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CIRCLE 26 ON PAGE 81
Humorist/mathematician Tom Lehrer once observed that, in academe, stealing the ideas of one man is called plagiarism but stealing the ideas of many is called scholarship. Quite the opposite value judgment pertains in music. When a composer builds his music on the foundation of a single style, we study and admire the development of his personal language. But when he bases his style on a variety of musics, he is condemned for a lack of originality, for—in a word—eclecticism.

When I was a student it was fashionable to denigrate George Gershwin’s serious music as a little bit of Ravel, a little bit of jazz, a little bit of Shostakovich. Shostakovich, too, was accused of being a little bit of Prokofiev, a little bit of Mahler. As for Mahler, few of us had heard much more than the First Symphony, but it was easy to demean him as the most eclectic of all: a big bit of Wagner, a big bit of marching band, a big bit of folksy music, even a little bit of kitchen sink. Didn’t these guys have anything original to say? The only eclectic who got away unscathed was Spike Jones.

Elsewhere in this issue, John Ardoin refers to the eclectic tendencies in Leonard Bernstein’s music, and particularly to that apotheosis of eclecticism, Mass. Mass incorporates idioms from the Renaissance to rock and does so not timidly, but blatantly. But one does not get the same feeling here that one gets upon hearing a Gershwin idea falter and the composer in effect asking himself, “Let’s see, what would Tchaikovsky have done to continue?” Rather, Bernstein seems to be proclaiming: “Here is music—all music—and it is all part of our language, all one.”

Yet “eclecticism” still seems to be a pejorative term. It implies a lack of originality, the inability of a composer to speak consistently in his own voice. But why should a composer be expected to ignore the variety of musical dialects that are familiar to twentieth-century ears, that are part of our common musical language? Twentieth-century avant-garde literature—the divine punning of Joyce or Eliot—assumes that the reader is familiar with references from Latin to Hebrew, from contemporary literature to works thousands of years old. Authors write with the knowledge that movable type has long since made the world’s literary treasures available to their potential readers. Few composers have yet realized that the phonograph has done the same thing for music. Today, at the touch of a button, we can hear music from any period, from any part of the globe.

Brahms couldn’t do that. Nor could his audience. If someone now were to write a Brahmsian symphony, he might be ignored or damned by the critics (unless he had already paid his dues as an avant-gardist, in which case the development of his personal language” might be admired), but his audience would hardly find his language unintelligible. On the other hand, had Brahms written a Mass in the Gothic style of Perotin, he would have been considered mad.

Before the proliferation of recordings, listeners were familiar with only one or two basic styles. Public concerts themselves are barely two centuries old, and for most of their existence they consisted solely of contemporary music. Bach did not know the music of Gabrieli or Gabrieli the music of Machaut. When Schumann first heard the music of Bach, or Mozart first heard “Turkish” music, their musical vocabulary may have become enriched, but their language remained the same.

Today, music from Japan to Africa, from Byrd to “Bird,” has become part of our culture, and any of it should be available to a composer without having to duck critical bricks. Perhaps someday, when our aesthetics have caught up with the twentieth century, it will. As I once wrote, not so tongue-in-cheek, in an introduction to our “futuristic” issue (May 1978) wouldn’t it be ironic if Leonard Bernstein turned out to be the seminal composer of our time?
The phonograph record is a mechanical replica of musical performance. The job of the phono cartridge is to convert complex undulations of the record groove into an electrical signal. Here's how the different kinds of phono cartridges compare in function, performance and manufacture. This chart has been prepared to help you make the appropriate choice for your budget and music system. The information encompasses the range of performance characteristics for each type of cartridge. Data is compiled from manufacturers' literature and the results obtained at Micro-Acoustics cartridge clinics held throughout the U.S.A.

<table>
<thead>
<tr>
<th>Performance Categories</th>
<th>Crystal, Ceramic</th>
<th>Moving Magnet</th>
<th>Moving Iron (Similar to Induced Magnet Type)</th>
<th>Moving Coil</th>
<th>Electret (Micro-Acoustics Direct-Coupled)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operation Principle</td>
<td>Stylus bar moved by record groove under heavy tracking pressure (3-8 grams). Bar's motion bends crystal element causing output signal.</td>
<td>Stylus bar moved by record groove. Magnet armature vibrates between pole pieces, causing change in flux, and inducing signal in output coil.</td>
<td>Stylus bar moved by record groove. Iron armature vibrates between pole pieces, changing reluctance of magnetic path, and inducing signal in output coil.</td>
<td>Stylus bar moved by record groove. As coil vibrates through magnetic field, signal is induced in coil and fed to step-up transformer or preamp.</td>
<td>Stylus bar moved by record groove. Stylus bar vibrates electrets through resolver and pivots, producing signal which is fed to microcircuit.</td>
</tr>
<tr>
<td>Tracking Ability</td>
<td>Poor to Fair</td>
<td>Good to Excellent</td>
<td>Good to Excellent</td>
<td>Good to Very Good</td>
<td>Very Good to Excellent</td>
</tr>
<tr>
<td>Transient Ability</td>
<td>60 to 100</td>
<td>30 to 60</td>
<td>25 to 50</td>
<td>20 to 30</td>
<td>17 to 20</td>
</tr>
<tr>
<td>Freq. Resp. Variation Due to Loading with Pre-Amp. Cables</td>
<td>±4dB below 1000Hz (plugs directly into amp input)</td>
<td>-10dB to +6 above 3kHz</td>
<td>-12dB to +4 above 3kHz</td>
<td>-1dB over entire range</td>
<td>-1dB over entire range</td>
</tr>
<tr>
<td>Ability to Perform In Variety of Tonearms</td>
<td>Works in low-cost units only</td>
<td>Good to Very Good</td>
<td>Fair to Very Good</td>
<td>Fair to Very Good</td>
<td>Very Good to Excellent</td>
</tr>
<tr>
<td>Ability to Track Warped Records</td>
<td>Poor to Good</td>
<td>Fair to Good</td>
<td>Fair to Good</td>
<td>Fair to Good</td>
<td>Very Good to Excellent</td>
</tr>
<tr>
<td>Cartridge Body Weight</td>
<td>5 to 10 grams</td>
<td>6 to 8 grams</td>
<td>5.5 to 7 grams</td>
<td>7 to 11 grams</td>
<td>4 to 5.25 grams</td>
</tr>
<tr>
<td>User Replaceable Stylus</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Usually Not</td>
<td>Yes</td>
</tr>
<tr>
<td>Method of Manufacture</td>
<td>Mass Production</td>
<td>Mass Production</td>
<td>Mass Production</td>
<td>Precision Handmade</td>
<td>Precision Handmade</td>
</tr>
<tr>
<td>Cost Range</td>
<td>Least Expensive</td>
<td>Inexpensive to Moderate</td>
<td>Inexpensive to Moderate</td>
<td>Expensive to Very Expensive</td>
<td>Moderate to Expensive</td>
</tr>
<tr>
<td>Warranty</td>
<td>90 days (limited)</td>
<td>90 days to 1 year (limited)</td>
<td>90 days to 1 year (limited)</td>
<td>90 days to 1 year (limited)</td>
<td>2 years (full)</td>
</tr>
</tbody>
</table>

*All cartridges show single channel only.*

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COMING NEXT MONTH

For the poet, September brings the season of mists and mellow fruitfulness. For the audiophile and the music lover, it marks the season when the promises of the component manufacturers at early-summer consumer-electronics trade shows and the plans hatched in the A&R offices of the world’s recording companies bear fruit. So September is our annual preview issue: An Advance Look at Audio ’79 and Record Release Lists ’79. We also offer A Phonographic Chronicle of La Scala upon the opera house’s bi-centennial and survey the continuing and pervasive influence of the great Russian-American conductor in Koussevitzky’s “Grandchildren.”

In BACKBEAT, Len Lyons screens Weather Report and recording-studio engineer Fred Miller unashamedly reveals Shocking Secrets of Those Special Effects. And that’s not all!

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Back to Bach

After reading Scott Cantrell's review of Vol. 3 of Telefunken's Bach chamber music series [May], I am moved to respond to two issues he raises.

Judging from Mr. Cantrell's remarks about *The Musical Offering*, it is apparent that he is unfamiliar with the brilliant study by Christoph Wolff ("New Research on Bach's *Musical Offering*," in *The Musical Quarterly*, LVII [1971], pp. 379-408), in which some of the traditionally obscure aspects of the work's ordering and instrumentation are once and for all clarified. Professor Wolff shows convincingly that the work was most likely intended to be performable on "a total of five instruments: flute, two violins, and the continuo instruments [harpichord, and cello or viola da gamba]." (It is possible that for the three-part ricercar the keyboard player should substitute the fortepiano for the harpsichord, since that piece demonstrably resulted from Bach's improvised response to Frederick the Great's challenge on the occasion of the composer's visit to Potsdam to try out the newly acquired Silvermann pianos.) As for ordering, while it is unlikely that Bach intended a cyclical performance of any kind, Wolff shows that a symmetrical structure framed by the two ricercars and having the trio sonata as a centerpiece (as, for instance, in the Hans David edition mentioned by Mr. Cantrell) was a part of Bach's conception and was intended to be reflected in published form.

The second issue is the reference to the "grotesque mistranslations" by Frederick A. Bishop of Telefunken's often unusually fine program notes. Anything that can be done to convince the company of the extent to which such travesties detract from its otherwise significant contributions should receive everyone's support.

R. Peter Wolff
Stony Brook, N.Y.

Dolby FM

We are prompted to write by "Dolby FM Broadcasting: A Status Report" ["News and Views," March]. As experienced consultants who have set up audio and transmitting equipment at many FM stations, we would like to clarify certain matters related to FM signal processing and modulation and, in particular, the use of Dolby on FM.

Several years back, Robert Orban and Eric Small showed that virtually all stereo generators introduce severe phase shifts that can cause overmodulation of up to 40%, regardless of the audio levels applied. The low-pass filters necessary to prevent interference to the pilot tone and stereo subcarrier will generate ringing and overshoots on certain signals and waveforms whether or not Dolby is used to reduce preemphasis. This means that Dolby does not necessarily lessen the incidence of overmodulation.

Ray Dolby claims a 5-dB improvement in noise levels with his system. However, he urges the broadcaster to abandon all other forms of signal processing, a move almost certain to reduce the average modulation level of the station and engender occasional overmodulation, distortion—and FCC citations. The new stereo generators made by the Orban or Harris companies allow modulation to be increased by at least 30%, and we are sure that this competitive advantage will spur other manufacturers to make similar products. Without destandardizing conventional transmission characteristics, these devices can increase the apparent signal-to-noise ratio two-thirds as much as Dolby claims.

In comparative listening with standard FM stations, as the broadcasters themselves told *High Fidelity*, the Dolbyized stations did not sound as loud. And if you transmit a louder signal, the listener may lower the volume and consequently hear less noise. The secret of preserving FM fidelity is to do this without squashing musical dynamics, dulling transients, and distorting the spectral balance of the original program source. There are a handful of signal processing devices on the market that, judiciously applied and feeding the proper stereo generator, can preserve the fidelity of sound and transmit a loud, controlled signal without requiring additional components in the listening installation or upsetting the compatibility of existing transmitting and receiving gear.

Personally, we find that undecoded Dolbyized broadcasts, even on car radios, have side effects that are much more noticeable than those of the best limiters, tastefully employed.

John M. Higdon
San Jose, Calif.
Stephen R. Waldee
San Mateo, Calif.

HF replies: The extra 30% modulation to which the writers refer amounts to 24 dB, a bit less than half, rather than two-thirds, of the 5 dB claimed by Dolby. On the basis of the few, virtually negligible limitations that Orban admits for his system in the paper he delivered at the 1975 NAB convention, we suspect that a properly decoded Dolby signal might sound a hair better than one processed through the Orban Optimod. But Messrs. Higdon and Waldee are correct in pointing out that the Dolby system, in the absence of the decoding hardware, suffers quite noticeably from a lack of compatibility.

Together Again

In Royal S. Brown's review [May], he calls Leonard Bernstein's recent recording of the Poulenc *Gloria* and the Stravinsky *Symphony of Psalms* "an intriguing and revealing coupling that should have been thought of a long time ago." It was. Mr. Brown must have mislaid his SCHWANN catalog. Robert Shaw did this combination in 1965 with the RCA Symphony Orchestra and soprano Sara Mae Endich on RCA LSC 2822, and it is still available.

Also, Mr. Brown takes exception to the notes on the Poulenc work in the set: "Why
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does Columbia assign the task to somebody so basically out of tune with that composer? I would like to think that, in turning to the undersigned for notes on these works in 1965, RCA found somebody more in tune with both these masters.

Check out the recording—it even has a stained glass window by Matisse on the jacket cover.

Klaus G. Roy
Director of Publications
The Cleveland Orchestra
Cleveland, Ohio

More Boris

David Hamilton's review of the first recording of Mussorgsky's Boris Godunov [January] was an excellent piece of work, confirming my long-standing admiration for this critic. Unlike others who have reviewed this recording for the publications I read (which include the prestigious British ones), Hamilton has a thorough knowledge of the score, its history, and the issues surrounding it. However, I cannot agree with his treatment of the matter of the various versions of the opera and his contemptuous rejection of the solution employed in this recording.

It is argued in some quarters that the published vocal score of 1874, with its substantial cuts, represents the definitive "second version"; while the 1871-72 version is only an interim working manuscript to which the composer added and from which he subtracted as he revised the opera. Although it is unlikely that this theory will ever be proven beyond doubt, there is significant evidence supporting it, and if it is true the policy of performing only "pure" versions, as Hamilton advocates, entails a much larger sacrifice of desirable music than he suspects.

It can also be argued that the first version of 1869 represents not a viable alternative to the expanded score, but an unsatisfactory first effort, seriously flawed in its dramatic structure. We are told by Hamilton and several other writers that the first version "concentrates on Boris, his rise and fall," but this supposed concentration is dissipated by two consecutive scenes in which Boris does not appear at all. These scenes deal with the opening phases of the Pretender's struggle for the throne, a theme that is introduced but left dangling. A performance of this would be a valuable curiosity, but I certainly don't want this to be the only way I can hear the remarkable St. Basil Cathedral scene, or the other music cut from the 1874 vocal score.

Rejecting the practice of combining the St. Basil and Kromy Forest scenes in a single performance, Hamilton considers it highly improbable that the Simpleton could "make a trip of over two hundred miles in the middle of a seventeenth-century Russian winter" to be present in the latter scene after confronting Boris on Red Square. As a specialist in Russian history, I would like to point out that winter was the preferred time for overland travel and transport in old Russia because the frozen, snow-covered surface provided a much better medium than primitive, often mud-choked roads. In the seventeenth century, peasants of the European north of Russia who were involved in the fur trade traveled to Siberia every year to obtain furs, sometimes reaching Yakutsk or even Kolyma (of concentration-camp fame), near the northeastern extremity of this giant land mass. The Russian population was notorious for its mobility, and in times of unusually severe weather, whole families would congregate in the tool houses of the simpleton to the other.

There is no physical improbability whatever in the Simpleton's reappearance.

On the other hand, I agree completely with producer David Muttley that the episode of the Simpleton and Boris is an unlikely fugitive in the Kromy scene. In its original location it provides the dramatic motivation for the confrontation of the Simpleton and Boris. In Kromy it seems merely pasted in, necessary to give the Simpleton some exposure before his final lament but otherwise an irrelevant interruption of the proceedings. That Muttley's solution renders this intrusion unnecessary is certainly no disadvantage. In keeping with the Russian tradition of the "holy fool," Mussorgsky gave the Simpleton a prophetic role; the repetition of the lament—although murder is the composer—does not change this role in substance, but rather emphasizes and, in my view, strengthens it.

Certainly there is something to be said for observing the distinction between the two versions of the opera strictly. On the other hand, however nasty the world may sound, "conflation" is widely practiced in such confused textual circumstances (e.g. the five-act Don Carlos or the preferred Haas edition of Bruckner's Eighth Symphony), and I know that in practice I will always want to hear the libretto. In the Kromy scenes, especially in a recording. This alternative can be ruled out only if it is shown that serious harm is done to the dramatic conception or structure, and Hamilton has not made such a case.

Daniel Morrison
New York, N. Y.

Mr. Hamilton replies: Mr. Morrison's thoughtful letter raises some interesting points. First off, I don't by any means advocate a policy of performing only "pure" versions (though I believe conflations should clearly be labeled as such); sometimes it's the only sensible solution when a work has been handed down to us in multiple versions or a completely confused state.

As to whether the 1871-72 full score or the 1874 vocal score should be taken as the "definitive" form of Mussorgsky's second version, we may indeed never know, for the puzzle has too many missing pieces. David Lloyd-Jones believes that at least some of the copy Mussorgsky gave the publisher for the vocal score antedated the final state of the orchestral score, because the deadlines didn't give him enough time to bring everything into line. I don't know the literature exposing other points of view. It would, at any rate, be dangerous to assume that simply because something was printed it is more authoritative than a manuscript; one has to know under what circumstances it was printed, and from what sources.

True, the 1869 version isn't a perfect dra-
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Positive Input

Thank you for your "Input Output" column. My principal hobby is home recording, so any information that expands my knowledge of how equipment can be used and what is available is very helpful to me. There is a dearth of information available to recording enthusiasts who do not work in studios. "Input Output" fills an important gap.

C. G. Burt
San Francisco, Calif.
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* 45 watts/channel, min. RMS, 8 ohms, from 20Hz-20kHz, with no more than 0.02% THD. Rack-mount handles and woodgrain cabinets optional.
17. The Emergence of Jazz
by Gene Lees

The first European music to which many southern blacks (and whites) were exposed was Protestant hymns. It is customary to praise them as fine, sturdy, and upstanding old tunes, and a fastidious courtesy has sheltered them from any serious musical evaluation. In fact, much of this music—relentlessly diatonic and major-key—is as desiccated emotionally as the Calvinism from which it grew, the morality it disseminated, and the loveless God it extolled.

The whites in the South accepted the religion and the music as they were. The blacks did not. They had a memory of another religion, another music, and another culture, and in some ways it has persisted well into this century. In the fall of 1976, the bi-centennial of the U.S., I heard the black composer/pianist Eubie Blake in concert. Since Blake was then ninety-four, it struck me that he had lived through nearly half the history of the country. When he played a wrong note, he muttered, “What’d you do that for?”, and when he was playing well, he would say, “Talk to me, talk to me.” The remarks were addressed to his hands. It struck me that these phrases, so close to the “Feet, do yo’ stuff” (from Eugene O’Neill’s The Emperor Jones) so despised by black militants, express a lingering cultural memory of African animism, which attributes life and mentality to everything—rocks, trees, and one’s own hands and feet. If such attitudes persist in vestigial form into our own time, how much stronger they must have been in the midnineteenth century. And how fresh the memories of African music.

Jazz first emerged from New Orleans, substantially a Catholic city with a French and Spanish rather than Anglo-Saxon Protestant background. A large percentage of New Orleans blacks were (and are) Catholics. Before the seventeenth century, music was based on church modes, and many of them contain the interval of the minor third on the base note. It seems to me not unreasonable that...
these unwilling immigrants from Africa fused the Catholic liturgical and their native melodic-harmonic systems, and that this fusion contributed to the development of the "blue note"—the slightly flatted third and seventh notes of the scale, and later the fifth as well—and thus to the blues.

Where blacks were forced to accept Protestant religion and its music, they transformed it—bent its tones and syncopated its time, broadened and humanized its emotional spectrum. When this music was sad, it expressed an almost ineffable despair. When it was joyous, it poured out an energy and exuberance that must have been disquieting to those whites embracing the Protestant doctrines of rationalism and emotional control.

The French and Spanish Catholics of New Orleans apparently admired and enjoyed it, perhaps because, as a Paulist priest put it to me with dry humor, "Catholicism takes the view that all men are sinners, so you might as well accept the will of God." But farther north, in such culturally backward (and deeply Protestant) places as Tennessee, Kentucky, and Arkansas, this new music gradually coming to be known as jazz was not so readily tolerated and never took root, except in St. Louis, a seething and rather cosmopolitan river port. (The comparative influences of Catholic and Protestant music on the emergence of jazz seems to me too little explored by scholars.)

By the twentieth century, jazz was spreading rapidly through the country and began to appeal to young white musicians. Significantly, few of them were Anglo-Saxon. In fact, the Anglo-Saxons viewed the music with suspicion and ghettoized it in speakeasies and other places of "loose behavior," with which they associated it. They thought of it as revolutionary, and it was—not only musically, but morally. Its explicit sensualism and celebration of the body and its movements presaged a physical liberation in the U.S.

Jazz permits each musician an almost infinite personal freedom of expression within a coherent discipline that maintains the social integrity of the group, and it puts the responsibility for performance squarely on the individual: If you're not good enough to play with the big boys, get off the bandstand. It is a collective music, but its spirit and philosophy are not collectivist. And it recognizes no authority. Unquestionably the Anglo-Saxon Protestant establishment understood none of this consciously but felt threatened by it.

But the day of the ofay was coming. In the 1950s, strictly white southern music, derived from English folk music and those dreary Protestant hymnals, would spread over the land. Shrewdly commercial in their thinking, the Nashville music-makers would expunge the term "hillbilly" from their public vocabulary and replace it with the more dignified "country and western." It was the era when barbers called themselves hair stylists, janitors custodians, and plumbers sanitary engineers. The value and effect of semantic revisionism was not lost on Nashville.

Out of the white South would soon come something else. At first it was called "rockabilly," but then it became generally known as "rock and roll." There would be a war between jazz (and the popular music influenced by it) and this foursquare Protestant secular southern music. Jazz would lose. Precisely what was lost I will discuss next month.

Gene Lees's series "Music U.S.A." was one of the recipients for 1977 of the Deems Taylor Award for outstanding nonfiction books and articles dealing with music and its creators, presented by the American Society of Composers, Authors, and Publishers (ASCAP).
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LONDON—Recently, as I watched a young conductor gyrate himself almost to death before a London orchestra (and to no avail, incidentally), I was reminded of those conductors who have been able to achieve what they want without appearing to move very much at all. I remember my astonishment on the one and only occasion, after the war, when I saw Richard Strauss conducting at the Royal Albert Hall. It's all very well to say that any orchestra will give its utmost when faced with a man of such age and distinction, but the fact remains that he had to communicate somehow, and I have to report that his beat was infinitesimal. In that respect he was in the same league as Fritz Reiner, whose beat was so small that sometimes, like the Cheshire Cat, it vanished altogether—and, incidentally, left no smile behind.

What Strauss, Reiner, and some others I shall mention had in common was a special kind of communication by eye. Of course almost all conductors (there is a particular reason for that qualification) communicate by eye as well as baton, but they need to be aware of the law of diminishing returns. Orchestral players do not like to be glared at every time they have a solo, and so the trick seems to be to use expressive eyes only for the very important moments. That is how Pierre Monteux used to bring off such a shattering climax in Elgar's Enigma Variations and get it in the right place. He did not, like many other conductors, allow the "Nimrod" variation to overshadow the rest of the piece.

"It was by eye communication that Leopold Stokowski, some ten years ago, nearly lifted the roof off the Royal Festival Hall while playing Tchaikovsky's Marche slave as an encore. He had already played what I supposed to be the loudest fortissimo I had ever heard when he suddenly looked directly at the brass section, which, having given him everything it thought it had, promptly gave him more, yet without any sign of force. Sir Thomas Beecham used to do the opposite by creating the most exquisite string pianissimo and then lowering it to the verge of inaudibility, and, if you were in a position to see how he did it, you realized that it had everything to do with eyes and little to do with arms. However, I will not extend the argument to include Sir John Barbirolli's habit in later years of laying down the baton and folding his arms throughout the climax (the last statement of the big tune) of Tchaikovsky's Fifth Symphony, which always
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seemed to me to have the negative effect of drawing all attention to the inanimate conductor.

During my years in Vienna, I frequently sat behind the Philharmonic during concerts and, from that vantage point, was able to watch most of the great conductors of the time. (In location recording you hardly see the conductor at all, except on closed-circuit television.) Of all such occasions the most unforgettable was Hans Knappertsbusch conducting the climax of Strauss's Tod und Verklärung. He was a big man, well over six feet tall, and toward the end of his life used to conduct while perched on a high stool. He was not a particularly demonstrative conductor, and ensemble was not his strongest point. What he knew most about was how to draw a line that would lead to a climax, irrespective of the length of the piece. Now it is generally considered that the Verklärung part of Strauss's tone poem is its weakest, but, like it or not, it is indisputably the climax. Knappertsbusch used to build it slowly, almost casually, until the climax proper approached, when he would very slowly rise from his seat and look at the brass section with an intensity that was almost hypnotic. It was not a question of just getting the brasses to play louder; it was a way of getting them to sustain a line, just as Strauss himself had done. And it was largely achieved by the eyes.

There must always be an exception, and the exception in this case is extraordinary, for Herbert von Karajan conducts quite a bit of the time with his eyes closed. I believe that the intensity he generates (and there can be no argument about that) comes directly from his own immense concentration during public performances. Knappertsbusch hated rehearsals and relied on his powers of communication (and, perhaps, an element of surprise on the part of the orchestra) to bring off a concert. Karajan, on the other hand, will rehearse to perfection, so that the concert appears to be an almost mystical experience for him. The orchestra knows exactly what is expected of it at any moment, and so communication by eye from the conductor is necessary only occasionally, or in emergency. But then, Karajan is unique, and I wouldn't recommend that any young conductor try to emulate his style, although he could learn from it. The oddest thing of all is that most audiences never see the conductor's eyes and so probably don't realize that they are his secret and most powerful weapon.

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I read with interest your review of the Kenwood KA-9100 integrated amplifier [December 1977], and I am considering the purchase of one for use with a pair of KLH Baron (Model 355) speakers in a fairly large room (5,000 to 6,000 cubic feet). Sound pressure levels approaching 105 dB are desired.

My impression is that a solid 80 to 100 watts (10 to 20 dBW) of power would suffice, but I notice that you found the Kenwood put out only 70 watts [18 dBW] for intermodulation distortion of 0.3% (approximately ten times the advertised specification) at 4 ohms. In your review of the KLH Baron [October 1977], you indicated a minimum impedance of approximately 4% ohms at 150 Hz. It seems likely to me that many receivers and amplifiers rated at 60 watts [17 dBW] per channel with less impressive overall distortion specifications than the KA-9100 will put out 70 watts per channel at 4 ohms with no distortion at 0.3% IM distortion and hence provide at least equal performance when used to drive the Barons. What do you say?—Donald R. Knap, Houston, Tex.

First of all, you are misinterpreting Kenwood’s specs (the advertised distortion rating applies to an 8-ohm load) as well as our report (the IM chart for the KA-9100 clearly indicates less than 0.25% distortion for 18% dBW into a 4-ohm load). A quick check of the 1978 edition of HIGH FIDELITY’S TEST REPORTS shows that not many of the receivers and amps rated at 17% dBW per channel and below can achieve the performance you claim. Those that do are comparable in price to the KA-9100.

More important is the fact that (if we are in the right channel; a right-only signal, on the other hand, will appear in the third channel reversed in phase with respect to the right channel. This will cause an imbalance in the stereo image.

Both of these difficulties are solved neatly if two speakers are connected in series (with their “minus” terminals together) across the hot terminals of the amp. The setup is now close to the circuit used in the Dynaco Quad-420 and has similar strengths and weaknesses. The speakers should have an impedance of 8 ohms or higher, and the amp should be capable of driving 4-ohm loads safely.

I am giving serious consideration to the Allison Model 1 or 3 loudspeakers. However, I am uncertain as to my receiver’s capability to drive them. I have a Sherwood Model S-9910 with 100 watts [20 dBW] per channel. My musical tastes run the gamut from rock and progressive jazz to classical music, all at high volume levels. I don’t want to damage the amplifier by overheating or listen to clipping. I would appreciate your comments and recommendations.—R. W. Kustanbauer, New Albany, Ind.

Offhand, we’d say that 20 dBW per channel is enough for the Allisons, but we don’t know how big your room is or how loudly you play your system. (A 3-dB increase in sound pressure level, a barely noticeable change, requires a doubling of the amplifier’s output power.) If your budget permits, the best course is to get the speakers you want and replace the receiver if it won’t drive them.

My question, though possibly mundane, might be important to those wishing to keep their components looking like new. Can you recommend a suitable cleaner/polisher for brushed-aluminum faceplates found on most electronic components? Typical spray polishes don’t clean effectively and, worse yet, leave a filmy deposit.—John M. Harvanek, Marietta, Ga.

Frankly, we haven’t run into the need for such scrupulous cleaning, but a soft cloth moistened with distilled water might work. If that is not satisfactory, photographic lens cleaner might do the trick.

I have a Pioneer Model 727 receiver with 37 watts [15% dBW] per channel used with Creative Speakers Model 92. The speaker system is rated at 40 watts [16 dBW], so I assume all is safe, except that Pioneer claims the 727 can put out up to 95 watts [19% dBW] at 4 ohms on instant peaks. Can my speakers take this?—Stanley Baird, Selden, N.Y.

There seems to be a big push toward superamps with 200 watts [23 dBW] and up. Several dealers have told me that, by using an amplifier three to four times as powerful as the one I have, I would need no gimmicks, as they call them, like the Pioneer RG-1 expanders I am currently using. What is your opinion on this?—STANLEY BAIRD, SELDEN, N.Y.

We would expect that your speakers are quite safe. In our testing program, relatively small bookshelf speakers have been subjected to short-term pulses on the order of 700 watts without ill effects. The need for large amps—23 dBW per channel and up—is predicated on the notion that music contains short bursts of energy whose level may be as much as 10 to 17 dB above the average level. Thus, if it takes, say, 7 dBW (5 watts) average to drive your speakers to the maximum loudness you ever want, the amplifier may have to produce 17 to 24 dBW (90 to 250 watts) on an instantaneous basis to avoid clipping the signal. Ironically, the Pioneer RG-1 would tend to make the need for a super power amp more apparent, not less, because it will push the peaks still higher.

My system—which consists of a new Technics SL-1400 Mk. Il turntable, a Shure V-15 Type III cartridge with a new stylus, a Kenwood KA-5500 integrated amp, and two Advent Loudspeakers—finally sounds the way I feel it should. But I still have a problem that is very annoying. On just about every record that I own, old or new, and whatever brand of LP I consider to be an inordinate amount of surface noise. Clicks, ticks, pops, and general crackle abound. This is particularly noticeable between tracks but can often be heard during soft passages. I am very careful about cleanliness, using Discwasher as recommended. Can these problems be the result of excess static electricity? Or could they be caused by the cartridge?—John C. Simoneaux, Morgan City, La.

From the symptoms you describe, you are probably letting the Discwasher brush get too dirty. If it is not cleaned regularly, dirt can be simply transferred from disc to disc. A good plan would be to wipe the brush on a lintless fabric after every two or three discs. A more thorough cleaning with a vacuum cleaner is advisable weekly. This schedule presupposes fairly heavy use of the Discwasher and can be relaxed under less demanding conditions.

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How does Jensen achieve Total Energy Response?

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In fact, for perfectly integrated speaker systems and total quality control, we make every element that goes into the manufacture of our Lifestyle speakers. From the heavy duty magnets to our hand-wound, high power voice coils. Even the computer-designed crossover network.

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Metal-Particle Tapes—A New Era in Recording?

Audio tapes using particles of metal (rather than of metal oxides) as the magnetic recording medium—an approach about which rumor has been abuzz for the last year or more—will reach the consumer market by the end of 1978. That's the word from 3M Company, which claims that its new Scotch Metafine recording tape will surpass in performance the best of conventional metal-oxide tapes.

Actual performance of the tape depends to a degree on the machine used to record it, but indications are that Metafine, recorded on a two-head machine, will offer 5½ dB more output than a typical chromium dioxide at 333 Hz and an astounding 11 dB more output at 12.5 kHz. At the same time, the metal-particle product is subject only to something like one-third the distortion. On a three-head machine, the additional output is 9 to 10 dB at low frequencies and 5 to 7 dB at high frequencies, with a reduction in distortion to less than one-tenth of the usual figures.

As might be expected from its performance, Metafine has physical characteristics quite different from those of conventional tapes. Retentivity (which primarily influences output at low frequencies) and coercivity (which plays a similar role for the highs) both are more than those of a typical chrome product. Playback equalization is 70 microseconds (the same as for chrome, ferricobalt, and ferrichrome), allowing existing decks to play Metafine tapes, but the hefty increase in coercivity means that current models do not have the bias capacity to record on them.

When demonstrated by 3M (without Dolby), the new cassette gave results that, to us, generally sounded comparable to conventional open-reel tapes at 7½ ips. A company spokesman has indicated that Metafine C-90 cassettes will be introduced at a price above those of premium C-90s and below those of 1,800-foot open-reel tape. Pressed for more precise price, he mentioned $10—but insisted that this is tentative.

Though the cassette format stands to derive the most dramatic benefits from Metafine, the possible applications of metal-particle tapes do not end there. In time it is expected to be used in open-reel audio recording, video recording, and data storage. While Metafine (and the competitors that presumably will follow it) should offer advantages in digital recording, its major effect may well be to help analog recording retain its pre-eminence—at least in the home.

...and Recorders?

At about the same time that Metafine reaches the marketplace, several equipment manufacturers are expected to have decks capable of handling it. Tandberg is the first to confirm positive marketing plans. It will offer the 340-AM cassette deck at a projected retail price of $1,300. The deck, currently in production, has separate recording and playback heads, a dual-gap erase head, and an electronically controlled three-motor transport, as well as two-position bias/EQ switching (for ferric and Metafine tapes). This arrangement allows recording of Metafine and ferric and playback of all current tapes, including Metafine.

Tandberg seems to believe that users of the 340-AM will prefer Metafine over chrome and its equivalents for critical applications and the less expensive ferrics for other recording purposes. The company points out that, significantly, while Metafine is perfectly amenable to noise-reduction processing (Dolby or DBX), it does not depend on noise reduction to attain acceptable performance. Thus the recordist may choose electronic noise suppression for the extreme dynamic range it offers with Metafine or take the "purist" approach in avoiding the minor side effects of such processing.

Recording on metal-particle tapes is not easy, and Tandberg has had to redesign its heads and electronics. To create the additional headroom demanded by the new tape, Tandberg now feeds the recording head from a transconductance amplifier (rather than the conventional high-voltage source and large resistor), a device that produces a constant current proportional to its input voltage. Since the need for high voltage is obviated, the design achieves both additional headroom and reduced demands on the recording amp's slew rate. The transconductance amp also isolates the equalization feedback loop from stray bias signal, resulting in more freedom from chirps when high frequencies are recorded at high levels.

Actilinear (active linear) Recording, as the new system is called, has already replaced the crossfield head system, which is not particularly advantageous for tapes of high coercivity, in Tandberg's latest open-reel deck. Not incidentally, Actilinear Recording will simplify the conversion of the open-reel deck for use with Metafine when the tape becomes available for this format.

Ever Heard of "Noise Intermodulation"?

Nor had we, when a company called Spatial sent us a technical paper describing the phenomenon and claiming that it was an important cause of listener fatigue and the lack of that elusive real-as-life quality with conventional components. There was a patent position to protect, the paper said, so some of the details couldn't be spelled out, but a way had been found of constructing transistors uniquely resistant to noise intermodulation. After a passing glance at the waste-
basket, we decided to make the Spatial office in Long Beach, California, a port of call on our next journey west.

Rich (actually Richard) Knapp is the inventor, the president of the company, and the author of the paper. He struck us as a bright, energetic, eager man. (Whether you insist on calling him a young man is more an index of your age than of his.) He admits that some of what he has to say—and he has a lot to say—may sound rather messianic to an engineering community unused to thinking in his terms.

He describes noise intermodulation as an electronic process analogous to the generation of modulation noise in tape recording. It saps spectral energy into its spurious side bands, robbing music of dynamic range and investing it with a sort of fuzziness that, among other things, contributes to want of definition in stereo imaging. But it is difficult to isolate aurally or measure on the bench. (That specific alone is enough to set Thomases a-doubting.)

His solution: Improve the linearity of the "valve" action of transistors by redesigning their physical structure. The product of that design is called the Knapp TFET Valve, and it is being used to build an attractive $800 preamp as Spatial's first product. Already on the drawing board is at least one power amp using the device. How about the current drain, since the valve appears to be a variety of FET, and we all know about the extraordinary measures that were needed in order to develop power FETs? No problem, says Knapp; the TFET Valves can be paralleled to deliver as much as is needed.

Since there was no hint of a plant near the office, we opined that the preamp was being built elsewhere under contract. How about production capacity of the supplier? There is no supplier, says Knapp. Because the proprietary ideas in the design must be protected, the work is going on at what might be called a secret factory and the key elements of the product sealed in X-ray-proof encapsulations. The plant can produce whatever it is asked to, but no confirming look-see is allowed.

He asked whether we would like to hear the preamp. Of course—with the understanding that we always mistrust first impressions, particularly in unfamiliar acoustic surroundings. We went to Knapp's apartment, where he had the preamp set up with a Shure V-15 Type IV and a pair of Dahlquist speakers (to name the most crucial ancillary items).

When we left two or three hours later we were aware of having been treated to a sonic feast such as we hadn't enjoyed since lord knows when. Was our excitement due to Knapp's engineering genius, to his excellent (and catholic) taste in program material, or to the good vibes we get from the man and his surroundings? Frankly, we haven't made up our minds, but Rich Knapp is certainly doing something right.

Second-generation equalizer from Soundcraftsmen

The RP-2215-R graphic equalizer is designed around circuitry using the wire-wound passive inductors long championed by Soundcraftsmen. Each of the ten octave bands is adjustable through a range of ± 22 dB. According to Soundcraftsmen, total harmonic distortion is less than 0.01% at 2 volts input and noise is 114 dB below full output. A rack-mount panel is provided with the RP-2215-R as well as walnut-grain vinyl sides (for shelf installation), a test record, and Computone charts for making permanent records of desired settings. The price of the RP-2215-R is $370.

Advent debuts mobile speaker system

Advent's EQ-1, an equalized speaker system for mobile use, incorporates two full-range drivers with integral power amplifiers and can be operated via remote control. According to the company, the EQ-1 performs optimally when rear mounted, using the car trunk as a sealed enclosure. Equipped with two sets of inputs, the system can be driven from line-level sources such as tape decks or from speaker outputs. The EQ-1, with remote switch, wiring, hardware, and grilles, costs $180.
There's been a quiet revolution going on in the cassette world. Leading makers of quality cassette decks have adopted TDK SA as their reference standard tape for "High" (CrO₂) bias and equalization settings. Why TDK SA? Because TDK SA's advanced tape formulation and super precision cassette mechanism let them (and you) take full advantage of today's advanced cassette deck technology. In addition, a growing number of other companies are recommending SA for use with their machines. So for the ultimate in cassette sound and performance, load your deck with SA and switch to the "High" or "CrO₂" bias/EQ settings. You'll consistently get less noise, highest saturation and output levels, lowest distortion and the widest dynamic range to let you get the best performance from any quality machine. But you needn't believe all this just because we say so. All you have to do is check our references.

TDK Electronics Corp., 755 Eastgate Blvd., Garden City, N.Y. 11530
In Canada: Superior Electronics Industries, Ltd.

The machine for your machine.
High-end turntable from Yamaha

Now at the top of the Yamaha turntable line is the Model YP-D10. This two-speed (33 and 45 rpm) direct-drive turntable has dual speed control systems: a servo-controlled quartz phase-locked loop circuit and a servo-controlled frequency generator. Other features include an automatic lift-stop and an S-shaped tone arm. Signal-to-noise ratio of the YP-D10 is said to be better than 73 dB (DIN B), rated wow and flutter less than 0.03% (weighted average), and speed control range ±3%. The YP-D10, with base and dust cover, costs $650.

XLR-style audio connectors from Philips

This new three-pin configuration line includes male and female XLR connectors plus a male 1/4-inch phone plug. Housings are of sturdy alloy, and the inserts are of plastic reinforced with glass fiber. The innovation here is the adjustable strain relief on the back of the connector, which will accept cables from 1/10 to more than 1/8 inch in diameter and which can be tightened to secure connections. The plugs are available in matte nickel finish with silver-plated contacts, or in black finish with gold-plated contacts. Prices range from $3.55 to $4.95.

Electro-Voice announces new stage speakers

The S-15-3 is a three-way speaker system (with a 15-inch woofer) whose small size makes it ideal for a touring-band situation. The manufacturer specifies a flat frequency response from 50 Hz to 16 kHz. The ST-350A tweeter is said to disperse high-frequency signals over an angle of 120 degrees; power handling of the system is rated at 100 watts. A vented enclosure for the midrange driver is designed to allow sound pressure levels of up to 116 dB without the use of a horn. Suggested list price for the S-15-3 is $550.

New stereophone from Koss

Koss's latest headphone is the K/6A, whose low-angle drivers are designed to minimize distortion and smooth frequency response. Impedance is said to be 100 ohms at 1 kHz, and total harmonic distortion for a 100-dB sound pressure level is rated at less than 1% at the same frequency. The headset is light in weight and has ear cushions contoured for comfort during extended listening. The K/6A costs $24.95.

Class D amp from Sony

Sony's TA-N88, a power amplifier that uses Class D (pulse width modulation) circuitry and vertical field effect transistors, includes a power supply claimed to reduce voltage variation to 1% or less. Class D operation is said to contribute to the amp's high efficiency and to enable it to handle peaks with minimal perceptible distortion. Its small size and light weight make it useful where portability is necessary. The TA-N88 is rated for a signal-to-noise ratio of 110 dB and output to 160 watts (22 dBW) per channel with no more than 0.5% harmonic distortion, 20 Hz to 20 kHz. It costs $1,000.
INTRODUCING THE TEAC C-1.

We took a data recorder made for computers and built a cassette deck made for connoisseurs.

If you're critical about what you listen to, you should see the new TEAC C-1.

The C-1 has a transport directly derived from recorders built by our Instrumentation Division for the world's major computer manufacturers.

Its motors are rated for thousands of hours of continuous use. Servo controls have a reliability factor of $10^8$ and function switches are built to withstand repeated use in excess of 100,000 times.

WHY THE TRANSPORT IS SO IMPORTANT

For the C-1 to deliver the kind of virtuoso performance we promise, it has to meter—not pull—tape with the utmost reliability. And that's a matter of mechanics, not electronics.

The sad fact is, many tape recorders are built by electronics companies with a short history of transport design. And transport mechanics is where most tape recorders break down.

Transport design—using materials that move and interact—is no simple science. It's an art that takes a long time to learn.

The art of mechanical design is one we've been practicing for more than 25 years. And it reaches a high point with the C-1.

THE TRANSPORT

The C-1 transport is a 3-motor/3-head dual capstan system. The closed loop dual capstans are linked with twin belts to produce a wow and flutter spec of just 0.04%. The capstan motor is phase-locked loop, so it's free from voltage and frequency fluctuations.

C-1 pinch rollers are self-adjusting to get optimum tape pressure onto the capstans. Transport controls are LSI logic-operated and positive. Separate right and left input controls are cross-gearied with friction coupling for one-hand control of channels.

A pitch control lets you vary tape speed up to $\pm 4\%$ (Because tapes you get from others may not be as accurately recorded as those you give).

THE ELECTRONICS

There isn't a cassette deck made that can beat this combination of specs: overall frequency response with $\text{Cr02-20-20kHz}$, other—$20-18\text{kHz}$; Wow and Flutter—$0.04\% \text{ NAB}$, weighted; and Signal-to-Noise ratio—$-70\text{dB}$ with Dolby at $5\text{kHz}$ and up to $-90\text{dB}$ with optional dbx interface module (Rx-8).

Another unique feature to the C-1, are plug-in bias EQ/cards that let you optimize the electronics to a specific brand of tape. Additional cards are available for various brands of tape. For distortion-free recording, peak program meters respond to signals with an attack time of 10 milliseconds in all audio frequencies and give you an accurate display of peak level up to $+5\text{dB}$.

Other C-1 features include an input selector switch for Mic/Mic-with-attenuation (20dB pad)/Line; a timer control for automatic record/playback start; a memory function for Auto-Stop/Repeat; and a folding stand for vertical or angled use. Naturally, the C-1 can also be rack mounted.

HOW MUCH

The TEAC C-1 has a suggested list price of $1300, a lot of money by some standards. But when you consider its computer/instrumentation heritage—and what that means in terms of how long and how well it will run—it could be the most inexpensive tape recorder you can buy.

TEAC®

First. Because they last.

@TEAC 1978

*Also available in brushed aluminum.
AcoustaTrac amp provides a boost
Sparkomatic Corporation has introduced a mobile booster amplifier, the AcoustaTrac GE-500, with an illuminated screen on which a flexible rod illustrates the frequency-response curve of the stereo amp. The curve is user-adjustable via tone controls that range from 60 Hz to 10 kHz. The GE-500, said to provide 20 watts (13 dBW) per channel of power, can be used with all mobile tape decks and radios. Other features are a fader control and a bypass switch. The GE-500 costs $79.95.

Parenthian Industries' disco mixer
The Sultan 2000 portable stereo disco mixer is intended for use in small nightclubs or with mobile units. It is a free-standing console with two BSR turntables (ADC cartridges supplied) and a self-contained preamp for connection to power amplifiers and speaker systems. This mixer, by Parenthian Industries, has standard features for disco use, such as back cueing, multiple source mixing, a cross-fade pot, and a tone control for the microphone input. In addition, it has two seven-band equalizers, an LED power output indicator, and a cue level control. Suggested list price is $599.90; a three-sided base stand is available for $45.

Uni Sync's amplifier has clean design
The Model 100 professional power amplifier by Uni Sync, designed to fit into a standard 19-inch rack, is rated at 100 watts (20 dBW) per channel into 8 ohms with a stated frequency response to 100 kHz (-3 dB) and harmonic distortion below 0.02%. The cleanly designed front panel holds individual-channel volume controls and LEDs to indicate ready status and peak output. The Model 100 is convertible for 120- or 240-volt operation, is switchable for either mono or stereo applications, and offers both XLR and phone inputs as well as five-way banana-plug binding posts at its outputs. The price of the amp is $549.

The truth is clearly seen in every Scotch Master Cassette, thanks to our see-through cassette shell. You can see the unique roller guides that reduce friction by moving the tape evenly across the head. And the two radially creased shims that insure a smoother wind, improved mechanical reliability and reduced wow and flutter. Even the recorder head penetration. The sexy, see-through Master Cassette shell. It's kind of like getting the naked truth.
Care package for VCRs

The Recorder Care Division of Nortronics is making available the QM-95, a maintenance kit designed for video-cassette recorders. The kit includes a tape-head cleaner in spray form (QM-103), an antistatic dust cloth, cellular foam swabs (QM-505), and a special screwdriver for removing headcover screws. The QM-95 comes with illustrated instructions and costs $11.90.

CIRCLE 141 ON PAGE 81

Low fundamentals from PSU

The PSU Sub Woofer/Bass Enhancer from Precision Sound Unlimited may be used with conventional speaker systems and is said to extend frequency response into infrasonic regions. Working on the theory that sound below 100 Hz is nondirectional, PSU says that only one unit is needed and placement is not critical. In the subwoofer mode, rated frequency response is 15 to 82 Hz, ±2 dB; 15 Hz to 2 kHz, ±2 dB is the rating in the bass enhancer position. The Sub Woofer/Bass Enhancer is said to handle 80 watts (19 dBW) of power and costs $395.

CIRCLE 142 ON PAGE 81

Analog Echo from Roland Corporation

The Roland DC-10 analog delay, for use with home or stage amplification systems, adds echo or reverberation to the direct signal supplied by an instrument or other monophonic source through an A/B output that sends a straight signal and a delayed signal, for a stereo effect. A threeposition attenuator enables the device to accept different input levels. Other controls include input and output volume controls, faders for the direct and reverb signals, repeat for controlling echo-effect quality, and intensity for controlling the amount of echo reverberants. An optional foot switch cuts the system in or out. The DC-10 uses 1/4-inch phone jacks and sells for $390.

CIRCLE 143 ON PAGE 81

Master I Cassette is for normal bias recording. It features an excellent dynamic range, low distortion, uniform high frequency sensitivity and output that's 10 dB higher than standard tapes.

Master II Cassette is for chrome bias recording (70 microsecond equalization). It features a special coating that gives it a 3 dB better signal-to-noise ratio at low and high frequencies than chrome cassettes.

Master III Cassette is for ferri-chrome bias recording. It offers a 3 dB output improvement at low frequencies and 2 dB output improvement at high frequencies over chromium dioxide.

SCOTCH RECORDING TAPE. THE TRUTH COMES OUT.
How to identify the world's finest tonearm.*

True four-point gimbal centers and pivots tonearm mass where vertical and horizontal axes intersect. The four needle-point pivots are tempered and honed to produce microscopically smooth surfaces. Each pivot is matched to a ball-bearing race only 0.157 inches in diameter.

Unique counterbalance contains two mechanical anti-resonance filters which are specially tuned to absorb parasitic resonances originating in the tonearm/cartridge system and chassis.

Straight-line tubular shape provides maximum torsional rigidity and lowest effective mass.

Tracking force is applied with a tempered, flat-wound spiral spring, centered around the vertical pivot. Stylus force remains perpendicular to the record even if the turntable is not level.

The tonearm shown is part of our higher-priced turntables. But many of its precision features are found in our lowest-priced models: four-point gimbal, straight-line design; and controls for balance, tracking force and anti-skating.

United Audio, 120 So. Columbus Ave., Mt. Vernon, NY 10553
**HiFi-Crostic No. 37**

by William Petersen

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**DIRECTIONS**

To solve these puzzles—and they aren't as tough as they first seem—supply as many of the Output words as you can in the numbered dashes following the Input. Unless otherwise specified in the input, the Output consists of one English word. Compare meanings, compound, or hyphenated, word.

Transfer each letter to the square in the diagram that bears the corresponding number. After only a few correct guesses you should begin to see words and phrases emerging in the diagram which, when filled in, will contain a quotation related to music, recordings, or audio. The words in the quotation are separated by darkened squares and do not necessarily end at the end of a row.

Try to guess at these words and transfer each newly decoded letter back to its appropriate dash in the Output. This will supply you with further clues.

A final clue: The source of the quotation—the author and his work—will be spelled out by the first letters in Output, reading down.

The answer to HiFi-Crostic No. 37 will appear in next month’s issue of High Fidelity.

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**Solution to last month’s HiFi-Crostic appears on page 7.**

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**INPUT**

| A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z |
| Recorded complete Brahms organ music on Turnabout | Jazz trumpet with Bob Crosby, Tommy Dorsey, and Benny Goodman (full professional name) | Balance achieved by a group of musicians | Lisz’s华尔兹 | RCA’s Thais | 1960 Broadway musical recorded by Columbia (3 wds.) | Siegfried’s sword | Nickname of Schubert’s second C major symphony | A note, lengthened 1½ times in value | Concert overture by Elgar (3 wds.) | Etudes, piano pieces by Schumann |

**OUTPUT**

| 131 | 53 | 176 | 43 |
| 127 | 194 | 91 | 94 | 165 | 116 | 55 | 49 |
| 23 | 112 | 89 | 10 | 66 | 136 | 150 | 188 |
| 20 | 132 | 97 | 73 | 143 | 113 | 154 | 40 |
| 3 | 22 | 57 | 117 | 46 | 86 | 180 | 147 |
| 172 | 99 | 19 | 121 | 141 | 38 | 72 | 62 |
| 190 | 107 | 5 | 184 | 59 |
| 79 | 140 | 18 | 47 | 124 | 181 | 108 | 157 |
| 61 | 139 | 149 | 52 | 179 | 4 | 81 |
| 110 | 42 | 96 | 25 | 142 |
| 105 | 21 | 153 | 83 | 41 | 63 |
| 195 | 118 | 84 | 130 | 151 | 16 | 177 | 60 |
| 39 | 103 |
| 102 | 189 | 145 | 178 | 2 | 12 | 80 | 36 |

**INPUT**

| A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z |
| N. Andre Previn musical starring Katharine Hepburn | P. In medieval treatises, tone colors, pitches, notes (Lat.) | Q. Horn or Bach suite | R. of a note, lengthened 1½ times in value | S. Beethoven’s “Beloved” horn or Bach suite for Lyric Chord |
| U. Taras | V. Soprano Dorothee recorded Vaughan Williams Mass for Capitol |
| W. Bring together |

**OUTPUT**

| 51 | 164 | 98 | 70 |
| 173 | 93 | 30 | 45 |
| 29 | 193 | 75 | 163 | 11 |
| 68 | 13 | 129 | 55 | 32 | 122 | 170 |
| 37 | 67 | 100 | 56 | 77 | 120 |
| 134 | 162 | 111 | 167 | 54 | 175 | 65 | 187 |
| 152 | 171 | 24 | 123 | 15 |
| 119 | 183 | 158 | 26 |
| 92 | 115 | 155 | 74 | 14 | 137 | 17 |
| 71 | 31 | 82 | 144 | 166 |
| 174 | 64 | 185 | 6 | 95 | 192 | 109 | 128 |
| 114 | 186 | 69 | 145 | 34 | 169 | 78 | 7 |
| 156 | 125 | 44 |
| 9 | 148 | 162 | 160 | 76 | 50 | 91 | 138 |
| 168 | 88 | 35 | 106 | 126 | 197 |

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**CIRCLE 17 ON PAGE 81**

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**Notes:**

- **INPUT** is filled in with the words that are clues to the Output.
- **OUTPUT** is where the clues are transferred to.
- **DIRECTIONS** guide the puzzle-solving process.
- The quotation is revealed as the Output is completed.
- The answer to the last month's HiFi-Crostic is also included.

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**Solution:**

The solution to the puzzle is revealed as the Output is completed. The quotation related to music, recordings, or audio is also revealed. The answer to the last month's HiFi-Crostic is provided on page 7.
Empire's Blueprint for Better Listening...

No matter what system you own, a new Empire phonograph cartridge is certain to improve its performance.

The advantages of Empire are threefold:
One, your records will last longer. Unlike other magnets, Empire’s moving iron design allows our diamond stylus cartridges to float free of its magnets and coils. This insures much less weight on the record surface and insures longer record life.
Two, you get better separation. The small, hollow iron armature we use allows for a tighter fit in its positioning among the poles. Sn, even the most minute movement is accurately reproduced to give you the space and depth of the original recording.
Three, Empire uses 4 poles, 4 coils, and 3 magnets (more than any other cartridge) for better balance and hum rejection.

The end result is great listening. Audition one for yourself or write for our free brochure, "How To Get The Most Out Of Your Records." After you compare our performance specifications we think you'll agree that, for the money, you can’t do better than Empire.

Empire Scientific Corp., Garden City, New York 11530

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<table>
<thead>
<tr>
<th></th>
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<th></th>
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<th></th>
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<th></th>
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</thead>
<tbody>
<tr>
<td>FREQUENCY RESPONSE</td>
<td>10kHz to 50kHz + 3 dB</td>
<td>15kHz to 45kHz + 3 dB</td>
<td>20kHz to 20kHz + 2 dB</td>
<td>20kHz to 20kHz + 2 dB</td>
<td>20kHz to 20kHz + 2 dB</td>
<td>20kHz to 20kHz + 2 dB</td>
<td>20kHz to 20kHz + 2 dB</td>
<td>20kHz to 20kHz + 2 dB</td>
<td>20kHz to 20kHz + 2 dB</td>
</tr>
<tr>
<td>TRACKING FORCE RANGE</td>
<td>-1/16 gm</td>
<td>-1/16 gm</td>
<td>-1/16 gm</td>
<td>-1/16 gm</td>
<td>-1/16 gm</td>
<td>-1/16 gm</td>
<td>-1/16 gm</td>
<td>-1/16 gm</td>
<td>-1/16 gm</td>
</tr>
<tr>
<td>SEPARATION</td>
<td>15Hz to 1kHz</td>
<td>1kHz to 20kHz</td>
<td>20kHz to 50kHz</td>
<td>20kHz to 50kHz</td>
<td>50kHz to 10kHz</td>
<td>15kHz to 20 kHz</td>
<td>20kHz to 20kHz</td>
<td>20kHz to 20kHz</td>
<td>20kHz to 20kHz</td>
</tr>
<tr>
<td>I.M. DISTORTION</td>
<td>2% @ 2kHz-20kHz</td>
<td>2% @ 2kHz-20kHz</td>
<td>6% @ 2kHz-20kHz</td>
<td>6% @ 2kHz-20kHz</td>
<td>11% @ 2kHz-20kHz</td>
<td>15% @ 2kHz-20kHz</td>
<td>2% @ 2kHz-20kHz</td>
<td>2% @ 2kHz-20kHz</td>
<td>2% @ 2kHz-20kHz</td>
</tr>
<tr>
<td>STYLUS</td>
<td>2 mil</td>
<td>2 mil</td>
<td>2 mil</td>
<td>2 mil</td>
<td>2 mil</td>
<td>2 mil</td>
<td>2 mil</td>
<td>2 mil</td>
<td>2 mil</td>
</tr>
<tr>
<td>EFFECTIVE TIP MASS</td>
<td>4 miligram</td>
<td>4 miligram</td>
<td>2 miligram</td>
<td>2 miligram</td>
<td>6 miligram</td>
<td>6 miligram</td>
<td>6 miligram</td>
<td>6 miligram</td>
<td>9 miligram</td>
</tr>
<tr>
<td>COMPLIANCE</td>
<td>30 x 10^-4 cm/dyne</td>
<td>30 x 10^-4 cm/dyne</td>
<td>30 x 10^-4 cm/dyne</td>
<td>30 x 10^-4 cm/dyne</td>
<td>30 x 10^-4 cm/dyne</td>
<td>30 x 10^-4 cm/dyne</td>
<td>30 x 10^-4 cm/dyne</td>
<td>30 x 10^-4 cm/dyne</td>
<td>30 x 10^-4 cm/dyne</td>
</tr>
<tr>
<td>TRACKING ABILITY</td>
<td>33 cm/sec at 1kHz @ 1 gm</td>
<td>33 cm/sec at 1kHz @ 1 gm</td>
<td>33 cm/sec at 1kHz @ 1 gm</td>
<td>33 cm/sec at 1kHz @ 1 gm</td>
<td>33 cm/sec at 1kHz @ 1 gm</td>
<td>33 cm/sec at 1kHz @ 1 gm</td>
<td>33 cm/sec at 1kHz @ 1 gm</td>
<td>33 cm/sec at 1kHz @ 1 gm</td>
<td>33 cm/sec at 1kHz @ 1 gm</td>
</tr>
<tr>
<td>CHANNEL BALANCE</td>
<td>within 1 dB @ 1kHz</td>
<td>within 1/10 dB @ 1kHz</td>
<td>within 1/10 dB @ 1kHz</td>
<td>within 1/10 dB @ 1kHz</td>
<td>within 1/10 dB @ 1kHz</td>
<td>within 1/10 dB @ 1kHz</td>
<td>within 1/10 dB @ 1kHz</td>
<td>within 1/10 dB @ 1kHz</td>
<td>within 1/10 dB @ 1kHz</td>
</tr>
<tr>
<td>INPUT LOAD</td>
<td>100k Ohms/ channel</td>
<td>100k Ohms/ channel</td>
<td>47k Ohms/ channel</td>
<td>47k Ohms/ channel</td>
<td>47k Ohms/ channel</td>
<td>47k Ohms/ channel</td>
<td>47k Ohms/ channel</td>
<td>47k Ohms/ channel</td>
<td>47k Ohms/ channel</td>
</tr>
<tr>
<td>TOTAL CAPACITANCE</td>
<td>under 100 pF/channel</td>
<td>under 100 pF/channel</td>
<td>300 pF/channel</td>
<td>300 pF/channel</td>
<td>300 pF/channel</td>
<td>300 pF/channel</td>
<td>300 pF/channel</td>
<td>300 pF/channel</td>
<td>300 pF/channel</td>
</tr>
<tr>
<td>OUTPUT</td>
<td>3 mV/channel</td>
<td>3 mV/channel</td>
<td>45 mV/channel</td>
<td>45 mV/channel</td>
<td>45 mV/channel</td>
<td>45 mV/channel</td>
<td>45 mV/channel</td>
<td>45 mV/channel</td>
<td>45 mV/channel</td>
</tr>
<tr>
<td></td>
<td>@ 3.54 cm/sec</td>
<td></td>
<td>mV/channel</td>
<td></td>
<td>mV/channel</td>
<td></td>
<td>mV/channel</td>
<td></td>
<td>mV/channel</td>
</tr>
</tbody>
</table>
A Quality Performer from Technics


If you are losing sleep over the problem of head wear on your cassette deck, look to the Technics RS-631: The ten-year limited warranty on its hot-pressed ferrite combination record/play head should do wonders for your repose. And, if you think flutter is an unavoidable concomitant of a cassette deck, look again to the RS-631: Lab data show a flutter level that could be the envy of many an open-reel recorder.

This is a front-loading deck whose design philosophy seems to be, "If one way of doing things is good, a choice of ways is even better." For example, it offers three possible rewind modes: rewind/auto-play (rewind to the head of the tape with automatic playback), memory rewind (rewind to a preselected point—the 000 counter reading—and stop), and memory/auto-play (rewind to 000 with automatic playback from that point). In addition, review and cue features let you quickly scan the tape to find particular sections. You activate them by fully depressing PLAY and partially depressing REWIND (for review) or FAST FORWARD (for cue). As the tape shuttles past the head, you will hear a low-level, somewhat garbled sound for as long as the fast-mode lever is held down. Releasing the lever returns the deck to PLAY. There is sufficient burble in the Cue and REVIEW modes to tell where you are on the tape, but a bit more output level wouldn't have hurt.

The meters are quite generous in size, feature dual scales (-20 to +3 dB and -17 to +6 dB), and are backed up by a three-LED peak-indicator display. The meter ballistics and range are controlled by a front-panel switch marked PEAK CHECK. In its IND position, the upper (-20 to +3) scale is used to monitor the recording level of the averaging meters, while the LEDs indicate peak recording levels of 0, +3, and +6 dB. In the METER position, the pointers respond more quickly and the lower (-17 to +6) scale is used. Since the meters now are reading "peak" values, Technics chose to defeat the LED display in this mode. We find the meanings of IND and METER...
At a relatively modest price, the RS-631 offers a sensible assortment of mechanical features—the clutched microphone and line-input level controls, for example, permit line/mike mixing—and a fine level of performance. And where else does one find a ten-year head warranty?

**Technics RS-631 Cassette Deck**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Speed accuracy</td>
<td>0.56% fast at 105, 120, &amp; 127 VAC</td>
</tr>
<tr>
<td>Wow and flutter</td>
<td>playback: 0.04%, record/play: 0.05%</td>
</tr>
<tr>
<td>Rewind time (C-60 cassette)</td>
<td>85 sec.</td>
</tr>
<tr>
<td>Fast-forward time (same cassette)</td>
<td>84 sec.</td>
</tr>
<tr>
<td>S/N ratio (re DIN 0 VU; Dolby off; CBS weighting)</td>
<td>playback (L ch: 51 dB, R ch: 48 dB)</td>
</tr>
<tr>
<td></td>
<td>record/play (L ch: 47 dB, R ch: 48 dB)</td>
</tr>
<tr>
<td>Erasure (333 Hz at normal level)</td>
<td>70 dB</td>
</tr>
<tr>
<td>Channel separation (at 333 Hz)</td>
<td>record left, play right: 33½ dB</td>
</tr>
<tr>
<td></td>
<td>record right, play left: 34½ dB</td>
</tr>
<tr>
<td>Sensitivity (re DIN 0 VU)</td>
<td>line input (L ch: 88 mV, R ch: 90 mV)</td>
</tr>
<tr>
<td></td>
<td>mike input (L ch: 0.33 mV, R ch: 0.38 mV)</td>
</tr>
<tr>
<td>Meter action (re DIN 0 VU)</td>
<td>peak mode: L ch: 2½ dB high, R ch: 3½ dB high</td>
</tr>
<tr>
<td></td>
<td>averaging mode: L ch: 3¼ dB high, R ch: 3 dB high</td>
</tr>
<tr>
<td>Maximum output (re DIN 0 VU)</td>
<td>L ch: 0.6 V, R ch: 0.6 V</td>
</tr>
</tbody>
</table>

**Harmonic Distortion Curves**

- **RS-631 (1)**
- **RS-631 (2)**

**DIN Playback Response**

- **Left channel:** 4½ dB, 3.5 Hz to 10 kHz
- **Right channel:** 4½ dB, 3.5 Hz to 10 kHz

**Record/Playback Response**

- **DOLBY ON**
  - **Left channel:** -1½ dB, 3.5 Hz to 15 kHz
  - **Right channel:** +1½ dB, 4.6 Hz to 15 kHz

- **DOLBY OFF**
  - **Left channel:** +1½ dB, 3.5 Hz to 15 kHz
  - **Right channel:** +1½ dB, 4.6 Hz to 15 kHz

**Recording and Playback**

- **Ferric Tape, Dolby Off**
  - **Left channel:** 0.05%, 105, 120, & 127 VAC
  - **Right channel:** 0.04%

- **Ferrichrome Tape, Dolby Off**
  - **Left channel:** 0.05%
  - **Right channel:** 0.04%

- **Chrome Tape, Dolby Off**
  - **Left channel:** 0.05%
  - **Right channel:** 0.04%
Denon: A “Legendary” Tape Name Returns


Years ago, a semipro open-reel recorder made by Nippon Columbia and sold under the Denon brand name had a small but avid following in this country. Then the importer closed its doors, and Denon became a shadowy entity on the American market. For a time Nippon Columbia attempted to sell its relatively inexpensive (and not very impressive) consumer electronics here while the professional products on which its American reputation really was based—the moving-coil cartridges and transcription turntables, for instance—remained hard to come by. Then the American subsidiary, too, was shut down. We were left with rumors of sophisticated digital mastering recorders and the spotty availability of the pickups. So when American Audioport announced that it would make the Denon equipment line available here once again, we were eager to sample the current generation—particularly the tape equipment, of which the present unit is the top cassette model.

In the lab, the Denon shows unusually low flutter, both in record/playback and playback alone. The basic transport speed is a hair fast and becomes increasingly so with rising power-line voltage, but the discrepancy is minute: worst case, less than 1/12 of a semitone.

Signal-to-noise ratios for both channels are very good—surpassing, with the use of Dolby, the 60-dB mark that we consider essential for a high-performance cassette deck. Measured channel separation is fine indeed and outpaces that delivered by even the best phono cartridges. For all practical purposes, erasure on the DR-750 can be regarded as total. Judging by its sensitivity—the minimum input signal needed to produce an output equivalent to DIN 0 VU on playback—the Denon will interface easily with other equipment.

When used for playback of prerecorded tapes, the deck shows the usual low-frequency hump caused by the adherence of the Philips test cassette to an outmoded standard. In practice, the bass response would be just about right. Above 1 kHz a slight rolloff occurs in both channels. It is barely perceptible and quite innocuous as long as the tape is not Dolby-encoded; if it is, the level dependent changes in high-frequency response that result are readily noticeable.

Because the DR-750 incorporates a control with which the user can “fine tune” the recording bias to a specific tape type, the distortion figures measured by the lab must be interpreted more broadly than usual. Distortion, like recording sensitivity with respect to frequency, is a function of bias level. Seen in that light, the distortion data for the Denon suggest very good performance.

The large, easily visible meters have calibrations extending from −40 to +5. They are switchable from a VU or averaging mode to a peak-reading mode, offering the recordist a safety factor against overload by reading 2 to 3 dB high in the former, 3 to 4 dB high in the latter. The peak-reading ballistics are somewhat slower than those we have seen elsewhere, but the pointers reach their destination quickly enough to allow the user to identify the transients that cause particular peaks.

One surprise in the design is the head configuration: an erase head plus a combination record/play head that, at first glance, may suggest a less expensive class of equipment. Denon considered a monitoring format carefully and has come to the conclusion that the use of a separate playback head—even in the same housing with the recording head—imposes performance limitations that are less desirable than those occasioned by the combination design. For playback, the necessarily wider gap of the combination head (needed for efficient recording) limits response at the extreme high end (though very little, as the curves show). But phase and output stability are significantly better with a combination head, according to Denon, because inherently it introduces a minimum of skew anomalies as the tape moves across it.

Using the unit is convenient and pleasant. The solenoid-operated transport controls respond positively to a gentle touch.
Denon DR-750 Cassette Deck

| Speed accuracy | 0.17% fast at 105 VAC  
|                | 0.30% fast at 120 VAC  
|                | 0.37% fast at 127 VAC  |
| Wow and flutter | playback: 0.045%  
|                 | record/play: 0.050%  |
| Rewind time (C-60 cassette) | 65 sec.  
| Fast-forward time (same cassette) | 65 sec.  |
| S/N ratio (re DIN 0 VU, Dolby off; CBS weighting) |  
| playback | Left channel: +51/4, -1/2 dB  
|          | Right channel: +5%, -3/4 dB  
| record/play | Left channel: +5%, -1/2 dB  
|            | Right channel: +5%, -3/4 dB  |
| Erasure (333 Hz at normal level) | 69 dB  
| Channel separation (at 333 Hz) |  
| record left, play right | 39 1/2 dB  
| record right, play left | 40 dB  
| Sensitivity (re DIN 0 VU) |  
| line input | Left channel: 100 mV  
|            | Right channel: 93 mV  
| mike input | Left channel: 0.40 mV  
|            | Right channel: 0.41 mV  
| Meter action (re DIN 0 VU) |  
| peak mode | Left channel: 4 dB high  
|           | Right channel: 3 dB high  
| average mode | Left channel: 2 1/4 dB high  
|             | Right channel: 2 dB high  
| Maximum output (re DIN 0 VU) |  
| L ch | 1.35 V  
| R ch | 1.35 V  

While requiring just enough effort to minimize the possibility of inadvertent actuation, loading or retrieving a cassette is simply a matter of slipping it in or out; no eject mechanism is necessary. The cassette cannot be removed while the tape is in motion. The solenoid system allows direct passage between play and either of the fast-forward modes without going through stop.

The pause is somewhat unusual in that, while it is held, the tape continues to move but recording ceases. A single quick touch makes it operate in the conventional manner. Use of this control as an editing device, however, is a bit problematic: it introduces no transient into the recording, but it does leave an audible gap. For most recording, the pause need not be used at all. Pressing RECORD arms the machine and allows level checking, after which a touch on PLAY starts the recording process.

In using the Denon to dub some rather demanding program material, we rapidly came to the conclusion that some of the fine bias settings used by the lab in deriving response curves—with TDK SA for the CO (ferricobalt) setting, Sony for the ferrichrome, and Maxell UDXL-1 in the ferric setting—were not optimum, the fact that they agreed with the instruction manual notwithstanding. Trotting out our signal generator and using essentially the procedure outlined in the instruction manual to set the bias points, we were able to obtain substantial improvement in the audible quality of our copies. This suggests that to get the full performance of which this deck is capable a test oscillator of some sort is a necessity. Fortunately, the adjustment procedure is not at all tedious or complex, thanks in part to the memory rewind.

Once the bias was correctly set, our copies were excellent matches for the original sources. Our best results came with ferrichromes—with which Denon has done an unusually good job—"chrome-substitute" ferricobalts formulations. The separate switch position for ferrichromes, but also made good copies. It is to the credit of the metering system that results nearly as good but produced slightly more compression of peaks. It is to the credit of the metering system that the compression could easily be confined to peaks, where the concomitant increase in distortion is not significant. Ferric tapes showed the largest losses in dynamic range and high frequencies, but also made good copies.

Once its demands for careful adjustment are satisfied, the Denon DR-750 is capable of truly fine performance. A removable plate allows easy access to the heads for routine maintenance, and the overall construction seems substantial and durable.

Whether this adds up to a "professional" cassette deck or a home deck with luxury features (like the solenoid controls) can legitimately be debated. In either case, the deck is neither run-of-the-mill in concept nor inexpensive; its unique mix of capabilities and attributes must be judged carefully against the price by the prospective purchaser.

### Denon DR-750 Cassette Deck

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
</table>
| Speed accuracy | 0.17% fast at 105 VAC  
|                | 0.30% fast at 120 VAC  
|                | 0.37% fast at 127 VAC  |
| Wow and flutter | playback: 0.045%  
|                 | record/play: 0.050%  |
| Rewind time (C-60 cassette) | 65 sec.  
| Fast-forward time (same cassette) | 65 sec.  |
| S/N ratio (re DIN 0 VU, Dolby off; CBS weighting) |  
| playback | Left channel: +51/4, -1/2 dB  
|          | Right channel: +5%, -3/4 dB  
| record/play | Left channel: +5%, -1/2 dB  
|            | Right channel: +5%, -3/4 dB  |
| Erasure (333 Hz at normal level) | 69 dB  
| Channel separation (at 333 Hz) |  
| record left, play right | 39 1/2 dB  
| record right, play left | 40 dB  
| Sensitivity (re DIN 0 VU) |  
| line input | Left channel: 100 mV  
|            | Right channel: 93 mV  
| mike input | Left channel: 0.40 mV  
|            | Right channel: 0.41 mV  
| Meter action (re DIN 0 VU) |  
| peak mode | Left channel: 4 dB high  
|           | Right channel: 3 dB high  
| average mode | Left channel: 2 1/4 dB high  
|             | Right channel: 2 dB high  
| Maximum output (re DIN 0 VU) |  
| L ch | 1.35 V  
| R ch | 1.35 V  

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**DIN Playback Response**

**Record/Playback Response**

**Ferrichrome Tape, Dolby Off**

**Ferricobalt Tape, Dolby Off**

**Ferric Tape, Dolby Off**

**Ferric Tape, Dolby ON**

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**Harmonic Distortion Curves**

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**Specifications**

- **Maximum output (re DIN 0 VU)**: L ch: 1.35 V, R ch: 1.35 V
- **S/N ratio (re DIN 0 VU)**: 0.07 dB, 0.1 dB, 0.2 dB, 0.3 dB, 0.5 dB, 1.0 dB, 1.7 dB, 3.0 dB
- **Wow and flutter**: playback: 0.045%, record/play: 0.050%
- **Rewind time (C-60 cassette)**: 65 sec.
- **Fast-forward time (same cassette)**: 65 sec.
ReVox Model B-77, a stereo quarter-track (or half-track) open-reel tape deck in metal case. Dimensions: 16¾ by 17¾ inches (front panel), 7¾ inches deep. Price: $1,295; optional dust cover, $45. Warranty: "limited," two years parts and labor. Manufacturer: Willi Studer, Switzerland; U.S. distributor: Studer/ReVox America, Inc., 1819 Broadway, Nashville, Tenn. 37203.

Today's open-reel market offers, by and large, a choice between "classic" models; the shakeout years are long gone. The B-77 is, in fact, an update of just such a classic—the decade-old A-77, which remains in the ReVox line. Both are two-speed (3¾ and 7½ ips), direct-drive, servo-controlled machines; both come in half-track or quarter-track three-head versions; both handle up to 10½-inch NAB Type B reels (the small-center-hole variety) with adapters available for NAB Type A hubs.

The B-77 offers a more modern electronics design than the A-77. The logic circuitry that controls the tape motion is entirely solid state; no relays are used. The VU meters are larger—a real boon—and peak-responding LEDs indicate the tape-overload point. The 0-VU reference corresponds to a recording level of 257 nanowebers per meter, some 3 dB higher than Ampex 0 and more in line with the capabilities of modern tape. Studer claims a headroom of 24 dB for both the recording and playback electronics in the B-77—10 dB more than that of the A-77 and well in excess of that currently available from tapes. It's unlikely that any ferric-oxide product will tax the new deck to its limits in the foreseeable future.

The transport functions of the B-77 are similar to those of the A-77. The logic circuitry that controls the tape motion is entirely solid state; no relays are used. The VU meters are larger—a real boon—and peak-responding LEDs indicate the tape-overload point. The 0-VU reference corresponds to a recording level of 257 nanowebers per meter, some 3 dB higher than Ampex 0 and more in line with the capabilities of modern tape. Studer claims a headroom of 24 dB for both the recording and playback electronics in the B-77—10 dB more than that of the A-77 and well in excess of that currently available from tapes. It's unlikely that any ferric-oxide product will tax the new deck to its limits in the foreseeable future.

Both electrically and mechanically our quarter-track B-77 acquitted itself very well in the lab tests. The speed is almost precisely correct, and the flutter is extremely low, especially at 7½ ips. Once a correction is made for the response of a quarter-track play head to the full-track Ampex test tape, the "true" playback response is within ±1 dB of flat from 50 Hz to 15 kHz at 7½ ips. At 3¾ ips, the low-frequency rise also disappears, and the response stays within ±2½ dB throughout the range of the test tape. This "fringing effect," an interaction of the play head and test tape, also explains why the response of the right track (where the head is flanked by recorded signal on both sides) appears to rise more at low frequencies than the left (edge) track.

The record/play response curves at both speeds, made with Scotch 207 tape, are notably flat in the bass range—a tribute to superior playback-head design. Note that ReVox makes no provision for "tape matching," its technically...
sound recommendation is that the user standardize on a single type and have both bias and recording EQ adjusted for it, as the test sample’s were for Scotch 207.

Erasure is superb and the channel separation very fine indeed. Total harmonic distortion is well contained at the –10 dB recording level. The signal-to-noise ratios must be interpreted in light of the superior headroom of premium open-reel tape compared to cassette tape. A typical premium open-reel tape has perhaps 12 dB of headroom above the Ampex reference level, a cassette tape 0 to 3 dB above DIN reference level. Thus, in practice, the B-77 has a total dynamic range of 62 dB, whereas that of a cassette deck exceeds its measured S/N little, if any. To take advantage of this headroom, ReVox calibrates the meters for 0-VU at a recording level 3 dB above Ampex 0—just about what the lab measured.

In our listening tests, the ReVox B-77 at 7½ ips produces virtually perfect copies of even the most demanding records. The only way we can distinguish the tape from the disc is by the dub’s slightly increased noise level, discernible only during quiet passages and at high listening levels. At 3½ ips, performance is nearly as good: The noise level is a little higher but thoroughly masked by most music. The slow-speed response is nearly as good: The noise level is a little higher but very minor ones at that—be noticed. For the ultimate in live recording, an external Dolby or DBX noise-reduction system would eliminate the last vestiges of hiss.

The B-77 is convenient to use. The meters are of reasonable size, and their ballistics are well controlled, apparently conforming to VU standards. The peak-indicating LEDs, a helpful adjunct, are designed to flash at an indicated 6 dB above the meters’ 0-VU level and mark the onset of saturation. We could hear no degradation in the program as long as the LEDs flashed only rarely.

Though the PAUSE, when released, occasionally introduces a slight burble, we found it unnoticeable in the majority of program material. The tape wind is excellent (with the Scotch tape we used) for both the normal transport speeds and the fast wind. In fact, our sample’s only foible in tape handling is a propensity for the infrared end-of-tape sensor to “see” through the white leader on the Scotch tape and shut the deck down if PLAY is released before the tape has reached the magnetically coated section.

For the serious recordist, the B-77 affords an approximation of perfection that is unavailable with any cassette deck, and the editing convenience and dynamic range of the open-reel format are virtual necessities for most live recording. Based upon the track record of the A-77, we expect that a brand-new ReVox will provide its owner many years of service.

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**ReVox Model B-77 Open-Reel Deck**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Speed accuracy</strong></td>
<td></td>
</tr>
<tr>
<td>7½ ips</td>
<td>0.16% fast at 105, 120, &amp; 127 VAC</td>
</tr>
<tr>
<td>3½ ips</td>
<td>0.06% fast at 105, 120, &amp; 127 VAC</td>
</tr>
<tr>
<td><strong>Wow and flutter (ANSI weighted)</strong></td>
<td></td>
</tr>
<tr>
<td>7½ ips</td>
<td>playback: 0.025%</td>
</tr>
<tr>
<td>3½ ips</td>
<td>record/play: 0.025%</td>
</tr>
<tr>
<td><strong>Rewind time, 7-in., 1,800-ft. reel</strong></td>
<td>88 sec.</td>
</tr>
<tr>
<td><strong>Fast-forward time, same reel</strong></td>
<td>88 sec.</td>
</tr>
<tr>
<td><strong>S/N ratio (re NAB 0 VU; CBS weighted)</strong></td>
<td></td>
</tr>
<tr>
<td>playback</td>
<td>L ch: 56 dB</td>
</tr>
<tr>
<td>record/play</td>
<td>L ch: 53 dB</td>
</tr>
<tr>
<td><strong>Erasure (400 Hz at normal level)</strong></td>
<td>75 dB</td>
</tr>
<tr>
<td><strong>Channel separation (at 400 Hz)</strong></td>
<td>54 dB</td>
</tr>
<tr>
<td>record left, play right</td>
<td>46 dB</td>
</tr>
<tr>
<td><strong>Sensitivity (re NAB 0 VU)</strong></td>
<td></td>
</tr>
<tr>
<td>line input</td>
<td>L ch: 15.6 mV</td>
</tr>
<tr>
<td>mike input (hi)</td>
<td>L ch: 1.2 mV</td>
</tr>
<tr>
<td>mike input (lo)</td>
<td>L ch: 0.1 mV</td>
</tr>
<tr>
<td><strong>Meter action (re NAB 0 VU; at 7½ ips)</strong></td>
<td></td>
</tr>
<tr>
<td>L ch:</td>
<td>3 dB low</td>
</tr>
<tr>
<td>R ch:</td>
<td>3½ dB low</td>
</tr>
<tr>
<td><strong>Maximum output (line, 0 VU)</strong></td>
<td></td>
</tr>
<tr>
<td>L ch:</td>
<td>0.58 V</td>
</tr>
<tr>
<td>R ch:</td>
<td>0.64 V</td>
</tr>
</tbody>
</table>

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![Harmonic Distortion Curves](image_url)
A "Teaching Machine" from Akai


So-called three-head (separate erase, record, and play) cassette decks are still a relatively exotic mutant of the genus—for good and sufficient reasons. Generally speaking, the use of a separate play head takes its toll in both price and performance, but it does have its advantages. In particular, the user can make instantaneous sonic comparisons between the source and the recording. This not only helps him to optimize individual recordings, but offers immense educational potential, teaching him about the medium so that he will make better recordings on any machine. The lessons are presented even more vividly when—as with the Akai GXC-750D—a large, legible, and reasonably accurate set of meters, adjustable for peak or VU readings, assists in the monitoring of source and tape.

In addition, the control panel of the GXC-750D offers a choice among 'chrome' (or ferricoberalt, etc.), ferrichrome, high-bias ferric (LH), and normal-bias ferric (LN) tape types as well as the usual features, such as memory rewind, Dolby noise reduction, and 19-kHz multiplex filter. Beyond that

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**Akai GXC-750D Cassette Deck**

- **Speed accuracy**: 0.67% slow at 105, 120, & 127 VAC
- **Wow and flutter**: playback: 0.05% record/play: 0.06%
- **Rewind time** (C-60 cassette): 55 sec.
- **Fast-forward time** (same cassette): 53 sec.
- **S/N ratio** (re DIN 0 VU, Dolby off; CBS weighting)
  - **playback**: L ch: 48 1/2 dB R ch: 48 1/2 dB
  - **record/play**: L ch: 46 1/2 dB R ch: 46 1/2 dB
- **Erasure** (333 Hz at normal level): 69 dB
- **Channel separation** (at 333 Hz)
  - **record left, play right**: 34 dB
  - **record right, play left**: 34 1/2 dB
- **Sensitivity** (re DIN 0 VU)
  - **line input**: L ch: 150 mV R ch: 148 mV
  - **mike input**: L ch: 0.58 mV R ch: 0.56 mV
- **Meter action** (re DIN 0 VU)
  - **vU mode**: L ch: 4 1/4 dB high R ch: 4 1/4 dB high
  - **peak mode**: L ch: 3 1/2 dB low R ch: 3 1/2 dB low
- **Total harmonic distortion** (at -10 VU)
  - <0.71%, 100 Hz to beyond 5 kHz
  - <1.58%, 50 Hz to beyond 5 kHz
- **Maximum output** (re DIN 0 VU)
  - L ch: 0.72 V R ch: 0.70 V
there is a 400-Hz oscillator that, together with the screwdriver-adjustable recording-calibration controls, allows the machine to be set up for minimum Dolby mistracking due to varying tape sensitivity. Separate clutched controls handle the mike and line levels, and mixing of the two is possible.

The transparent cassette well door opens smoothly at the touch of the EJECT. Upward pressure on the door panel slides it out of its retainer to allow easier (but still not easy) access to the heads when cleaning is necessary, but slipping the panel back into place calls for an acquired touch. One nice wrinkle in this and some other Akais is that slack in the tape is taken up automatically as soon as the cassette is snapped into place.

Transport functions of the deck are solenoid operated and engaged by a set of pushbuttons that are sensitive to little more than the brush of the finger. Good news about the transport is that the PAUSE causes practically no transient at all and is very useful as an editing device. But there is a price, albeit a subtle one, to be paid for this; basically, the mechanism and controls of this unit are extremely quiet—quiet enough, in fact, that in a pinch one might be tempted to run it in the same room with a live mike. That possibility vanishes as soon as the machine is switched to RECORDING; the rapid engagement that is the virtue of the PAUSE makes a considerable clatter. The interlock between the EJECT and the transport is excellent; if we press EJECT even during fast wind or recording, the cassette always emerges without loops or snags.

Laboratory evaluation of the mechanical functions shows that the record/play speed is slow by only a trivial amount and is rock steady at both voltage limits of our test. Short-term stability, as evidenced by the flutter test, is excellent. Fast winding speeds are perhaps a few seconds quicker than average.

Signal-to-noise ratios are acceptable, and erasure is for all practical purposes complete; channel separation is very good indeed. The sensitivity at the mike and line inputs is right in the normal range and should cause no matching problems.

Like so many meters in consumer equipment, those in the Akai provide a hedge against overload by reading a little over 4 dB high in the VU mode. The peak mode, due to its faster response, needs less headroom, and here the meters read almost 8 dB lower than in the VU mode. Physically, the meters are large and have calibrations from -40 to +7.

Tests of Twenty-Four C-90 Cassettes

Ampex Grand Master ferric C-90 cassette. $4.29; also available in C-60.
Ampex Plus ferric C-90 cassette. $2.49; also available in C-45, C-60, C-120.
Audio Magnetics High Performance ferric C-90 cassette. $3.49; also available in C-45, C-60, and C-120.
BASF Professional I ferric C-90 cassette. $4.79; also available in C-60.
BASF Professional II chromium dioxide C-90 cassette. $4.99; also available in C-60.
BASF Professional III ferrichrome C-90 cassette. $4.99; also available in C-60.
Columbia ferric C-90 cassette. Price not announced; also available in C-40, C-60, C-120.
Fuji FX-I "pure ferrix" ferric C-90 cassette. $6.15; also available in C-46, C-60.
Fuji FX-II Beridox (similar to ferricobalt) C-90 cassette. $6.15; also available in C-46, C-60.
Maxell UDXL-I ferric C-90 cassette. $7.20; also available in C-60.
Maxell UDXL-II ferricobalt C-90 cassette. $7.20; also available in C-60.
Memorex MRX ferric C-90 cassette. $3.90; also available in C-30, C-45, C-60, C-120.

Nakamichi EX-II ferric C-90 cassette. $7.00; also available in C-60.
Nakamichi SX ferricobalt C-90 cassette. $7.20; also available in C-60.
Realistic Supertape Gold ferric C-90 cassette. $3.49; also available in C-45, C-60, C-120.
Royal Sound Ultralinear ferric C-90 cassette. $5.00; also available in C-60.
Scotch Master I ferric C-90 cassette. $4.69; also available in C-45, C-60.
Scotch Master II ferricobalt C-90 cassette. $5.39; also available in C-45, C-60.
Scotch Master III ferrichrome C-90 cassette. $5.39; also available in C-45, C-60.
Sony Chrome chromium dioxide C-90 cassette. $4.79; also available in C-60.
Sony Ferri Chrome C-90 cassette. $5.59; also available in C-45, C-60.
Sony Hi Fidelity ferric C-90 cassette. $3.79; also available in C-46, C-60, C-120.
TDK AD ferric C-90 cassette. $3.99; also available in C-45, C-60, C-120.
TDK SA (Super Avilyn) ferricobalt C-90 cassette. $4.99; also available in C-60.
On the whole, the harmonic distortion measured on the GXC-750D is about average. Judging from both listening and the deck's meters, the Akai seems to compress peaks a bit more than we would have liked. Playback frequency response falls off perceptibly at the extremes of the spectrum. Record/play response—tested with TDK SA for Chrome, Sony Ferri Chrome for FECR, Maxell UD for LH, and Fuji FL for LN—shows a similar falloff in the bass with all four; the high end, as can be seen in the graphs, varies with tape type.

What struck us as unusual about the Akai is the degree to which its design and layout encourages one to play with it. The monitor switch allows the user to hear just what the tape is doing to the recorded signal and adjust the level for the best compromise between linearity and noise for a particular selection—virtually always necessary in the cassette medium. Adjustable Dolby calibration turns out to be a considerable plus for extracting the best performance of which the machine is capable.

This performance level is adequate, reaching its peak with ferricobalts (which are just about interchangeable with chromes on this deck) and falling off respectively with ferri-
FERRIC C-90 TAPES

As expected, the bias level plays a critical role in establishing the high-frequency performance of the tape. A variation of just a few percentage points will appreciably change the high-frequency sensitivity and the high- and low-frequency distortion. Within each group, we have arranged the tape graphs in order of increasing bias requirements. If your deck does not have provision for adjustment, you are well advised to stick with tapes whose bias requirements are within a few percentage points of the tape for which your deck is adjusted. For example, if your deck’s FERRIC switch position is set for Maxell UDXL-I, then Sony HF, Audio Magnetics High Performance, and Fuji FX-I should perform pretty much as our data indicate. As you move toward the extremes of the ferric tape group, however, the poorer the match to your deck will be and the less reliable our data may be for that deck.

Since the ferrics’ optimum bias points encompass a range of about ±10%, they can’t all be expected to perform equally well on a fixed-bias deck, and adventur- ousness of tape choice can lead to sonic oddities. If the deck has bias adjustment, you will be able to duplicate the performance we report (within the capability of the deck) by readjusting for the particular tape, and the relative bias figures will indicate the adjustment range needed in the deck if it is to accommodate the tape in question.

As a group, the ferrichromes work best with a greater bias setting than the ferrics, but there are rather large differences among them. The two chromium dioxide cassettes we tested (Sony and BASF Professional II) require more bias than do the chrome equivalents. Note that we followed standard deck practice in using the 120-microsecond EQ-switch position for the ferrics and the 70-microsecond position for all the rest—with no tuning of the recording equalization for individual tapes.

For each tape, we measured the relative sensitivity vs. frequency at a recording level 20 dB below DIN 0. The curves are plotted from 100 Hz to 20 kHz. (Below 100 Hz, response curves become irregular, due not to the tape itself, but to the play-head contour effect.) In general, the relative sensitivity curves are quite flat—within, say, ±1 dB. This is to be expected when the bias has been adjusted for best performance on each of them. Some tapes, however, have a slightly exaggerated (or depressed) response at 20 kHz. Of the ferrics, chromes, and chrome equivalents, only Columbia could not be adjusted to give equivalent 333-Hz and 10-kHz sensitivities. Ferrichromes presented a unique case. In general, their curves of relative sensitivity vs. frequency show depressed midrange response and exaggerated response at very high frequencies. These results are typical of those we have seen on many decks that use the ferric-bias/chrome-equalization combination to accommodate ferrichromes. However, we have tested decks that produce a very flat response—evidently when a special recording EQ is used—

...
Distortion and noise remain among the most important considerations. As in our past tests of cassette tapes, we established the recorded level that generates 3% harmonic distortion—but this time only at 333 Hz. This recorded level is referred to the DIN 0-dB level (250 nanowebers per meter) and expressed in decibels as the midrange headroom. When distortion reaches 3% it tends to begin rising rapidly with increased signal, so this distortion point is a generally accepted measure of maximum useful recorded level.

We also measured midband (333 Hz) harmonic distortion at typical operating levels: DIN 0 and −10 dB. Note that the meter calibrations on typical home decks generally read about +2 or +3 and −7 or −8, respectively, for these two levels.

Of the three tape categories, the ferrics differ most in their 0-dB distortion figures, which range from less than 0.5% (Scotch Master I) to greater than 6% (Columbia); the mean value works out to about 2.25%. The mean value is the same for the chrome group, but the spread of individual values is less extreme. The ferrichromes average the least midband distortion: 1.5% at this level.

These THD figures were measured with spectral analysis. At the 0-dB level, the distortion is mostly third order. At the −10 dB level, the THD is less, of course, with some tapes exhibiting mostly third harmonic, others approximately equal second and third harmonic distortion. The THD of the average ferric and ferrichrome is about 0.25% at −10 dB; for the "chrome" group it is slightly higher.

The midrange headroom also differs most on the ferric products, with Scotch Master I having the greatest safety margin (+5 1/2 dB) and Columbia the least (−2½ dB). The average ferric, chrome, or chrome equivalent exhibits a headroom of about 1½ dB at 333 Hz; the average ferrichrome offers +3 ¼ dB.

Midrange headroom does not tell the entire story, however. Tape—especially cassette tapes—vary greatly in their ability to record high-frequency signals. In past tests, we followed the quasi-standard industry procedure of determining the recorded level that produces 3% third harmonic distortion and plotting that level as a function of frequency as the "maximum recorded level curve." Above the 4- to 7-kHz region, a tape may go into saturation before 3% distortion is measured and, since the third harmonic component cannot be resolved by the playback head, the distortion appears to drop. In this region, we previously plotted the maximum level that could be recorded on the tape: its saturation point.

This procedure, however customary, is dubious on several grounds. Where the curve representing 3% third harmonic distortion meets that representing saturation level, the data can be quite inconsistent. Here, a tape may never reach 3% harmonic distortion—perhaps it peaks at 2.9%—but the recorded level that corresponds to 2.9% third harmonic may be much lower than the maximum recorded level at that frequency. Which number should be chosen? In any event, it is intellectually unsatisfactory to merge data taken by two different methods into a single curve. Finally, the maximum-recorded level portion of the curve does not indicate the nonlinearities (i.e., distortion-producing mechanisms) of the tape at high frequencies even though, by definition, nonlinearities must be present if the tape has reached saturation.

...
For this series of tests, we broke with industry custom and developed a new method to determine high-frequency headroom. We used two tones, differing in frequency by 1 kHz. With a spectrum analyzer, we measured the recorded level of each of the tones as well as the third-order intermodulation (IM) distortion products. (Since, at high recording levels, the nonlinearity of the tape is predominantly third-order, we could safely ignore lower intermodulation products.) The distortion was computed as the ratio of the sum of the squares of the IM products to that of the two desired tones. We adjusted the recording level to yield 3% IM and read the point that corresponded to this degree of nonlinearity. This gave us the data we needed to plot the maximum-output curve that appears in the graphs. The data were taken at nominal frequencies from 2 kHz (using 1.5- and 2.5-kHz signals) to 20 kHz (using 19.5 and 20.5 kHz).

On the whole, our new data indicate that cassette tapes have less usable high-frequency headroom than would have appeared had we relied on saturation measurements. We are convinced that the new technique yields much more reliable information. Where we have compared it with 3% THD measurements at the same frequencies, the agreement between the two has been very close; comparison with saturation measurements shows that the latter may document as "usable" recorded levels that generate 15% or more of audible intermodulation. We hope that the industry will take note and establish a standard IM distortion measurement for the determination of high-frequency headroom.

As a group, the ferrics have the greatest recording capability at 4 kHz—the average is 2% below DIN 0. The average chrome or chrome equivalent comes in at a little more than 5 dB below DIN 0, the average ferrichrome at about 7½ dB below. At 15 kHz, the ferrics have the greatest recording capability (about −12½ dB). The chrome group averages about −14 dB of headroom. The typical ferrichrome maximum-output curve does not fall off as precipitously at high frequencies as those for the ferric and chrome groups; at 15 kHz, the average ferrichrome can handle a recorded level of −12½ dB.

Again, all of these distortion-related figures are to some extent dependent on the bias/EQ tradeoffs of the decks on which the tapes are used. But while the values involved are not absolute, they are useful both as a guide to optimum levels for the tapes in question and as a comparison of tape capabilities.

The dynamic range of a tape is, of course, the "distance" from its maximum-recorded level "ceiling" down to its noise "floor." This image is somewhat confused by the fact that the floor is not flat, depending on the tape and on the playback equalization (70 microseconds suppresses hiss more than 120 microseconds does), a curve of tape noise can take on various rising characteristics as frequency increases. Dolby noise suppression further alters the curve because it suppresses noise by the nominal 10 dB only in the range (approximately 3 to 10 kHz) where it is most audible. That is, while it produces 10 dB of audible improvement, it does not suppress all noise by 10 dB. Therefore, we made all noise measurements with the Dolby circuit turned off.

We took our measurements using A-weighting, a practice whose reputation is on the increase because it concentrates on perceived-noise values without entailing the complexity of some (theoretically slightly more accurate) sophisticated psychoacoustically weighted systems. The A-weighted noise is expressed as a negative number in dB...
midrange S/N ratio at that frequency may be taken as 35 dB.

3% IM curve for the same tape is at -5 dB at 4 kHz, the difference between the maximum recording level (3% THD) exercised in using the Columbia tape since it has the least average. To achieve the full capability of this tape, the midband dynamic range is attributable to its extraordinary headroom numbers are a good starting point in determining how high the maximum readings of your meters should be with the tapes in question, though the numbers should always be tempered by careful aural examination of the results if you want best possible dynamic range with minimum evidence of overload.

As with averages of any kind, some individuals stand out from the crowd. Scotch Master I, a ferric, has a midrange S/N of 56 dB, almost the equivalent of the average chrome; and Scotch Master II, in the chromium group, has a midband dynamic range of 62 dB, the greatest of any tape tested. In Master I, the greater than average dynamic range is attributable to its extraordinary headroom (+5.3 dB); its noise level actually is slightly higher than average. To achieve the full capability of this tape, the record level should be raised above normal. By the same token, the greatest care to prevent overload must be exercised in using the Columbia tape since it has the least headroom of any tape in the group. The midrange headroom numbers are a good starting point in determining how high the maximum readings of your meters should be with the tapes in question, though the numbers should always be tempered by careful aural examination of the results if you want best possible dynamic range with minimum evidence of overload.

If you are recording acoustically generated sounds like folk or classical music, the midrange numbers will be your best guide; for things like synthesizer rock, whose spectral requirements are quite different, they may not be. Music with extremely high levels between 4 and 10 kHz may require chrome-bias or ferric tapes, for their high headroom curves in this range, if the sound is not to become pinched or harsh when recorded at a high enough level to make full use of the tape's midrange capability, if, instead, the demands are extreme above 10 kHz, the more gradual slope of the ferrichromes' 3% IM curves may be needed for the same reason.

Midrange sensitivity is important for Dolby tracking. Since the sensitivity curves are measured at a constant recorded level equivalent to -20 dB DIN (25 nanowebers per meter) at 333 Hz, they do not indicate the input-to-output sensitivity of one tape relative to the others. The relative sensitivity rating does: it shows the output level (or recorded level) that will result at 333 Hz with the "standard" input level needed to drive the reference Nakamichi tapes to the indicated output level. Thus if the rating is +1 dB, the tape under test will produce 1 dB more output than the Nakamichi tape will for the same input.

The relative sensitivity rating can be viewed as a scaling factor of the relative-sensitivity-vs.-frequency curves—the entire curve being raised or lowered by the indicated number of decibels. It also shows the relative difference in actual recorded level for the same meter reading; a high-sensitivity tape will have a lower recorded level for the same meter reading than a lower-sensitivity tape. If you are using a gauge of the lowest recording level (a reference which should be of the same quality as the tape under test), the relative sensitivity rating can be used to adjust the reference recording level for the same meter reading; a high-sensitivity tape will require a lower reference recording level than a lower-sensitivity tape.

The average A-weighted noise level is lowest for the ferrichrome (-57½ dB), a figure almost matched by the average in the chrome-bias group. The average ferric-tape noise level is -51½ dB. The lower noise level and higher midrange headroom of the ferrichromes produce the best midrange S/N ratios (an average of 60⅔ dB). The chrome-bias group is a close second (58⅔ dB), while the higher noise level resulting from the 120 microsecond equalization curve used with the ferrics puts them in last place on the whole (just over 53 dB).

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CHROME-BIAS C-90 TAPES

**Output stability and print-through** also were evaluated for this new set of tests. Output stability was measured at 333 Hz, 10 kHz, and 20 kHz. With the limited number of samples available, we cannot say that our impressions are universally valid, but trends did emerge. The stability of the chrome-bias group proves excellent as a whole, with Maxell UDXL-II, Nakamichi SX, TDK SA, and BASF Professional II outstanding in this regard. The 333-Hz and 10-kHz stability of Maxell UDXL-II, BASF Professional I, Nakamichi EX II, and Scotch Master I also are superb, but none of the ferric group matches the 20-kHz stability of the chromes. The three ferrichromes have the least stable output as a group, but BASF Professional III has a slight edge on the competition. In general, the stability of all the products is good; gone are the days when the output level of cassette tape wobbled badly.

When a tape has been recorded and stored for some time, a certain percentage of the signal is transferred from one layer of the tape to the next. This gives rise to a pre- or post-echo—which can become especially noticeable when the adjacent layer remains unrecorded—and constitutes a major limitation of cassettes, in our opinion. The degree of print-through depends upon the magnetic properties and physical thickness of the tape; the thin tapes used in C-90 cassettes are more subject to the problem than are those in shorter cassettes. Print-through also depends upon the frequency of the recording, the recorded level, the length of storage, and the temperature at which the tape is stored. The amount of print-through increases by approximately 5 dB for every increase of 50 degrees (F.) and for every quadrupling of storage time.

For our tests, we recorded a section of each cassette at a frequency of 600 Hz (the worst case, theoretically, for a C-90) and stored the tapes for twelve days at a temperature of 75 degrees. After recording, we had advanced the tape (in the play mode) for several hub revolutions. Just before measuring the tape, we rewound it to a spot preceding the recording and measured the pre-echo, main recording, and post-echo levels with a spectrum analyzer. The average ferric tape exhibits approximately equal amounts of pre- and post-echo (46% dB below the reference recording). Sony HF proves outstanding in its resistance to print-through, with -53 dB of pre-echo and -49 dB sensitivity tape will be recorded more deeply than will a less sensitive one.

The most important use of the relative sensitivity rating is to determine compatibility with the Dolby circuitry on decks not equipped with Dolby recording level calibration controls. The rating should be within 1 dB (preferably within ½ dB) of the tape for which your Dolby circuit has been adjusted if you are to avoid mistracking. If your deck is equipped with these controls, however, it can be set up for any tape that is comparable in other respects. Note, though, that if you recalibrate the Dolby circuit for a new tape, the meters in your deck will be recalibrated as well, and in such a deck the meters will continue to read the same for a given output level from the tape, no matter what the tape’s sensitivity rating may be.

The relative sensitivity span of the ferric tapes is about 2½ dB—enough to cause a substantial error in Dolby tracking. Of the fourteen tapes tested, however, more than half are within about ½ dB of our arbitrary standard. The chrome-equivalent tapes (but not the two chromes) are within ½ dB of the reference. The ferrichrome group, as measured against the standard of the other ferric-bias tapes, range from -½ to +¼ dB—a narrow spread.
of post-echo; Realistic Supertape Gold, Royal Sound ULC, Fuji FX-I, and TDK AD all measure better than average. The average ferrichrome exhibits more print-through than the ferrics (-41½ dB pre-echo and -44 dB post-echo); Scotch Master III has the least of this group. The chromebias group has more pre-echo (-42% dB average) than post-echo (-49 dB); Maxell UDXL-II performs best, with Nakamichi SX and TDK SA better than average. Curiously, the spread between pre- and post-echo figures is much greater among the chrome equivalents (up to 10 dB) than among the true chromes (2–3 dB). Thus, for example, while Scotch Master II and Sony Chrome have identical post-echo levels of -46 dB, the pre-echo of the chrome is -44 dB, and that of Master II is -37 dB (the poorest print-through measurement of any tape tested).

Your choice for a deck without bias adjustment and Dolby level controls should be based, first of all, on the machine’s compatibility with the tape’s bias requirement and sensitivity. If more than one tape fills that bill, look for the greatest midrange and 4-kHz signal-to-noise. If your tastes tend toward synthesizer rock, also look for the greatest 15-kHz dynamic range. A tape with good midrange and 4-kHz signal-to-noise will probably also have a low 333-Hz THD at DIN 0 and at -10 dB.

If your deck has provision for bias adjustment and for Dolby calibration, your choices widen considerably. According to the deck’s adjustable range. Choose a tape with the greatest dynamic range and the least distortion.

You may also want to zero in on a preferred tape (and standardization does promote consistency of results) by considering some physical factors. Cassette molding and packaging are improving, except in one respect: a tendency for designers to forget that the labeling liner in the Philips box doubles as a dust seal at the hinge joint. We firmly believe that dust and cassette fidelity are natural enemies, so we hate to see any backward step, however tiny, in this respect. Fortunately the general improvement in molding quality means that most boxes today have quite narrow hinge joints. Among the tested cassettes, Ampex’s and Columbia’s have both fairly wide joints and liners that fall short of covering the gap; Audio Magnetics’ has a gap and no liner at all. A few boxes still have anti-pilferage holes near the corners (which let in dust but are never, in our experience, used by stores for their intended purpose): Ampex Plus (but not Grand Master), BASF (our Professional II only), Audio Magnetics, Columbia, Realistic, and Royal Sound.

All brands except Memorex can be bought in Philips boxes, though with some minor variations—particularly from Maxell, whose tougher plastic seems the least breakable. All of the 3M cassettes also are available in the Scotch C-Box stackable housing, which has its attractions but, in our opinion, cramps labeling space. So does the Memorex box design, which remains essentially the same for the new MRX tape.

All the premounted cassette labels except Royal Sound’s and Columbia’s (the latter providing stick-on “relabels”) have white spaces for write-ins so that erasures can be made neatly, though their size varies from tiny (Ampex Plus) to generous (Fuji). The stick-on labels provided instead with several brands—Ampex Grand Master plus those from Audio Magnetics, Maxell, and 3M—look good but tend to be on the small side (particularly Grand Master’s). If you prefer file-folder stick-on labels, the current TDK, 3M, Fuji, Memorex, BASF, Columbia, and Royal Sound shells accept them particularly well.
Only one man has conducted more than 300 Columbia Masterworks.

Columbia Masterworks salutes Leonard Bernstein on the occasion of his 60th birthday.

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Leonard Bernstein at Sixty

The Many Careers, the Singular Man

Probably because he still projects the same Boy Wonder enthusiasm he did in his twenties, Leonard Bernstein's sixtieth birthday this month is as difficult for me to accept as my fortieth was. Yet it is just as difficult to remember a time when there was no Bernstein at our musical side, prodding us—gently or otherwise—with his baton, piano, and Boston accent, urging us to join him in discovering new music or new things about old music.

For more than half of his sixty years he has been omnipresent in concert, on Broadway, on television, and on recordings as conductor, composer, pianist, author, teacher, and, on more than one occasion, conscience. He is part sophisticate, part kid, part businessman, part traditionalist, part explorer. He is loved, put down, honored, and distrusted. His gifts are diverse enough to have made exceptional careers for three or four men, and his personality is as outsized as his talent. Say what you will about the Bernstein years, one thing is certain: They have not been dull.

Of the many musicians who make up Leonard Bernstein, the oldest are the pianist and composer. It was the conductor, however, who started all of them on their way—and with a single concert. In 1943, when this took place, it was astonishing that such a thing should happen to an American. Apart from Howard Barlow at CBS, there was no American conductor who could be taken seriously. Strike one. And a conductor of any nationality in his twenties was unheard of. Strike two.

Strike three was that this twenty-five-year-old conductor was named Leonard Bernstein. The name was clearly impossible, or so his mentor Serge Koussevitzky thought. A year earlier the colorful Russian maestro of the Boston Symphony had asked his protégé to dinner to discuss "a grave matter." He talked of anti-Semitism, which Bernstein knew firsthand, having been beaten up by Irish kids in Boston's public schools. "It is very difficult," Koussevitzky said, "for a Jewish boy in this world. A name like Leonard Bernstein would never be put on a poster outside Carnegie Hall."

Koussevitzky had picked out a new name: Leonard S. Burns (S for Bernstein's father, Samuel). After losing a night's sleep contemplating the change, Bernstein decided he would make it either with his own name or not at all.*

A short time later, he had a phone call from Arthur Rodzinski, then the new music director of the New York Philharmonic, asking for a meeting. It took place at Rodzinski's Connecticut farm, the host arriving on a motorcycle wearing a giant beekeeper's hat. The two sat down against a haystack, and Rodzinski said with deadly seriousness that he had asked God who his assistant at the Philharmonic should be and that God had told him to take Leonard Bernstein. (God mercifully had made no mention of Leonard S. Burns.)

*Bernstein did, at one time, use the name Lenny Amber as his pseudonym when he was making piano arrangements of pop songs for a music publisher. Bernstein is the German word for "amber." And incidentally, the firm he has set up to handle his business affairs is called Amberson Productions.
On Performance

"Mediocrity is the bane of my existence. I would rather hear a really bad performance by somebody and be able to walk out than listen to a mediocre performance that's good enough to warrant staying in the hall. . . . "

"When a performance by me is over, I can usually tell if it's been a first-class performance as opposed to just an all-right performance by 1) the degree to which I've been lost in it and 2) the sense of having composed the piece as I was conducting it. That's a very important test for me. If the whole piece seems made up on the spot as though I just thought of it, if I've just created a marvelous piece by Beethoven or Haydn or Mahler or whoever it is, then I know it must have been a wonderful performance."

Bernstein was signed for $125 a week by the Philharmonic and to a personal contract as well with Arthur Judson, then manager of the orchestra. In September he took a room in Carnegie Hall. The Day soon came: November 14, 1943, a Sunday. That afternoon was the Philharmonic's weekly national broadcast, reaching millions of listeners across the country. The guest conductor, Bruno Walter, was in bed with the flu. At nine o'clock in the morning, associate manager Bruno Zirato telephoned the assistant conductor, who was dead to the world, with a tremendous hangover. The evening before, he had played a recital in Town Hall with Jennie Tourel, which had included the New York premiere of his song cycle I Hate Music. A party afterward at Tourel's had continued until dawn, with Bernstein at the piano, drinking and playing blues.

"You have to conduct today at three o'clock," Zirato told him. No rehearsal. Nothing. "Walter says he will spend an hour with you, pointing out problems in the scores." The offer was like a life preserver in the middle of the ocean, for the program was a fiercely difficult one, and Bernstein would be conducting all of it for the first time: Schumann's Manfred Overture, Strauss's Don Quixote, a new work by Miklós Rózsa, and the Prelude to Act I of Die Meistersinger.

A wave of groans reached him in the wings when it was announced that Walter was ill and that his place was being taken by a young American making his Philharmonic debut. He claims he remembers nothing from his entrance until his exit except the tricky downbeat to Manfred and the orchestra coming in "like angels." If this is true, Bernstein is the only one who blanked out. The next day he was on the front page of the New York Times and on the lips of musical America.

Bernstein already had an engagement set with the Pittsburgh Symphony to premiere his Jeremiah Symphony, and after his sensational Philharmonic appearance offers came in for concerts in Montreal, Detroit, and Cincinnati. On top of this, every conductor that season at the Philharmonic, including Rodzinski, got sick—something that had never happened before. Not even Judson, whose memory was like an elephant's, could recall a conductor canceling a Philharmonic date.

As Bernstein became the rage, Rodzinski became subject to a jealousy of his assistant's success...
that eventually approached the pathological. He tried to discredit the younger man and once even attacked him physically. Judson privately suggested to Bernstein that he get away for a while and accept some of his guest offers. When he returned, Rodzinski had calmed down, but soon the old conflicts returned. Bernstein left the orchestra before the season was over.

Bernstein the conductor took a breather to let the composer catch up and in quick succession came the ballet *Fancy Free* and his first Broadway musical, *On the Town* (both 1944), conquering new worlds and garnering new laurels. In 1945 he was given his own orchestra, the New York Symphony at City Center, and soon he was off to Europe. First came Prague, then Paris and London, and finally Israel, where he conducted concerts in spots that the day before had been battlegrounds.

During his three years with the Symphony, he cut his teeth on repertoire and developed his conducting skills. He performed music the Philharmonic didn’t—premieres, music by Bartók, Stravinsky’s *Oedipus Rex*, excerpts from Berg’s *Wozzeck*—along with Brahms, Beethoven, and the rest, a lot of which he was doing for the first time in his career.

It set a pattern, for at sixty Bernstein is still learning in public, still cutting teeth, still enlarging his repertoire. He is fond of saying his repertoire “is music—all of it, whatever the style.” This is the result of not only his immense musical curiosity, but his restlessness as well. He could not be happy studying and restudying the Top 100, as Toscanini or Walter before him. They were part of an age of specialists that is gone forever, an age in which an artist seasoned slowly and with restraint. We may or may not be poorer for it, but there is no mistaking that the times, as well as his multiple talents, shaped and diffused Bernstein.

As a conductor, he came full circle in 1958, when he was appointed music director of the Philharmonic after sharing the orchestra for a season with Dimitri Mitropoulos, the man who first urged Bernstein to take up conducting. He found himself with an unhappy band of men whose ensemble playing had deteriorated. He brought back a sense of adventure to their concerts and greatly improved the orchestra’s sound and its economic standing by extending the season and making many more recordings, television appearances, and world tours. It was an exciting period the Philharmonic has never been able to recapture.

During the next decade, before Bernstein stepped down to become the orchestra’s laureate conductor, he continued to dig, explore, stimulate, and premiere. He liked to plan seasons around themes: There were persuasive investigations of the concerto, the symphony in the twentieth century, music for all forms of theater, and—perhaps most memorable of all—a re-evaluation of Gustav Mahler occasioned by the 100th anniversary of his birth in 1960. It is no exaggeration to say that Bernstein’s playing and recording of, and proselytizing for, Mahler’s nine symphonies did much to fulfill

**On Critics**

“Last night we had the New York premiere of my newest work, Songfest, and this morning I came to breakfast and found my son reading the *Times* and surrounded by the darkest of clouds, ... and he said, ‘Don’t read it.’ So I haven’t read it. And that’s, I think, the first time in my life I have not read a review that was lying there on the table. I usually do, because I’m interested in reactions even when they’re by stupid people. ...”

“I’m used to a great deal of critical hailstones, and by this time, at the ripe old age of whatever I am, it shouldn’t bother me any more, and I suppose it doesn’t. On the other hand, it would be pleasant if people understood what it was I was trying to do. Now, when I say ‘people,’ I’m making a very definite distinction between critics and people, because I write my music for people and certainly not for critics.”
that composer's prophesy, "My time will come" [see Bernstein's article on Mahler, HF, September 1967].

In the realm of the hard-core classics, Bernstein's achievements were more checkered, and his performances of the Bach-through-Brahms repertoire—excepting, perhaps, only his Haydn—never found the widespread acceptance his performances of the late Romantics and moderns did. But if the performances I heard of Beethoven's Second and Third Symphonies—taped by Deutsche Grammophon for Bernstein's forthcoming cycle of the symphonies with the Vienna Philharmonic—are any indication, a re-examination may be in order. There is a unity of conductor and score, a freedom, and an exultation here that can stand up to any current competition and a good deal from the past.

Bernstein will probably never quite outlive, or live down, charges that he is a showoff on the podium, whose acrobatic antics get in the way of the music. Actually, his exuberance is the result of a deep involvement with the music. If he can be faulted, it is in being too anxious to make a point, to share what he has found in a piece. It is at such moments that yet another Bernstein, the teacher, gets the upper hand.

It was prophetic that his debut as a conductor should have involved an electronic medium, for a decade later Bernstein solidified his successes in concert and on Broadway with a series of TV appearances that changed the way America thought and talked about music. Even today, the impact on one's memory of that first Omnibus script in 1954 remains: the opening page of the Beethoven Fifth Symphony painted giant-size in white on a black floor, with the musicians standing on the lines of their parts. Bernstein then contrasted the various revisions the symphony underwent, and as he talked and as the instrumentation changed from version to version, players came onto and left the "page." It was unforgettable, and it brought into the open Bernstein's quasi-rabbinical instincts and his need and gift for verbalizing about music.

In television the teacher found a paradise of a classroom, and other Omnibus programs followed: explorations into the world of jazz, the art of conducting, musical comedy, Bach, and what makes opera grand. Then there were the Young People's Concerts of the Philharmonic. Who but Bernstein could speak to the nation for an hour on Charles Ives and receive an Emmy for his efforts? And finally came the groundbreaking, free-wheeling Norton Lectures at Harvard, the importance of which has still not been fully gauged.

Meanwhile, Bernstein the composer was growing. For Broadway there were Wonderful Town (1953), Candide (1956), and West Side Story (1957). In the concert hall there have been the premieres of the Second and Third Symphonies, the Sere-

### On Art and Politics

"The main function of the artist... is to preserve the history of mankind as if it were in a time capsule. He can, of course, have great influences on the political world, and by 'political world' I mean the whole world, because the whole world is political. But he can't do it necessarily through his art. That is where most people make the mistake. In other words, whether I write F sharp or B flat is not going to change a thing in the Cairo talks or at Geneva.

"Artists, however, are very sensitive to what goes on around them, and they are the first people to strike for freedom, because freedom is essential in artistic expression. Therefore, the artist is the first one to go out in the streets and march, the first one to sign a manifesto and to organize a protest. The artist is the first one to say, 'I am a dissenter.' And sometimes this leads the artist to dissent artistically and to make him go further than he would ordinarily, just to exercise his rebelliousness and to make the point that he is a free man."
nade for Violin and Orchestra, and now his latest work, Songfest. In a class by itself is the moving theater piece Mass, written to inaugurate Washington, D.C.'s Kennedy Center for the Performing Arts. Each new score amounted to a stretching of his imagination and musical horizons until he had reached a point where it was clear to anyone willing to listen with an open mind and heart that he had become a major voice in America's music.

Yet, of all the Bernsteins, the composer has proven the most controversial and difficult to pin down. His popular successes and the resulting show-biz image they created made him suspect in segments of the music community, and so did his deep commitment to tonality (the raison d'être of the Harvard lectures) and his willingness to use any musical means to convey what he had to say. For Bernstein’s music ranges widely and freely from pop and rock to unabashed lyricism and complex dissonance. Whatever you think about it, one fact cannot be denied: It hits hard and communicates with elemental honesty and passion.

It has been said the greatest impetus to Bernstein’s art is a religious one, that he expresses the twentieth-century dilemma of the nonsupernatural person not knowing what to believe, yet needing desperately to believe something. A larger truth is that everything he has written, with the possible exception of the student Clarinet Sonata, has been music overtly for the theater or suggestively theatrical. Even his symphonies have extramusical elements—they have texts or are founded on texts. Sometimes he writes the words himself, as in the Third (Kaddish) Symphony; sometimes they are Biblical, as in Jeremiah. Often they are by poets whom he knows or whose work he loves, such as W. H. Auden (The Age of Anxiety, his Second Symphony) or Whitman, Stein, Millay, Poe, and others he drew upon for Songfest. Whatever the source, it seems to take a verbal idea or a literary image to set his imagination in motion.

To complicate matters, there are two Bernsteins who compose. There is Lenny, the secular Bernstein of the New York music, the early ballets, the musicals, On the Waterfront. Then there is Leonard, the sacred Bernstein of the Israeli music, the First and Third Symphonies, the Chichester Psalms, Dybbuk. The two have often met and mingled but have come together as equals in only one piece so far—Mass—and it is not by accident that this is the most compelling and cathartic of Bernstein’s scores.

This dichotomy has bothered many, particularly critics who are uncomfortable around music they cannot put into a niche. For them, Bernstein will always be the square peg. They tag him "eclectic," using the word pejoratively, but Bernstein wears it like a badge of honor. What his detractors have overlooked are the astonishing sense of continuity that stretches from Jeremiah to Songfest and the individual voice that has personalized it all, no matter where it was derived from.

Besides, at this stage in music history, and especially for the American composer, eclecticism is surely a viable aesthetic style, for it mirrors a pluralistic country, a land of immigrants who forged what we term “American.” The ears of composers, like those of all of us, are filled with the music of four centuries. We live in a time when our radios, phonographs, and concert halls pour out everything from Machaut to Moog. In Bernstein’s case, his roots extend everywhere: jazz, Hebrew liturgical music, show tunes, Bach and Beethoven, Mahler and Berg. Yet he always strikes that Bernsteinian note, his and his alone.

At the moment, he is obsessed with opera. The obsession is nothing new: it is only more persistent.

On Composing

"I sit for long nights all by myself and don’t have a thought in my head. I’m dry. I’m blocked, or so it seems. I sit at the piano and just improvise—strum some chords or try a sequence of notes. And then, suddenly, I find one that hits, that suggests something else. The whole point of composing, you see, is only when they progress to another chord or note that you have meaning.

"The mind, where all this creativity takes place, is an immensely complicated circuitry of electronic threads, all of which are connected at a certain point and are informational. But every once in a while, there is something like a short circuit; two of them will cross, touch, and set off something called an idea.

"This is the most exciting moment that can happen in an artist’s life. And every time it happens ... I say ‘Gratias, agimus tibi.’ I am grateful for that gift, for those moments, just as I can be terribly depressed by the moments in between when nothing happens. But ... eventually those two strands will come together. a spark will fly, and I’ll be off, sailing, my ego gone. I won’t know my name. I won’t know what time it is. Then, I’m a composer.”
On Tonality

"Kaddish, my third symphony, contains a great deal of highly complex, carefully worked out twelve-tone music according to the Schoenbergian system. When it was first played in Boston, a whole group of young composers, who were at the time considering themselves very avant-garde and who had gotten wind of the fact that I had finally written a twelve-tone piece, came to the rehearsals in a body—Arthur Berger, Harold Shapiro, Leon Kirchner, the Harvard group, the Brandeis group. They were all terribly excited until about the midpoint of the symphony at the second Kaddish, which is sung by a soprano and which is a lullaby and completely tonal. They all threw up their hands in despair and said, 'Oh, well, there it goes; that's the end of that piece.' And they didn't come to any more rehearsals. It was that cut-and-dried, and that simpleminded. Of course, they didn't understand at all that one of the main points of the piece is that the agony expressed with the twelve-tone music has to give way—this is part of the form of the piece—to tonality and diatonicism, so that what triumphs in the end, the affirmation of faith, is tonal."

now that he is sixty. Apart from the one-act Trouble in Tahiti, written in 1952, and Mass, Bernstein's attempts at opera have been stillborn. One of the stumbling blocks has been the conviction that native opera would develop out of Broadway from the direction he pointed in West Side Story. But rather than follow his lead, Broadway (with certain exceptions, like the work of Stephen Sondheim) retrogressed to a commercial, money-making, review-currying enclave.

Bernstein has finally decided to stop experimenting with the musical and address himself instead to the opera house. The project at hand is a setting of Vladimir Nabokov's Lolita. He has said he wants it to be in an "American" language, set to a kind of music that doesn't sound phony or laughably operatic, but natural. It is a challenge that involves a large dose of courage, a quality Bernstein has never lacked either on or off stage.

He has been both damned and admired for being outspoken on sensitive issues, for taking sides for civil liberties, for marching in demonstrations. Perhaps his most courageous act of all was his defense of tonality during the decades when it was unfashionable to do so, when everybody from Stravinsky down was writing serial music. Today, many composers who spent those decades in the avant-garde and came to a dead end are rallying to the tonal cause. By staying true to his ears and beliefs, Bernstein now finds himself—to his amazement and gratification—at the very center of American compositional life. That is one landmark his sixtieth birthday represents for all concerned with this country's music.
Happy Birthday Maestro

"the mark of quality"
How to Make Convincing Stereo Recordings

by Ronald J. Wickersham and Edward M. Long

In our October 1977 issue, under the heading "Art Weds Technology," Harold A. Rodgers reviewed a mixed bag of the new "superdiscs," among them some impressive offerings from Reference Recordings made by the proprietary Pressure Recording Process. While we knew little about PRP at the time, we found—and continue to find—that it consistently results not only in fine sound as such, but in fine stereo imaging as well. We are delighted, therefore, to have this opportunity of affording our readers an inside look at the technique—for their own, noncommercial use—written by its developers.

Engineer Ronald J. Wickersham of Alembic, Inc., and acoustics consultant Edward M. Long have established the PRP trademarks and, at this writing, are pursuing patent proceedings on behalf of the process. They describe its fundamentals not just in the usual "how-to" form, but also in terms of "how not to," because the first step to understanding and applying their approach requires that the current accretion of expedients be cleared away.

While the information presented here will enable the amateur to try the PRP technique, you will see that best results presuppose individual experimentation with both the placement and the equalization of the microphones. In an article such as this it obviously would be impossible to give equalization data on a model-by-model basis. Some mikes, however, have been examined in detail by the authors, who offer to share their findings with readers willing to send $5.00 (to cover printing and mailing) to E. M. Long Associates, P.O. Box 2727, Oakland, Calif. 94602.—The Editors.

When you listen to a naturally occurring sound you are able to determine various things about its source and the surrounding environment by the way in which they interact. People can be recognized by the characteristics of their voices whether they are speaking in a small room, a large room, or out of doors, but the size of a room and the proximity of the speaker also can be judged. Differences in both amplitude and time of arrival between the direct sound and the sound reflected from the floor, ceiling, and walls of a room are involved in these determinations.

If you walk around a room while a person is speaking to you from a fixed position, he does not seem to move as you do. You would be sure of this even with your eyes closed, because your ears are continuously sampling amplitude and time differences between the direct and reflected sound, and your brain extracts information from these clues as well as from differences in amplitude and in time of arrival at each of your cars.

You may have noticed that the situation is often different when you listen to sounds reproduced in stereo. Has it ever seemed that, when you change your listening position in relation to your two loudspeakers by moving left or right, the soloists tend to move in the same direction? Why don't they stay put?

Part of the answer lies in the fact that time clues have been omitted. The soloist's portion of the signal in both channels is identical in every respect except amplitude. In fact, if the aim is to center the soloist between the loudspeakers, even the amplitudes will be identical: a mono recording, played through two loudspeakers. Thus it is apparent that amplitude panning—the technique of locating a monophonic source between a pair of playback speakers by apportioning its amplitude between the two channels—works only for a single, fixed listening position. In some cases, the reproduced sources seem to shift position with movements of the listener's head, a condition that is both unnatural and disconcerting. It seems reasonable, then, to posit that differences in time of arrival as well as in amplitude must be considered in any stereo recording process that sets realism as its goal.

Most modern recordings have concentrated on capturing the sonic details of musical performances. This is generally accomplished, at the expense of spatial relationships, by placing the microphones relatively close to the performers. This method might better be called "distributed mono" than stereo, since the locations of the performers in the playback sound image are achieved through amplitude panning, which does not take into account the fact that sounds occurring simultaneously in instruments at different distances from a listener in the original environment reach his ears at different times. By suppressing these time differences, a recording made this way squeezes all the performers into a two-dimensional surface that stretches between the left and right loudspeakers; the sense of depth is lost. Adding stereo reverberation can ameliorate this effect to a degree and give some sense of a space in which the music occurs, but realism remains elusive.

It seems plausible to suppose that failure to reproduce exact time differences in quadraphonic systems—especially the matrix variety—may account for the lack of enthusiasm for them by listeners, who cannot easily relate a quadraphonic
listening experience to the way things really sound. The possibility exists that a rational system of time-difference information, as it relates to loudspeaker playback, might be included in a quadraphonic matrix scheme to achieve a realistic sound field. But let us concentrate on the problems of making a realistic recording in two channels.

Many early stereo recordings were made with simple microphone arrangements and no amplitude panning. This gave a good sense of spatiality, but the individual instrumental detail was not as good as that achieved by close microphone placement. For popular recordings now, each instrument usually has at least one microphone close by to pick up its sound. (There normally is a minimum of four to five microphones assigned to a drum set to pick up the sound of its various components.) Classical recordings usually do not employ a separate microphone for each instrument, but groups of microphones are generally assigned to the various sections of an orchestra—strings, woodwinds, brass, percussion, etc. Soloists ordinarily are given individual microphones, which are then (again) added to the stereo mix by means of amplitude panning.

Mike Techniques

At this point, it would be a good idea to take a close look at the possibilities for deploying microphones. Three basic methods exist: close miking, in which a mike is placed within a foot or so of each performer; coincidence miking, in which single mikes are used for each channel and are at nearly the same point in space, farther away from the performers; and spaced miking, where once again a single pair of mikes is used, located back from the performers and often about 12 feet apart. Each of these arrangements interacts with the placement of the playback speakers in a different way.

Assuming a typical listening setup (Fig. 1) with the speakers 8 feet apart and a preferred listening position 8 feet back from the plane of the speakers and about 9 feet from each of them, a sound panned to the center of the stereo image will reach the listener with equal amplitudes and delays from both channels. If the listener now moves directly to the right, to a point 8 feet from the right speaker and 11.3 feet from the left, the sound from the left speaker arrives about 3.3 milliseconds later and 3 dB lower in level than it does at the right mike. The stereo channels therefore contain time as well as amplitude differences.

Fig. 1—A typical loudspeaker setup, with Position 1 the preferred listening location. Distances are in feet; those marked "(ms)" are paths along which sound travels. (The speed of sound is about 1 foot per millisecond.) Sound panned to the center of the stereo image reaches Position 1 with equal delays and levels from both channels. At Position 2, sound from the left channel arrives later and more weakly, displacing the image to the right.

Fig. 2—An example of spaced miking, with distances and travel times for sound indicated as in Fig. 1. Sound from the mid-left source reaches the left-channel mike sooner and at a higher level than it does the right mike. The stereo channels therefore contain time as well as amplitude differences.

The mikes of a spaced pair are at different distances from any but a precisely centered sound source. Thus sound from the mid-left source in Fig. 2 arrives at the left mike 4.6 milliseconds earlier and 3.8 dB higher in level than it does at the right mike. These differences are preserved in playback when the listener is in the preferred location. When he moves to the right, a significant part of the difference in amplitude disappears, but enough temporal difference is retained so that the sound from the left speaker reaches the listener first. With this technique, the mikes can be placed for a good balance between direct and reverberant sound, but it too offers less detail than close miking.

Distance and Reverberation

When a mike is placed at some distance from a source (Fig. 3), sound travels to it along the most direct path. But the sound also reaches it along a different path after reflecting off room surfaces; because it travels farther, it is weaker (the acoustic power received by a mike is inversely propor-
Fig. 3—A mike placed at a moderate distance from the source receives a direct wave and a wave reflected from the floor. Because of the longer path, the reflected sound arrives 3.3 milliseconds late and only 3 dB lower in level, interfering with the direct sound and creating a series of peaks and nulls in the response. In this example, nulls occur at 150 Hz and its multiples: 300 Hz, 450 Hz, etc.

Fig. 4—Raising the mike above the position in Fig. 2 increases the time delay to 7.8 milliseconds but changes the level of the reflection by only 1/4 dB. The first null is now at 68 Hz, but the roughness caused by the interference is partially masked, since the mike “hears” more ambient sound. Balance and character of instruments may be altered, as their upward and their forward radiation differ.

Fig. 5—Close-mike setup overcomes floor reflection. Time delay is still about 7 milliseconds, but the reflection is 18 dB weaker than the direct sound and is swamped out. The sound, however, lacks reverberation.

stereo location problems we pointed out earlier. Another anomaly can occur when reverberation is added to the otherwise very dry recording characteristic of close miking. Sometimes ambience mikes 20 to 30 feet away from the sources are used to pick up and add reverberation, but they pick up direct sound as well. When the signals from the ambience mikes are added to those from the close mikes and levels are adjusted for realistic effect, the direct sound will appear twice in succession in the composite signal, followed by the reverberation (Fig. 6B). This effect is unpleasant and, even when it occurs naturally, is considered normally a sign of poor room acoustics.

The reason usually given for not using a distant mike technique—coincidence or spaced miking—is that, because of the physical size of microphone diaphragms in relation to the varying wavelengths of the sound, every mike used for recording exhibits a different response for direct sounds than for random-incidence sounds. Very tiny instrumentation microphones do not present this difficulty, but they are too noisy for recording music. A microphone with a flat response for direct sound will roll off for sound approaching from random directions. Since the reverberation is just this sort of sound, it will be rolled off with respect to the direct sound.

It has been argued that, if the natural rever-
ations caused by the total sound field, including these problems by sampling the pressure variation. Our Pressure Recording Process solves both of these problems by combining the direct sound with the reverberant sound. The total sound can then seem to be exactly the same way as the direct sound waves at the boundary, such as the floor. The sound waves making up the reverberant sound field react in exactly the same way as the direct sound waves at this boundary. Since the microphone can be made to have a flat response to uniform pressure vs. frequency, it will combine the direct sound with the reverberation exactly as they are present at the boundary and without frequency discrimination. And with the microphone located at the boundary, reflections can cause no problem.

All that remains is to determine where to place the mikes so that they capture a good balance between direct and reverberant sound and avoid possible comb-filter effects. The latter problem is serious only for recordings that will be played in mono—perhaps for broadcast—by combining both channels. Concern for mono compatibility is one of the chief reasons for the mediocre stereo quality of most recordings. An interesting property of a well-made record is similarity of tonal balance between the two channels. Most of the stereo effect comes from differences in time, rather than amplitude. The tonal balance is so close, in fact, that either channel alone could be satisfactory as mono.

Of course, it is not necessarily true that everything you might like to record will lend itself to PRP, but the method works well for anything that can be heard in its totality by a listener present at the recording site. A piano played in your living room, a school band, a parade, sounds of nature, etc., can be recorded so that the loudspeaker playback will have an uncanny sense of realism. And some listeners hearing PRP recordings over headphones have asked if they were made especially for this mode of playback. The time-difference information preserved via this process is what makes such recordings sound so natural.

In your experiments with PRP, start by placing two omnidirectional condenser or dynamic mikes on the floor some distance from the sound sources as shown in Fig. 2. (Most of the mikes supplied with cassette recorders are omnidirectional dynamics.) Make sure that the mike diaphragms are as close to the floor as possible. Most omnidirectional mikes are not designed to give a truly flat pressure-vs.-frequency response, but, depending upon the design, they can be excellent for all but the highest frequencies. And most mikes can be corrected electrically for extended flat response with the Pressure Recording Process. The slope of the needed equalization is gentle, adding 3 dB per octave as frequency increases above about 1 or 1.5 kHz, for mikes 1 to ¼ inch in diameter, respectively. A reasonable approximation of the required boost can be produced by an ordinary treble control.

If, when monitoring the setup over a closely spaced pair of speakers, as recommended, you hear some strange effects as you move your head back and forth between the speakers, try shifting the mikes by as little as 6 inches relative to the source that seems to exhibit this strange phasing, or comb-filter behavior. Mike placement is very important. It is much like focusing a camera.

The most obvious effect of using PRP is freedom from coloration that is often ascribed to the room but really caused by the boundary cancellations and additions. The use of spaced mikes means that both time and amplitude information relating the individual sound sources and the surrounding environment can be recorded in a manner that is complementary to the playback speaker geometry. Although the Pressure Recording Process is proprietary, its use by amateurs for noncommercial recordings is not only authorized, but encouraged.
Backstage novel. Brown Meggs, who left his position as chief operating officer of Capitol-Angel to become an author, has written his long-awaited novel about the classical record business. (His first book after leaving the record industry was a murder mystery; we didn’t see the second.) *Aria* (published by Atheneum, $10.95) is the story of how Harry Chapin, chief operating officer of the Los Angeles-based Melos-Doria record company, the classical record division of an American entertainment conglomerate and the U.S. branch of an international classical record "consortium" (and make of those names and that organizational setup what you will), prepares a recording of Verdi’s *Otello*.

How much of *Aria* is based on Meggs’s own experience only he knows for sure, but throughout the novel we see Harry in his dealings with artists, managers, technicians, lawyers, other executives and employees, and the press. We watch as he negotiates with everybody from his own unmusical board chairman to an aging superstar soprano who has been delaying her contracted-for *Desdemona* for a decade while her voice deteriorates. Although an inordinate amount of Harry’s business life takes place in bed (he makes love to almost every female in the book except his wife) and/or with booze (his average daily ration is two bottles of wine plus a half-dozen aperitifs), Meggs does manage to convey a great deal of information about the musical, financial, and corporate arrangements that surround the making of classical records these days.

The climax of the book, of course, is the *Otello* sessions themselves, in Rome. And what a cast! *Otello* is not the only title role but has also been slated for the role of the husband of the mistress of the lover of the wife of —. Perhaps a sequel is in the offing? *Duet*? or better yet, *Couplets*?

**Bernstein’s Beethoven.** Leonard Bernstein’s massive Beethoven project for DG is now well under way. Indeed the two largest works are already on tape: *Fidelio*, which was also filmed, was done in Vienna with the Philharmonic and the State Opera Chorus; the *Missa Solemnis* was done in Amsterdam with the Concertgebouw and the Hilversum Radio Chorus. *Fidelio* has Gundula Janowitz in the title role, with Rene Kollo as Florestan, Hans Sotin as Pizarro, Manfred Jungwirth as Rocco, Lucia Popp as Marzelline, and Adolf Dallapozza as Jaquin. Soloists for the *Missa* are Edda Moser, Hanna Schwarz, Kollo, and Kurt Moll.

Bernstein’s new symphony cycle, to be based on live performances with the Vienna Philharmonic, began with No. 5, followed by Nos. 2 and 3. Joining Bernstein in the piano concertos, also with the Vienna Philharmonic, Daniel Barenboim will record his second cycle as soloist (the first was with Otto Klemperer for EMI in the late Sixties); most recently, of course, he conducted Arthur Rubinstein’s third *beethoven* concerto cycle for RCA.

**Piano rolls.** In 1966 Argo released three discs recorded from Ampico piano rolls, under the title "The Golden Age of Piano Virtuosi," and in the December issue our resident piano-roll skeptic Harris Goldsmith judged the result "not only historically valid, but artistically enjoyable. These discs awaken a bygone era with startling vividness. There are few of those tell-tale signs that one usually identifies as evidence of the mechanism of the piano player."

Now, a dozen years later, Decca/London has returned to piano rolls, this time on its Oiseau-Lyre label — producing a dozen records in five days of concentrated work in London’s Kingsway Hall. Decca/London engineer Norman Evans had adapted a nine-foot Russian Estonia piano to take Ampico rolls, made by such legendary performers as Sergei Rachmaninoff, Josef Lhevinne, Leopold Godowsky, Josef Hofmann, and Benno Moiseiwitsch.

**Goode’s Brahms.** In select circles pianist Richard Goode has long been known as one of the most serious and searching musicians around, but in recent years he has devoted much of his time to chamber music. Now he has left his position as one of the two resident pianists of the Chamber Music Society of Lincoln Center in order to pursue his solo career more actively, and the first result is a disc of late Brahms piano works for Desmar. (Goode’s first Desmar recording was the remarkable Lieder recital with Benita Valente that David Hamilton greeted so enthusiastically in April."

**Dallas déjà vu.** Thirty years ago the Dallas Symphony Orchestra made its first record: The company was RCA Victor, the conductor was Antal Doráti, and the work—in its first recording since the composer’s own—was Prokofiev’s Third Piano Concerto with William Kapell as soloist. In April, Dallas returned to the RCA label—with the Prokofiev Third this time around, the performance features the orchestra’s new music director, Eduardo Mata, and pianist Tedd Joselson, whose recording debut four years ago, with Eugene Ormandy and the Philadelphia Orchestra, was Prokofiev’s Second and who is in the process of recording all his piano sonatas. The Third Concerto is coupled with Ravel’s G major Piano Concerto. In addition, Mata and Dallas have completed a Copland L.P., including *Appalachian Spring*, *Rodeo*, and *El Salón México*. Both discs are slated for fall issue.

**Kastlemusick.** Vol. 1 of the 1978 Kastlemusick Directory for Collectors of Recordings (successor to the 1977 directory described in "News and Views," October 1977), containing a master listing of sources for records and tapes of all sorts plus a listing of publications in the field, is available from Kastlemusick, Inc., 901 Washington St., Wilmington, Del. 19801. The $12.50 price covers both the fifty-plus-page Vol. 1 and Vol. 2 (scheduled for August publication), which will include listings of societies and private collectors. For active collectors, editor Robert A. Hill also publishes the Kastlemusick Monthly Bulletin, which costs $9.00 for a year.
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The Stasevich oratorio arrangement of Prokofiev's last film score makes a powerful impact in Riccardo Muti's new Angel recording.

Conductor Riccardo Muti (above) and narrator Boris Morgunov

Prokofiev's Terribly Imposing Ivan

by Royal S. Brown

One of the most highly acclaimed concerts in New York this past season was Riccardo Muti's performance with the Philadelphia Orchestra of the oratorio based on Prokofiev's last film score, composed between 1942 and 1945 for Sergei Eisenstein's last film, the two-part Ivan the Terrible. The tense dynamism of Muti's vision of the score is preserved in Angel's new recording, even though the orchestra, chorus, and vocal soloists are different.

We are fortunate to have access to the music at all. The Soviets have lagged far behind other countries in paying attention to any film scores not later arranged into concert suites by the composer. It remains a mystery why Prokofiev did not so rework Ivan the Terrible, which rises in quality well above Lt. Kije and even Alexander Nevsky. Fortunately, conductor/composer
Abram Stasevich, who led the performance for the original movie music track, did prepare an extended twenty-five movement oratorio in 1961, even including some music not heard in the film.

I cannot share the apparent regrets of annotator Stuart Campbell that a more concentrated concert version was not made, in the manner of Nevsky; every note Prokofiev composed for Ivan deserves to be heard. For this reason I do, however, regret the intrusion of the narrator over some purely instrumental passages, in particular the “March of the Young Ivan” and “Ivan’s Illness,” which contains one of Prokofiev’s most haunting, if lugubrious, melodic inventions. For those who share this regret, Stasevich’s own recording—available domestically as a two-disc Melodiya/Angel set—is obtainable from France (on Chant du Monde) and Germany (on Eurodisc) in shortened single-disc form, with the narration edited out.

But at those points where the spoken words are not obliterator music, the narration provides an intense counterbalance to the music. I know of no other culture that has anything resembling the Russian tradition of dramatic readings (or recitations); the combination of the Russian language with poetic texts, such as those Eisenstein wrote for Ivan the Terrible, in an unimpassioned vocal flow produces its own kind of music, and the performance of Boris Morgunov (who did take part in Muti’s U.S. performances—and in fact was the narrator of the work’s 1962 premiere) offers a perfect example. Indeed, I prefer Morgunov’s narration to Alexander Estrin’s in the Stasevich recording; for one thing, Morgunov’s softer inflections and less bassy vocal timbres more closely recall those of Nikolai Cherkov, who in the film played an Ivan more majestically “imposing” than “terrible” (as the Russian epithet grozny is customarily translated).

In the music as well, the Russian language plays an essential role. The words tuchka chornaya (“the black cloud”), for instance, provide a perfect impetus for the characteristic motor rhythms used by Prokofiev as the low male voices make their entrance in the “Overture and Chorus.” But even when no language is used, the score never loses any of its dramatic impact as the music moves with an operatic flow not unreminiscent of Boris Godunov. Whether in the majestic, brass leitmotiv that opens the work above high, swirling unison strings, or in the athematic, bacchanalian “Dance of the Oprichники,” this is an instrumental tour de force that is Prokofiev at his best.

Prokofiev was fully in touch with Eisenstein’s vision. A grotesque combination of E-flat clarinet and oboe, for instance, plays as the Tartar prisoners are about to be executed (by bow and arrow) by their own forces; an ominous clocklike ostinato in the low strings and winds often appears with the sinister Yefrosina; and for the arrival of the Tartars. Prokofiev invented a monstrous, brassy, chromatic figure that rises to a pitch supremely beautiful in its consummate ugliness.

For all of this, and in spite of the split-second timing Prokofiev applied to certain passages, Ivan the Terrible remains a piece of concert music that happens to have been successfully applied to a film. Film-music detractors (and even such an authority as Bernard Herrmann) constantly point to Alexander Nevsky and Ivan as examples of what a “great” composer can come up with when he is asked to do a film score. Although I greatly admire Nevsky as a cantata, I have never felt it did very much for the Eisenstein film, and there are moments when it simply overwhelms the cinematic goings-on. The much more operatic nature of Ivan the Terrible made it more compatible aesthetically with Prokofiev’s style. But very rarely does the score operate on the level on which most film music needs to operate, and it is no more fair—or relevant—to measure other film scores against Prokofiev’s endeavors than it would be to compare the language used in most films with that of a great theatrical work.

Both the Muti and the Stasevich recordings of Ivan are first-rate, and my affections are split just about evenly between them. I have already stated my preference for Muti’s narrator, and there is no question that Muti’s rhythmic pacing and perfectly balanced realization of Prokofiev’s instrumentation communicate an exhilaration and aural excitement perfect for the score. I also prefer the brighter sound of Irina Arkhipova to Stasevich’s somewhat colorless Valentina Levko, although the latter comes closer to the Yefrosina character (in the “Song About the Beaver,” for instance) and is better miked. (Baritone Anatoly Mokrenko sings in both performances.)

Indeed the new recording suffers somewhat from a tendency to push everything but the orchestra into the background. Thus Melodiya’s Moscow State Chorus, which not unexpectedly has a more Russian character to begin with, benefits from superior recorded presence. Furthermore, those who know the film will often find Stasevich’s performance closer to it in spirit. But he does tend toward the vulgar from time to time (as in the “Dance of the Oprichники”), and he sometimes sacrifices clarity for emotional effect, although this is rarely seriously detrimental.

If I had to choose one recording, I suppose it would be Muti’s, both for the more present, less reverberant orchestral sound and for the overall elegance of his interpretation. But Angel’s mastering has once again taken the bite out of the highs and dulled the midrange, so that I would be tempted to seek out the British EMI edition (which I have not heard). And although the surfaces are fairly clean, some disturbing groove roar intrudes upon some quieter passages because of the low recording level. Angel has included a sensitively put-together program booklet, with Russian texts, transliterations, and translations and some badly reproduced stills from the film.

Muti’s Ivan is filled out with Prokofiev’s Sinfonietta, begun in 1909 and then reworked in 1914 and 1929. Although the composer apparently felt it worthy of his Classical Symphony, this fluffy work strikes me as one of his few mistakes, having none of the symphony’s tautness and bite, and rare are the pages when the composer can even be recognized. What a shame the Ivan forces could not have remained assembled for a premiere recording of Prokofiev’s Ode to the End of the War.


Comparison—Ivan the Terrible: Estrin, Levko, Mokrenko, Stasevich / L. S. S. R. Sym. Mel / Ang. SB 4103
Haydn's Desert-Island "Operetta"

L'Isola disabitata, a "bewitching" experiment in through-composed music drama, joins Antal Dorati's Philips series of Haydn operas.

by Andrew Porter

For fifteen years—since I read through the Vienna copy of the score—I have been waiting to hear a performance of Haydn's L'Isola disabitata. It is a work of a different kind from that of his other operas, and different from that of any other eighteenth-century operas that I know. The composer himself said as much in a 1781 letter to his publisher Artaria. The Parisians had applauded his Stabat Mater and, Haydn writes, had been most surprised that I should be so singularly successful in my vocal compositions. But I was not surprised at all, for they have heard nothing yet. If only they could hear my operetta L'Isola disabitata, or my latest opera, La Fedelta premiata. I assure you, no work of this kind has ever been heard in Paris—and perhaps not in Vienna either. It's my bad luck that I live in the country.

When reviewing earlier albums in Philips' series of Haydn operas—La Fedelta premiata (6707 028, June 1976) and La vera costanza (6703 077, August 1977) [Orlando paladino was reviewed by Paul Henry Lang (6707 029, December 1977)]—I pointed out ways in which the works differ from, on the one hand, those of Paisiello, Anfossi, etc., and, on the other, those of Mozart: ways that make them less apt for the stage than Mozart's, but delectable phonograph fare. L'Isola disabitata is in yet another vein: not an opera buffa or semiseria enriched and elaborated by generous musical genius, but a chamber piece, almost a serenata, which has not only less action, but also less intricately and elaborately developed music than have its companions.

There are just four singers and a small orchestra—flute, two oboes, bassoon, two horns, and strings, with drums added (in some copies) to the finale. The piece lasts about an hour and a half, and thus fits easily onto two discs, instead of the four or three of the earlier albums in the series. There are just six arias, none of them extended: two for each of the women, one for each of the men; and, in addition, an "ariaetta" for Gernando in which he picks up the opening strains of Costanza's preceding aria, and then breaks off. These numbers are linked not by secco (i.e., harpsichord-accompanied) recitative, but by extensive recitativo accompagnato and arioso (i.e., accompanied or punctuated by musical material from the whole orchestra). The opera is "through-composed."

It seems to me that Haydn was here trying something quite new for him: a little play declaimed throughout to full musical accompaniment, but with a minimum of organized musical numbers. The thematic material is rather of the kind Georg Benda used in his "melodramas," whose texts are spoken to, or between, phrases of orchestral accompaniment—only here the dialogue itself is sung, not spoken, and it moves occasionally into measured, lyrical arioso.

Metastasio's libretto, written in 1752, was much set by, among others, Paisiello, Jommelli, Traetta, Spontini, and (at the age of eight) Frederick Arthur Gore Ouseley. It is a charming piece. In the words of the author's argument: "The youthful Gernando with his young wife Costanza and her little sister Silvia, still an infant in..."
arms, was sailing to join his father, the governor of certain islands in the West Indies, . . . when (to summarize) a storm made them put in at a desert island. While Costanza and Silvia were sleeping in a grotto. Gernando was seized by pirates. Costanza believed herself deserted, but "when the first impulse of her despair began to give way to a natural love of life, she wisely resolved to find the means of preserving herself in that forsaken spot; and, sustained by the herbs and fruit in which the island abounded, she lived there with the little Silvia, inspiring the child (who did not know men at all) with the hatred and horror she had conceived for all men."

The opera begins thirteen years later. Costanza, "curiously dressed in skins, fronds, and flowers," is carving her own epitaph with a scrap of a broken sword. Gernando, after thirteen years of slavery, has escaped and come at once in search of her. He comes upon the epitaph. Despair! But it changes to joy when the lovers are reunited, and Costanza learns that his apparent desertion of her was involuntary. Gernando is accompanied by his friend Enrico. Silvia sees Enrico and, like Miranda in The Tempest, falls in love with the first young man she sees! And he with her. The opera ends with a happy quartet.

There is no "action," therefore, except a coming and going on the single set, "an attractive part of a small desert island, elegantly adorned by nature with strange plants, curious grottos, and flowering bushes." (There is something of Robinson Crusoe here, and something of The Tempest.) In the same year that Metastasio's libretto appeared, Goldoni wrote an Isola disabitata that was performed in Bologna, and later set by Giuseppe Scarlatti, Domenico's nephew, for Venice.

Haydn's opera opens with an unusually serious, energetic overture in G minor, lightened by an allegretto G-major minuet episode. Costanza sings recitative, arioso, and her first aria in the accents of a new Ariadne. But Norma Lerer is a disappointing heroine. Her phrasing is dull and dead. The line and the sense seem to die at each of the many rests that break up the recitatives. The statements do not carry forward, and her words have little feeling and color in them—or, rather, just one feeling and color, somewhat listless and lachrymose. Linda Zoghby's Silvia has the right simplicity and freshness of manner, but the music needs brighter, clearer, more forward singing. Miss Zoghby tends to be small and breathy.

The performance comes to life when Gernando enters. Luigi Alva's free, lively, colorful way with the recitative shows up the deficiencies of the others. Renato Bruson also delivers words as if they meant something, but this Verdian baritone seems somewhat ill at ease in Haydn, and a less than ideal Haydn stylist.

In the October 1977 number of Music & Letters, Winton Dean writes: "Many singers, trained or accustomed to sing notes as written, seem to be mesmerized by the sight of a bar-line after every fourth beat and, half-unconsciously perhaps, distribute their note-values and their emphasis accordingly." And: "If [recitative] is sung parlando, with the utmost flexibility of delivery, and without intrusive pauses or the repeated full stops interpolated by delayed cadences, the pace of the opera, instead of becoming clogged, is accelerated and its coherence enhanced. The dramatic tension is carried forward into the next movement, whether it be an aria, a duet, or another recitative." And: "Singers, influenced perhaps by the traditional performance of the oratorios, tend to place too much weight on the musical articulation of every word instead of propelling the action forward."

Dean is writing specifically of secco recitative in Handel's day, but his remarks apply to much of this score, which Haydn has composed mainly in recitative. For Haydn (like Verdi in his recitativo accompagnato) uses at least three kinds of recitative: declamation as free as that of secco, which should plainly
be delivered as pitched speech rather than as vocalization in strict 4/4; declamation on motivic patterns, echoing or echoed by the instruments, in which one does need to feel the beat; and fully accompanied lyrical phrases, to a measured pulse. (In his Hamlet, Ambroise Thomas still uses these three kinds of recitative, and constantly reminds his singers, with an "a voixonte," that what he has forced into a conventional 4/4 notation should really be sung as freely as speech.)

I go on about recitative because L'Isola disabitata might be considered an opera composed in melodious recitative, interrupted by just a few short arias. The right way to prepare it, I imagine, would be with spoken rehearsals of the Metastasio play first, and then the music added later. (That's the way Wagner said his Tannhäuser should be prepared—no singing until the cast could act and speak the piece convincingly without the music.) And if this performance disappoints me, it is because only Alva seems to have grasped fully what Haydn was about. Dorati produces some eloquent shaping of the expressive orchestral phrases, but his pacing of the piece lacks animation. It is as if he now took it for granted that every listener would fall in love with Haydn without any persuasion. He has not captured the special qualities of this score.

If there were any likelihood of a second recording—one that had, say, Janet Baker and Ileana Cotrubas as Costanza and Silvia, Alessandro Corbelli as Enrico, and Charles Mackerras or Denis Vaughan as its conductor—then I would advise opera-lovers to wait for it. But since...
that’s unlikely. I would not deter anyone from discovering Haydn’s operetta, his bewitching experiment with onward-flowing music drama. As the work proceeds, he pulls surprises from his sleeve. In the final sequences, recitatives and arias are drawn closer together. A solo violin becomes prominent. Costanza’s and Gernando’s reunion is prefigured by their hitting independently on the same musical phrase for their sad reflections.

In the final quartet, Haydn suddenly decides to allow free rein to the composer in him (as apart from the experimental musical dramatist), and writes a ten-minute onward-flowing music drama. As the work proceeds, he is Berey’s Haydn’s operetta, his bewitching experiment with that’s unlikely, I would not deter anyone from discovering Petrushka into a perfectly acceptable, teddy-bear, bedtime story, is Witold Rowicki’s with the Warsaw National Philharmonic on the Polish Muza label. But the impact is dulled by the engineering and by the inferiority of the orchestra itself.

Virtuosity is a necessity here; one loses confidence when the trumpeter seems to have swallowed his mouthpiece and when the bassoonist sounds as if he’s chewing on the reed. For anyone who’s willing to put up with these problems, though, Rowicki’s interpretation is both genial and solid, attractive in its delicacy, and well shaped. If the engineers had allowed the sound to shimmer, it could have.

Both Rowicki and Levine use the 1947 version of Petrushka, in which Stravinsky cut back the size of the orchestra and made the rhythmic notation somewhat tighter and more precise. Charles Dutoit and DG, on the other hand, give us the original, 1911 version of the score. Pianist Tamás Vásáry gets high billing (not undeservedly), and, as one might expect, the “Scènes burlesques en quatre tableaux” sound thicker and fatter here than they do when performed from the later scoring. The DG recording has a pear-shaped sound—skinny on the top and dense on the bottom. But, worse than that, the music isn’t chipper; it hardly ever clowns around, and it never sneers. The London Symphony plays adequately, but no better. And what is Petrushka without maniac highs from which one can descend to the depths?

In Sacre du printemps, none of the new recordings supersedes the old Monteux/Boston version (not currently available) or even Stravinsky’s own performance (Columbia MS 6319). But it goes without saying that Herbert von Karajan and the Berlin Philharmonic are up to all aspects of the technical challenge in this, their second recording of the work. Because of the orchestral sound and its dynamism, this is a fine all-around Sacre.

The performance is masterly, colorful (naturally), tasteful, and appropriately dreamy at the beginning of Part II. “Better safe than sorry” must have been the motto here; both Karajan and the recording team seem to have been inclined to handle the music with white kid gloves. The conductor stretches the rhythms now and then, but there is no trace of the Promethean spirit in this Sacre.

Colin Davis leaves a more personal signature on his Philips Sacre with the Concertgebouw. The quality of the orchestra’s winds is a big plus; so is the conductor’s willingness to bring out off-forgotten combinations of inner voices. Davis is interested in clarity and gets lovely balances. He also knows that contrast is the key to fitting together some of Sacre’s apparently conflicting pieces. This somewhat classical approach would have worked better had the engineers not practiced the “big bang theory” of production, in which the percussion section dive-bombs onto the rest of the orchestra at every opportunity.

The last and least of the Rites is Zubin Mehta’s with the New York Philharmonic on Columbia, his first recording with the orchestra he takes over this fall. Though Mehta appears to be ready to jump exuberantly from the record jacket, his performance is in no way airborne. He gets color without cohesion and loses forward thrust. Articulation is heavy and thick; the music growslows. And the orchestral playing is rough, even in the more atmospheric sections, where solo work is highlighted to the extent that the listener feels as if he has just been pushed from a comfortable balcony seat right down onto the stage.

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HAYDN: L’Isola disabitata.

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Gernando
Luigi Alva (t)

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CIRCLE 45 ON PAGE 81
Atious T 1978

When each new album of Telefunken’s Bach cantata series arrives, I feel like a child being presented with a new treat, and can hardly wait for the necessary stretch of a few free hours to unwrap the album and discover its riches.

Vol. 18 contains four strongly contrasted cantatas: four and a half, in fact. No. 69a was composed in Bach’s first Leipzig year, 1723; in his last years, he adapted it as the municipal cantata No. 69, composing new recitatives, a new aria, and a new final chorale, and transposing one of the arias. In its original form, the first aria is for tenor, with recorder and oboe da caccia; in the revision, the voice (now alto) goes up a fifth. In No. 70, (now bassoon) goes down a fifth; and the oboe da caccia line (now oboe) up a fourth. So the texture is quite different. I think the original disposition is the more beautiful: and it is more beautifully sung by Kurt Equiluz than is the alto version by Paul Esswood.

But the new finale is a great addition. No. 69a ends with a simple chorale borrowed from Weinen, Klagen. Cantata No. 12. No. 69 ends with a different chorale, in which the three trumpets and drums strike in to clinch just the cadences of the first four lines and then, during the next four, continue with independent and increasingly brilliant parts, so that the cantata ends, as it began, with a bright blaze. The second of the new recitatives is also a beautiful piece, in which secco is enriched first by sustained string chords and then by emotional string writing.

The new movements of No. 69 are presented as an appendix, at the end of the fourth. No. 72, which precedes them, is a short cantata (seventeen minutes), so there is plenty of space. The whole side takes a little over twenty-eight minutes, making this one of the best-filled sides in a series whose layout has always been spacious. Side 3 contains only just over eighteen minutes.

No. 70. Watch! Pray! Pray! Watch!, opens with a very exciting chorus, sung with great spirit by the choir. (Where do the mature male voices come from? The ‘Tolz Boys’ Choir is the only chorus named.) Watch! is set to rising scales, and “Pray!” to long-held notes. This cantata also has two versions: the first, No. 70a, is a Weimar piece, and No. 70 is a Leipzig (1723) expansion of it. But since the expansion consisted only of adding four recitatives and an extra chorale verse, the earlier work is comprised in the later, and needed no separate recording. This is a Last Judgment cantata, and the two bass recitatives are stunning. The first is accompanied by trumpet, oboe, and strings; the second opens with a cry of “Ach!” at the top of a diminished seventh, and is a kind of Dies Irae for strings and trumpet. The ensuing bass aria has serene outer sections but a central episode of earthquakes through which the last trumpet peals.

No. 71 is one of Bach’s earliest cantatas, composed for the Mühlhausen Town Council in 1708. Ludwig Finscher, in the album note, seems to me to make too little of it. (Alfred Dürr, in Die Kantateterminologie von Johann Sebastian Bach—the essential paperback companion, for anyone who reads German—is more eloquent.) It is very richly scored: for four instrumental “choruses” (three trumpets with drums; two recorders with cello; two oboes with bassoon; and strings), and alternating full chorus and solo quartet or semichorus. These groups play at dialogues and echo effects, producing an extraordinary sense of deep perspective.

The theme is Age and Youth. In the second number, the tenor sings that he is eighty years old and longing to return to his native city, to die beside the grave of his parents. But well before he is done, the young treble breaks in (with a highly decorated version of a chorale melody) to the effect that he hopes to lead a long and meritorious life. Their duet and the succeeding chorus (“May thine old age be as thy youth!”) are accompanied by continuo. The windwind trials return for the bass aria, which calls for a repeated low F below the stuff (sinking to modern low E at the pitch of this performance on eighteenth-century instruments). A new bass, Liewe Visser, joins the series, and although his bottom F is not a particularly sonorous note, it is there. The next, arioso for alto is scored for just three trumpets and drums, with continuo. They are the only instruments omitted from the penultimate chorale. In C minor; while in the final chorus all four instrumental groups and the two choral “divisions” create a wonderfully rich and diverse tapestry, varied still further by an organ obbligato episode. The piece ends with a figure on violins first echoed by solo oboes and then dying away on solo recorders.

In No. 72, the richness is not so much instrumental (the scoring is just for oboes with strings) as formal. The second movement is an unbroken sequence of a recitative, an arioso (ever-varied statements of a basic “Herr, so du wilsst”), and an aria that opens with a vocal declaration or “motto,” continuing with an instrumental fugue, and then combines the two. The second aria, in polonaise rhythm, opens with a ritornello; the treble sings a “motto”; and then there is another ritornello before the aria proper begins. In the central section, long notes picture the words “liegt” and “still,” and a very long note paints the word “ruh’n.”

In his lower registers here, the new treble, Wilhelm Wiedl, has some trouble in sustaining the tone. He is no Peter Jelosits, the treble star of earlier volumes, for his line is choppy, his recitatives sometimes emerge as a series of exclamations, and his mannerism of swelling any sustained note and then abruptly letting it go is exaggerated. Nevertheless, the timbre is right, and his execution is bold. His style suits Harnoncourt’s fondness for ending phrases very abruptly. (I can’t even hear the last two notes, the violin and viola close, of the second aria in No. 72, the movement seems to be cut short in midair.) Kurt Equiluz and Rudi van der Meer, the tenor and bass, are as good as ever. Paul Esswood, the

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**Explanation of symbols**

**Classical:**
- Budget
- Historical
- Reissue

**Recorded tape:**
- Open Reel
- 8-Track Cartridge
- Cassette

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**August 1978**
alto, is fluent, cultivated in style, sometimes uneven in timbre. Most of the recording has the pure, well-balanced, lively but unforced quality that distinguishes this series; there seems to be a slight looseness of focus in the last two movements of No. 69a.

No. 71, that early cantata, was the first—and one of the few—of Bach's vocal works to be printed in his lifetime. The Miibhausen City Council paid for its publication (as also for that of the 1709 cantata they commissioned; this is lost). They had reason to be proud of it. Christoph Wolff's essay in this album deals with the publication of Bach's music—or rather with what one might call its nonpublication by comparison with that of Telemann and Handel. The very variety of Bach's compositions, the kaleidoscopic and ever-changing range of forces required, made them unapt for general circulation, and therefore for publication. "Such a work as the St. Matthew Passion was completely unsuitable for printing since Bach's time there was hardly any chance of a performance outside of Leipzig," Telemann's cantata cycle of 1725-26, which was published, is, in Wolff's words, "conceived with modest average conditions in mind"—and as a result is also "far more monotonous" than Bach's cantata set of 1724-25. So far, as this Alfred A. Knopf series brings me closer to a systematic knowledge of the cantatas in performance than many scattered concerts have done, I find them not monotonous at all, but an unailing joy and comfort.

As usual, Telefunken provides miniature scores, ex-libris, and notes, together with identification of editions, the instrumentalists, and their instruments.

**BARTÓK:** For Children. Dezso Ránki, piano. TELEFUNKEN 26 35338, $15.96 (two discs, manual sequence).

For Children is an utterly delightful collection of little piano pieces—savorly the folktales, full of life and sweetness, lyricism, and fantasy. What we hear seems to be both Bachian and Handelian. The true aboriginal folksong, not yet contaminated by gypsies and commercial arrangements. Indeed, he wanted even more: nothing less than the creation of a genuinely Hungarian style and idiom. This required much preliminary work and study, which resulted in valuable collections of Eastern European folk music snatched from destruction in the last minute before the radio reached the isolated villages. But from the very beginning Bartók realized that he must carefully keep separate the scholar from the composer. In his major works he seldom quotes folk melodies, but their spirit, gag, accents, and tonal characteristics entered into his bloodstream. Nevertheless he also wanted these fine melodies made accessible to music lovers, especially to children. The problem was how to consummate the marriage of age-old monodic melodies with modern many-voiced music. His musical instinct and the judgment of the scholar found the solution.

"The more primitive a melody," says Bartók, "the more singular can the harmony or accompaniment be... . The absence of barriers provides greater freedom to anyone knowing how to apply this freedom." In a distant way the procedure resembles that used by Bach in his chorale harmonizations: The melody is left intact, but the "accompaniment" is altogether the composer's property. Since most of the tunes are modal or pentatonic, the harmonization is tricky, but Bartók's inventive use of ever new harmonies and tonal centers is not short of Bach's inexhaustible harmonic imagination, and the interposed connecting links between strophes, at times only a single measure, are marvels of artistic assimilation to an ancient idiom.

Dezso Ránki (born 1951) plays this music—here wild like a colt, there timid like a doe—with unerring taste and superlative pianism; he has this language in his bones. The young pianist catches the many colors and moods and immediately establishes intimate relationship with his listeners. Though intended for children, this music and this fine recording will delight young and old. P.H.L.


Barenboim's three recordings of this score—played and conducted Beethoven's piano arrangement for DG and then conducted the New York Philharmonic with Isaac Stern for Columbia—show a pretty good reception. Though each version seems to get a bit slower and heavier. I find the first movement of the new performance somewhat lumbering and static, with phrases standing like marble pillars instead of meshing like fine spun silk, as in the classic accounts of Kreisler and Blech (available in a German reissue imported by Peters International). Kulenkauf and Schmidt-Iserstedt, and Muenlin and Furtwangler/Lucerne (i.e., their 1947 recording, not the

The most noteworthy releases reviewed recently

**BACH:** Cantatas, Vol. 17. Haroncourt: Leonhardt. TELEFUNKEN 26 35335 (2), May.

**BRAHMS:** Symphony No. 4. Levine. RCA ARL 1-2624, July.

**CILEA:** Adriana Lecouvreur. Scotto, Serpold, Furtwangler. PHILIPS 6703 003, June.

**DEBUSSY:** La Mer: Apres-midi d'un faune; et al. Haitink. PHILIPS 9500 359, July.

**DVOŘÁK:** Symphony No. 9 (From the New World). Guiotini. DG 2530 881, July.


**HAYDN:** Middle Piano Trios. Vienna Haydn Trio. TELEFUNKEN 46 35332 (4), July.

**LISTZ:** Piano Sonata et al. Falkowska. RCA FRL 1-0142, July.

**MOZART:** La Clemenza di Tito. Baker et al. C. Davis. Philips 6703 079 (3), May.

**MOZART:** Quartets Nos. 20—23. Alban Berg Qt. TELEFUNKEN 6.41999. 642042, July.

**NIELSEN:** Maskerade. Brodersen, Landy, Hansen, Frandsen. UNICON UN3 700 (3), June.

**NIELSEN:** String Quartets, Opp. 13, 44. Carl Nielsen Qt. PG 2530 920, June.

**PUCCINI:** II Tabarro. Scotto, Domingo, Wixell, Maazel. COLUMBIA M 34588, March.

**SCHUMANN:** Kreisleriana; Waldszenen. Beroff. CONNOISSEUR SOCIETY 26.35335 (2), May.

**SHOSTAKOVICH:** Symphony No. 10. Haitink. LONDON CS 7061, July.

**TELEMANN:** Methodical flute Sonatas. Robinson, Sanders, Lesser. MHS 3704/5 (2), June.

**VARÈSE:** Amériques, Arcana, Ionisation. Boulez COLUMBIA M 34552, July.

**VERDI:** I due Foscari. Riccioni, Carreras, Gardelli. Philips 6700 105 (2), June.

**VILLA-LOBOS:** Bachianas No. 3; Momo precioso. Ortiz, Ashkenazy. ANGEL S 37439, June.

**VIVALDI:** VIVALDI: Bachianas No. 3; Momo precioso. Ortiz, Ashkenazy. ANGEL S 37439, June.

**VILLA-LOBOS:** Bachianas No. 3; Momo precioso. Ortiz, Ashkenazy. ANGEL S 37439, June.

**VARESE:** Ameriques; Arcana; Ionisation. Boulez. COLUMBIA M 34552, July.

**SHOSTAKOVICH:** Symphony No. 10. Haitink. LONDON CS 7061, July.

**TELEMANN:** Methodical Flute Sonatas. Robison, Sanders, Lesser. MHS 3704/5 (2), June.

**VARÈSE:** Amériques, Arcana, Ionisation. Boulez COLUMBIA M 34552, July.

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**VILLA-LOBOS:** Bachianas No. 3; Momo precioso. Ortiz, Ashkenazy. ANGEL S 37439, June.
1953 performance with the Philharmonia Seraphim). Zukerman might conceivably flow more at a more mobile pace, and his lustrous tone does have its edgy moments. chiefly because of his reliance on a constant throbbing vibrato that seems at variance with the exalted classical nature of this music. Still, generally considered, this is a sturdy, virile performance, among the better recent accounts.

Barenboim, incidentally, once again opts for the unusual manuscript reading following the first-movement cadenza, which omits the bassoon answers to the cellos, but this time he has reconsidered and restored the missing bar (217) that a copyist omitted in the rondo. Kreisler's cadenzas are used throughout—those in the second and third movements in abbreviated form. The engineering is kind to instrumental detail and gives a fortissimo in true relationship to softer passages.

H.G.


Ever since Eugen Jochum's first Beethoven Fifth (with the Berlin Philharmonic) appeared in Epic's first release back in 1953, this massive, forthright way with the score appeared in Epic's first release back in 1953. Jochum now observes the repeat in the symphony's finale, a repeat I am not crazy about—although this purposeful, incisively rhythmical approach makes it work as well as it ever has.

The Fidelio Overture, which has now filled out three consecutive Jochum recordings of the Fifth, is—the symphony—a bit broader and tougher than before, with some particularly plush and splendid drumbeats in the introduction. An outstanding release in every way.

H.G.


Lesia Nador Zurga
Nourabad

Like Berioz, Bizet has been accorded little enough serious attention in the land of his birth. Without the labors of the English musicologist Winton Dean, in Bizet (1948, revised 1975), and the American biographer and social historian Miss Curtis, in Bizet and His World (1958), we would lack even elementary knowledge of the facts of his life and the nature of his oeuvre.

During the postwar years, it's true, several of the composer's works have been made available for the first time by his French publishers, including the one-act Le Docteur Miracle and the full-length Ivan le Terrible, and at least one of his scores. Carmen—edited by Fritz Oeser in 1965 and published by the German firm of Bärenreiter—has been subjected to scholarly scrutiny. Yet none of these can be regarded as definitive, to say the least. Ivan, revised by Henri Busser, reduces Bizet's original five acts to four, adds a new character to the dramatic personae and a substantial amount of music to the original score, while Oeser's Carmen as Dean has clearly demonstrated, corrupts rather than clarifies the composer's intentions. What is still needed, more than a hundred years after Bizet's death, is a critical edition of his complete works, carried out by responsible musicologists.

Les Pêcheurs de perles is a case in point. At least three versions of the vocal score of this opera are in circulation, none of them agreeing with the full score: the autograph of which has disappeared. The edition of 1863, the only one to appear in Bizet's lifetime, and thus to lay any claim to authenticity, has long been superseded by arrangements that change the libretto (primarily in order to effect a more sanguinary and picturesque finale) and in several places rewrite the music, the most egregious example of which presumptuousness is the replacement of a duet for Leila and Nadir in Act III by a trio for Leila, Nadir, and Zurga written by Benjamin Godard, the composer of Loclain.

All previous recordings of Les Pêcheurs de perles are, in fact, testimonies to the lack of respect accorded Bizet in his native land: Apart from the Godard trio, they include various other emendations in Act III as well as the addition of a spurious ending to the celebrated tenor/baritone scena "Au fond du temple saint," from which Bizet's concluding section (designed to provide a contrast with the main body of the duet) has been eliminated in favor of a reprise of the famous friendship theme.

Angel's new recording is thus an event of some importance, since it is the first to restore Bizet's original intentions as they are revealed in the 1863 vocal score—though this has meant re-orchestrating the passages omitted from the posthumous full score (a task carried out unobtrusively by Arthur Hammond). The result, while it reveals no long-hidden masterpiece, has yielded a more effective opera, especially in Act III, where the various revisions produce a cruder effect than anything Bizet intended. In any case, though Les Pêcheurs de perles is an early work and contains a fair amount of inferior music, it deserves to be heard in a form as close as possible to that in which it was left by the composer—particularly since the revisions do not mitigate its weaknesses.

It follows, therefore, that this new
recording is not in competition with Angel's other current set (SBL 3603), conducted by Pierre Dervaux, and that it deserves to be heard by anybody interested in Bizet. The performance, if not outstanding, is proficient enough to give one a clear idea of the composer's original achievement. Of the soloists the best is Alan Vanco, now less plaint and attractive of voice than when he made the London Lakmé with Sutherland, but an engaging artist, nonetheless. Ileana Cotrubas, who at the rate she seems to be recording will soon have more discs to her credit than Fischer-Diuskau, is a pallid Leïla of fluttery tone. The individualism of manner of Guillermo Sarabia is a clumsy, inexpressive Zurga, and Roger Soyer a dry-voiced Nourabad.

Georges Prêtre conducts without much grace or charm. Some of his tempos are on the lethargic side. "Au fond du temple saint," however, is decidedly brisk. The Paris Opera Orchestra and Chorus do a creditable job, though the enunciation of the latter body is hardly up to snuff. The recording does not help matters: in large-scale scenes it tends to be muffled, and throughout there is a disturbing lack of presence in the sound. Chatty notes, libretto, translation—all are in need of proofreading (e.g., the tenor/baritone duet comes out as "Au fond du temps saint," which is a different kettle of fish entirely).

Of the inauthentic editions my favorite among available recordings is the Pathe mono made with Opera-Comique forces under the knowing direction of André Gédéon in 1961 (EMI 2C 153 12057/8, a French import distributed by Peters International). It features a highly distinguished account of Nadir by Henri Legay, an underrated artist, whose performance eclipses Nicolai Gedda's in the Dervaux/Agel set, both in phrasing and in sweetness of tone.

**BLOCH: Quintet for Piano and Strings, No. 1**

New London Quintet. HNH RECORDS 4063. $8.98.

Bloch's 1923 First Piano Quintet has hardly been overexposed: This is its first recording since the Glazer/Fine Arts version on Concert-Disc (still listed in SCHWANN) a dozen years ago. But then, I have yet to encounter the much later Second Quintet at all, either in concert or on disc.

Contrived from a handful of terse motives, including accompanying trills and tremolos that send shivers of desolation through the score, the First Quintet makes extensive use of quarter tones, glissandos, and barcarolike driving ostinato figures. The prevalent mood is sorrow mixed with mystical reverie, with moments of delirious frenzy. The texture is sustainedly exotic. This fundamentally romantic work seeks in vain the consolatory balm of tonality—until the culminating coda of the finale, where the ensemble comes to rest on a C-major chord.

If you do not yet know this pivotal masterwork of modern chamber music, the HNH release should be the perfect introduction. The New London Quintet—Frank Wilhaut, piano; Norman Freeman and Rolf Wilson, violins; Kenneth Essex, viola; Peter Willson, cello—seems equally cognizant of the music's vehemence drive (stressed almost to excess by Glazer/Fine Arts) and its dreamy, rhaphodic musings (the strong suit of the Impressionistically tinged London mono recording by the Chihi Quintet). The first-movement coda, for example, is played with grand and sweeping vehemence, while the concluding modulatory bars are pointed in an ever-so-hesitant and tense manner.

The recording allows plenty of air space around the performers, so the velvety beauty of the strings is always voluptuously evident, yet internal clarity is never sacrificed for atmosphere. Tiny secondary figures, high harmonics, and other soft details (with which the piece abounds) can be savored in a way the older recordings didn't permit. HNH's pressing and packaging are superb. A standout release. A.C.

**BUXTEHUDE: Organ Works, Vols. 1-2.** Michel Chapsis, organ of Cantate Domino Church, Frankfurt (Germany); and St. Max- imin Church, Thornville (France). TELE-FUNKEN 6.42001 (Vol. 1); $7.98, and 26.35307 (Vol. 2); $15.96 (two discs).

**BUXTEHUDE: Organ Works. Mireille Lagacé, organ of Old West Church, Boston. [Ralph Dopmeyer, prod.] TITANIC Ti 11. $8.00 (Ti- tanic Records, 43 Rice St., Cambridge, Mass. 02140).**

During the past fifteen years or so a good deal of attention has been devoted to the North German organ and its music, but even now, surprisingly, there are few really worthy recordings of the period's best instruments and literature. Though the late Edward Buxtehude did much to encourage interest in this wide area, his own playing of the music was often too stodgy and mechanical and his close-miked recordings tended to give false impressions of the sonorities for which the music was conceived. With these new Buxtehude recordings by Michel Chapsis and Mireille Lagacé, we now have an admirable representation of at least one important composer of the period (and the Chapsis rec- cords constitute only the first two installments in a four-volume survey of Buxtehude's complete organ works). Here, I'm happy to report, we have winning combinations of dynamic playing and outstanding organs, and everything is very well recorded.

It was the sheer beauty of tone produced by the three organs used for these recordings that struck me first—and the strong family resemblance among them. They were all built within a three-year period—the Kern organ at Thionville in 1918, the Frankfurt Ahrend in 1970, and the Fisk in Boston's Old West Church in 1971—and each is a real masterpiece of contemporary organ-building. Stylistically, each of the instruments demonstrates a most successful synthesis of eighteenth-century French and German elements; somewhat in the manner of the organs built by the Silbermann family, they speak German, as it were, with a hint of a French accent. Thus, while not strictly in the style with which Buxtehude was most familiar, they are far more authen- tic and appropriate than most of the "neobaroque" organs constructed in the past fifteen years. Mercifully, we are spared the equation—as erroneous as it is wide- spread—of the baroque organ with harsh- ness of tone and exaggerated "chiff." Here the flues are beautifully round and mellow, the reeds eschew undue blatancy, and the choruses have breadth and richness as well as brilliance.

We don't, of course, know exactly how Buxtehude played his music, and so there is room for considerable variety in interpretative approach. What is most important is that the player have a solid understanding of his baroque "organique" organ, and that he at best use music in general and a good deal of sheer panache, and both Chapsis and Lagacé are well qualified in these respects. Chapsis—favoring brisk (and occasionally even breathless) tempos, pointed articulation, and colorful registrations—predictably excels in projecting the bravura elements of Buxtehude's toccatas in general and with the Prelude and Fugue in E minor (BuxWV 142) the effect is nothing short of electrify- ing, but in some of the more introspective works—such as the E minor Chaconne and the chorale preludes—I sometimes felt a need for more rhythmic flexibility. At worst, though, Chapsis's playing is merely efficient: at its best it is exciting indeed, and the impact is much enhanced by the vivid and full-bodied recording.

The Lagacé recording is not quite so sharply focused, but its perspective is well judged for the much drier acoustic of the Boston church and for the performer's more relaxed manner. She makes more of the music's rhaphodic and improvisational as- pects, and—as befits a protege of Anton Heiller—she provides just the sort of rhythm- ic give-and-take that I sometimes miss with Chapsis. In particular, her performance of the E minor Chaconne (incorrectly listed as E major) is the very personification
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of elegance, each variation being delineated by sensitively applied rubato. Nowhere, in fact, do I find Lagace's playing "merely efficient"—no, it is ever remotely dull. The Titanic record sleeve commendably includes the organ's specification, but the program notes are disappointingly brief and nobody has bothered to provide the Karlslust catalog numbers (BuxWV) for the pieces. Telefunken, on the other hand, has opted for a lavish presentation, although one must purchase both volumes to get all the supplementary materials: Vol. 1 includes information on the organs used for the entire four-volume series and a listing of the complete works with BuxWV numbers. Vol. 2 includes program notes and miniature scores (reprinted from the Peters edition) for the works included in both volumes.

**CHOPIN:** Piano Works. Vladimir Ashkenazy, piano. [James Walker and Richard Beswick, prod.] LONDON CS 7022, $7.98. Tape: ** CS5 7022. $7.98.


Vladimir Ashkenazy Chopin on an instinctively exalted level

Debussy's preludes. This disc, taped live at Washington's Phillips Collection, mirrors those qualities—more faithfully, in fact, than the New York performance two weeks later, which suffered from Carnegie Recital Hall's drab, cramped acoustics and an unresponsive instrument, not to mention understandable "debut nerves." That Krichaf has good basic technical command can be heard in the sturdy "Feux d'artifice" and, at the other end of the dynamic spectrum, the crystalline-textured "Les Tierces alternées" (really an etude in disguise).

The sound is pleasingly round—close-up, sufficiently amply detailed, and entirely serviceable despite an unusual amount of tape hiss.

H.G.

**FRANCK:** Symphonic Variations—See Schumann: Concerto for Piano and Orchestra.

**GANNE:** Les Saltimbanques. Suzanne Manon

Mady Mesple (s) (recorded in concert, February 7, 1977) [recorded in concert, February 7, 1977] Tape ** MHC 5702. $6.95 ($4.95 to members). (Add $1.25 postage; Musical Heritage Society MHS 3702, $4.95 ($3.75 to members) [recorded in concert, February 7, 1977] Tape ** MHC 5702. $6.95 ($4.95 to members). (Add $1.25 postage, Musical Heritage Society. 14 Park Rd., Tinton Falls, N.J. 07724.)

Debussy: Preludes, Book II. Jacob Krichaf, piano. MUSICAL HERITAGE SOCIETY MHS 3702, $4.95 ($3.75 to members) [recorded in concert, February 7, 1977] Tape ** MHC 5702. $6.95 ($4.95 to members). (Add $1.25 postage, Musical Heritage Society. 14 Park Rd., Tinton Falls, N.J. 07724.)

Toronto-born Jacob Krichaf, one of the 1976 recipients of a Concert Artists Guild debut award, impressed me at the auditions with his quietly introspective, serious-minded, self-negating (in the good sense) readings of a Haydn sonata (No. 99 in C), Schumann's Kreisleriana. and, particularly. Book II of Debussy's Preludes. This disc, taped live at Washington's Phillips Collection, mirrors those qualities—more faithfully, in fact, than the New York performance two weeks later, which suffered from Carnegie Recital Hall's drab, cramped acoustics and an unresponsive instrument, not to mention understandable "debut nerves." That Krichaf has good basic technical command can be heard in the sturdy "Feux d'artifice" and, at the other end of the dynamic spectrum, the crystalline-textured "Les Tierces alternées" (really an etude in disguise).

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H.G.

**THE MUSICAL HERITAGE SOCIETY**

**NEW YEAR'S CONCERT—1978**

The music of Louis Ganne (1862-1923) is not often played these days outside the composer's native France, where it occupies a modest but seemingly unassailable place in the affections of the public: two of his marches. La marche Lorraine and Le père la Victoire (not Le père la Victoire as Connoisseur Society's notes and even Grove's have it) are so well known as, in effect, a form part of the national consciousness.

His opéraett on circus life, Les Saltimbanques (The Acrobats), endures, too, if not so much on the stage any more, then as the source of tunes one hears on the radio or in the general musical background of daily life. First performed in December of 1899, the work was a huge success from the start, one of its numbers, the waltz "C'est l'amour," immediately achieving hit-status. Several other numbers also quickly established themselves as favorites, especially the pair of charming duets for Suzanne and her lieutenant suitor, André, and the "Chanson militaire" sung by the latter.
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of individual sonatas, by Jean-Pierre Rampal and James Pellerite, are currently in print, and all these use the transverse flute—we know best today rather than the recorder, the flauto of Marcello's time.

The present versions try hard to enliven this formidable collection (nine four-movement sonatas, three in five movements) with as much tonal variety as possible by shifting from alto to soprano recorder in Nos. 1, 9, and 12 and by varying the continuo instruments: bassoon and positive organ, bass recorder and harpsichord, cello and harpsichord, lute alone, lute and harpsichord. But listeners' tolerances are not helped by René Clemencic's occasional lack of both executant authority and interpretative persuasiveness.

Too bad, partly because all the players are almost painfully earnest and the (Harmonia Mundi) recording is satisfactorily clean, but mainly because Benedetto himself was no more nobly born dilettante, but a composer of distinctive imagination and wholly professional craftsmanship. Taken in small doses, there is inexhaustible delight in the best individual sonatas (perhaps especially the brief No. 3 and the three five-movement works) and in many single movements (most notably the nobler coda of No. 12).

R.D.D.

**Mozart**:

**Divertimentos**: in D, K. 136; in B flat, K. 137; in F, K. 138; Symphony No. 13, in F, K. 112. English Chamber Orchestra, Jesus López-Cobos, cond. HNH RECORDS 4023, $8.99

López-Cobos is an extraverted, eager, even nervously tense Mozartian—not all necessarily disadvantageous in these Salzburg works of 1771-72. His breezy verve works best in the remarkably concise and youthful little Symphony No. 13. The three-movement string divertimentos, K. 136-38, are similarly high-spirited and not too bright recorded (by Discos Ensayo). But here the conductor's intensity sometimes gets a bit out of hand, to the detriment of both tempo steadiness and high-register string tonal qualities.

There are a number of more polished recorded performances of all these works, notably those by Marriner for Argo and Philips, but there is no other single disc I know that includes all four.

R.D.D.

**Mozart**:

**Mitridate, ré di Ponto**, K. 87.

Alessia Brancaleoni (Eliana); Arleen Auger (Arsenio); Ileana Cotrubas (Menecme); Werner Hollweg (Mitridate); Agnes Baltsa (Pamir); David Kubler (Sancta); David Daniels (Thrasea); St. Louis Symphony Chorus and Orchestra, Louis Langrée, cond. LYRICA 31098, $4.98 (QS-encoded disc). Comparisons: Celtic Woman's 3-LP version.

The orchestra is fine, and Leopold Hager keeps good order (but the seccos could have been a little more flexible). The sound is pretty good, even though the singers are a trifle closely miked, which occasionally coarsens the high notes.

**Prokofiev**:

**Alexander Nevsky**, Op. 78. Claudez Carlson, mezzo-soprano; St. Louis Symphony Chorus and Orchestra, Leonard Slatkin, cond. (Marc Aubert and Joanna Nickrenz, prod.) CANDIDE QCE 31098, $4.98 (OS-encoded disc).

It is most interesting and informative to have Mozart's pleasant juvenile operas recorded. Not that the young composer, four-teen at the time of Mitridate, was yet capable of creating a dramatically whole and developing opera; two years later he could already surpass most of his contemporaries, but what he could do at this age was to compose some very attractive music—and at that stage of operatic history in Italy, with the great late baroque composers gone, this was sufficient for the audience. Mozart's treatment of the libretto of Mitridate is naive and often irrelevant. Coloratura is applied haphazardly and usually out of context, and the orchestra merely furnishes an accompaniment, though in the second half of the opera it begins to assert itself. The boy could not yet understand and experience real passion, but with his uncanny capacity for instantaneously absorbing a new style—in this case the neo-Neapolitan—he could find the expression fitting a given scene by remembering similar scenes from Piccini or Christian Bach.

The many sketches, at times four for one aria, show that Mozart had trouble with his singers—in those days that was an occupational hazard for composers because he never had need for so many second thoughts. This situation, as well as his still undeveloped dramaturgical sense, contributed to his acceptance of the concert opera format: practically nothing but arias and recitatives. There is only one duet and a final quintet, really a coro, the old baroque device of having the principal characters unite in a choruslike ensemble. This one lasts all of thirty seconds, making the end of the opera pretty lame.

Since three of the five male roles in Mitridate are written for castratos, the present cast consists of five women (only two of them, Arleen Auger and Ileana Cotrubas, portraying women) and two tenors—a rather unsatisfactory combination, without sonic perspective. It goes without saying that there are some fine spots in the opera, but it is very long there are too many chains of secco recitatives, and it is a bit trying to take in Mitridate in one sitting. The five women are all first-class, and every one of them can cope with the difficult coloratura passages. The two tenors are not in their league but get by, except when the high tones come along, when this happens Werner Hollweg (Mitridate) resorts to a sort of "Heldenfalsetto," while David Kübler (Marzio) just squeezes them out.

The orchestra is fine, and Leopold Hager keeps good order (but the seccos could have been a little more flexible). The sound is pretty good, even though the singers are a trifle closely miked, which occasionally coarsens the high notes.

R.D.D.

**Prokofiev**:

Alexander Nevsky, Op. 78. Claudez Carlson, mezzo-soprano; St. Louis Symphony Chorus and Orchestra, Leonard Slatkin, cond. (Marc Aubert and Joanna Nickrenz, prod.) CANDIDE QCE 31098, $4.98 (OS-encoded disc).

**Comparisons**:

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PROKOFIEV: Ivan the Terrible. For a feature review, see page 66.

Purcell: Funeral Music for Queen Mary; Anthems. Timothy Byram-Wigfield and Peter Castle, boy sopranos; Michael Cockerham, counter-tenors; Robert Crickott and Andrew King, tenors; Jonathan Roberts, Nicholas Hayes, and Gareth Morrell, basses, Francis Grier, organ. King’s College Choir (Cambridge), Philip Jones Brass Ensemble, Academy of St. Martin-in-the-Fields, Philip Ledger, cond. [Christopher Parker, prod.] ANGEL S 37251; $7.98 (SAC-encoded disc).

Purcell: Funeral Music for Queen Mary; Come, ye sons of art. Felicity Lott, soprano; Charles Brett and John Williams, counter-tenors; Thomas Allen, baritone; Monteverdi Choir and Orchestra, Equale Brass Ensemble, John Eliot Gardiner, cond. [Peter Willemsen, prod.] ERATO STU 70911, $9.98 (distributed by Euroclass Record Distributors)-at once rich and lacking in rich and affirmative tonal projection. The St. Louis Symphony is well up to the score’s demands, and Leonard Slatkin steers his way through the cantata with studied control and judgment, if not with the greatest involvement imaginable. Claudine Carlson sings the “Field of the Dead” alto solo satisfactorily, though one misses a close identification with the Russian language.

With the Nevsky recordings continuing to defy a clear-cut choice, let us be thankful that the lower-priced versions are as solid as the full-priced ones. Fritz Reiner’s subtle sense of theater remains undimmed, and the RCA sound, despite its age, is still impressive; but who wants an English-language version of this quintessentially Russian work? Slavic temperament and excitement abound in Turnabout’s Alexander Khovanskih performance (of mysterious provenance), but this appealing bargain (with the Love for Three Oranges Suite as filler) is something like Russian polished in execution and less than spectacular in sound. For the solo alto, the outstanding performance on records remains Lili Chookasian’s (Oxford), though she is not helped by Thomas Schippers’ slapdash approach.

The Candle峡谷 recording has considerable depth and naturalness, with nice instrumental definition. All told, a safe Nevsky recommendation—for those who will be content with a “safe” performance of this cataclysmic, giddily triumphant work. A.C.

What redeemes Gardiner’s excesses in the funeral music is his marvelous performance of the 1694 birthday ode, Come, ye sons of art. I prefer the more incisive string sonorities and the splendidly stylist ornamentation of the earlier King’s College Choir recording (Telefunken 6.41123, now evidently deleted) with David Willcocks and Leonard Marshall.

What redeems Gardiner’s excesses in the funeral music is his marvelous performance of the 1694 birthday ode. Come, ye sons of art. I was no less enthusiastic about the late David Munrow’s Angel recording than Susan T. Sommer was in her August 1977 review, but this new version is if anything better. Gardiner’s orchestra does not use original instruments, and the strings are sometimes just a bit too lush and lacking in rich and affirmative tonal projection. For a feature review, see page 66.

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Wenzel Sedlak (1776-1851) was a clarinetist and hack arranger in Vienna during the first part of the nineteenth century, and he deserves our heartfelt thanks for having made possible one of the most delightful records of this or any other year. Not that his transcriptions ofRossini operas (there are at least eight of them, including the major set numbers as well as the overtures) have any independent merit—but they afford the Netherlands Wind Ensemble a perfect showcase. Few modern “authentic” Rossini performances have so caught the fun of the music, its energy and charm, and this is the added sheen of pleasure of an impeccably tuned wind band, irreproachably together despite the various hazards of ensemble that naturally arise with instruments that “speak” at different speeds.

Sedlak’s arrangements document aspects of Viennese musical life—not only the presence of wind bands (between nine and twelve players) in aristocratic households, but the Rossini craze of the period. The only unfamiliar piece in this repertory is Corradino, an opera first performed under the title Matilde diShaban and slightly better known, if at all, under that title. The excerpts from IlBarbiere, performed in no particular order, include “La colunonia,” “Largo al factotum,” “Zitti, zitti,” and bits of the two finales—plus an anonymous interloder (on the penultimate band), a tune that may be by Rossini but certainly has nothing to do with IlBarbiere. No matter—it’s played as succulently as everything else on the record, which could hardly sound more natural if it were your own resident wind band, right there in your living room.


What a rare pleasure it is these days to encounter a concerto performance that has obviously been meticulously considered and perfected in every detail. One need not agree with everything—although I am wholly convinced by these eloquent statements, even at their most subjective—to discern that conductor and orchestra have worked with the soloist over each balance, rubato, and tempo relationship to achieve an authority and unanimity one seldom hears. The finish of the playing shows up again and again: in the attention that Neumann lavishes on a pertinent woodwind detail while suppressing a string passage that might have made an easier, more immediately arresting effect, in the way that Moravec is given breathing space in which to mold his phrases with strong, assertive nuance. For all the flexibility of tempo, these are not willful or eccentric interpretations. Where necessary, they move with a swift resilience that contrasts all the more effectively with the more ruminative moments. Take the last movement of the Schumann concerto or the lively culmination of the Franck variations: Both are projected with perfectly regulated rhythmic patterns and yet with marvelous elasticity of line.

Moravec’s contours in the Schumann have something of the containment and emotional poise of Dino Lipatti, for whose art he has expressed great admiration, but he is too individual an artist to be an imitator. Indeed, I am even more struck by his evocation of the more intensely declamatory manner of Alfred Cortot. In the Franck, too, Moravec shows himself to be a great stylist, with a masterly and congenial orchestral collaboration. This work has had many excellent modern recordings, but Moravec and Neumann recall the great old Cortot/ Ronald and Gieseking/Mengelberg versions.

Even the side break in the concerto—just before the finale—is well chosen, and far less painful than one might imagine. Supraphon could have avoided this break by placing the Franck before the first movement of the Schumann or squeezing the whole concerto onto a single side, but either of these solutions would have produced a side exceeding half an hour, and one can understand the producer’s reluctance to crowd the sound, which is full, resonant, and wide in dynamic range. These are performances touched by greatness.

Jascha Horenstein
Distinctive gifts in familiar Strauss

PhonographOncerta, Jascha Horenstein, cond. [Charles Gerhardt, prod.] QUINTESSENCE PMC 7051 and PMC 7061, $3.98 each [previously released by Reader’s Digest].


Quintessence already has enriched the invaluable Horenstein discography with several triumphs resurrected from the Reader’s Digest recordings of the Sixties, and now it adds two more that demonstrate that extraordinary maestro’s distinctive interpretive/executional gifts as applied to familiar and relatively unfamiliar Strauss waltzes.

As Horenstein’s admirers could confidently expect, the results are not only immediately straightforward realizations of the scores, but also readings that combine exceptional virility and no lack of lyrical warmth. There are no cuts, of course (and what a joy it is to get the whole long introduction to Wine, Women, and Song), and the conductor avoids both extremes in observing or disregarding the score-indicated repeats. Except for listeners who demand more sensuous or lushly inflated treatments, these versions rank with the best available. No true Strausian can afford to miss either disc, and I hope that Vol. 2 (PMC 7061) will find an even wider audience—above all for my own personal favorite among the entire Viennese-waltz repertoire: the ineffably haunting Where the Lemon Trees Bloom.

Puzzlement: The PMC 7061 jacket credits date 1969 as the recording date for this and the two other Vienna Symphony performances, and 1962 for the two Vienna State Opera Orchestra performances, and, except for occasional sharp-edgedness (which may in fact originate in the Quintessence transfer, judging from reports of earlier releases in the series), the sound is highly satisfactory. So, with the same proviso, is that of PMC 7051 (performed entirely by the Vienna State Opera Orchestra), but surely its December 1972 recording date, while not impossible (Horenstein died in April 1973), must be a misprint for 1962.

The well-validated London Treasury reissue program makes for an interesting comparison (especially in Wine, Women, and Song, here also complete) between Willi Boskovsky’s somewhat more warmly recorded and generally more relaxed—or at least less faultily controlled—readings and those by Horenstein. But, oddly, there is no reference at all to the original release’s prime distinction: It was the 1967 New Year’s Concert program, the first Boskovsky sequel to Clemens Krauss’s three such discs
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Musical America Names Alicia de Larrocha
Musician of the Year

You might think that an artist who had been playing the piano on the world's stages for fifty years would, at this stage of her career, be relatively easy to catch up with. That is emphatically not the case with the vivacious Spanish pianist Alicia de Larrocha, MUSICAL AMERICA's 1978 Musician of the Year, whose touring dates would not permit her to attend award ceremonies until April 25. On that day, HIGH FIDELITY/MUSICAL AMERICA held a reception for her at the New York offices of American Broadcasting Companies, Inc., and the photographs on this and the facing page are representative of the afternoon's highlights.

The presentation: HF editor Leonard Marcus' (above right) opening remarks provoke disparate reactions in, from left, composer Carlos Surinach, MA editor Shirley Fleming, and Carlos Moseley, president of the New York Philharmonic. Fleming (photo at right) presents the award to Alicia de Larrocha. Cradling her plaque (below), De Larrocha charms her audience—as usual. Looking on are Marcus; Leonard Goldenson, chairman of the board of American Broadcasting Companies; Elton Rule, ABC president; and Don Rafael de los Casares, Spanish consul general. Behind Marcus are Avery Fisher and (peering over Goldenson's shoulder) his wife, Jan.

Below, piano manufacturer Henry Steinway (yes, De Larrocha's is) shares a light moment with Carlos Moseley (right).
It was decidedly the Spanish hour—or two: the guest of honor with Surinach and with the consul general.

Peters International’s Pierre Bourdain (far left), under the watchful eye of HF editorial director Robert Clark, gently cajoles Scott Mampe, Philips Records’ classical v.p. Dario Soria (left in photo at right), managing director of the Metropolitan Opera Guild, seems to be demonstrating his conducting technique for Frank Campbell, chief music librarian of the New York Public Library.

Are they matching swallows? Or agreeing to disagree? HF reviewer Dale Harris (far left) with Columbia Masterworks v.p. Marvin Saines. At right, James Frey (left), Deutsche Grammophon’s American chief, indicates that the photographer should “shoot” Saines, as Ronald Wilford, president of Columbia Artists Management, Inc., looks suitably amused.
in the early Fifties—none of the latter currently in print, to our loss. R.D.D.


Here are two additions to the now extensive list of American representations of the superb Kempe/Dresden Strauss series, 1973–75, which is available overseas in fourteen boxes comprising fourteen discs. It's good to have both of them in the budget-priced Seraphim series, and particularly good to have the long-needed near-ideal account of the early Italian Suite—a work inexplicably ill served on records (at least since the Clemens Krauss mono version of c. 1954, available in a London "Treasury reissue, R 23210). Ssurely Kempe's glowingl luminous recorded performance will finally win the mass-public favor that this ingratiating tonal travelogue (more disarmingly mellifluous than even Goldmark's Rustic Wedding) so richly warrants. It was one of the young Strauss's last compositions before he burst the bonds of Mendelssohnian/Brahmsian orthodoxy to strike out sensationally on his own, yet even his later paradigms of colorful orchestral depiction were no more effectively scored than this work.

The other disc couples three familiar favorites (which I hope does not mean that the original European couplings—the Suite from harpsichord pieces by Couperin and the Josephslegende symphonic fragment—will not appear here). Kempe's Deuth and Transfiguration is one of the extremely rare recorded versions that vitalize this grandiloquently bombastic work with genuine dramatic conviction; his Till Eulenspiegel is one of the none-too-frequent readings that capture the tone poem's fairy-tale and humorous qualities, yet without diluting its sonic-spectacular drama. "Salome's Dance" is notably well played and recorded too, but here Kempe is perhaps a bit too restrained for tastes that demand more of the barbaric ferocity Strauss himself undoubtedly intended.

I should note that I find the domestic Aus Italien not significantly inferior sonically to the British EMI edition, but there is a more marked difference where the other works are concerned: The EMI surfaces are quieter, their sonic climaxes slightly more lucidly detailed. The SQ encoding of the Seraphim editions is EMI's custom—back-channel ambience-only type, but it enhances the airy expansiveness of what well may seem ideal stereo recording. R.D.D.

STRAVINSKY: Petrushka; Le Sacre du printemps. For a feature review, see page 70.

VIVALDI: Concertos for Wind and Strings (ed. Hogwood). Christopher Hogwood and Colin Tilney, harpsichord and organ; Academy of St. Martin-in-the-Fields, Neville Marriner, cond. [Chris Hazell, prod.] ARGO ZRG 839, $7.98.

Concerto for Two Oboes, Bassoon, Two Horns, and Violin, in F, R. 569 (with Neil Black and Celia Nicklin, oboes; Martin Gatt, bassoon; Timothy Brown and Roul Davis, horns, Iona Brown, violin). For Oboe, in F, R. 456 (with Black); for Bassoon, in A minor, R. 498 (with Gatt), in C minor, R. 447 (with William Bennett).

VIVALDI: Works with Lute. Konrad Ragosin, lute; Eduard Melkus, violin and viola d’amore; Leonhard Wallisch, cello; Vera Schwarz, harpsichord; Vienna Capella Academica, Eduard Melkus, cond. [Gerd Ploebusch and Andreas Holschneider, prod.] ARCHIV 2533 376, $8.98.


Writing of Weber elsewhere in this issue, I remarked that he was among the first to use color as an important ingredient of orchestral music, but I should have remembered Vivaldi, who was a veritable wizard playing with color.

The first of the concertos, R. 569, on the Argo disc shows this by the very makeup of the solo body: two oboes, two horns, bassoon, and violin. The combinations Vivaldi obtains from these instruments and the string orchestra are extraordinary and are well brought out by the superb performance. The two horn players run around like hares and are as surefooted, and in the warm Siciliana violinist Iona Brown excels, still holding her own when the composer carries her part into the stratosphere. This is an astonishingly modern composition, only the sequencing reminds us that we are still in the baroque.

The Oboe Concerto, R. 456, is also quite advanced. Vivaldi starts with a weighty sonata-like ritornel in unison, but the theme always remains in the orchestra, while the solo oboe soars with a beautiful bleating chant, each section going its own way. The Bassoon Concerto, R. 498, has a magnificently exotic beginning, why, its color and tone suggest that it is something out of Peter Gynt! Vivaldi stays in the bassoon's best register and makes it sing, not clown. Martin Gatt obliges with a Warren, really singing tone, though when needed he can easily break the four-minute mile while never missing a note. In the Flute Concerto, R. 441, everything is raised one or two stories higher and the nimblest of wind instruments is given a genial workout. The performance by William Bennett, with Warren, really singing tone, is an astonishingly modern composition, only the sequencing reminds us that we are still in the baroque.

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Much of what Weber does is fun to hear for any musician sufficiently free of "isms": these clarinet concertos are no exception. They are at times a little shallow, yet in a way also subtle. There is no principle of formal unity in them: The form merely expands without getting deeper, and even the spirit of rivalry that characterizes the concerto is largely absent. But there is a wealth of imagination and, partly because the music has little substance, partly because Vivaldi cannot seem to make up his mind whether to compose a duet or a trio, and also because the performance is tentative. In such a work the continuo harpsichord must lend a steady helping hand, but most of the time it sounds like mice squirming behind the wainscoting.

in that orchestra, but it was either accidental or of secondary importance (except in some scenes in Fidelio). But to Weber—as later to Berlioz—the color scheme, the particular orchestral effect, often appears before the idea, and it is always fascinating to see how the two spheres are ultimately reconciled.

The little Rossini piece that fills out the disc is an obviously doctriled score, and so I will not attempt to criticize it.

Guy Deplus is a real virtuoso, has a well-modulated tone, and appears to have a fine sense for expressive delivery, but he is somewhat hampered by the conducting of Yoav Talmi. This kind of music calls for a more temperamental conductor, and preferably one with operatic experience. The orchestra does its job, and since Weber's orchestration is indestructible everything the orchestra does its job, and since Weber's operatic experience. The orchestra does its job, and since Weber's orchestration is indestructible everything sounds fair enough, but this rhapsodic music needs more freedom and flexibility. Although the clarinet itself is well recorded, the orchestra is not—the tuttis are not well stacked up.

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The recording is spacious, the pressings (at least on my copy) noisy. Transliterated texts are supplied with idiomatic transcriptions.

COMA. Original film soundtrack recording. Composed and conducted by Jerry Goldsmith [Sonyy Burke, prod.] MGM MG 1-5403, $6.98; Tape ** T 2287, $7.98.

The two ends of Jerry Goldsmith's career as a film composer are represented on these three discs.

The score for John Huston's 1962 Freud (Montgomery Clift's next-to-last film) was one of Goldsmith's earliest. Yet this music, although perhaps more suggestive of the id's lugubrious creations than of the man who codified them, has all the markings of a masterpiece. Goldsmith not only applied a number of modern techniques to his idiom, but put them together in a series of well-drawn sequences that absorb the listener with their dark, themessent harmonic miasmata, their slow, hypnotically recurring motifs, and their surrealistic instrumentation (including subtle use of an electronic organ). Note, for instance, the polytonal harp-celesta flute that opens the "Cecile and the Dancer" cut and, in the "Red Tower Street" sequence, the chilling piano osti...
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nato created from an instrumental figure first heard in the title music. As usual, Goldsmith brilliantly deploys the string section to produce gray expanses of tonal space that form the backbone of the musical decor.

It is interesting that both Gregory Rose, in his liner notes for Freud, and director Michael Crichton, in his otherwise revealing comments on the Coma album, trace Goldsmith's style back to Schoenberg, who seems to be credited—or blamed—just about every time dissonance pops up in contemporary music. Freud does have one or two tone-row-ish motifs and a few prominent rising seventh intervals of the type that pervade atonal compositions, but its basic textures have their roots in the music of Bartók, and it is to the latter's Music for Strings, Percussion, and Celesta that the score is closest in spirit.

While Bartókian instrumental textures still show up in Coma, the style has moved another step or two forward to include some of the divisi effects, clusters, and glissandos of more modern works, resulting in a more chaotic overall effect. Particularly intriguing is the manner in which Goldsmith replaces the whole concept of a theme or leitmotiv with a single note—a midrange E flat—and hollow tritones, often heard in echo repetitions, built around that same E flat. This echoed tritone makes unsettling, phantomlike appearances—as in the bizarrely gruesome "Study in Anatomy" sequence.

A second important musical element is the static "hymn gone wrong" that suggests the disquieting impersonality of the monolithic Jefferson Institute. The motif associated with it appears quite frequently, to some extent a comment on the Coma album, trace Goldsmith's style back to Schoenberg, who seems to be credited—or blamed—just about every time dissonance pops up in contemporary music. Freud does have one or two tone-row-ish motifs and a few prominent rising seventh intervals of the type that pervade atonal compositions, but its basic textures have their roots in the music of Bartók, and it is to the latter's Music for Strings, Percussion, and Celesta that the score is closest in spirit.

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of thumps on a prepared piano instead of drums and a mildly chromatic modulation in the theme. Throughout, the music logically has a strongly American flavor, created by folksy syncopations and a wide-open-interval spaciousness in the harmonic textures. Broad choralelike passages in the brass add to this effect.

The otherworldly orientation of films such as Freud and Coma, it seems to me, encourages the type of originality and even experimentation one hears in their scores. But if the 1977 MacArthur lacks their novelty, it more than makes up with its depth of expression and with the subtlety of its musical effects. In the "Tunnel" sequence, for instance, the percussion figure in the prepared piano is joined by a harp motif, then by a trumpet theme, and eventually by the strings (those essential Goldsmith strings!) to create a dirgelike lament of increasing intensity.

As in most MCA film-music albums I have heard, the sound tends toward the shrill, but not enough really to detract from the overall sonic quality, which is quite decent.

R.S.B.

THE FURY. Original film soundtrack recording. Composed by John Williams; London Symphony Orchestra, John Williams, cond. ARISTA AB 4175, $7.98.

John Williams' score for Brian de Palma's The Fury rarely lets the viewer escape from the mood of surreal gloom created, over red-on-black visuals, by the slow minor-key waltz, introduced on solo winds over a somber harp figure, that gradually expands to draw in the forces of a large orchestra in a magnificent swell that has the tragic grandeur of a Mahler symphony.

Much of the score has a broadly conceived, symphonic continuity that, along with a strongly romantic intensity of expression, links it stylistically with the work of Erich Korngold. Unlike Maurice Jarre, who has attempted the same thing, Williams has devised an original musical language that at least partially restores, without a hint of pastiche or insincerity, the classic Hollywood approach to scoring. Long developed themes and big climaxes replace the more minimalist tendencies used so effectively in many modern film scores. Whether or not The Fury needed such a large-scale, old-fashioned accompaniment remains in question, but in this instance I suspect the music will outlive the film. It stands beautifully on its own on this splendidly recorded disc, which features exceptional playing from the London Symphony.

The disc includes a final cut, "Epilogue," that I do not recall from the film. In it Williams has taken the main theme and transformed it into a moving elegy for string orchestra.

Certainly Williams' best effort since Images, The Fury joins Jerry Goldsmith's Coma as one of 1978's outstanding film scores. We are fortunate to have it on a recording that has been produced with taste and utmost thoughtfulness. R.S.B.
Festivo now; Privilege, Seraphim to come. The musiccassette label debuts continue unabated. I have in hand part of the twenty-title inaugural release of Philips' new midpriced Festivo series, to be followed shortly by a comparable initial release for Deutsche Grammophon's Privilege line, and Angel has announced a blockbuster fifty-program list to launch its new budget-priced Seraphim tape catalog.

The latter, coming hard on the heels of last month's Odyssey cassette debut, similarly features—mainly but not exclusively—recordings that date back some years yet remain of timeless significance. The initial release includes seven by Leopold Stokowski, four by Malcolm Sargent, and three by Thomas Beecham, and there are two complete operas: Bellini's La Sonnambula with Maria Callas and Puccini's La Bohème with Victoria de los Angeles and Jussi Björling. At least some of the Seraphims should be available for comment next month.

The Festivo and Privilege series, both list-priced at $6.98 (and both, like the Seraphim, in Dolby), give us material that has not been available in this country in disc or tape editions. Indeed, nearly half of the Festivo titles are new to the domestic catalog. Most of those I've received so far (which include—glory be!—program notes) stem from the Sixties, but there are a couple of exceptions: a 1977 collection of Wagner overtures by Silvio Varviso and the Dresden State Orchestra (Festivo 7310 030) and the 1972 coupling of Mozart's Prague and Jupiter Symphonies by Colin Davis and the BBC Symphony (7310 087). Varviso's Wagner readings are perhaps conventionally Romantic, with only the Flying Dutchman Overture given individual distinction, but the recorded sonics are outstanding even today for their rich warmth and solid impact. Davis' Mozart symphonies—also sonically notable, in this case for their transparency—are exceptional interpretations of their almost stern straightforwardness and last control. It is a most welcome contrast to the Romanticized approach of so many other, less austere conductors.

Among the milestone older recordings, there are the 1963 Davis/London Symphony version of the Berlioz Symphonie fantastique (7310 031), which was superseded—but by no means displaced—by his 1974 Amsterdam Concertgebouw remake; and the 1963 Haitink/Concertgebouw coupling, appearing for the first time in the U.S., of Dvořák's Eighth Symphony and three Op. 46 Slavonic Dances (7310 078). Of course, it will be no surprise to Haitink fans that this endearingly songful symphony evokes the conductor's warmest empathy as well as his invariable magisterial skill.

Some quidnunc's quiddities. In music as in life one's interests and affections aren't always determined by the generally accepted standards of what's good or great. Often we're fascinated by the odd, different, eccentrically individual—the musical equivalents of people who are considered to be uncommon characters. Some current musiccassettes (all in Dolby, all $7.95 or $7.98 each unless otherwise noted), for me, fall into this slightly or decidedly oddball category.

- Angel 4XS 37499 presents a perhaps anachronistic but certainly piquant "Renaissance Suite" arranged by David Munrow, with his Early Music Consort, as the film score of Joel Santini's La Course en tête. I don't know how well it suits the movie, but all by itself it's a glorious divertissement featuring the raw timbres of old instruments in a bouillabaisse of dances and other pieces by the likes of Hassler, Macque, Phalèse, Praetorius, and Susato plus others by various anonymous composers, including the one who first devised the Folies d'Espagne tune on which Corelli et al. composed variations.

- Columbia MT 34201 incongruously couples that nearly forgotten triumph of exotic modernism, Dukas's La Pétris, with the austereley muscular Third Symphony by Roussel. Both are performed by Pierre Boulez and the New York Philharmonic, the former done as a glowing triumph, the symphively rather heavy-handedly (but it is the only available taping of this distinctive work).

- Musical Heritage MHC 5699 ($6.95 list; $4.95 to MHS members) features unfamiliar but gifted French players (soloists Gilbert Petit and Marc Ullrich with "La Follia" Ensemble) in five two-trumpet concerted works. They range from the relatively familiar Vivaldi P. 75 and Manfredini D major Concertos through the seldom-heard G. M. Bononcini Op. 3 Sinfonia decima a 7 and Legrenzi Op. 8 Sonata La Buscha to an arrangement of a sonata (originally for organ with trumpet and oboe) by the obscure Giuseppe Carcascio, whose exact seventeenth-century dates are unknown.

- Philips 7300 568 ($8.98) is a second volume of Vivaldi oboe concertos (Ryom catalog numbers 451, 457, 461, 453, and 455) by the matchless Heinz Holliger with I Musici: sheer joy in every respect.

- RCA Red Seal ARK 1-2449 is offbeat Stravinskiana, combining two originals (the 1953 Septet and 1919 Three Clarinet Pieces) with three of the composer's own transcriptions: a violin/clarinet/piano L'Histoire du soldat Suite, cello/piano Pulcinella Suite, and violin/piano Pastorale. The vividly closeup recorded performances are by Tashi and friends, starring clarinetist Richard Stoltzman and pianist Peter Serkin.

Open-reel expansions and consolidations. As the Barclay-Crocker specialists continue indefatigably their Musical Heritage, Unicorn, and Vanguard reel series, they also are preparing new ones for the fall season: the first reel representations of the Argo and Oiseau-Lyre catalogs. Meanwhile, I've been keenly relishing three new Unicorn/B-C releases, especially the D 0309 coupling of Martinů's provocatively enigmatic Sixth Symphony (Fantaisies symphoniques) with the delightfully Haydnesque Schubertian, even prematurely Brahmsian Symphony in D by Martinů's nineteenth-century compatriot, Jan Vrček. Both these first tapings are arrestingly played by the New Philharmonia under Michael Bialouski, and realistically recorded by Bob Auger.

D 0239 couples the finest modern and classical clarinet concertos—Nielsen's and Mozart's—in distinctive versions by John McCaw with the New Philharmonia under Raymond Leppard, while D 0233 reveals novel, disarmingly understated chamber music faces of Ravel's elegant Tombeau de Couperin and Stravinsky's roguish Pulcinella Suite by the London Chamber Players led by Yuval Zaliouk. These normal-length reels are $7.95 each, by mail order only from Barclay-Crocker, 11 Broadway, New York, New York 10004.

Incidentally, I erred last May with the price of the double-play reel (K 0326) of Nielsen's Symphonies Nos. 3 and 6: It should be $14.95.
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Listen to a system with one name: a dream system, only at an Optonica dealer.
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The twin power meters are fast-rise, peak delay—they can track even the briefest of transient bursts. Plus they can respond to levels from 1mW to 316W (into eight ohms).

Real Life Rated. The specifications of the individual components of the CA-2010 are superior to many separates. Individual specifications alone, however, can't possibly reflect actual in-system performance. That's why Yamaha measures overall performance from phono in to speaker out, rather than at designated points along the signal path. Furthermore, we measure noise and distortion together over a broad output range, rather than individually at the optimum output.

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Jerry Wexler: Producer with a Fan’s Passion
by Sam Sutherland

On a bleak, sunless afternoon, Jerry Wexler sits comfortably in the shadows of a recording studio control room, listening to the playback of a vocal take. As the tape stops, he leans over and speaks softly into the talk-back mike that links him to the singer. Although he has just two hours left in which to complete two more songs, he discusses the performance at hand in a calm, reassuring tone. He questions the pitch of one line, approves the feel but not the scan- of another, and asks for suggestions for revising the phrasing of a third. Long before his criticism can hint at impatience, he lightens the mood with an affectionate, appropriately musical joke. This triggers delighted giggles from the singer, though the reference to late ’40s R&B vocalist Al Hibbler baffles the two young engineers seated beside him at the recording console.

The singer is Etta James, an ebullient rhythm and blues stylist whose own career stretches back, like Wexler’s, to the seminal urban blues scene of the late
'40s and early '50s and the birth of rock & roll. But if she and her producer have covered much of the same musical territory, they've done so via very different routes. Wexler not only has been successful as a record company executive, but his two-decade track record as a producer serves as a virtual roadmap of American styles. James's life, on the other hand, reads like a fevered scriptwriter's summation of the blues' darkest side. Her '50s and '60s successes have long since been obscured by a personal and legal tangle that began with the gradual decline of Chess Records and worsened with her own harrowing addiction to drugs. Two mid-'70s comeback attempts failed, and the assistance of her friend Wexler—who produced several unreleased sides—was short-circuited by another label's hit with the very song Wexler hoped would launch her again.

This time, with no dire coincidences or legal hobbles intervening, both producer and singer are clearly enjoying the sessions. Freed of past contractual commitments and her habit, James is radiant, showing few signs of her stormy life. As she listens to Wexler's vision of the song they're working on, her expression is a combination of childlike trust and professional concentration. Her confidence in him says as much about the producer's reputation among his performing peers as it does about her own resilience.

For the next twenty minutes, he guides her through several verses and a bridge. He punctuates over earlier rough spots but never lets overall feel take second place to cosmetic precision. He respects James's instinctive vitality but monitors the critical balance between passion and technique. Ninety minutes later, singer, producer, and pianist are ready to leave with three vocals wrapped.

Like most of the projects Wexler has been involved with over the past fifteen years, the James LP, "Deep in the Night," took comparatively little studio time. While other producers will spend months and six-figure budgets assembling an album, total time on a Wexler production, from basic tracks to mastering, is seldom more than a few weeks. Some of his earliest hits were cut in a single take, but, on the strength of the finished records, few can accuse him of rushing his players. "Maybe I don't cut hits, but I cut 'em quick," he says playfully, sitting in a Beverly Hills hotel suite later. "Like Gene Sarazen. He used to walk up to the golf ball, lay down his club, and hit it. He used to say, 'Miss 'em quick. That's what I believe in.'"

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In his late fifties, Wexler easily traverses generational and cultural boundaries. His salt-and-pepper beard, craggy grin, and steel-rimmed glasses reinforce a patriarchal aura, but his energy and acute awareness of contemporary pop styles easily match those of label executives half his age. His conversation is filled with anecdotes drawn from a long, lively career. Yet, in an industry where jaded insouciance is often mistaken for experience, Wexler cues up a new song by an unknown writer with fanlike enthusiasm. Which is as it should be.

His early interest in jazz, and subsequently in black culture, led him to the fringes of the music community in the early '40s. As a trade writer for Billboard he gained a knowledge of the business end, yet when he accepted an offer to join Atlantic Records in 1953 (after an interim stint with Big 3 publishers), his approach to marketing music was still shaped by a fan's passion.

His initial role among the label's seven full-time staffers was primarily promotion and a&r—a kind of administrative jack-of-all-trades. But, like cofounders Herb Abramson and Ahmet Ertegun, Wexler quickly moved into the studio to help cut records as well as promote them. Between 1953 and 1975, when he resigned from Atlantic, the label grew from a feisty independent to an international giant. That this growth made it the most successful of the '50s r&b independents was clearly the result of Wexler's and Ertegun's wise balance between aggressive promotion and creative involvement.

Trying to fully index his Atlantic years is complicated. Like blues collectors and a handful of recording executives before him, Wexler moved beyond the company's New York base to investigate southern music firsthand. Unlike his predecessors, he neither collected performances in a documentary style nor im-ported artists to New York. Instead, he used southern studios and helped to build local styles in the process. "I can find anything," he explains today. "I found Memphis, and I found Muscle Shoals." Atlantic's strong association with Stax Records and Wexler's own production work with Wilson Pickett and Aretha Franklin (among others) verify his claim.

Yet the label's increasing size brought with it greater deskbound responsibilities, and Wexler longed to concentrate more on making records. "I used to be the chief administrator. Then, in '68, I moved to Florida and decided to soft-pedal it. The balance went over toward production and away from administration, which is what I wanted." He also got Miami's Criteria Studios off the ground by bringing it
The Wexler aesthetic rub: recording New Orleanian Allen Toussaint (above) with L.A. and New York sessionmen

a series of projects—both his own and others—and convincing Atlantic's original engineer, producer Tom Dowd, to relocate to Florida. Yet working there, and later in New York, Nashville, and Los Angeles, he continued to feel the conflict with executive duties: "I didn't really want to do administrative work any more, so in 1975 I resigned from the company, and the arrangement left me free to work with anyone I wanted in the Warner group. Then Mo Ostin [Warner's chairman] informed me that I was going to waste and that he could use me, so would I become the 'Man in the East.' And so, that's what I'm doing now."

Officially, Wexler's post is a senior vice presidency with Warner Bros. Records, based in New York. In fact, though, he is still able to take any projects Warner Bros. declines elsewhere, and his various recording chores over the past year have led him to studios in Los Angeles and New Orleans. That recent renewed visibility as a producer coupled with projects that involve veteran r&b artists like James, Allen Toussaint, and the Staple Singers might suggest a conscious return to his triumphant mid-'60s production style. Yet he denies such a goal, asserting that his work has long balanced black styles with rock, country, and pop. In the Sixties his work with Pickett, Franklin, and the Stax roster was augmented by albums with Dusty Springfield ("Dusty in Memphis" is a classic example of his production style and song sense), Delaney and Bonnie, Ronnie Hawkins, and the late Duane Allman—whom Wexler discovered as a session guitarist. And in the Seventies he similarly focused on progressive country and southern rock.

In fact the body of his '60s work for Atlantic refined an approach that was seldom puristic. Whether producing sessions himself or overseeing liaisons between artists and producers he had chosen, Wexler modified basic ensemble styles with instrumental elements and production effects from disparate sources. He moved his sessions down to Memphis and Muscle Shoals to tap their distinctive studio ensembles for basic tracks. But to these he frequently added outside soloists, and, from the Sixties on, horn, string, and vocal sweetening. That strategy appeared more conservative than it really was because of the contrast between the spontaneity of the session band's head arrangements and the architectural formalism of other contemporary soul records being cut in New York and Detroit.

For his current work Wexler has had to abandon the practice of using existing ensembles since the once-common local session bands have virtually disappeared. Both the James and Toussaint LPs were recorded in Los Angeles, rather than James's original Chicago milieu or Toussaint's New Orleans environs. "I couldn't keep these bands working," he says sadly. "There are no more set rhythm sections in the U.S. ex-
cept for the Muscle Shoals Sound, and another one I heard floating around Mississippi. You can't keep
them together unless you give them enough work to play every day.

Yet Wexler doesn't interpret the decline of local bands as the knell for individual and regional styles. "The individual musicians are still floating around. The regional thing is there. When you bring a musician from another place in, that's very good, because it sets up what I call the 'aesthetic rub.'" His work on the recent Toussaint record provides a graphic illustration of that principle. He took the veteran songwriter, arranger, and producer—whose work has earned him a special niche as a definitive New Orleans stylist—to Los Angeles for recording, and, instead of familiar Delta musicians, assembled a studio band of top L.A. and New York players. "We decided we were going to change everything—the musicians, the studio—and get away from the New Orleans thing, which I love." (The last qualification is hardly gratuitous, as witnessed by his production of the soundtrack for Louis Malle's last film, Pretty Baby—a primer of the ragtime and jazz styles of the film's 1917 setting.)

He describes his producer's goal as "serving the artist," and distinguishes his work from what he perceives are the major alternatives—"the documentary approach" and "the studio confection." He defends his preference by simply saying, "I think it has yielded a long string of artists with durability. . . . We didn't create these artists, we just perceived them. Everyone from Chuck Willis to Ray Charles or Aretha Franklin. But James doesn't feel her earthy, often raucously sensual style has been threatened.

Wexler tends to view the material's character in terms of its similarities, rather than differences. Take it to the Limit, he notes, isn't a country/rock song. "I knew right away that it was gospel: the chord changes, the layout, the meter, the build, the repetitive hook." His arrangement includes a vivid gospel choir, soaring horn charts, and Richard Tee's richly gospel-edged acoustic piano part. "I can't go by what's modish. I have to go by what the record calls for. In other words, suppose I did this with strings, and suppose I used the Eagles to sing background vocals, which was an idea at the time. It would have been wrong." James theorizes that Wexler's real perspective behind "Deep in the Night" may have been gospel. "I think he's always secretly wanted to make gospel records," she asserts, pointing to his long admiration for the genre, as well as to previous successes with singers forged by the church—especially in the case of Aretha Franklin. But James doesn't feel her earthy, often raucously sensual style has been threatened.

Wexler is committed to no single line of inquiry for future projects. From Toussaint's album of originals, through to interpretive LPs by James and the Staples, along with the Pretty Baby soundtrack, he has devoted much of the past year to southern jazz and blues sources. More recently, though, he has taken over production for Tony Orlando, a pop singer whose own r&b past has been eclipsed by more mainstream elements. And at least one pivotal '60s rock hero—whose name Wexler requests I keep off the record—is interested in his help in entering a new phase of studio work. He can joke that he has as many white southern red-neck friends as old blues contacts. He can also note without apology that his first master acquisition for Warners was a disco album by European vocalist Madleen Kane—something far removed from his usual métier.

Then there are unsung rock and blues players, some recording for small, esoteric labels, some without contracts, that Wexler is eyeing. Add his ambition to apply the scrupulous accuracy of Pretty Baby's source music to other films, and it appears obvious that Wexler plans to keep up his "aesthetic rub."
There were a couple of things that bothered me. Unless I used -40 dB output, the unit was quite noisy with my amplifier. Although there is plenty of gain even at -40 dB and although the tape-loop format is inherently noisier than an electronic echo, I didn't like using the extreme setting to get a satisfactory sound. Also, the power switch automatically sets the tape in motion between the capstan and the dual pinch rollers. A performer might want to keep the mechanism on for a long time, so it would seem to be easier on the tape, heads, and pinch rollers for the transport to engage and the tape to move only when necessary.

I noticed that the high-frequency response of the system falls off drastically after the first repetition. And when echo repeat is wide open, the device distorts rather freely and strangely—a mixed blessing, for this could be useful for some (very) special effects. In no case, however, even with echo volume full up, was I able to get the repeated signal to come back at the level of the initial signal, so the echo effect will always be lower in volume.

The MX-201 requires 100-117 volts AC. It is relatively lightweight and comes with a durable case with a carrying handle for portability. The tape transport is protected by a heavy plastic cover (removable by turning two screws), and the front panel is recessed to shield the controls. Despite its few problems, the Multi Echo is certainly worthy of your attention. Manufacturer's suggested retail price is $589.50.
The Evolution of a Home Studio, or How the 'I Need More Stuff' Syndrome Changed My Life

by Jeff Baxter

I first started getting into multitrack recording at home in 1970, when I moved to Los Angeles to work on Steely Dan’s first album. I found myself a small apartment in Hollywood, and, as I began to get more and more involved in the studio-musician scene, the idea of doing homework for sessions seemed like a good one. Not only would I be able to practice, and to try out several different versions of, say, a lead guitar solo over the tracks already laid down at the studio, but I could also record two or three different approaches for the producer to choose from, thereby lessening the time/cost pressure of a commercial studio. It gave me a better chance to become acquainted with the material and ultimately to come up with a better performance. The producer got exactly what he wanted without killing his budget.

But “homework” wasn’t the only thing. Having been in and out of so many studios, I was also becoming interested in the technology. The more familiar I became with it, the more capable I felt of overseeing the entire process myself. And I have to tell you, it’s great. Being able to get up in the middle of the night and put a musical idea on tape is a remarkable convenience. But that’s not the half of it. How about doing an acoustic guitar overdub while floating in the middle of the swimming pool (wireless microphone, of course) or calling up your friends to have a background vocals party.

Jeff Baxter is a guitarist with the Doobie Brothers and has played on the albums of Barbra Streisand, Dolly Parton, Burton Cummings, and Carly Simon, among many others.

The author between his monitors (usually the horn players’ spot)
I started out in my small two-bedroom apartment with a cassette machine and a 7 1/2-ips quarter-track recorder of dubious quality. At first I tried practicing my part using the open-reel for playback. But what I really needed was a machine that could record what I was practicing over what had been recorded in the studio. So I went out and bought my first four-track with sync—a Teac 3340S. Listening to something I had played without having my attention diverted by the actual playing itself enabled me to be constructively self-critical—the self-sufficient artist/engineer/producer concept.

Somehow, out of all this came the realization that the amount of objectivity needed in this situation varies directly with the amount of control one has over it. So I added a mixer with six inputs and four outputs (Teac Model 2), a good 15-ips quarter-track deck that would accommodate the 10-inch reels from the studio (Teac 2340S), and a couple of good hundred-dollar microphones (Shure SM-56s). I plugged the whole thing into my hi-fi, a quad unit with the capability for monitoring all four channels (Sansui QR-4500), and got into it.

One of the first things I did was to try out on the...
was built with unfinished pine two-by-fours

mixer all possible permutations and combinations of every signal-processing device for guitar that I owned. I plugged in a phase shifter on the vocal track, put wah-wah on the voice, and tried a Mu-tron envelope follower on the drums. And then I threw spring echo and tape-delay echo on everything, as well as trying

Combining the right gizmo with the right whatsit to produce a hitherto unheard of sound or color is a real art.

MXR limiters and compressors on drums and voice. A valuable axiom arose from these experiences: Try everything. Combining the right gizmo with the right whatsit to produce a hitherto unheard of sound or color is a real art.

Anyway, here I was in my little apartment with my little four-track studio occupying half of the guest room. I was not only enjoying listening to the playback of my efforts, but I was also getting more and more involved in putting everything together technically. It was then that I became afflicted with the familiar curse of the home recordist: the "I need more stuff" syndrome. And, in between trips to the audio store to eye that new equalizer in the window, I stumbled across the second curse: the "we're trying to get some sleep up here on the second floor" problem.

There is a lot that can be done in this area. You can, of course, insulate your studio against sound leakage with egg cartons, old blankets, and leftover carpeting, to name a few materials. Or you can call in the professionals. But if you live in an apartment situation, I would suggest you learn to record and mix with a fair degree of accuracy using a good set of headphones. This will also get you more intimately involved with your equipment. The better you know it, the better you'll know what to expect from it on tape, and you won't have to play back through your speaker system more than once or twice. For example, if you know your bass guitar sounds good plugged in a certain way on your equipment, it should sound good no matter what you use to monitor it with. It's like flying an aircraft using instruments only. You begin to trust your technical ability as much as your eyes (or ears, in this case). Also, by using headphones you can spend the money you allotted for soundproofing materials to upgrade your equipment instead.

By being restricted in the amount of noise (I use that word in its most innocuous sense) you can make, you'll also learn how to get an instrument on tape
without the use of a microphone—i.e., direct. With the exception of drums, just about every instrument can be recorded this way. All electric guitars, basses, keyboards, and synthesizers can be plugged directly into the mixer or tape machine. You'll have to use a microphone and/or pickups on acoustic pianos and guitars, but capturing the sound of a single instrument is a much smaller problem than dealing with a full band. And, while a rhythm machine (or drum machine as it is sometimes known) doesn't have as much soul as a real drummer, it's a lot quieter and can be recorded direct as well. It will also keep you in strict tempo, which is particularly important if you're a one-man operation.

But there comes a time when no matter how good you are at mixing and recording with headphones, no matter how fine your direct sound, and no matter how many ways you have figured out to use your drum machine, your space and noise limitations will get the best of you. You decide to devote your entire guest room to recording purposes only. This is usually accompanied by a particularly virulent attack of the "I need more stuff" syndrome and, if you're lucky, it happens just about the time you were planning to move from an apartment to a house anyway.

I left Hollywood and moved into a house. I discovered that the only room that wasn't occupied was the two-car garage. The ceiling had been lowered and fluorescent lights installed by the previous owner, and the walls were covered with Masonite paneling, but the floor was finished concrete. Having ascertained that the walls were fairly well insulated, I went to work on soundproofing the ceiling. Then I covered the walls and floor with rubber matting and thick shag carpeting. Because the room was fairly small, I wanted to make it as dead as possible for isolation purposes. Wooden panels could always be added later to liven it up with reflected sound.

Once I had successfully isolated the two-car garage-cum-studio from the world, the next step was upgrading my equipment. I purchased an eight-track 1/2-inch machine (Otari MX-5050), an 8-in 8-out mixer

There is no control booth . . . I am a guitar player and I like to be in the room where the music is being recorded.

(Teac Tascam Model 5, modified), some reverberation (an Orban/Parasound mono spring delay device and an AKG BX-10), more and better microphones (2 AKG-414s, 2 Electro-Voice RE-115s, 2 Sennheiser 441s and more Shure SM-56s for the drums), a pair of high-quality studio monitors (modified JBL 4320s with an LE-15B bass driver), a biamp system for them (a BGW 100 in the top, BGW 750A on the bottom, with an active JBL crossover), a couple of good equalizers (2 SAE stereo graphic half-octave equalizers, 2 Lang PEQ-2 full range equalizers, 4 ADI 1500s), a few limiters (2 Spectrasonics Model 610 Complimiters and an Eventide Harmonizer), a lot of shielded wire, and plenty of connectors.

In order to integrate all of these components, I asked some friends to help me design a console for the mixer and the various auxiliary sound-processing devices. The entire assembly was constructed of unfinished pine wood two-by-fours, which were not only resistant to damage, but—since my friends happened to be architects—turned out to be aesthetically pleasing as well as functional. We built a similar edifice (bearing an uncanny resemblance to the IBM building in Hartford, Conn.) to contain the three tape machines (the Teac 3340S, the Otari, and the Teac A-6010) and the electronics for the eight-track. It too was made out of pine two-by-fours, and the space between the supports was designed to correspond to standard rack-mount dimensions. Both structures have plenty of storage room for extra components, tape, and microphones.

I spent several days and nights wiring everything together. With the use of a real-time analyzer, a turn-
The keyboards: a Wurlitzer electric piano, and a Kustom organ with a Concert Spectrum

Inside the drum booth

I finally had a multitrack studio of my own. I continued to work up arrangements and parts for the Doobies and other bands and producers. As my recording technique improved and I learned more about the room, I began to get recordings that sounded a lot more like records than home tapes. So I invited some musicians over to play some demo sessions. We did the demos for Rosie Carter Nicks's (Johnny Cash's stepdaughter) first LP, and produced some preliminary overdubs for the Paul Bliss Band—a project I'm involved in for Columbia records. By this time I had put together a good cue system for the music, found that an amplifier sounded best miked in my living room, that the sauna made a terrific vocal booth, learned that an okay microphone sounds okay on tape and a great microphone sounds great, added twelve tracks worth of noise reduction, built the boxes full of switches and input jacks that would do the things nobody else's boxes would do, bought a good coffee machine, and was glad I sealed the concrete before the rains came.

But the ultimate thrill came when I got to record the basic tracks for a real record by friend Elliott Randall. It was during this time that I came to the most important realization about a home studio: That yours has something that no one else's does. And if you've got high quality equipment that you're well acquainted with, some technical ability, and a good deal of patience, you can get impressive results. Perhaps most importantly, there's not the pressure of $150-an-hour eight-track studio time. Which is why we call our former two-car garage Casual Sound.
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Charlie Parker's Dial Sessions

by John S. Wilson


Charlie Parker. Original sessions produced by Ross Russell. Warner Bros. 6BS 3159, $34.95 (six discs).

With the gathering together of Charlie Parker's Dial sessions on Warner Bros., what might be considered his full recorded repertory is now available. The ground-breaking period of 1944-45, and the subsequent sides of 1947-48 were reissued in Arista's Savoy series (SJL 1107, SJL 1108, SJL 2201), and the Norman Granz period, 1948-51, is represented on a pair of Verve two-disc reissues (VE2 2501 and VE2 2512).

The Dial recordings fill in the remaining years, coinciding with the time preceding and immediately following his mental breakdown and seven-month stay at Camarillo State Hospital. They have been packaged in two sets: a two-disc "The Very Best of Bird," which includes one take of almost all his Dial releases, and a six-disc limited edition, "Charlie Parker." The latter is all-inclusive, with alternate takes of everything he recorded under his own name along with three sides released under the names of Dizzy Gillespie, Howard McGhee, and Red Norvo. Both sets have extensive, in-depth notes by Ross Russell, who owned Dial Records and produced the original recordings.

Despite his deteriorated physical and mental condition, Parker was in good form for most of these sessions. The one exception was the notorious one on July 29, 1946, after which he set fire to his hotel room and wound up at Camarillo. In deference to his dislike of this session three of its four takes—Lover Man, The Gypsy and Be-bop—are omitted from the two-disc set. (On Lover Man he appears barely able to get into the first chorus—Russell apparently had to hold him up to keep him from spinning away from the microphone.) The fourth, Max Making Wax, is included, although Russell does not say why. All four cuts appear in the other set.

The sessions on three sides of "The Very Best of Bird" are presented in chronological order, but for some reason the collection of ballads on the first side are not. This not only throws off the aural progression, but starts the set on a monotonous, unpromising note that might discourage some listeners from going any farther. Parker plays beautifully on these ballads—he was an amazingly consistent performer, a complete master of flow and spacing. But the steady diet of both slow tempos and Miles Davis' watery, vague trumpet make for less than enlivening listening.

Davis is a constant problem on Parker's 1945-48 Savoy and Dial records. He was still trying unsuccessfully to emulate Gillespie's virtuosity and had not yet arrived at the sparse, economic style that sat best with his capabilities. So he turns up on side after side, mumbling and fumbling through solos that sound all the more inept within their contexts: The flair and ease of the playing around him comes primarily from Parker, but also from Duke Jordan, Tommy Potter, and Max Roach on the Dials, Bud Powell and John Lewis on the Savoyos. The drag that Davis puts on the Dials is made vividly evident when, late on Side 2 of "The Very Best," McGhee bursts onto the scene, playing in a dazzling Gillespie-like style that continues brilliantly through four pieces on Side 3. But Davis improved as the years went on and, by Side 4 (the last of the Dial sessions—October through December of 1947), he begins to sound more secure with The Hymn, Klact-oveeseds-tene, and Drifting on a Reed. The last session (December 17) adds J. J. Johnson to the Parker group, and he plays in a crisp, staccato manner with the felicity that was later lost when his style became more important than its content.

The six-disc set includes extra takes (which will be of interest primarily to hardcore Parkerites who want every last note); the July 29 session; Parker as a featured sideman with Gillespie, Norvo, and McGhee; two sides featuring singer Earl Coleman, with both Erroll Garner and Parker as sidemen; and Parker's Home Cooking, Quasimodo, and Crazology. One can understand the omission of Home Cooking from the other set—
none of its three takes came together successfully. Quasimodo is pleasant but unimportant. Crazeology, however, is superb Parker, excellently recorded and supplemented by fine Jordan and Johnson solos. Even Miles is good. It could have made "The Very Best" package a little more definitive than it is.


I'm beginning to suspect the Alpha Band is a victim of that cruelty of fates: critical caprice. Their records and, to a lesser extent, live shows have attested to a steadily maturing style, yet the longer the interval since their first association with Bob Dylan and Rolling Thunder, the less attention they garner. "The Statue Makers of Hollywood" isn't being talked about, lionized, or played to death on the radio, and that's a shame. It's a screwball masterpiece, at once more focused and intriguingly opaque than either of the Alphans' first two LPs, due to the songwriting domination of T-Bone Burnett. Burnett has narrowed his already eccentric point of view to a fevered, Old Testament preoccupation with sin, as expressed through prosaic storytelling (on "Tick Tock") and verbatim fire-and-brimstone condemnation (on "Rich Man, Mighty Man and Perverse Generation"). But what seems obsessive on paper proves delightfully otherwise by the time it reaches your living-room speakers.

Burnett, Steven Soles, and David Mansfield, the band's creative core, frame their arch babble with an erotic eclecticism that is often at odds with the stern message. The songs are surrounded by a surreal lushness created by languid dobro, Eastern percussion, pantheistic violin solos that somehow meld conservatory and hoedown, thundering pangan chants, and Burnett's poker-faced singing. Mansfield's genuine virtuosity on a wide array of string instruments is central to the record's cleanly rendered settings, which range from the sparseness of chamber ensemble to a more orchestral framework. The latter is thickened with crack-of-doom gospel choirs (led by André Crouch) and horn arrangements by Darrell Leonard that switch from militant harmonies to polyphonic chaos where appropriate to the Alpha Band's dark designs.

Steven Soles also turns in two characteristically unaffected love songs that nod obligingly in the direction of Burnett's preoccupation with God on High. In any other commercially ambitious band, Soles's sweet tenor might be given greater prominence, but he apparently defers to Burnett's more severe vocal presence. That's both an act of faith in the band's maverick style and another demonstration of good taste.


Salsa addicts are fond of complaining that the Fania All-Stars used to be a great salsa group, until they sold out and got awful. In fact, they never were state of the art. They were a loud, sometimes cumbersome big band just right for blowing out the back wall of Madison Square Garden. And when Fania Records decided to go for crossover, as a trimmed-down version that was essentially a rhythm section, they produced a ghostly first album and a rather effective second one.

The current edition of the All-Stars, augmented by other good Latin musicians and some Anglo guests (Maynard Ferguson, Hubert Laws, David Sanborn, Eric Gale, Joe Caro, and Jay Berliner), interlards easy-listening disco music with various varieties of salsa. Like its predecessors, "Spanish Fever" is frankly commercial. Much of it is also pretty good.

The disco tracks are no more than efficiently glib: The title cut is Latin camp along the lines of Santa Esmeralda 2's "House of the Rising Sun," with flamenco guitar and general olé, Space Machine is straightforward dance-o-mat. Your Sereneness, a sentimental mood piece, is redeemed by the contrast between Laws's mellow and nostalgic flute and Sanborn's sharp-toned, melancholy solo.

So far, so harmless, if more than a little bland. But that's very far from being all. The second track on Side 1, a city-streets strutter (in the classic, Cuban son montuno rhythm) called "Que Pasa?" blends two-language salsa choral singing and Nicky Marrero's timbales with Gale's urbane jazz/rock guitar, Sanborn's sub-bop, a touch of bugalu, and a lick of reggae. The flip side is virtually pure salsa. It opens with Afro-Cuban chanting and percussion, triumphant Newyorican (New York/Puerto Rican) brass, and Cuban piano on "Coro Miyare." It then moves into another bilingual son montuno, titled "Donde," which is set off by subtle Spanish-tinged acoustic guitar from Gale. Two numbers punch it home, performed by leading young salsa singers—Ismael Miranda's "Te Pareces a Ud" and Ruben Blades's "Sin Tu Carino." The latter is notable for fine (uncredited—hiss!) piano by Papo Lucca, whose jazz/Cuban solo is wrought-iron flash.

The same salsa freaks who accuse the All-Stars of apostasy constantly complain that The Music doesn't get national recognition. But Ray Barretto's Latinized funk on Atlantic didn't do it, and Eddie Palmieri has only recently made good on his year-old Epic contract. So far, the All-Stars are the only group to get anything resembling the New York Latin sound "out there." Were it not for them, that huge space between New York and San Francisco would still be one vast Peoria for salsa.


Perhaps because their platinum record sales are generated everywhere except New York and L.A., perhaps because they supply no grist for the rock gossip mill, perhaps because they play all out basic rock & roll without any specific tags, Foghat is one of the most critically ignored bands on the scene. Occasionally the silence is broken by a passing putdown, like "high school boogie band." Well, Foghat certainly boogies, and high schoolers certainly like it. But Flintstone rockers they are not.

The band originated in the late-1960s London blues scene, and their albums always include compositions by the masters. "Stone Blue" contains a marvelous version of Elmore James's "It Hurts Me Too," Robert Johnson's "Sweet Home Chicago," and a piece called "Chevrolet" that is credited to Earl McDaniel but obviously began life as a children's song or work-song.

Being real blues and r&b addicts, however, the group shuns the absurdity of copycatism. Their basic style is an amplified compendium of all their influences. Their instrumental sound mixes the heavy eight-to-the-bar rhythm of Chicago bands like Muddy Waters with the thin, intensely electric sound of Bo Diddley and Chuck Berry. "Lonesome" Dave Peverett's vocals stem from the general Mississippi-to-Chicago blues sound, though his high and relatively thin voice leans toward Johnson rather than Waters.

Continuing the process by which Chicago electrified and exaggerated the Mississippi blues idiom, Foghat has arrived at a relentlessly driving style. But behind that all-out attack lies a subtlety based on real knowledge of their roots. In "It Hurts Me Too," Peverett sings not like a blues imitator, but like a rock & roll who understands the blues. Sweet Home Chicago takes a pre-Chicago theme beyond Chicago. Although Peverett...
Carlene Carter—Rock & Roll from a Country Blue Blood
by Sam Sutherland

She belongs to that Carter family, the one that looms over Nashville’s Music Row like some brick and mortar edi-ifice but is built instead from flesh and blood, singers and songs. Carlene Carter is third generation, great-niece to songwriter A. P. Carter, granddaughter to Mother Maybelle, daughter to June Carter and Carl Smith, and stepdaughter to Johnny Cash. Does she sound like it? Sort of. Her voice has that high, lonely beauty, a rough but appealing timbre, and her words are cured with the same sweet drawl. But Carlene Carter doesn’t sing country music, either newfangled or old-fashioned.

Her debut album is, in fact, a rock & roll record. There are a few ballads and moments when that knife-sharp voice flicks into a yielding, feathery falsetto. But the prevailing mood of these songs is tough-minded intelligence, fueled by the drive of electric guitars. Instead of the burnished pop or assembly-line country we might have expected, producers Bob Andrews and Brinsley Schwarz (both members of Britain’s superb Rumour) have matched Carter’s soaring vocals to a lean, hard-edged ensemble sound. That carries risks: There are no keening string backdrops or soothing vocal cho- ruses to sweeten her sometimes strident vocals, and that economy exposes the songs in high relief.

Awkward moments and rough cues do occur, but generally the straightforward approach pays off. On the strength of the four original songs included here, Carter is still experimenting as a songwriter, resulting in a rather uneven range of mate- rial. As a singer, though, she clearly poss-esses enough sheer power to carry her debut. And the potential shortcomings of her writing are mitigated by outside songs—from Alex Call, Rodney Crowell, Tracy Nelson, and Graham Parker—that reflect some care in sustaining her songs’ themes of lost innocence and romantic self-deception. Though close enough to the usual Moon-June-Spoon waters of mainstream romantic pop, these con-cerns are conveyed with a clear-eyed realism that darkens even the most conventional lyric sentiment. What emerges is Carter’s sense of both distance from and an ongoing debt to her country ori- gins: a romantic heroine who is at once modern in her wariness of her lovers and traditional in her southern-woman’s res- ility.

When she attacks the opening song, Call’s ‘Love Is Gone’, that mix assumes a cold fury that reminds you how long it’s been since a lady dared to come out with guns blazing. That her Smoke Dreams follows is significant in that she refuses to offer the requisite change of pace. The momentum of the opening track is fully sustained, turning here toward a darker feel that dovetails into Parker’s Between You and Me (also carried at a brisk pace). Crowell’s Never Together but Close Sometimes, which opens the second side, taps a more buoyant vein through its modified reggae arrange- ment, but Carter’s wry vocal and Schwarz’s concise guitar hook sustain the underlying tough edge. The first single from the set, Never Together, ef-fectively pits its jaunty melody and nimble chorus against the pessimism of the lyric.

Of the originals, the most revealing is I Once Knew Love, a stately ballad that displays Carter’s somewhat mannered imagery as well as her brooding lyricism. Less striking are her Slow Dance and Who Needs Words. The latter creates some problems for her as vocalist, since its subdued text demands a soft deliv- ery—one of Carter’s few problem areas.

Andrews, Schwarz, and coproducer Martyn Smith (credited with pairing Carter with these English rockers) don’t resort to cosmetic production touches, which amplifies such lapses. But the overall live feel more than makes up for any flubs. At twenty-two, Carlene Carter seems more than capable of rectifying these problems, especially if she continu- es to recognize the distinction between mere technical craft and the genuine rock energy that informs her debut.

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Peter Gabriel. Robert Fripp, producer. Atlantic SD 19181. $7.98. Tape: • CS 19181 • TP 19181. $7.98.

Peter Gabriel's shimering, quixotic solo debut album showed him to be less coy and more funny than one would have expected from his previous work. He had arty pretensions in abundance, but he also had a knack for hooks and good-humored, flappy rock & roll.

His second LP is even better. Producer Robert Fripp has channelled Gabriel's pretensions into ambitious arrangements and elaborate, but effective, studio trickery. Odd sound effects—like the snap-snap-snap of broken recording tape that becomes the sharp buzz-buzz-buzz of a fruit fly on Mother of Violence—startlingly illustrate the songs' moods and lyrics. Gabriel and Fripp use instruments as disparate as the synthesizer and the pedal steel in atypical ways, and employ both in the creation of chunky rock & roll and gliding, morose ballads.

Gabriel's lyrics flow over the same terrain as such stylistic brethren as Brian Eno, David Bowie, and John Cale. Like Bowie, he can swivel trite phrases and banal subject matter into hypnotic litanies (White Shadow, Home Sweet Home). And his playfulness on a song like A Wonderful Day in a One-Way World is never condescending or trivial; it is desperate, passionate playfulness.

Gabriel's voice, filtered and multiply-tracked, initially seems cold and distant—as if the dreamy scenarios he spins could not possibly involve him. But the ear quickly adjusts, and, if anything, is pulled into his little stories all the more swiftly for his sensitive robot's coo. As if to assure us of his humanity, he occasionally breaks into a cracked moan on wistful ballads like Indigo.

The album's most revelatory piece is Perspective. Here the humanoid, his despair fractured by a huge grin, groans "I need perspective." repeating it again and again over an exceedingly unrobotic, honking sax solo. Believe me, Gabriel has already attained perspective, and a lot more.

K.T.


Rock & roll reverses its dead. But record companies seldom do. Buddy Holly's corpse was scarcely cold when Tommy Dee eulogized him in Three Stars (the other two luminaries being Ritchie Valens and the Big Bopper, killed in the same plane crash on February 3, 1959). Twelve years later, Don McLean's American Pie commemorated "the day the music died."

Of course, Holly's music lived on, though businessmen have done their damnedest to kill it. First Norman Petty, the producer with whom Holly had severed ties before his death, doctored with overdubs whatever tapes had been left behind—he should have been sued with overdubs whatever tapes had been left behind—he should have been sued for malpractice. Then, in 1972, MCA, which now owns Holly's recordings, issued "A Rock & Roll Collection." It was a slipshod compilation that omitted several of Holly's biggest hits, included a song by the Crickets (his backup band) on which he had neither sung nor played, and souped up every number with simulated stereo.

And now, in anticipation of a forthcoming movie about Holly, MCA has done it again. The company cannot have...
Buddy Holly—someone didn’t care enough

spent more than $100 of its money and ten minutes of its time packaging “20 Golden Greats.” True, it corrects some of the more egregious shortcomings of the '72 collection: All but one (Early in the Morning) of the missing hit singles are here, and in the original monophonic sound. But there are no liner notes, no indication that at least three of the tracks were overdubbed after the artist’s death, and within twenty-seven words, the blurb on the jacket’s back makes two factual errors. Holly’s professional recording career spanned twenty-one or thirty-four months (depending on whether you count his early, unsuccessful sessions with Decca), not eighteen as alleged here, and he enjoyed only three, not “9 TOP TEN SMASH HITS.” What makes such inaccuracies inexcusable is that, several years ago, John Goldrosen gathered all these facts and figures definitively in his admirable book, Buddy Holly: His Life and Work. In short, MCA has accorded one of rock & roll’s most brilliant artists less respect than it does the least talented of the many mediocre contemporary artists on its roster.

Still, because this is the only sampling of his music that is widely available in America, those who have none of his original records (or anthologies imported from Europe) should buy it, even as they gnash their teeth. Holly was a pioneer: He was one of the first rock & rollers who wrote almost all of his own material, who created a white vocal style that owed little to black performers, and who parted company with Elvis Presley by substituting insecurity for the King’s insolence, as embodied in that famous, fragile hiccup. It can even be argued that...

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Holly has had a more profound influence on popular music than Presley—from the Beatles and the Hollies to Linda Ronstadt and Elvis Costello. But don't believe for a second that MCA knows or cares about that. Music, after all, is only money.

K.E.


A couple of years ago, one of the Kinks's typically rowdy and drunken concerts deteriorated into an on-stage row between drummer Mick Avory and guitarist Dave Davies, two of the original members. After witnessing the fracas, leader Ray Davies approached the microphone and confided to the audience, "Y'know, I'm getting a bit tired of those boys."

Ray can hardly be faulted if, after fifteen years or so with this band, he has tired of the whole scene; yet the Kinks still make good records. On "Misfits," he confronts his disaffection, particularly in the title cut and A Rock 'n' Roll Fantasy—two of his finest ballads since Celuloid Heroes. He admits to some nagging misgivings with insightful simplicity ("Don't want to spend my life, living on the edge of reality/Don't want to waste my life, hiding away anymore"), but counters them with genuine optimism ("you may be through, but I've just begun").

This bittersweet eloquence is the most striking aspect of the album, but there is much else to recommend. While Dava's chord progressions and melodies are no longer terribly original, he has lost none of his lyrical gifts—their humor and versatility being his and the Who's Peter Townshend's alone. Where else can one find looks at allergy (Hay Fever), race relations and religion (Black Messiah), and transvestism (Out of the Wardrobe), as presented by a spirited and rocking band? To call the Kinks "survivors" or "elder statesmen" is to demean them. A tenth of the young upstarts one hears today should be so good as to make a record this enjoyable.

S.G.

Phil Manzanera and 801: Listen Now. Phil Manzanera, producer. Polydor P D 1-6147, $7.98. Tape: ** CT 1-6147, 8T 1-6147, $7.98.

801 Live, 801, producers. Polydor P D 1-6148, $7.98. Tape: ** CT 1-6148, 8T 1-6148, $7.98.

801 is the way ex-Roxy Music guitarist Phil Manzanera is getting his songs performed these days, but 801 isn't really a formal band. On "Listen Now," sixteen musicians are listed, but never more than...
six or seven play on any one cut. On "801 Live," the lineup is limited to six, including Brian Eno, who certainly belongs to no single band. Brian Eno may not belong to a single planet.

This sort of structural looseness seems to suit Manzanera just fine, since for him music is expansiveness. The songs on both of these albums (all but four by Manzanera) burrow along the rims of their riffs with an earnest aimlessness. He is indulgent of the synthesizer, especially when it is manned by Eno, and happily chimes in at the slightest suggestion of an improvisation by anyone at any time.

Still, because every song is structured around a riff, things never become too tedious. "Listen Now" is in this and other ways the superior record, rocking with the loose confidence that the studio inspires in such scientist/technicians as Manzanera. It also benefits from the singing of Simon Ainley, who croons in a voice as slippery as Eno's synthesizer. On "801 Live," the vocals are intoned by Bill MacCormick, who sounds as if he'd just as soon stick to bass-playing.

As a songwriter, Manzanera has little to say—he is already reduced to fulminating against 42nd Street sin (City of Light) and an unjust legal system (Law and Order). As a guitarist he plays his riffs neatly and is modest to a fault: We could do with fewer synthesizer solos and outbursts from the brass. In general, he exhibits all the generosity and lack of leadership of a good lead guitarist in search of a band to join.

K.T.


Mink De Ville's follow-up to its critically acclaimed debut album of the same name finds Willy De Ville and his boys Now Herbie's singing with his voice as well as his keyboards. And the result is "Sunlight." It's a new album that shines with so much musical energy, you'll wonder why he's waited till now to make music with everything he's got.

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Tom Petty and the Heartbreakers: You’re Gonna Get It! Denny Cordell, Noah Shark, & Tom Petty, producers. Shelter/ABC DA 52029, $7.98. Tape: **DA5 52029, **DA8 52029, $7.98.

One of the most interesting things about Tom Petty is that he does his damnedest to hide his subtlety. On last year’s debut, “Tom Petty and the Heartbreakers,” he offered a bunch of singles, each of them swift, clean, hard pop/rock, each featuring a different voice from Petty. One moment he was Roger McGuinn, the next, the Everly Brothers. The songs tended to

an intense interpretation of John Martin's Rolene, and Guardian Angel is Mink De Ville's tribute to the early '60s classic Spanish Harlem. The band even sounds jet-propelled on Willy's own Steady Drivin' Man and Soul Twist.

But there is no Spanish Stroll (which became a massive European hit) with its irresistible monologue of "Hey, Rosita!". But however tough, no Mixed Up Shook Up Girl. These will remain the standouts of "Mink De Ville" because they were both precise and emotive. Too much of "Return to Magenta" is indecisive both structurally and instrumentally. On occasion Willy's voice is muddied by the weight of his band, a production error.

Given the major thrust of most new New York bands, all vying for equal New Wave space, Mink De Ville deserves respect for occupying a territory that blends the strongest of the city's diverse ethnic cultures. It aspires to produce songs as soulful as those of its lovingly remembered black artist models. But to match even the essence of those performers, it must consistently place strong instrumental frames around its convincing lyric portraits.

T.G.
be simple lamentations of true love or rock & roll bursts of celebration. Unsubtle.

"You're Gonna Get It!" reaffirms Petty's directness; what you're going to get from it is a punch in the mouth. Unsubtle. But all is certainly not anger; he is not a punk. In fact, with this second album he becomes, more or less, his own man. More or less, because he still slips into a nice, moaning McGinn voice now and then and, on the track title, adds Mick Jagger to his list of impersonations.

But "You're Gonna" concentrates, with great skill and incisiveness, on Petty's restless, grumpy lover persona—he's a guy who will take some kicking around from someone he loves, but he has his limits. To that end, the Heartbreakers spin sturdy guitar lines; when his vocal signals a tantrum, they let loose with a Byrds-Buffalo Springfield barrage, thrashing in the wind of his white. What distinguishes it all from the '60s rave-uppers is Petty's effortless way with a hook—his songs snap with them, their terseness defining the length of each cut.

The album's high point, and the song to say nothing of subtle.


"Brused Orange" is John Prine's first collection of new songs in over three years, but even the added excitement created by that hiatus can't fully account for the LP's power. Prine hasn't merely picked up where he left off with 1974's "Common Sense." He has recaptured the elegant simplicity of his earliest and best records and at the same time developed a new and separate character as a songwriter and performer. In their balance of humor, pathos, and urgings his beleaguered loved one to follow her own impulses, even if they

Continued on page 123
Pop/Rock

BY KEN TUCKER


The first side of this ambitious debut consists of solid, mature pop/rock, aware of its own glibness and teeming with catchy tricks. All of it smacks of the first real intellectual garage band. On the second side, however, songwriter Ric Ocasek complicates the melodies and piles on a dampening literacy, and "The Cars" loses its fresh jolt. It also makes you think they weren't taking the first side seriously, but that's where their best music resides.

Allan Clarke: I Wasn't Born Yesterday. Spencer Proffer, producer. Atlantic SD 19175, $7.98. Tape: WIC'S 19175, TP 19175, $7.98.

The trademark Hollies voice rocks out, not because he necessarily feels it, but because he knows it would be novel to do so. One longs to hear Clarke without all the mindlessly massed guitars; the ephemeral, ultraripe lyrics would then be all the more obvious.


Coe's best album to date salutes his exemplars, and the nicest aspect of this is that they include a few astute ringers (Faron Young, Mel Tillis) among the predictables (Lefty Frizzell, Willie Nelson). Coe mulls over his Mormon upbringing at too great length, but eventually his ruminating takes on the force of obsession, which does much to carry those songs. Even if he does refer to himself now as The High Priest of Country Music, he gets more sane every time out, and it's very becoming. He has it in him to make a great album yet.

Dion: Return of the Wanderer. Terry Cashman & Tommy West, producers. Lifesong JZ 35356, $7.98. Tape: • JZT 35356, • JZA 35356, $7.98.

Dion continues to write good songs and to be disarmingly produced. Here Cashman and West attempt to make the old codger sound like Barry Manilow. It is to Dion's credit that on one tune, (I Used to Be a) Brooklyn Dodger, he outdoes Manilow on a gloriously un-Manilowish song. There's a rollicking cover of Tom Waits's Heart of Saturday Night and a horrendous Do You Believe in Magic (almost worse than Shaun Cassidy's version). Here's hoping he keeps trying.


Ex-New York Doll Johansen sounds like an extremely intelligent clod with a blaring, tending-toward-the-monotone voice that speaks eloquently of primal subjects. These discourses on rage, loneliness, and frustrated ambition and love are charged with poignancy; his voice and the guitars of Johnny Rao and Thomas Trask throb and wail within ready-made riffs and familiar melodies. Johansen and co-producer Richard Robinson employ the directness of punk in the service of Johansen's elegiac, sarcastic meditations, and the results are never pretentious, never without rocking power.

Gove Scrivenor: Shady Gove. Mike Melford, Ernie Winfrey, & Gove Scrivenor, producers. Flying Fish FF 048, $7.98.

Sure, he has a nice, deep country voice and has gathered some good players around him (Doc Watson, Buddy Emmons, John Hartford). But there isn't a thing here, in terms of hard country picking, that you can't get from either Moe Bandy or the still-to-be-found Unholy Modal Rounders. And with them you don't have to put up with Scrivenor's hippie sexism of the most pernicious, affably laid-back, sort.


This is at once more maudlin and more arch than Kate Taylor's previous work; she never does reveal those things about herself that her songs promise. Maybe this is because of the inhibiting presence of her siblings—Alex has always seemed rather taciturn. Folkie evasions have been tricked up for easy-listening FM stations, with what taste there is provided by Kate's careful reticence and coproducer James' discretion.

Joe Walsh: "But Seriously, Folks..." Bill Szymczyk, producer. Asylum 6E 141, $7.98. Tape: • JCT 141, • JZT 141, • JZA 141, $7.98.

Lots of typically Walshian noodling around here, aimless and none too catchy, but the longest song deserves its eight-minute length. Life's Been Good is a sly, self-deprecating saga of a rock star. You wouldn't believe that an Eagle could deal with so hackneyed a subject with such grace, humor, and riff-power—the song rescues the rest of the album. Almost.
on There She Goes. Fish and Whistle, and That's the Way that the World Goes 'Round.

On those three songs, he uses the carefree context of upbeat country (There She Goes) and sing-along folk to leaven his dispiriting observations. Rather than wallow in his grave discoveries, he toys with them, so that a simile like "naked as the eyes of a clown" (on That's the Way) can sound both wickedly funny and brutally frank.

Nowhere is the dividing line between dark and light more finely drawn than on Sabu Visits the Twin Cities Alone. A deceptively anecdotal parable about performing, it presents as accurate an image of an artist's decline as any portentous ballad could hope to. Recounted in Prine's dryly expressive baritone, Sabu's odyssey—a promotional tour to boost his latest film, now "dying on the edge of the nation's spotlight. Thus titling his album "Stranger in Town" precisely expresses his peculiar situation.

Many of these songs were written while Seger was in the midst of his first headlining tour. They speak about golden California girls and fleeting relationships in which the "Midwestern boy on his own" searches for security. His lyrics are so personal that one can easily accept them as career descriptive. The opening bars of the first cut, Hollywood Nights, recall the hurried beginning of Springsteen's Born to Run, and another song echoes Boston's guitars—these are the sounds of two other artists abruptly pushed into the frenzy of stardom. But the feel of the songs belongs totally to Seger, his gravelly lead voice overwhelming and challenging his fiercely rhythmic band.

"Stranger in Town" was recorded partially in Los Angeles, but never falls prey to California mellowitis, thanks to Seger's firm hand on production. I worry about the Eagles' Glenn Frey receiving a special thanks and solo guitar credit—fortunately, he pushes to keep up with the Silver Bullets rather than attempting to exert any calming influence. When Seger does take a few minutes to break away from the album's propulsive tone, he does so on his own terms, without any FM format compromises. We've Got Tonight, a ballad both tender and overtly erotic, retains as much vigor in its execution as the playful Old Time Rock & Roll.

It is tempting for a no-longer-teenage reviewer to remain partial to Seger's last album, "Night Moves," with its wonderful line, "Now that sweet sixteen's turned thirty-one... come back baby, rock & roll never forgets." Yet there is enough unbroken sincerity coursing through "Stranger in Town" that Seger's personal life adventures are easily accepted. As long as he retains that elusive combination of a life-affirming lead vocal, lyrics that read like good romantic poetry, a band that plays with the fire of dedication, and control to produce records with crystal clarity and unbounded energy, Seger will continue to symbolize what is right with American mainstream rock & roll.

**Gary Stewart: Little Junior. Roy Dea**
Producer. RCA APL 1-2779, $7.98
Tape: **APK 1-2779, APS 1-2779, $7.98**

On the men's-room wall of a club in downtown Nashville, there is the graffiti. "Think Country." Beneath it, an unknown but wise man has written, "That's a contradiction in terms." While it is true that country music is little more than an awkward adulterer grooping in the dark at the legs of sentiment, there are a few country singers who possess a real and fiery creativity. Gary Stewart, who sings like the white-trash ambassador to hell and dresses like an Arkansas gaspumper on his first trip to the big city, is one of that few.

As country singers go, Stewart is not
prolific. “Little Junior” is his fourth album in as many years, and the deliberation and care are obvious. There are weak performances here, but they are without exception the result of weak songs. *If My Eyes Touch You and You’re Running Wild* are silly, freeze-dried weepers. (It is interesting that country music approaches the theme of unrequited love with droll theatricality, while black music approaches it with raw conviction.) *Stone Wall (Around Your Heart)—* and where would a country album be without at least one pair of unnecessary parentheses—simply drags along, sounding too much like too many other country songs.

But *Single Again*—one of two songs Stewart wrote here and the only one that features his marvelous, Jerry Lee Lewis-derivative piano—is an all-out barroom killer about solitude, hatred, and self-destruction. *Whiskey Trip* deals with out-of-the-body experiences of a sloppy kind. There are brilliant versions, too, of Ry Cooder’s *I Got Mine,* Hank Williams’ *Honky-Tonkin’,* and the Marshall Tucker Band’s *Can’t You See.*

Roy Dea is one of the most sensible and capable producers in Nashville. But he should not have allowed the android background singers to soil this album. “Little Junior” would have been great were it not for this added schmaltz and the few weak cuts. Onward, Gary, to that place beyond overdubbed choirs and violins, to what is rightfully yours. N.T.

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**JAZZ**

*Ry Cooder: Jazz,* Ry Cooder & Joseph Byrd, producers. Warner Bros. BSK 3197, $7.98. Tape: **M5 3197,** **M8 3197,** $7.98.

Ry Cooder continues his endless quest to experience every sort of music known to man. His eclecticism, however, is never scholastic and never dilettantish. This album of ancient songs is drawn from an era when jazz, to the popular mind, meant junk (and often was). It has nothing to do with revivalism or parody. It might be considered a tribute of sorts, which would mean nothing if it weren’t so much fun.

Cooder’s “Jazz” brings to mind Merle Haggard’s 1973 album “I Love Dixie Blues.” (The two albums even have a song in common—*Big Bad Bill Is Sweeter William Now,* recorded in the Twenties by the influential but elusive Emmett Miller.) His choice of material is even more intriguing than Haggard’s: *Face to Face that I Shall Meet Him,* often recorded in the first years of this century; *The Pearls,* cut by Jelly Roll Morton in 1923; *Davenport Blues,* from Bix Beiderbecke’s first recording session in 1925; pianist Ford Dabney’s coin song *Shine;* minstrel Bert Williams’ *Nobody;* and the old-as-whisky *We Shall Be Happy.*

The music of “Jazz” is not what most people think of as jazz, but it was once upon a time. In a big way, it’s a lot closer to the true meaning of the word and a hell of a lot more fun to listen to than Anthony Braxton.

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The strengths of “Don’t Let Go” are unique to the artist; the problems lie with current black music as a whole. Though George Duke is only a fair singer, his playing is rooted in a piano style that traces back both to the church and to barrelhouse blues. As a writer he combines the more important contemporary strains with an extroverted disposition, which makes for the kind of party music you can listen to more than once.

More than many black artists, Duke understands rhythm’s recent Latinization: He understands that salsa-derived patterns work over two measures, not one. The reason *We Give Our Love* is better than most recent git-down tracks is not because the conga player is Latin (Sheila Escovedo is Chicano anyway, and therefore starts on a par with black conga players), but because the whole rhythm section—the real front line of all funk music—is given the elbow room of that double measure.

Duke’s feeling for the creative cutting edge of contemporary black music is documented by the short *Percussion Interlude.* This piece by Ndugu Chancler and Escovedo is almost pure Cuban street-drumming, African melodies and all. It may upset the traditionalists, but it shows that his engine room knows whereof it drums. Sheer ebullience gives like to an irresistible piece of nonsense called *Dukey Stick.* It bounces with touches of church parody, cheerful double entendre, and general riotousness. Unlike most disco-funk, which is dull enough to numb the knees, this track really does hang loose. All this is the good news, as is Duke’s piano on *Don’t Let Go,* a tongue twister of a tune during which he kids with the rhythm section in a back-and-forth barrelhouse scamper.

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The bad news stems from the vocal department. One problem is that Duke doesn’t quite make it as a ballad singer and that his second vocalist, Josie James, tends to turn vocal somersaults like a showoff kid. But behind these specifics lies a more fundamental, ideological difficulty. The funk idiom that has revolutionized the American rhythm section has never developed a singing style to match its instrumental punch. The James Brown grunt having been passed by, the only remaining options are a soul style that is best suited to a simpler and freer rhythm and a bland backup as soft as Charmin (and about as sexy). I don’t have an answer to this problem. More to the point, neither does Duke. J.S.R.
When someone records as much as Keith Jarrett does, there is a risk of overdoing a good thing. Fortunately, the possibility doesn't seem to occur to him, and his music continues to be innovative and high in quality.

This latest effort is largely backed by his touring group: saxophonist Dewey Redman, bassist Charlie Haden, and drummer Paul Motian. They have not impressed me in the past—too often the environment they've provided has limited Jarrett's far-ranging imagination.

For once I was surprised. Jarrett has paced the music well, interrupting each side with tracks like "Bop Be" and "Blackberry Winter," on which saxophonist Redman lays out, and balancing the flaky avant-garde ("Pyramids Moving") with the mainstream. If there is any persistent influence, it is Ornette Coleman, whose presence hovers over virtually every note Redman plays, particularly on "Mushi Mushi" and "Pocket Full of Cherry."

Keith Jarrett—another first-rate outing

This time around Jarrett seems to be stimulated by his accompanists, and drummer Motian (usually the odd man out with this group) sounds just right. The introspective meanderings of Jarrett's solo albums are nowhere to be heard, replaced instead by the gutsy, downtown drive of a solid, well-integrated jazz group.

Among the better moments: Jarrett's superb improvising on the long piece, "Gotta Get Some Sleep," his expressive (if not always adept) soprano sax playing on "Pocket Full of Cherry;" Redman's curious musette work on "Pyramids Moving;" the beautifully lyrical ballad "Blackberry Winter;" and the similarly moving (and harmonically fascinating) "Silence."

It's a first-rate album, and one that is well up to Jarrett's usual high standards. D.H.

Continued on page 128

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DBHF3
Continued from page 125

Johnny McLaughlin, Electric Guitarist.

John McLaughlin & Dennis MacKay.

producers. Columbia JC 35326, $7.98. Tape: JCT 35326, JCA 35326. $7.98.

John McLaughlin's life odyssey through the outer fringes of the personal development movement has taken his music through a lot of changes—some good, some bad. "Electric Guitarist" dispenses with the extra-musical trappings we have come to associate him with and gets down to the simple business, and the simple joy, of making music. If what we hear on it is any indication, there's something to be said for getting the gurus out of jazz.

McLaughlin plays with as wide a range of accompanists as one could hope for, with results that underlie the panoramic range of his skills. New York On My Mind includes violinist Jerry Goodman and drummer Billy Cobham, and much of the playing is reminiscent of the lamented group Dreams as well as McLaughlin's early Douglas albums. On Friendship, a partnership with Carlos Santana is revived with mixed blessings. Every Tear from Every Eye is better, in part because it encourages the powerful rhythm and blues skills that lie beneath McLaughlin's mannerisms are not for everyone, surely not for those who feel that electric jazz guitar should sound like amplified acoustic guitar. But for those who can accept the inevitable inroads of rock music, this is jazz of a very high order—improvisations to pique the imagination.

D.H.
Our theory sounds fantastic.

In an industry where trial and error methods are common, the Koss Theory of loudspeaker design may seem out of place. But once you hear the unmatched Sound of Koss in the new CM 1020 loudspeaker, you’ll know our computerized theory helped make the optimum 3 bandpass speaker a reality.

The Koss Theory eliminates the guesswork in speaker design by selecting parameters for the best possible performance. That’s why every part of the CM 1020 works superbly both alone and as part of the whole.

The dual ports, for example, enhance the woofer’s front sound waves and dampen excessive woofer movement. There are two ports instead of one because two allow for improved cabinet tuning and greater structural stability. This added stability keeps the cabinet walls from beginning to flex causing unwanted soundwaves.

The port-augmented 10-inch woofer is a special design that provides a 3 dB gain in electrical efficiency and a 3 dB down point of 31 Hz while offering maximally flat response over the low bandpass. To capture all the presence and musical energy from 300 Hz to 3.5 kHz, the CM 1020 features a performance synthesized 4½-inch midrange driver. Handling the high bandpass is a 1-inch dome tweeter linked to a unique acoustic transformer. This Koss tweeter produces the highest energy output and lowest distortion of any 1-inch direct radiator tweeter on the market. Finally, to unite all these outstanding elements, Koss developed a unique, seamless crossover network.

Though we’ve tried to describe the superiority of the Koss CM 1020, nothing can match the thrill of a live performance. Ask your Audio Dealer for a demonstration, or write to Fred Forbes c/o the Koss Corporation for a free brochure of Koss CM loudspeakers. After experiencing the CM 1020, you’ll agree: hearing is believing.

KOSS CM 1020 SPEAKER SYSTEM

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THE MARANTZ 2600 WE BLOWS THE LID ON

400 WATTS PER CHANNEL AT 4 OHMS
(Minimum RMS, 20-20,000 Hz at 0.05% THD)

300 WATTS PER CHANNEL AT 8 OHMS
(Minimum RMS, 20-20,000 Hz at 0.03% THD)

TRUE POWER is the capability of a receiver to deliver more power into 4 ohms than into 8 ohms according to FTC regulations on power ratings.

An 8 ohm power rating alone tells just half the story of a receiver's true performance. Yet, as our chart shows, our competitors' highest powered receivers are only rated this way. Except Marantz!

Now Marantz makes a major move by providing full disclosure ratings which include distortion and full bandwidth on all Marantz receivers at both 4 ohms and 8 ohms. That's TRUE POWER Rating. It tells your customers Marantz receivers can deliver at least 25% more power into 4 ohms than at 8 ohms — and it's below 8 ohms where loudspeakers need extra power.

Here's why: In the real world of sound, loudspeakers rated at 8 ohms frequently present only 6 ohms impedance. If you connect two pairs of speakers the impedance drops in half and the speakers demand more power than the 8 ohm rating can deliver. And because Marantz provides full 4 ohm and 8 ohm disclosures on all models, only Marantz can guarantee the TRUE POWER your speakers need on all Marantz models.

No other competitor offers a full FTC primary 4 ohm disclosure on every model from the least to the most expensive. We can only assume that if most other competitors can deliver equal or higher power at 4 ohms with full disclosure, they would do so.

Marantz TRUE POWER Design is engineering know-how that requires more sophisticated, expensive circuitry. That's why Marantz TRUE POWER receivers cost a bit more — but that's why they're worth it.

COMPARE THE TRUE POWER COMPARISON CHART AND SEE WHO GIVES YOU FULL DISCLOSURE AT BOTH 4 OHMS AND 8 OHMS.

<table>
<thead>
<tr>
<th>Suggested Price</th>
<th>SANSUI G22000*</th>
<th>PIONEER SX1980*</th>
<th>MARANTZ 2600</th>
</tr>
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<tbody>
<tr>
<td>8 Ohm Rated Power</td>
<td>$1,250</td>
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<td>$1,495</td>
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<td>THD</td>
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<td>Frequency Response</td>
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<td>400 Watts RMS</td>
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<td>Frequency Response</td>
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<td>Not specified</td>
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</tbody>
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BRUTE POWER AND COOL OPERATING EQUALS UNMATCHED RELIABILITY.

“We have never encountered any other audio component that remained as cool in operation.” That’s what noted reviewer Julian Hirsch said about the Model 2500, and like the Model 2500 the Marantz 2600 incorporates the same exclusive Tunnel Pin Fin Heat Sink system for the most efficient heat dissipation. The result: the entire Model 2600 is literally air-cooled, and its electronics are protected from the ravages of heat...the worst enemy of long receiver life. A receiver with a conventional heat sink dissipation system with equal cooling capacity would be twice as large and far heavier than the Model 2600 and hot enough to burn fingers.

A QUARTZ-LOCK TUNER WHICH VIRTUALLY ELIMINATES FM DRIFT.

The Model 2600 includes a touch-controlled quartz-lock tuner which monitors the incoming FM signal, comparing it to the Model 2600's internal quartz-frequency standard, and precisely adjusts tuning so the 2600 is always tuned to the minimum distortion tuning point...and to peak performance. Complementing quartz-lock is a 5-gang FM tuning capacitor and dual-gate MOS FET FM front end.

A TEAM OF FILTERS TO KEEP THE SOUND CLEAN.

The Model 2600 includes an ultra-sophisticated noise-control system for the most thorough noise-filtering available. Where most competitors use 6 dB per octave or 12 dB per octave filters, Marantz has chosen the more expensive and steeper 18 dB per octave 9 kHz Bessel-derived high filter and 15 Hz Butterworth subsonic low filter to remove the noise instead of the music. And a convenient plug-in optional Dolby** FM circuitry pocket gives you Dolby...when you want it.

The Marantz model 2600 with TRUE POWER Design looks stunning both inside and out. Its beauty and performance set the standard for the entire line of Marantz TRUE POWER receivers. See them all at your Marantz dealer now.

*Based on manufacturer's published specifications and prices available 4-1-78. **Dolby is a registered trademark of Dolby Labs, Inc. True Power™ is a trademark of Marantz Company, Inc. © Copyright 1978 Superscope, Inc., 20525 Nordhoff St., Chatsworth, CA 91311. All Rights Reserved.
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LET YOU HEAR AS YOU RECORD.
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WHAT YOU HEAR.

Three-Head Design with Double Dolby.*

Not all three-head cassette decks are created equal. Some manufacturers have designed their decks with separate erase, record and playback heads primarily for convenience. So you can tape monitor as you record. But our new KX-1030 uses separate heads, primarily for performance. Each designed with the optimum gap to record or play back sound more accurately.

As a result, the KX-1030 has a frequency response of 35-18,000 Hz (±3 dB using CrO2 tape.) And to let you take full advantage of the separate record and playback heads, the KX-1030 has a Double Dolby* system with separate circuits for the record amplifier and the playback preamplifier. That way, as you record with Dolby, you can also tape monitor with Dolby, so you hear the sound precisely as it's being recorded.

The KX-1030 also has a Variable Bias Adjustment Control and a built-in oscillator, so you can adjust the exact bias for the type or brand of tape you use. We also built in a number of other features like MIC/LINE mixing, memory rewind and a peak indicator. But as good as all this sounds, wait until you hear the price. Because at $400.00,** no other comparably priced cassette deck can match the performance and features of our new KX-1030.

Of course the only way you're really going to appreciate the KX-1030 is to visit your Kenwood dealer. Once you do, you'll be convinced: Performance, convenience, and value set the KX-1030 apart from all the rest.

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**Nationally advertised value. Actual prices are established by Kenwood dealers.