have been recorded with a hymn tune, the ballet builds and soars grippingly, but Ormandy's performance is very good, even though one cannot forget the contributions of Bergonzi and Scarpia. Rafael Kubelik gives no evidence that some of the dramatic values. The Marios and Scarpias are for all her radiant vocalism, concentrates on the theatrical rather than the dramatic. Tebaldi is the more lyrical of the two (although her Act Two conclusion was made (1952); so, too, was Leontyne Price when she participated in Karajan's production of the early Sixties. Tebaldi is the more lyrical form of the two (although her Act Two conclusion sends shivers down one's back), whereas Price, for all her radiant vocalism, concentrates on dramatic values. The Marios and Scarpias are likewise very good, even though one cannot forget the contributions of Bergonzi and Gobbi or Angel (highlights only on cassette).

In matters of conducting, however, the differences are more clear-cut. Errede is efficient; he loses little time on subtleties, and the force of the drama eludes him. Karajan, on the other hand, treats the opera as a cumulative dramatic

Explanation of symbols:
- reel-to-reel tape
- four-track cartridge
- eight-track cartridge
- cassette

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

Experience in recording is indicated by the symbol ©; all others are stereo.

RECORDING OF SPECIAL MERIT

PUCCINI: Tosca. Renata Tebaldi (soprano), Tosca; Giuseppe Campora (tenor), Mario; Enzo Mascherini (baritone), Scarpia; Dario Cassi (bass), Angelotti; Fernando Corena (bass), Sacristan; Piero de Palma (tenor), Spoletta; Chorus and Orchestra of the London Symphony in the Royal Festival Hall. LONDON © D31170 two reels $14.95.

Performance: Karajan better drama 
Recording: (1) 1952 mono reissue; (2) Dolbyized cassette 
Playing Times: (1) 104' 54"; (2) 111' 2"

Each of these performances, newly released on cassettes, is excellent. Both casts are stellar, with the interpretations of the title role in particular being standouts. Renata Tebaldi was in breathtaking form at the time her recording was made (1952); so, too, was Leontyne Price when she participated in Karajan's production in the early Sixties. Tebaldi is the more lyrical form of the two (although her Act Two conclusion sends shivers down one's back), whereas Price, for all her radiant vocalism, concentrates on dramatic values. The Marios and Scarpias are likewise very good, even though one cannot forget the contributions of Bergonzi and Gobbi or Angel (highlights only on cassette).

In matters of conducting, however, the differences are more clear-cut. Errede is efficient; he loses little time on subtleties, and the force of the drama eludes him. Karajan, on the other hand, treats the opera as a cumulative dramatic
experience. His direction has great power, atmosphere, and tension.

As for sonics, the English-made Richmond cassettes are fortunately not treated to artificial stereo processing. The mono sound is a little dull, and at times there is a modicum of distortion, but never enough to detract seriously from the merits of the performance. Hiss is minimal. The London cassettes, produced and released by Ampex, are Dolbyized, and no hiss is evident in playback with the Dolby switch on. Everything sounds open, and there is excellent stereo separation. There is a minor processing problem at the very start of the opera (head alignment off?), but otherwise the sonic reproduction is pretty impressive, certainly not typical of the average cassette sound of the past. Richmond provides a reasonably lengthy synopsis divided between the two reels. Ampex, I am afraid, has done it again: not only is there no libretto, no synopsis, and no cast list other than the names of the four principals on the tiny cover (and last names without their initial letters), but the important information about Dolby processing is contained only on a sticker, which comes off with the cellophane wrapping.

I.K.


There are eleven currently available recorded performances of the complete Petrouchka (in both its original 1911 form or the 1947 revision for smaller orchestra) listed in Schwann, so it came as a distinct surprise to me to find this Leinsdorf reading and the Ozawa-Boston version the only ones available in cassette form. Unhappily, I did not have Ozawa’s on hand for comparison. The Leinsdorf treatment is clear and careful to the point of being anti-septic, for my taste. In general the Moor’s Room episode comes off well, and thanks to the well-handled and relatively ungimmicked Phase 4 recording, felicitous details emerge in the final Fair Scene that are not wholly audible in previous recordings. Nevertheless, I miss the unflagging rhythmic pulse and the pointing up of the acerbic woodwind and brass dissonance that characterize Stravinsky’s own reading of the 1947 edition on discs and open-reel tape.

D.H.

COLLECTIONS


The idea of a cassette made up of “music for quiet listening” works out soothingly as the Philharmonic displays Mr. Bernstein’s quieter side in a series of placidly performed barcarolles, nocturnes, adagios, and pavanes. The continuity is particularly felicitous, and these musical sleeping powders are rescued from total banality through the inclusion of such works as Samuel Barber’s Adagio for Strings, along with the inevitable chestnuts from the works of Grieg, Offenbach, and Humperdinck. All drawn, one presumes, from earlier recordings. Unless your player has a siesta switch, the program cannot be recommended, however, for listening from hammocks on lazy summer afternoons or late at night in bed; all that sustained pianissimo is bound, after a while, to induce deep sleep. Drivers beware.

I.K.


This double-play cassette, derived from a variety of recordings dating back several years, makes an effective if not all-inclusive showcase for the Oistrakhs. David is featured throughout, either as conductor or soloist or both, whereas Igor is heard only in the Bruch Concerto, a fine, virile performance. Equally good are the two Beethoven Romances, and, if the Bach concerts have their occasional over-romantic moments, the violin playing is still head and shoulders above most of the competition. DG has maintained an amazingly high standard of cassette quality; here, unfortunately, is an exception, for the sound is nowhere really clean, and there appeared to be a channel imbalance favoring the right channel throughout both sequences. Perhaps this is all the fault of an individual copy; if you are interested, take the trouble to check, because this is a very attractive cassette program.

I.K.

ENTERTAINMENT

BOSTON POPS: Leroy Anderson’s Greatest Hits. Blue Tango; Sleigh Ride; A Trumpeter’s Lullaby; The Waltzing Cat; Plink, Plank, Plunk!; Sarabande; Fiddle-Faddle; The Syncopated Clock; Belle of the Ball; The Typewriter; Serenata; and Bugler’s Holiday. Al Hirt (trumpet); Boston Pops Orchestra, Arthur Fiedler cond. RCA ® RK 1189 $6.95. Performance: Zing-glonk-changl Recording: Very good Playing Time: 33' 28'.

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(Continued on page 152)
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Grand Funk Railroad (vocals and instruments). Country Road; All You've Got Is Money; Comfort Me; Feelin' Alright; I Want Freedom; I Can Feel Him in the Morning; Gimme Shelter. CAPITOL © M 52033 $6.98.
Performance: Dull
Recording: Very good
Playing Time: 38' 45"

Ever wonder what became of Dullsville? Well, when the Strawberry Alarm Clock goes off, get up and take the Grand Funk Railroad across the Brooklyn Bridge to a piece of Rare Earth where the Rhinoceros forages among the Grass Roots. Dullsville by any of a dozen other (mostly metaphoric) names is still as dull as ever. Show-biz people get away with a lot, but nobody claiming to be an entertainer should be allowed to get away with being dull. If I had a kid swooning over Grand Funk, what would bother me most is that my own child had such a high threshold of boredom. N.C.

TOMMY MAKEM: Love Is Lord of All.
Tommy Makem (vocals with instrumental accompaniment). Vancouver; New York Girls; Lagan Love; Lolly Too Dum; Going Home to Marry; As I Roved Out; Better Times; Little Red Lark; Killyburn Brae; Bonnie Love; and Venezuela. GWP © M 52033 $6.95.
Performance: World-wide nostalgia
Recording: Excellent
Playing Time: 31' 12"

Tommy Makem, whose records with the Clancy Brothers set the whole world rocking to sea chanteys and Irish folk tunes, seems to be homesick for a number of ports this season. First he is heard pining for Vancouver, of all places, then putting in a word for the girls of New York, then longing for a lass in Venezuela. In between, Makem sings the praises of a number of colleens on the Old Soil and promises to marry one of them. With his hearty voice and amiable way with a ballad, the singer makes a persuasive case for every girl and land he sings of, but he comes off best on this di-verting cassette when he isn't singing at all, but reciting, with an Irish lilt that would have delighted the poet's heart, some stanzas from W. B. Yeats' 'The Song of Wandering Aengus' to a tender musical accompaniment. The recorded sound is splendid.
P.K.
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TAPE HORIZONS

By CRAIG STARK

TAPE WEAR AND CARE

Apart from accidents arising from gross mishandling (stepping on a reel or going too quickly from rewind into play), most of us tend to think of tape as the way to safeguard our recordings. LP's, we disdainfully observe, often develop unexpected "ticks" or "pops," and tend to lose their very high frequencies through excessive playing. But put a selection on tape, and we think it's practically a candidate for the National Archives.

Although I remain loyal to the tape medium, I cannot allow this misconception to stand. In my July column I treated the subtle-but permanent-invisibly, and the slight burr produced yields the same result. Acetate "ticks" the tape on every revolution). This can roughen the tape edge, and the increase in hiss and deterioration of high-end response that can be caused by an even slightly magnetized head, guide, or capstan. Of course, that can be prevented. But, unfortunately, other factors enter as well. Consider, for example, the following statement by Robert K. Morrison, who at one time directed the laboratory production of the industry-standard Ampex test tapes:

"A test tape which has been carefully handled and played fifty times will have a loss of 0.5 to 2 dB at the 0.5-mil wavelength (15,000 Hz at 7.5 ips). For one hundred plays, the loss may be about 3.5 dB at short wavelengths (i.e., the high frequencies). With more playings and/or slightly defective reproducers, the loss will approach 5 dB or more."

What causes this deterioration? Simply pressing the tape around a small radius—a capstan or a tape guide—is partly responsible, Mr. Morrison believes. But undoubtedly the major culprit is anything which prevents the absolutely intimate tape-to-head contact that reproduction of the highest frequencies requires. For example, even premium tape sheds some loose oxide. Oxide dropped from one tape layer can be pressed onto the succeeding one, preventing proper head contact.

Another cause of improper contact might be a slightly warped reel (one that "ticks" the tape on every revolution). This can roughen the tape edge, even invisibly, and the slight burr produced yields the same result. Acetate tapes (but not "Mylar" or "polyester"), when stored for long periods under varying temperature/humidity conditions, lose their flexibility—that is, their ability to hug the playback head. And any tape stored after being wound at high speed on any machine suffers from differing tensions within the reel itself, and so tends to be comparably deformed. Similarly, if a tape isn't wound in a perfectly flat "pack" (and it's almost impossible to achieve this in fast wind), but has edges sticking out, you can look for long-term storage troubles. Therefore, I strongly recommend taking the kind of precautions the professionals do, such as storing all tapes in a played, not in a rewound condition.

With conventional four-track open-reel machines, this is automatically achieved by turning the reel over and playing the second side. Or, if you record in only one direction, simply realize that it's no harder to rewind before playing than after. Then, if you make certain you use nothing but first-line tape and unwarped reels, perhaps even the "highs" will stay on the tape longer than your ability to hear them lasts.
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5 "...The Landmark 100 appears to give the listener the ideal mix between direct and reflected sounds and judging from the response below 300 Hz the "Servo-Linear" feedback system can really perform in almost any listening environment."
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   — STEREO & HI-FI TIMES, December, 1970

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