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Open Audio. Enjoy the sound. Yet, be part of what's going on around you.

Prediction. The OA-3A will be your favorite "component".
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Bach Flipped, by Jupiter!

On the fifth of next month, Voyager 1 is scheduled to pass Jupiter, whose gravity will be harnessed to flip the spacecraft toward Saturn and then out to the stars. In July, Voyager 2 (actually launched about ten days before Voyager 1 some eighteen months ago, but on a different trajectory) will also pass Jupiter before a similar cosmic journey. By the time you read this, Voyager 1 should have been sending highly publicized signals back to Earth for more than a month and Voyager 2 should be adjusting itself to begin its Jovian report.

What concerns me here is not the message Voyager sends back to us, but the one we have mailed to the universe using the two vehicles as postmen. Attached to the outside of each spacecraft is a package of some 120 photos, eighteen in color, greetings in 54 languages plus whale(!), twelve minutes of sounds of the Earth, and an hour and a half of music from Chinese to Pygmy. The format had to accommodate the dynamic range of Stravinsky's "Rite of Spring," the last 4½ minutes of which is included, and it needed a minimum lifetime of 60,000 years (to the nearest star), preferably of 100,000,000 years (to the center of the galaxy).

Elsewhere in this issue we discuss two recent information-storage developments: metal-particle magnetic tape and digital technology. But the medium chosen by NASA as optimum for both density of information and longevity was a stereo LP disc, recorded in the conventional analog process (including the photos), at 16⅔ rpm, the speed of the "talking books" for the blind. The recording has, accidents excepted, an expected lifetime in the billions of years, outlasting our sun.

After the pictures and greetings, Side 1's music begins and ends with Bach (first movement of Brandenburg No. 2/Richter on DG; Cavotte from Partita No. 3 for solo violin/Grumiaux on Philips). Side 2 begins with Mozart (Quintet of the Night aria/Moser on Angel) and ends with Beethoven (Cavatina from the String Quartet No. 13/Budapest on Columbia). The disc contains one more Bach (Prelude and Fugue No. 1, WTC II/Gould on Columbia), another Beethoven (first movement of the Fifth Symphony/Klemperer on Angel), recordings by Louis Armstrong, Blind Willie Johnson, and Chuck Berry, and twenty-one selections from other cultures. The copper discs are gold-plated and encased in aluminum covers for protection. Since the spacecraft will get battered during its anticipated eons of existence, NASA sensibly attached the package to it Bach-side in. Columbia's Special Products Division has remastered the recording for two discs at 33⅓ rpm in anticipation of public release, but at this writing it is bogged down in copyright negotiations with other record companies.

How do you store photos on an LP? Slides were focused into a video camera: the output, sampled by a video compressor, was brought down from a 5-MHz to an 8-kHz bandwidth, easily accommodated by the LP. Each photo took about eight seconds of signal (eventually four seconds when the tape was speeded up to conserve time), three images being needed for each color shot. Since both sides of the stereo groove were used, only about five minutes of the discs were needed to store all the visual material. I am told it sounds like a 60-Hz buzz (plus harmonics).

Last November, Random House brought out Carl Sagan's book Murmurs of Earth, which recounts the development of the Voyager's LP. It is in many respects an absolute delight, and the photos alone are worth the $15 price. Such episodes as the difficulties in trying to limit politicians to recording just the word "hello" and NASA's attempt to protect interstellar recipients from photos of nude humans deserve musical-comedy treatment. Unfortunately, the book is plagued with typos; my favorite has Kurt Waldheim identifying himself as Secretary-General of the United States. I wish Random House had been more careful, just as I wish Columbia Special Products good luck. After all, the likelihood of extraterrestrials intercepting our message to them is nil. We are its true recipients.
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COMING NEXT MONTH

In March we view the state of the recording art today—and prospects for tomorrow—through the eyes of several of its leading practitioners: John Eargle, vice president for product development at JBL and author of the most respected text on studio technique now in print; Stan Ricker, head of the JVC Cutting Center in Los Angeles; Jack Renner, chief engineer of Telarc Records, a pacesetting firm in the “audiophile” disc field; and Bruce Rothaar, design engineer for Soundstream, Inc., which has pioneered in the application of digital technology to recording. Through interviews with these men we obtain many insights into the best the recording process is capable of achieving from the studio through mastering to manufacture. And two of HF’s editors take differing slants on the implications of it all. Plus Lees Side, Culshaw at Large, the Autophile, regular Backbeat features, and more.

SOLUTION TO HI-FI-CROSTIC

After a month’s absence, the HiFi-Crostic resumes in this issue on page 55. The solution to HiFi-Crostic No. 42 will appear in this space next month.

ADVERTISING


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Graphic Illustration: Simulated oscilloscope data from Hitachi Toyokawa Laboratory

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Again though, specs can't do the sound of the M-4 justice. When it comes to doing justice to amplifying a signal from a preamp (especially the C-4) we feel the M-4 deserves a standing ovation. If you love musically accurate sound coming from your speakers, you will be equally enthralled with the sound of the M-4.

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Kempe Memorial Issue

Readers who have become aware of the late conductor Rudolf Kempe only recently, via Angel’s and Seraphim’s Strauss and Beethoven releases and the very favorable reviews in your magazine, may be interested to know that the current Le Grand Baton (the journal of the Beecham Society) is a Kempe memorial issue. It includes a discography, a list of opera broadcasts, and appreciations. Those interested should write to the Sir Thomas Beecham Society, P.O. Box 6361, Cleveland, Ohio 44101.

Charles R. Blyth
West Stockbridge, Mass.

Schubert and Caruso

In his review of London’s new Zubin Mehta recording of the Schubert Ninth Symphony (October), Harris Goldsmith states that “Mehta does not make the second-movement repeat . . . .” Surely Mr. Goldsmith, of all people, is aware that there is no repeat in the second movement. If he meant the third movement, then that movement contains more than one repeat. Since he has hitherto demonstrated that he knows the score in every sense, I hope he will be possible for him to clarify which repeats Mehta does or does not take, and in which movement.

In the same issue more than four pages are devoted to a feature review by David Hamilton of reissued Caruso recordings. This is an outstanding piece of work to the point of being awesome in its documentation and evidence of knowledge of the subject. It is one of the most thorough and well-considered reviews I can remember reading in High Fidelity.

John Canarina
Drake University Symphony Orchestra
Des Moines, Iowa

Somewhere between Mr. Goldsmith’s manuscript and the printed version Schubert was made to rearrange his symphony. The author had written “the second repeat in the scherzo . . . .”

Soundstream McCormack

David Hamilton’s review “Toward a Complete Caruso” (October) focused my attention on the first two Soundstream releases. I’ve never been a Caruso fan and this recording only reinforced my feeling. However, the Soundstream-processed John McCormack album made me into a fan of that great lyric singer. All I can say is: Let’s hear it for a “Complete” McCormack!

Larry W. Isselovitz
Silver Spring, Md.

Where Do I Sign?

I was very excited to read about the Audio-

To Score or Not to Score

My compliments to you on the excellent article by David Hamilton, “The Secret Life of a Song: Schubert’s Im Frühling” [November]. It was a treat for me to read so thoughtful and insightful an article. Let’s have more of these!

One small point, however: Would it not have been more helpful to the reader if the music had been included as well as the words? The article attempted (and largely managed) to describe the flow of the music along with the poetry—but having the printed score before one’s eyes would have facilitated greater understanding. It can’t be that a copyright question is at issue; Schubert’s music is unquestionably “public domain.” And I believe you can safely assume that those readers attracted to an article of this kind can readily follow the vocal line of the printed music.

Harold H. Plaut
Libertyville, Ill.

We did indeed contemplate publishing the music of Im Frühling but decided against doing so. One of the basic objectives of this article was to suggest ways of listening for readers of all musical backgrounds, and we were reluctant to do anything that might imply that the ability to read music was a prerequisite for understanding Mr. Hamilton’s analysis. We agree that a score would have enhanced appreciation of it, for some, and in some instances in the future, we may include a brief note about score editions for those readers who want to have the music at hand.

More Discographies

David Hamilton’s “Beyond Schwann: A Guide to Discographies” [October] set the stage beautifully for the announcement of a series of LP discographies that I have been preparing over the past several years. Foremost among them is the output of RCA Red Seal, 1950-73, and Columbia Masterworks, 1940-70. These run close to 300 pages each. Smaller discographies have been prepared covering the complete classical LP catalogs of Mercury and AmericanPhilips, Epcio, Decca, and Capitol. There is also an Angel compendium and a complete discography of RCA’s budget labels and early London LPs.

I’d like to hear from other High Fidelity readers so I can gauge just how large a market exists for such discographies. I am open to advice as to the most expeditious manner of disseminating this material. Suggestions on size and format would be welcome as well.

Paul D. Vodicka
Cicero, Ill.

Readers interested in responding to Mr. Vodicka’s proposal may write to him in care of this magazine.
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High Fidelity Magazine
Recording Institute in Sedgwick Clark's article "Aspen Tapes Itself" [November], I would appreciate it if you could tell me where I should write to apply for the course.

Seth Joel
Alexandria, Va.

The Aspen Music Festival, which oversees the Institute's program, has an office at 1860 Broadway, New York, N.Y. 10028.

Does Anybody Know?

I would greatly appreciate some assistance in locating a source for seven-inch tape reels that have a four-inch inner core instead of the usual two-inch core. For years I had been able to secure these low-torque reels at my dealer's, but now he tells me they are not available, and inquiry at other dealerships brings the same response. Yet one is still able to buy prerecorded tape on these large-center reels.

A. E. Zimmerman
Burbank, Calif.

Apparently none of the sources we've used in the past are supplying low-torque reels now either. Are there any readers out there who know where they can be found?

Friends of Edith Piaf

I want to thank you for the review by Gene Lees of the recently released album "Edith Piaf at Carnegie Hall" [September]. Your readers may be interested to know that there is an organization in Paris called Les Amis d'Edith Piaf. The club keeps an eye on the quality of Piaf's discs releases, has big gatherings for fans at which a guest speaker often reveals his or her experiences with Piaf, and, of course, promotes her memorabilia. The address is Lai 1901, 5 Rue Crespin-du-Gast, 75 Paris XI.

Chu Moy
New York, N.Y.

Oboes Oubliées

In his September review of DG's disc of Ralph Vaughan Williams' concertos, Abram Chipman stated that Mitch Miller's early Mercury LP of the oboe concerto was its premiere recording in SCHWANN. If memory serves me correctly, the concerto's dedicatee, Leon Goossens, recorded the work in England with Walter Susskind in 1952. This performance has now been released in England on EMI-World Records SH 243, and it's a stunning one.

One other recording from the Fifties, now sadly unavailable, was made in England on HMV (HQM 1015) by Dame Evelyn Rothwell with her husband, Sir John Barbirolli, and the London Symphony. The album also contains the only recording of Sir Edmund Rubbra's Symphony No. 5, an impressive but neglected work.

Howard Wayne
Brooklyn, N.Y.

Bernstein and Eclecticism

Thank you for "Leonard Bernstein at Sixty" by John Ardoin [August]. Bernstein's most lasting contribution may be his theater music, and a vital influence on him was passed over in the article—that of his longtime friend and mentor, Marc Blitzstein. The eclecticism of Mass is one of the outstanding characteristics of Blitzstein's opera Regina. Blitzstein ranges from Dixieland jazz and spirituals to a more traditional musical language. It is this melding of the popular with the traditional that is Bernstein's greatest gift. He may be a more proficient technician than Blitzstein, but the latter's rich musical language is an unjustly forgotten influence on him.

Keith Hagen
Madison, Wis.

The fairest and most intelligent way to discuss "eclecticism" in styles is to acknowledge one synonym its pariah counterpart, "pastiche," which didn't get used a single time by either Leonard Marcus in his editorial or John Ardoin in his Bernstein article. Surely both are entitled to their approval of Bernstein's eclecticism or even of eclecticism per se (eclecticism per se is a synonym of "pastiche," which would have to approve or disapprove of as a general principle). But the huge and elusive subject of the development of a style needs treatment on its own. "Appraising the influence of composers, major and minor from all periods. Then the key question would be whether a composer is justified in using materials and techniques of others, but whether his use of them makes us forget they are secondhand.

Timothy Ransom
Atlanta, Ga.
New York—Humperdinck's Hansel and Gretel and the problem of finding a cab at theater time were foremost in my mind when it happened; but what it was I shall come to a little later.

I had just left a discussion about the intermission talks I am giving this season during the Metropolitan Opera broadcasts. The first was to occur during Hansel and Gretel, a piece I have always adored. A few weeks earlier I had listened to the reissue of Karajan's superb performance recorded in the prestereo Fifties (and marveled, incidentally, at the production techniques applied by Walter Legge in those early days), and only the night before I had reread the original story by the brothers Grimm. "Original" is not, of course, quite the right word, because variations of the tale stretch back over centuries; but of all of them the Grimm version is the most horrific. Humperdinck, in collaboration with his sister, who wrote the libretto, eliminated the horror and replaced it with charm and humor. One wonders what would have happened if Richard Strauss, who conducted the first performance, had composed it instead and to a libretto based strictly on the story. I guess that the witch would have come out something like Klytämnestra, the mother like Herodias, the father like Faninal, Hansel like Octavian, and Gretel like Chrysothemis; and we can be quite certain there would have been no Sandman or Dew Fairy. It is perhaps as well that the idea did not occur to him, and anyway he loved Humperdinck's version.

What preoccupied me as I crossed Columbus Circle at about seven-thirty that evening was whether the witch is more effective when sung by a tenor rather than a mezzo, and that depends on what is meant by "effective." Despite Humperdinck's elimination of the nastiness of the original Grimm story, the fact remains that children enjoy being mildly frightened if they feel they are in a secure environment; and so, of course, do adults—the horror film has been with...
FISHER INTRODUCES THE WORLD'S FIRST CASSETTE DECK WITH WIRELESS REMOTE EDITING.

Tape recording will never be the same.

In Fisher's 41 years of audio leadership, we've introduced many important high fidelity "firsts." But we honestly think the new CR4025 tape deck is one of our most exciting and practical innovations.

Remote electronic editing is as important an advance in tape recording as the cassette.

Now for the first time, you can really enjoy creating your own personal music library from FM broadcasts or record albums. The editing is done electronically while recording. A great leap forward from the old way of recording...without jumping up and down every 3 minutes to edit.

Fisher's wireless remote electronic editor makes tape recording a pleasure. The CR4025 tape deck has a built-in wireless receiver that operates the deck's solenoid-actuated Pause mechanism. The remote control transmitter operates the Pause control instantly from up to 20 feet away. Relax, listen, and capture the selections you want to keep at the push of a button.

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Of course, this fantastic convenience wouldn't be worth much if you had to sacrifice performance. Fortunately, you don't — the CR4025 has the excellent frequency response and extremely low wow & flutter that you expect from Fisher, plus Dolby noise reduction for clean, noise-free recordings.

The Fisher CR4025 is priced at $270* and is available at selected audio stores or the audio department of your favorite department store.


*Manufacturer's suggested retail value. Actual selling price is at the sole discretion of the individual Fisher dealer.

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The perfect pair.
The new Koss CM/530 bookshelf speakers with the perfect mirror-image sound.

Here is truly a remarkable achievement in loudspeaker design and performance. The Koss CM/530 bookshelf loudspeaker sets an entirely new standard in extended bandwidth response, high efficiency, low distortion and perfect mirror-image for speakers in its size and price range and within today's technological capabilities.

By designing a left and a right channel configuration for the passive radiator, the woofer and the tweeter, Koss engineers have created a perfectly matched set of bookshelf speakers that can be placed horizontally or vertically without losing the perfect right to left imaging, an incredible degree of dispersion and the beautiful Sound of Koss.

To create the breathtaking depth and clarity in the CM/530, Koss engineers used an 8-inch passive radiator to radiate the sound energy over the lower two octaves. This allowed them to use an 8-inch woofer to reproduce the critical sounds in the midrange up to 3,000 Hz. In addition, the CM/530's 1-inch dome tweeter reproduces an exceptionally flat energy output and unusually low distortion that provides for a transparency and liveliness not found in other competitive speakers.

Ask your Audio Dealer to give you a live demonstration of a matched pair of bookshelf speakers. You'll be amazed at their perfect mirror-image sound. And while you're at it, try the perfect answer to private listening: Koss stereophones. But by all means, write, c/o Virginia Lamm, for our full color speaker and stereophone catalogs. The Sound of Koss will do great things for your records or tapes...and your image.

The Sound of Koss will do great things for your records or tapes...and your image.

KOSS CORPORATION, 4129 N. Port Washington Ave., Milwaukee, Wi 53212 International Headquarters, Milwaukee Facilities: Canada · France · Germany · Ireland · Japan
us in one form or another ever since the cinema began. Humperdinck's witch has to be at the very least menacing. (The Grimm witch is unquestionably female, but in earlier versions of the story the equivalent character, who also gets pushed into an oven at the end, is a giant and unquestionably male.)

I have heard the part sung by both voices on various occasions and was trying to sort out my recollections as I made my way toward Fifty-seventh Street (two-way traffic, and therefore more chance of a cab). Without wanting to be ponderous about a mere fairy tale, the witch's end can be seen as distasteful if the character has been played even slightly sympathetically. (It has often been noted that after the war many Germans could not take Hansel and Gretel at all, because the witch's oven was too close a reminder of the gas chambers at Auschwitz. If that sounds far-fetched today, it doubtless did not seem so then.) My conclusion, therefore, was that even Humperdinck's diluted witch really should be played by a woman, because an unreal threatening woman is likely to be more sinister than an unreal threatening man. I mean, I said to myself, if I were to put myself in Hansel's position in that cage, would I be more frightened of a woman who was determined to eat me than I would of a man? And the answer was perfectly clear: I'd be more frightened of the woman because I'd be more aggressive toward the man.

It was at the very instant that I reached this profound judgment that a character jumped out of a doorway on Eighth Avenue and held a knife at my left eye. All thoughts of aggression toward male witches evaporated in an instant, and in about five seconds he managed to remove my wallet and disappear with an alacrity that would have been the envy of Alberich even when he had possession of the Tarnhelm.

So my conclusion, after I had found a sympathetic cab driver who took me home for nothing, is that it doesn't matter a hang whether Humperdinck's witch is sung by a man or a woman so long as the portrayal isn't funny. Hansel and Gretel had no right to push the witch into the oven unless they were sure that they were about to be baked and eaten, but since they did so, they must have been convinced that the witch was evil. Evil isn't funny.

And incidentally, if the witch of Eighth Avenue happens to read this column, would he consider returning my wallet? 
One of my favorite local radio stations is received in stereo with a great deal of noise that is absent in mono. What can be done to improve the reception? My receiver is a Sansui 8080, and adjusting the antenna doesn’t help.—Paz Y. Kahana, Cambridge, Mass.

A receiver typically requires about 22 dB more signal at the antenna terminals to provide as much quieting in the stereo mode as in mono. Your best bet to assure quiet stereo reception is to get the highest gain, directional FM antenna you can find, and then use low-loss shielded twin-lead (or coax) to get the signal down to the receiver. Antenna boosters rarely help.

Since your favorite station is local, we’re surprised you’re having problems. You may want to check to be sure that the receiver is functioning properly and that you have oriented the antenna for minimum multipath—not just for strongest signal.

I own a Dual 1225 turntable and, for the most part, have been satisfied with it. I recently purchased a Shure V-15 Type IV cartridge and loaded it into the arm. The sound is good, but with the tracking force and antiskating set correctly, the tone arm likes to drift outward, making accurate cueing nearly impossible. Can this problem be solved with the same tone arm? If not, is it possible to put a different arm on the Dual?—Rick Jensen, Lincoln, Neb.

The outward drift of the tone arm when cued is caused by the antiskating force. (We assume your turntable is level.) Frequently, the problem can be alleviated by increasing the friction between the cueing assembly and the arm. A piece of cloth adhesive tape on the bar may suffice; the thin, rubbery foam tape sold as weatherstripping works even better with some equipment. A very small piece of tape on the arm where it contacts the bar may also help. It is not practical to replace the tone arm on a changer, and few turntables afford absolutely precise cueing.

Would a recording made using speakers that deviate significantly from flat frequency response sound more faithful to the original music if the frequency response of the audio system is flat or if it approximates that of the speakers used by the mixing engineer? In other words, is an audio system always optimized by being adjusted to yield flat frequency response through the speakers?—Paul Thiel, Covington, Ky.

If you can duplicate both the speakers and acoustic environment the mixing engineer had, you will hear what you would have heard at the mixing session. That is not to say that you necessarily will hear precisely what he intended that you hear; however, some mix-down (and mastering) engineers regularly give the response a tweak here or there on the assumption that they are compensating for the shortcomings of typical home equipment and making the sound more enjoyable for the home listener. Such practices, though part of the mystique of the pop-hit factories, influence classical recordings as well. In an ideal world, all equipment—including all speakers—would have flat response and the engineer could therefore predict precisely how you would hear his product. Failing that, the concept of “optimizing” the audio system eludes definition.

I recently purchased a Realistic tape-head demagnetizer to use on my Pioneer Model CT-4141E cassette deck. The instructions direct that the pole tips of the demagnetizer be placed against the entire surface of the recording head for one second. Unfortunately, I put the pole tips on both the recording and erasing heads for about 20 seconds. It seems to me that there has been a loss of volume on my deck, and I am now wondering whether I should have my heads checked for possible damage.—Marion Taubman, Brooklyn, N.Y.

We doubt that you have damaged your deck provided that it was turned off when you demagnetized and that the pole pieces of the demagnetizer were covered so that they didn’t scratch the surface of the head. It is more likely that you left the heads more magnetized than when you began. If so, they will probably respond to another, correct demagnetization. The deck should be off, and the demagnetizer should be turned on while it is still well away (say a foot or so) from the heads. Bring the demagnetizer up to the heads slowly and move it back and forth slowly. Then remove it slowly to a foot or more away before turning it off. The time in contact with the heads is unimportant; what is important is that the demagnetizer be moved slowly toward, around, and away from the heads.

When checking your results, use a new tape. You may have partially (but permanently) reduced the highs on tapes played with a magnetized head.

I am considering the purchase of a time-delay device. My speakers are a pair of Bose 901s, and I am thinking about buying another pair as rear speakers through which the delayed signal will be fed. Is this feasible, considering the reflected-sound principle used by Bose?—Michael Nathal, Erie, Pa.

Yes, it is. And the diffuse sound field that Bose speakers tend to produce could make it work better than otherwise.

We regret that, due to the volume of reader mail we get, we cannot give individual answers to all questions.
Our 120's do something unusual.
They work.

Anyone who uses 120 minute cassettes knows the tape is not only a lot thinner than the tape in a 60 minute cassette, it's also more susceptible to stretching, buckling, and tearing. Yet few people realize the fault lies not in the tape itself, but in poorly constructed cassette housings.

At Maxell, we build our cassettes to higher standards than the industry calls for. We use heavy-duty styrene in our cassette housing, Delrin guide rollers with precision steel pins and Teflon slip sheets. All of which help eliminate sticking and jamming.

So if you're looking for a 120, why look for trouble. Try Maxell. The two hour cassette that's guaranteed to work. Forever.
Chikumagawa and Back—via Tokyo

Certainly TDK is not the only manufacturer that takes the design and manufacture of magnetic tapes seriously. But during a recent journalists' junket, sponsored by the company, to its Tokyo headquarters and Chikumagawa plant a couple of hours' journey to the north, we learned how truly impressive TDK's intensive research and development effort is. In the past we have been shown some astonishing equipment and processes at other tape factories. Yet, perhaps as a result of the understandable reluctance of tape companies to disclose, inadvertently or otherwise, secrets that may be of use to their competition, none has had so much to show us as TDK.

Some of our native skepticism may have been lulled by TDK's sumptuous hospitality; but even without these amenities, we would have been enthralled by TDK's use of a quantum-mechanical phenomenon (the Mossbauer effect, for those whose curiosity extends to such things) to check proper magnetization of a tape sample for research or quality-control purposes. And that does not begin to suggest the high technology in evidence. Checks for the proper composition of materials are made by means of chromatography, a technique that depends on the radiation "signatures" of certain atoms and molecules and the different rates at which they diffuse through various media. Physical characteristics of the tapes are verified not only by means of electron microscopy, which we have seen used elsewhere, but by X-ray diffraction as well.

In sophistication, the facilities for production rival those for R&D. Much automation is used throughout tape manufacture and packaging, and critical operations are carried out in special clean areas, differentiated into five levels of "cleanliness." A-Level areas, for which controls are so stringent that the company president himself has not yet entered them, were the only ones to which we were denied access.

After this manufacturing tour de force the item of news most likely to interest consumers, though it is obviously important, seems almost anticlimactic: TDK is introducing a metal-particle cassette tape. We have heard a prototype demonstrated and have a sample in hand. There is some possibility that future developments will require some adjustment of its magnetic parameters, but TDK says the tape will be ready when decks that can use it are.

Aphex Patent Progresses

Can distortion and nonlinearity ever be constructive features of the audio reproduction chain? According to the developers of the Aphex Aural Exciter, a form of signal processing designed to add psychoacoustic enhancement to a recording, they can. Until the recent acceptance of the patent application on the process, descriptions of its inner workings were obscure at best and often downright misleading. Now that disclosure is permissible, we are told that the system—normally connected into a mixing console—receives its own two-channel stereo mixdown, which is subjected to a combination of nonlinear processing and time delay and added to the final mix to mimic the nonlinear behavior of the ear and trick the listener into hearing more spaciousness, brightness, and definition in the recording.

From what we could hear in a demonstration given at the Audio Engineering Society convention last November, the device definitely does add something to the music. When put in the final mix in quantities that are obviously audible, the Aphex effect is quite unpleasant; but this, of course, is not what the designers intend. When the level is kept suitably low (20 dB or more below the program), the effect is scarcely noticed at all—until it is switched out, and then the sound seems suddenly to go terribly flat.

Lest purists rail against gratuitous distortion being used to doctor their music, we should point out that quite a few popular musicians, including such notables as Linda Ronstadt, Carly Simon, James Taylor, Maynard Ferguson, and Neil Diamond, like Aphex and add it to their recordings. So you may have been listening to it—and liking it—for quite a while. Perhaps, in deference to the phenomenon, the audio lexicon will require a new term: creative distortion—as opposed to the destructive distortion that simply degrades signal quality.

Zenith Tries Components

Zenith is testing the waters of audio components with a few new product lines, including receivers, turntables, cassette decks, and loudspeakers. The three receivers span the power range from 15 to 40 watts (12 to 16 dBW) per channel with price points from $230 to $330. Three turntable models range from $100 to $250, the top of the line with belt drive and automatic operation. A front-loading cassette deck with Dolby noise reduction, three-position bias/EQ switching, and automatic shutoff and two Allegro loudspeakers round out the component offerings.
If you can find a receiver that does more.

Scott's new 390R is perhaps the most complete receiver ever made.

A professional control center for your entire sound system, the 390R delivers a full 120 watts per channel min. RMS, at 8 ohms from 20-20,000 Hz with no more than 0.03% THD. And it offers more options, features and flexibility than you'll find on most separates.

Compare the Scott 390R with any other receiver on the market today. If you can find one that does more... buy it.

Scott's unique, gold warranty card. Individualized with your warranty model and serial numbers, and expiration date. Scott's fully transferable, three-year parts and labor-limited warranty is your assurance of lasting pleasure.

For specifications on our complete line of audio components, contact your nearest Scott dealer, or write H.H. Scott, Inc. Corporate Headquarters, 20 Commerce Way, Dept. IR, Woburn, MA 01801. In Canada: Paco Electronics Ltd., Quebec, Canada.

Buy it.
AR-9's smaller brother
Acoustic Research has followed its AR-9 (and broken its inveterate serial numbering pattern) with the AR-90, a somewhat smaller model that uses the same three drivers in the upper ranges but substitutes a 10-inch woofer for the AR-9's 12-inch. Pricing of the new model is expected to run under $600, making it at least $150 less expensive than its bigger brother.

CIRCLE 150 ON PAGE 89

Processed dynamics from RG
The Pro-20, one of a new series of RG Dynamic Processors, provides up to 20 dB of continuously variable expansion. Features include adjustable noise reduction, processing for both tape recording and playback, peak limiting, and LED display of the processing action for each channel. Distortion is rated at less than 0.05%. Three versions are available: a black rack-mount case (Pro-20B), silver panel with walnut ends (Pro-20W), and black panel with walnut ends (Pro-20BW). The BW costs $410, the others $395.

CIRCLE 137 ON PAGE 89

Memorex presents new audio tape
Memorex is offering High Bias audio cassette tape, replacing its chromium dioxide line. Its ferrite-crystal formulation is intended for use with 'chrome' bias and 70-microsecond equalization settings. Reel locks in the new box, a redesign of the Philips type, will accept the cassettes with either edge facing out. High Bias tape comes in C-60 and C-90 lengths, priced at $4.39 and $5.99, respectively.

CIRCLE 141 ON PAGE 89

Sansui's receiver with PA capability
The Sansui G-4500 FM/AM receiver has separate signal-strength and channel-center meters and is equipped with a mike-mixing input that has its own level control for public-address applications. Minimum power output is rated at 40 watts (16 dBW) per channel; rated frequency response is 30 Hz to 15 kHz, +0.5, -1 dB. The G-4500, which comes in a simulated walnut-grain cabinet, costs $320.

CIRCLE 138 ON PAGE 89

Dynamic loading in Speakerlab's woofer kit
Both drivers that make up the Nestorovic Woofer System of Speakerlab's three-way Model Thirty are active in the upper bass range; at lower frequencies some input is shifted away from the larger woofer, automatically adjusting loading of the smaller woofer to the drive frequency. The system, equipped with a three-position woofer-damping switch, has a rated ±1-dB frequency response of 100 Hz to 10 kHz. The price of the Model Thirty kit, with walnut enclosure, is $330: a walnut-grain vinyl version costs $285.

CIRCLE 139 ON PAGE 89
While the others were catching up, TDK was moving ahead.

Shortly after it was introduced in 1975, TDK SA, the world's first non-chrome high bias cassette, was accepted by most quality deck manufacturers as their high bias reference standard. This advanced, new cassette enabled their decks to perform to the limit of their capabilities. And because the decks are set in the factory to sound their best with SA, music-loving consumers made SA the number one selling high bias cassette.

The other tape makers set out in pursuit of SA, hoping someday to equal the performance of its Super Avilyn particle formulation and the reliability of its super precision mechanism.

But making the world's most advanced cassette was nothing new for TDK's engineers. They pioneered the high fidelity cassette back in 1968 and for more than a decade they've led the way in cassette tape technology. Over the last three years, they've refined SA and made it clearly superior to the '75 version.*

That makes the music lovers happy; it means more music with less distortion. It makes the deck makers happy; they've been improving their decks and SA makes them sound better than ever. But for the competition, unhappily, it means a whole new standard to catch up to.

So if you'd like to raise your own recording standards, step up to TDK SA, the high bias reference tape backed by high fidelity's original full lifetime warranty.**

TDK Electronics Corporation.
Garden City, New York 11530

*Today's SA has a maximum output level (MOL) more than 3dB better than that of 1975 SA at the critical high frequencies, and improved sensitivity across the entire frequency range. *In the unlikely event that any TDK audio cassette ever fails to perform due to a defect in materials or workmanship, return it to your local dealer or to TDK for a free replacement. ©1978, TDK Electronics Corp.
Again we turn the world around.

The world's first pure power DC receivers, the Sansui G-line, redefined the limits of musical fidelity. Sansui's capacitor-free DC amplifier design (patent pending) with super-high slew rate, ultra-fast rise time, and full transient response, makes music sound much more true-to-life.

Now Sansui does it again. With the new G-7500 and G-5500. Using the same exclusive DC circuitry all others are trying to imitate, these new models offer more watts per dollar than ever before.

The G-7500 delivers 90 watts per channel, min. RMS, both channels into 8 ohms from 20 to 20,000Hz with no more than 0.025% total harmonic distortion, at a suggested retail price of only $620.

The G-5500, at a suggested retail price of only $465, offers 60 watts per channel with no more than 0.03% THD under the same conditions.

From their macro-designed power supplies, for rich, full sound over the widest frequency range, to their micro-sensitive double speaker-protection circuitry, the G-7500 and G-5500 are unbeatable.

The FM sections further enhance Sansui's reputation for tuner excellence. Pinpoint selectivity and ultra-sensitivity to even the weakest signals guarantee pure and clean reception, always. And always with maximum stereo separation.

Let your franchised Sansui dealer demonstrate the comprehensive, human engineered features and controls. There's nothing in the world with quite the same feel as the Sansui click-stop attenuator and ultra-smooth tuning knob.

Now look carefully at the graceful styling, with elegant rosewood veneer cabinet. It is setting the trend for all other receivers.

For the best receiver values, the world is now turning to the newest DC by Sansui, the G-7500 and G-5500. Shouldn't you turn to Sansui, too?
Crown separates aim at consumer
Though known for its pro and semipro equipment, Crown International has introduced two high-spec products designed expressly for the home market: the Straight Line One preamp and Power Line One amp. The latter is rated at 50 watts (17 dBW) per side into 8 ohms, 80 watts (19 dBW) per side into 4 ohms, or—at the flick of a back-panel switch—160 watts (22 dBW) mono into 8 ohms. Measures to minimize preamp RFI include removal of the phono preamplifier stage to a module that can be kept near the turntable. The Straight Line One costs $549 with one phono module, the Power Line One, $479.
CIRCLE 148 ON PAGE 89

Heathkit’s linear-phase speaker
Heath’s ASX-1383 three-way speaker system uses a compound curved baffle that is said to eliminate diffraction effects that cause transient distortion and inconsistent frequency response. The linear-phase design aligns the radiating surfaces of the drivers—a 10-inch woofer, a 5-inch midrange, and a 1-inch tweeter. The speaker, sold in kit form only, is finished in Brazilian rosewood veneer and costs $569.95 per pair.
CIRCLE 144 ON PAGE 89

Cadenzia’s metronome for your pocket
If you tire of carrying around that pyramidal wooden metronome, you can replace Maelzel’s version with one shaped like a pocket watch. The Cadenzia offers a visual as well as an audible beat, with a range of 40 to 200 per minute. The Swiss-made movement is housed in a shock-resistant silver-finish case. The price is about $80.
CIRCLE 146 ON PAGE 89

A budget deck from Sony
Sony’s TC-K1A Dolby cassette deck, a front-loader with servo-control motor, features a one-button recording system, automatic shutoff, and automatic repeat. Averaging meters and a three-position tape selector switch are also provided. Frequency response is rated at ±3 dB, 50 Hz to 13 kHz, and wow and flutter at 0.08%. The price of the TC-K1A is $180.
CIRCLE 140 ON PAGE 89

Royal Sound’s Add-N-Stac for video tape
Joining Royal Sound’s line of storage boxes are two module designs to accommodate, respectively, VHS and Beta video cassettes. Each module holds six cassettes (including their outer boxes, in the brands we have tried) and interlocks with the others so that the storage system can grow as the collection does. Available in six colors, the modules can be stacked or mounted on a wall and cost $7.00 apiece in either format.
CIRCLE 145 ON PAGE 89

Roland Corp’s stroboscopic instrument tuner
Marketed in the Boss line of accessories, the TU-120, a 12-note tuning device, features a built-in microphone for checking acoustic instruments, as well as a line input jack for testing electric ones. Standard pitch is switchable from 440 to 444 Hz, and an LED display indicates degree of departure from selected pitches. The Boss TU-120 can be powered by AC or battery and sells for $199.50.
CIRCLE 151 ON PAGE 89
Familiar design, new twists from BTM

At the top of BTM Manufacturing's line of ElectroStatic Translator speakers is the Model 320. In contrast to traditional design, the electrostatic driver uses a fixed bias plate between two movable diaphragms, both handling the input signal. Excursion is doubled, according to BTM, and high sound pressure levels therefore can be achieved with low power. BTM uses new design principles in the crossover/energizer network as well. The Model 320 costs $499. Other models in the line range in price from $139 to $349.

Panasonic record duster

The BH-651E battery-operated record cleaner from Panasonic uses a rotary brush to collect dust from a record surface. The particles are then deposited in a built-in dust box. The brush's fine polyvinyl chloride bristles are said to create no static or record wear while performing this function. The BH-651E is priced at $16.95.

Cassettes replace piano rolls

Superscope is marketing the long-awaited Pianocorder, an electro-mechanical cassette system that plays back prerecorded performances on your own piano. A cassette player is attached to an array of solenoids that control keyboard action and "play" tapes from the manufacturer (many derived from historic piano rolls) or original tapes made by the operator/pianist. A Pianocorder can be added to your present piano or ordered built into a new one. The system sells for $3,995.

Robins on the level

Robins Industries has introduced its Dual Spirit Turntable Level, designed to aid in adjusting turntables for proper azimuth and zenith leveling. The T-shaped device contains a pair of oversized levels to show orientation simultaneously along two axes 90 degrees apart. The Level (catalog No. 41-133) is priced at $4.25.

Adjustable dispersion in Shure stage monitor

Removable "acoustic wedges," plus two basic tilt angles, enable the Shure Model 703 monitor speaker to aim its output for best effect. The wedges deliver either 60 or 120 degrees of high-frequency dispersion, according to the manufacturer. The frequency response is tailored to emphasize the midrange, helping both intelligibility and naturalness of the output in sonically "busy" on-stage ambiences. The Model 703 is a two-way 8-ohm system; power-handling capacity is rated at 100 watts (20 dBW). The price is $370.
The new Phase 3000 Series Two was designed for that discerning music-lover who has a passion for accurate sound, an eye for elegant yet functional design, a feel for craftsmanship, and an unfailing determination to maximize return on investment.

The Phase 3000 incorporates the latest technological advancements in preamp design. Transient overloading that plagues preamps has been virtually eliminated, whether amplitude, frequency, or slew induced. Now you can enjoy the flexibility, performance and features that are priced substantially higher in other equipment.

**CMOS LOGIC MEMORY SYSTEM**

Most preamps used dated mechanical switching devices that force signals to travel long, noisy, circuitous routes from the inputs, to the front panel, then back to the outputs. Ours doesn't.

The Phase 3000 uses CMOS-digital logic to energize switching relays located where they belong, at the input jacks. This shortens critical signal paths. Noise, hum, and the "crosstalk" that's characteristic of mechanical switching is virtually eliminated.

**WANT MORE?**

A listening session with a pair of headphones will convince you just how much of a difference a true headphone amp makes. Turn the 3000 around, and see how easy it is to catch in your noise reduction unit.

Two complete taping circuits allow you to copy between decks while listening to another source.

But we've done enough talking. If you're serious about state-of-the-art performance it's time for you to do some listening. See your Phase dealer.

**SPECIFICATIONS:**

- **Distortion:** less than 0.04%
  (2kHz-20kHz).
- **Signal/Noise (IHF "A"):**
  Phono 1—Moving Magnet: greater than 90dB re 10mV input
  Phono 2—Moving Coil: greater than 78dB re 1mV input
- **Frequency Response:** Phono-1/Phono-2 deviation: ±0.3dB
- **Tone Controls:** High & Low Frequency controls with switchable turnover points
- **Volume Control:** 22-position precision attenuator with plus or minus 0.5dB tracking
- **Low Filter:** 18dB/octave below 15Hz.

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**PHONO CARTRIDGE FLEXIBILITY**

The two independent RIAA Phono Stages eliminate all low-level switching. As a result, noise is reduced to theoretical limits.

**Phono 1** is designed for moving-magnet cartridges and has three selectable capacitance values.

**Phono 2** is used with moving-coil cartridges and has three selectable resistance values. The expensive outboard head amp usually required for a moving-coil cartridge is a reality built into the 3000.

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**PHASE LINEAR®**

The Powerful Difference

Made in USA. Distributed in Canada by H. Roy Gray Ltd. and in Australia by Megasound Pty. Ltd.
Digital discs roll on. The long-awaited Magnavox/Philips/MCA video disc should be in the stores by the time this issue appears. It has been something of an uphill struggle, with questions of possible competition from other disc systems, the eleventh-hour switch from a single-sided format to the present half-hour-per-side double-faced version, and so on. But helping the “laser” disc (so called because a laser is used to play back the signal “bits” in the disc surface) has been the thrust by a number of companies—including Teac and Mitsubishi—toward using the same recording/playback scheme as the basis of an all-digital audio disc system.

Last fall JVC jumped into the lists with both feet—audio and video—by announcing its own system, called VHD/AHD (for Video High Density and Audio High Density, respectively). Like the Magnavox system, it uses a laser “cutter” to create pits on a disc master from which pressings are made; unlike the Magnavox, but like RCA’s SelectaVision disc, it substitutes a relatively simple and inexpensive capacitive pickup for the laser reading system. The double-faced discs hold one hour per side with either video or audio, the latter using a 14-bit (plus error correction) pulse-code modulation system.

JVC says it has no present plans to market VHD/AHD. It is using its prototypes to show what the approach will do and hoping that other manufacturers will adopt it, the question of standardization and interchangeability having proved crucial to so many recording formats over the years. Like other video recording systems, incidentally, JVC’s does allow for dual soundtracks—the age of stereo sound that we are so frequently told is just over the video horizon. (Or should we say, perhaps, rainbow?)

RCA’s SelectaVision disc is very much back off the shelf after a relatively quiescent period. Last fall a re-vamped player was shown to movie-industry insiders, who are reported to have been impressed. The $400 projected price is still being bandied about; presumably mechanical simplification of the player has offset inflation since the figure was originally suggested. Commercial introduction has not been scheduled, however.

In the background of all this stands the shadowy figure of IBM, which is said to be working on a system appropriate for video or digitalized recording. Presumably data storage is a major objective of the development project; how real its rumored consumer applications may be, IBM isn’t saying.

In the lab. For a lot of years we have been hearing about flat-screen (or, in Sharp’s more exact term, thin-screen) picture devices as alternatives to the bulky cathode-ray tubes on which most of us watch our video images. The flat-screen revolution—like the video tape revolution—was supposed to be just around the corner. Tape has turned it; the flat screen may do so soon, but don’t hold your breath—the interesting work that continues to be done in r&d labs around the world notwithstanding.

Sharp has demonstrated in prototype an electroluminescent panel only two inches thick that is capable of reproducing black-and-white images. The demonstration drew a great deal of attention, though it does not yet represent a marketable product.

Sanyo is pursuing the same objective with a light-emitting diode system that, like Sharp’s, is monochromatic in its prototypal form. First application of the system, we’re told, will be in readouts— alphanumeric displays and that sort of thing—but a true TV screen is hope for in two to three years.

By then, Philips may have a flat screen that displays a three-dimensional picture in full color, thus upstaging any even semi-working system we’ve heard of. Laboratories in Holland and West Germany are said to be at work on the device, which currently produces pictures but apparently meets neither the quality standards nor the cost goals set by the company. Still, they’re talking about 1981 as an introduction date.

More for the road. A few issues back, we mentioned that JVC was readying a portable model in its Vidstar line of VHS video cassette recorders. Matsushita (Panasonic) also has been at work on a model. A portable Betamax deck, first shown to Sony dealers last May, appears to be selling at prices only a little higher than those of home decks—a pattern that seems to apply to the VHS decks as well.

Meanwhile, the inherently much more portable LVR system has been scheduled for introduction by BASF here next fall.

Energy savers. Matsushita has developed a single-gun color tube that, it says, should reduce its appetite for house current by about 40%. It dispenses with the usual shadow mask, which allows only one electron beam at a time from the three guns of conventional tubes to reach the screen’s phosphors and so “wastes” the other two. At first the new tube will be used for small Panasonic battery-portable sets (which most obviously profit from the power saving in terms of reduced battery weight and/or increased battery life), but eventually larger tubes are expected to extend the savings into the living room.

Hitachi has developed a picture tube that is said to deliver an image within one second of turnon, but without requiring a continuous current drain during “off” periods to keep the heater warm and ready to go. That hat trick was pulled off, says Hitachi, by combining heater and cathode into a single alloy element that warsms very rapidly but requires less current to do so than conventional elements.
AKAI introduces automatic reverse record at popular prices.

Now instead of interrupting great moments in music when it's time to flip the cassette, AKAI's two newest decks automatically reverse the tape and continue to record or play back.

In addition, the deluxe GXC-735D is loaded with all the features that make the difference between a good deck and a great one. Things like AKAI's exclusive GX (glass and crystal ferrite) heads, guaranteed for 150,000 hours—the equivalent of playing 24 hours a day for 17½ years. As well as feather-touch controls, Dolby, memory rewind, quick reverse and dramatically recessed red/green illuminated VU meters. Not to mention the kind of specs serious component buyers all over the world depend on AKAI to deliver. (For the more economy-minded, there's the CS-732D. Same great auto reverse record/playback feature, with Dolby, quick reverse and tape selector—a lot of AKAI quality for not a lot of money.)

Hear them both at your AKAI dealer or write AKAI America, Ltd., 2139 E. Del Amo Blvd., P.O. Box 6010, Compton, CA 90224. And see how they can reverse your thinking about automatic recording.

GXC-735D: Wow/Flutter — less than 0.08% WRMS; S/N Ratio — better than 58 dB, weighted, at FeCr position, with peak level at 3% THD. Dolby on improves up to 10 dB above 5 kHz. Frequency response — 35-17,000 Hz (± 3 dB) using FeCr tape.

CS-732D: Wow/Flutter — less than 0.08% WRMS; S/N Ratio — better than 57 dB, weighted, at FeCr position, with peak level at 3% THD. Dolby on improves up to 10 dB above 5 kHz. Frequency response — 38-16,000 Hz (± 3 dB) using FeCr tape.

AKAI

You never heard it so good.
INTRODUCING THE EMPIRE EDR.9 PHONO CARTRIDGE.
IT SOUNDS AS GOOD ON A RECORD AS IT DOES ON PAPER.

It was inevitable . . .
With all the rapid developments being made in today's high fidelity technology, the tremendous advance in audible performance in Empire's new EDR.9 phono cartridge was bound to happen. And bound to come from Empire, as we have been designing and manufacturing the finest phono cartridges for over 18 years.

Until now, all phono cartridges were designed in the lab to achieve certain engineering characteristics and requirements. These lab characteristics and requirements took priority over actual listening tests because it was considered more important that the cartridges "measure right" or "test right"—so almost everyone was satisfied.

Empire's EDR.9 (for Extended Dynamic Response) has broken with this tradition, and is the first phono cartridge that not only meets the highest technological and design specifications, but also our demanding listening tests—on an equal basis. In effect, it bridges the gap between the ideal blueprint and the actual sound.

The EDR.9 utilizes an L. A. C. (Large Area Contact) 0.9 stylus based upon—and named after—E. I. A. Standard RS-2388. This new design, resulting in a smaller radius and larger contact area, has a pressure index of 0.9, an improvement of almost six times the typical elliptical stylus and four times over the newest designs recently introduced by several other cartridge manufacturers. The result is that less pressure is applied to the vulnerable record groove, at the same time extending the bandwidth—including the important overtones and harmonic details.

In addition, Empire's exclusive, patented 3-Element Double Damped stylus assembly acts as an equalizer. This eliminates the high "Q" mechanical resonances typical of other stylus assemblies, producing a flatter response, and lessening wear and tear on the record groove.

We could go into more technical detail, describing pole rods that are laminated, rather than just one piece, so as to reduce losses in the magnetic structure, resulting in flatter high frequency response with less distortion. Or how the EDR.9 weighs one gram less than previous Empire phono cartridges, making it a perfect match for today's advanced low mass tonearms.

But more important, as the EDR.9 cartridge represents a new approach to cartridge design, we ask that you consider it in a slightly different way as well. Send for our free technical brochure on the EDR.9, and then visit your audio dealer and listen. Don't go by specs alone.

That's because the new Empire EDR.9 is the first phono cartridge that not only meets the highest technological and design specifications—but also our demanding listening tests.

Empire Scientific Corp.
Garden City, N.Y., 11530

EDR.'9

THE I:MPIRE
McIntosh's New Receiver: Breeding Tells

Mac 4100 stereo FM/AM receiver, in case with simulated wood-grain finish. Dimensions: 18% by 5⅞ inches (front), 14 inches deep plus clearance for controls and connections. AC convenience outlets: 2 switched plus 1 unswitched (600 watts total), 2 for auto-on turntable switching (100 watts total). Price: $1,499; optional RMA-5 rack-mounting adapter, $29. Warranty: three-year service contract, free with purchase of the receiver, has provisions comparable to typical "limited" warranties but covers normal wear and tear. Manufacturer: McIntosh Laboratory, Inc., 2 Chambers St., Binghamton, N.Y. 13903.

McIntosh has for some years kept a very low profile vis-à-vis the press. This hiatus in communications has fostered a polarization of opinion about McIntosh: Is the company still deserving of its reputation for superb engineering, or is it trading on past glories? One review can't provide a definitive answer, of course, but the Mac 4100 receiver can be taken as a positive sign of health in Binghamton.

The personality of this receiver is like that of an accomplished servant used to coping with pampered aristocrats who demand the finest but are not always technically knowledgeable or manually dexterous. Accordingly, it takes responsibility in a manner that, paradoxically enough, is unassuming yet quite intolerant of intervention by its master. But once it has taken over, it performs virtually impeccably and can even ward off the consequences of ineptitude without noticeable fuss.

REPORT POLICY Equipment reports are based on laboratory measurements and controlled listening tests. Unless otherwise noted, test data and measurements are obtained by CBS Technology Center, Stamford, Connecticut, a division of Columbia Broadcasting System, Inc., one of the nation's leading research organizations. The choice of equipment to be tested rests with the editors of HiFi Fidelity. Samples normally are supplied on loan from the manufacturer. Manufacturers are not permitted to read reports in advance of publication, and no report, or portion thereof, may be reproduced for any purpose or in any form without written permission of the publisher. All reports should be construed as applying to the specific samples tested, neither HiFi Fidelity nor CBS Technology Center assumes responsibility for product performance or quality.
Very little of the receiver’s special quality is immediately apparent from the outside, though in hooking it up you get a clue from the convenience outlets. In addition to the conventional switched (black) and unswitched (red) ones, there are two green ones marked TURNTABLE, plus an AUTO/MANUAL switch. If you use the AUTO setting and a turntable plugged into one of the green sockets is turned on, the receiver and any outboarded equipment run off the switched outlets will come on automatically, even when the receiver’s power switch is off, and all will turn off again when the turntable shuts down. Thus an automatic model can be made to turn off the whole system unattended. Since the feature works by sensing current drain through the turntable outlets, the switch serves to override it should the turntable be one of those that draw some current even when they are off.

The receiver’s switching is handled by DC control voltages, actuated by the front-panel controls and fed to FETs that actually do the signal switching. There are two fundamental advantages to this approach: Switching transients are eliminated, and the short, direct signal paths made possible minimize noise pickup, RFI, and crosstalk. In all of these respects the 4100 is above reproach. We seldom have RFI problems in our area, but we do often find that, for example, some audio from an FM tuner section will “leak” into the tape-monitor signals; none was detectable in the Mac.

The FM section is unusual in that—in addition to conventional automatic stereo/mono switching—it has an automatic-blend feature that progressively reduces stereo separation (and hence out-of-phase noise) as signal strength drops. Since the full audio band is blended, the resulting stereo image may be a bit stabler than in the more usual high-blend solution, but the hill seems a little more intrusive for a given degree of separation loss. On weak signals it does work, however—and, like so many features of the Mac, without drawing undue attention to itself. Similarly, the Automatic Frequency Lock gently holds onto an FM station that has been tuned correctly; were it not for the front-panel AFL LED, which lights when lock occurs, you would be unaware of its action. This LED acts as a tuning aid; when the muting is on, the LED announces arrival at a receivable station before the unmuting action (which is gentle and slightly delayed) allows any audio to pass. The

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**McIntosh Mac 4100 Receiver**

**Tuner Section**

- **Capture ratio**: 2 dB
- **Alternate channel selectivity**: 76 dB
- **THD + N**: L ch R ch mono
  - 80 Hz: 0.25% 0.25% 0.16%
  - 1 kHz: 0.17% 0.22% 0.15%
  - 10 kHz: 1.8% 1.7% 0.21%
- **IM distortion**: 0.06%
- **19-kHz pilot**: -63½ dB
- **38-kHz subcarrier**: -66½ dB
- **S/N ratio (at 65 dB)**
  - stereo: 67 dB
  - mono: 71 dB

**Amplifier Section**

- **Manufacturer’s rated power**: 17¼ dBW (75 watts)/ch.
- **Power output at clipping (channels driven simultaneously)**
  - L ch: 20 dBW (98 watts)
  - R ch: 20 dBW (98 watts)
- **Dynamic headroom (at 1 kHz)**: 1½ dB
- **Frequency response**: + ½, -¾ dB, 20 Hz to 20 kHz
- **RIAA equalization**: ± 1 dB, 20 Hz to 20 kHz
- **Input characteristics (re 0 dBW (1 watt); noise A-weighted)**
  - **Sensitivity**: 0.27 mV
  - **S/N ratio**: 76½ dB
- **Phono overload (clipping point)**: 88 mV at 1 kHz
- **Damping factor at 50 Hz**: 100

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**FM SENSITIVITY & QUIETING CHARACTERISTICS**

- **STEREO SENSITIVITY**
  - (for -50 dB noise): 35½ dB at 90 MHz
  - 35½ dB at 98 MHz
- **MONO SENSITIVITY**
  - (for -50 dB noise): 13 dB at 90 MHz
  - 14 dB at 106 MHz

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**MONO FM RESPONSE**

- +½ dB, 20 Hz to 15 kHz

**STEREO FM RESPONSE**

- Left channel: +¼, -¼ dB, 20 Hz to 15 kHz
- Right channel: +0, -1 dB, 20 Hz to 15 kHz

**CHANNEL SEPARATION**

- Left channel: >40 dB, 40 Hz to 3.7 kHz
- >30 dB, 20 Hz to 12.5 kHz
- Right channel: >40 dB, 40 Hz to 7.5 kHz
- >30 dB, 20 Hz to 13.5 kHz
range of the signal-strength meter is well chosen as an aid in antenna orientation for best reception of problem stations.

The amplifier section, too, exemplifies the extra care that sets the receiver apart. Whether the option that enables switching in three speaker pairs simultaneously requires them or not, it has three distinct protection systems. The most conventional is triggered by a heat sensor and shuts down the output until the heat sink has cooled to within safe operating limits. The Sentry Monitor circuit reacts to abnormal current conditions by restricting the drive to the output transistors. And the Power Guard circuit responds to overdrive that normally would create hard clipping by shoving off the potentially dangerous harmonics—"softening" the clipping, so to speak. None impinges on normal operation; all minimize the effects—aural, thermal, or electrical—of abnormal operation.

The Power Guard, for example, limits peaks so smoothly that you are unlikely ever to hear this receiver overload, as such. The top LEDs in the front-panel power display—the one possible concession to fashion in the design—are Power Guard pilots; below that, the display is calibrated from 100 watts down to 0.1 watt in 5-dB steps. As we've said before, we're not convinced of the utility of such indicators, but the calibration points do seem relatively well chosen.

Two unusual features of the front panel are the equalizer/tone controls and the "loudness" knob. The latter might better be marked "contour" since it does not adjust midband level like most loudness controls, but simply adds boost in the deep bass plus some in the upper treble to compensate for low listening levels. Like other separate-knob schemes, this frees the loudness compensation from the volume control and makes it adjustable to the actual listening levels through the system; unlike some, the appropriate setting must be determined by ear alone—which is arguably the most reasonable approach.

The equalizer's five bands have maximum ranges of approximately ±13 dB and are marked for center frequencies of 30, 150, 500, 1,500, and 10,000 Hz—making them, respectively, controls for subbass, bass, midrange, treble, and spark. The 30-Hz control is most effective as a rumble-filter/boom-boost control; the top one might be used as a hiss filter, though its maximum-cut setting dulks the upper treble a good deal. As an ensemble, they offer genuinely useful flexibility; all have detented center "flat" positions.

While the lab measurements give little clue to the "extras" from which the receiver's special qualities derive, they document its very solid performance. McIntosh appears to be thinking in terms of listening quality rather than specsman- ship (an attitude we applaud), so distortion, for example, is only vanishingly low—not infinitesimaly low. The frequency response has been intentionally cut off beyond the audio band to help maintain clean sound by inhibiting intermodulation with infrasonic and ultrasonic "garbage" (a design criterion that applies to the tuner section as well as the amplifier); though this, similarly, may displease those who judge an amplifier by its square waves, the results with music seem all the better for it. Tuner data are likewise very good—even superb—with no offsetting cause for complaint of any kind.

It is obvious, too, that McIntosh has a clearly formed idea of the sort of user it is designing for: someone who, while he is uninterested in playing the "pro," cares very much about quality and craftsmanship. The cosmetics, the "feel," and the sound quality of the Mac 4100 are superb; the controls are minimal for the degree of useful flexibility they provide, with little if any concession to users who simply like to tinker. This truly is a receiver for music lovers.

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**NEW MEASUREMENT STANDARDS**

In making comparisons between current reports and those published in the past, readers are cautioned to pay particular attention to the reference levels and similar test criteria cited. SN ratios for electronics, in particular, are measured very differently now that we have adopted salient features of the new IF amplifier-measurement standard. While we believe that the new technique—which also implies a far more accurate approach to loading of all inputs and outputs—will result in measurements that more perfectly reflect audible in-use effects, they cannot be compared directly to the numbers resulting from the former, more conventional lab measurements.
When Inertia Is a Plus


Hefting the packing crate in which a Denon DP-2500 arrives is the first hint that something unusual is afoot. Tipping the scales at nearly 28 pounds, this model surely belongs in the heavyweight class. Far from being there just to impress or as a brute-force effort to secure some isolation from external shock, the avoridupos of the Denon seems to be an ingredient of a highly sophisticated isolation system. The system is so good, in fact, that when we inadvertently operated the turntable with its transit screws still in place we got results that we could not complain about. And with the screws removed (the power transformer is thereby decoupled from the main chassis), the isolation is superb—barely acknowledging hard footfalls on the floor nearby, for example. And acoustic feedback is out of the question, even at heroic listening levels.

This level of behavior is probably to be expected from a component that is so single-mindedly performance-oriented—one that is expensive yet utterly devoid of frills, conveniences, and automatic features. You start and stop the platter with a manual switch, and set the tone arm in the first groove and retrieve it from the last by hand as well. Thus, the Denon’s blandishments are all technical: the quartz-controlled servo-AC direct drive, the proprietary DC platter-braking system, the damped tone arm, the antivibration platter mat said to have been designed with the aid of laser vibration analysis, and so on.

Laboratory tests confirm the unvarying speed: at both 33 and 45 rpm, and despite extremes of power-line voltage, as exact as can be measured. (No intentional speed alteration is possible.) Flutter and rumble are minimal. The motor provides enough torque to allow use of a record-cleaning brush during actual play with no alteration in speed. This same torque also provides very quick startup—including virtually instantaneous transition from 33 to 45 rpm, with the opposite transition nearly as rapid.

The DP-2500’s tone arm measures 10 inches from pivot to stylus tip, promising reduced tracking error by comparison with 9-inch arms but, at the same time, increasing the mass. While the arm resonates right in the warp region (6.5 Hz for vertical motion), the damping confines the rise to a barely detectable level. Moreover, the unit proved itself by successfully tracking a severely warped disc that we save for such tests.

Accuracy of the stylus-force gauge is measurably perfect up to a setting of 2 grams. At one full turn of the counterweight, which seems to represent 2.5 grams, only a small error is detectable; higher settings can be dialed in by continuing into a second revolution. The counterweight, incidentally, is massive enough to balance moving-coil and other heavy pickups. Antiskating compensation, though not particularly linear, falls within the normal range, and cueing is above reproach.

Put to work in our system, the Denon performed flawlessly. Its effect, naturally enough, is elusive, but it gives our phono cartridges as stable a working environment as we have ever encountered and lets them work without gratuitous obstacles—and we cannot recall a turntable that let them do it better. Operating controls are located under the dust cover, but the smoothness of its hinge action and the imperturbability of the suspension make it easy to close the cover with the turntable in operation. The unit’s weakest point is its bilingual (French and English) instruction manual, which must be deciphered with some care.

The DP-2500 surely is a winner. Its superb performance is clearly addressed to the purist who can afford as well as appreciate it and won’t mind the lack of convenience features. If you fit this description, a trip to your Denon dealer may give great satisfaction.

CIRCLE 134 ON PAGE 89
**Superior Tuning in a Slim Package**


Judging a book by its cover is said to be ill advised. Certainly the diminutive size of the JVC T-3030 FM tuner belies the circuit complexity that lies within. And, though it's not necessarily true of look-aikes, the four-digit LED frequency readout does imply a form of crystal-controlled tuning. The oscillator frequency of the tuner is synthesized by comparing it with a quartz-controlled reference circuit; accuracy and stability are therefore determined solely by the rock stable crystal. Accordingly, there is no need for the common channel center meter, which has been omitted.

You tune the T-3030 by pressing one of the two buttons that cause it to scan (upward or downward) through the band in 0.1-MHz increments. In the slow-scan mode, it moves about 1 MHz in 4¼ seconds—it requires about 1 minute 22 seconds to sweep the entire FM band. When you press quick simultaneously, the rate increases, and the tuner slews from 86 to 108 MHz in less than 13 seconds.

During tuning, the output of the T 3030 is squelched, but the five LED signal-strength display and the stereo indicator alert you to the presence of a station. Since the first LED will not illuminate at signal strengths below 27 dBf, however, many stations that would afford excellent reception (at least 62 dB quieting) in mono slip by unnoticed. To “find” them, you either must know their precise frequency and tune manually or scan the band very slowly, stopping at each possible station and waiting for the tuner to come out of squelch. We find conventional rotary mechanisms more convenient for the purpose. Had JVC chosen 0.2-MHz steps—the closest station spacing allowed by the FCC—the process could have taken only half as long; furthermore, such a design would avoid confusion between stations’ quasi-frequency nicknames (“Stereo 101,” etc.) and their true tuning (100.9 or 101.1 MHz—or even farther from the nominal).

Seven preset buttons are provided; a single digit LED display indicates which of the seven has been selected. Presetting your favorite seven stations for the first time is a rather complex procedure but one that is readily accomplished if you follow the manual’s instructions precisely. The T-3030 stores the frequencies in a memory, maintaining the settings even when the tuner is switched off and—as with a conventionally tuned receiver—returns at switch-on to the station it was receiving when it was turned off. A battery (with a claimed life of one year) prevents “amnesia” during power failures. Provided that the battery is changed before it is completely discharged, the batteryless memory will coast for 10 minutes or so and hold your commands during the replacement.

The availability of seven presets is a bit misleading. If you wish to listen to only seven stations, they can be locked in; but
**JVC T-3030 Stereo FM Tuner**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capture ratio</td>
<td>1½ dB</td>
</tr>
<tr>
<td>Alternate-channel selectivity</td>
<td>83½ dB</td>
</tr>
<tr>
<td>S/N ratio (at 65 dBf)</td>
<td></td>
</tr>
<tr>
<td>stereo</td>
<td>67½ dB</td>
</tr>
<tr>
<td>mono</td>
<td>72½ dB</td>
</tr>
<tr>
<td>THD + N</td>
<td></td>
</tr>
<tr>
<td>80 Hz</td>
<td>0.18%</td>
</tr>
<tr>
<td>1 kHz</td>
<td>0.17%</td>
</tr>
<tr>
<td>10 kHz</td>
<td>0.34%</td>
</tr>
<tr>
<td>IM distortion</td>
<td>0.065%</td>
</tr>
<tr>
<td>19-kHz pilot</td>
<td>-65½ dB</td>
</tr>
<tr>
<td>38-kHz subcarrier</td>
<td>-67½ dB</td>
</tr>
</tbody>
</table>

should you wish to tune manually, the frequency stored in the last preset used will be lost when you do. An example may clarify. Assume you have preset seven stations and have selected Preset 4. You now wish to scan the band. You move the SELECT/MANUAL switch to manual and press one of the scanning buttons. When you do, Preset 4 will be readjusted to the manually tuned frequencies. To return it to its previous setting, you must remember what it was and feed it back into the memory after your manual tuning. The only purpose we find for the SELECT/MANUAL switch is to prevent manual tuning (and hence the loss of presets) in the SELECT mode.

In addition to a fixed-level output pair, the T-3030 affords control of the output level from a second pair of back-panel jacks, which are handy for matching the tuner to the levels fed to the system’s preamp by other equipment. A detector output jack provides for discrete FM quadraphony should such a system become a reality. Strangely, the only antenna input is for 75-ohm coaxial; if you use a 300-ohm lead-in, you will need a balun to match the T-3030.

You have a choice of two muting levels (plus off). Even in the more sensitive position, however, the tuner rejects a large number of stations that would provide excellent mono reception, so we frequently find ourselves forgoing the muting—especially when scanning. A calibration signal equivalent to a 50% modulation level aids in predoubling tape-recorder levels, and the high-blend/“antibird” switch helps with less-than-perfect reception conditions.

A high level of performance is reflected in the laboratory data. The differences in sensitivity across the band suggest some mistracking in the electronic-tuning mechanism, but midband sensitivity is very good and the low end is only about 2 dB less sensitive. The distortion is low—especially in mono—and the capture ratio and alternate-channel selectivity are very good. Frequency response and separation are what we expect from a top-of-the-line tuner.

And the lab data correlate well with our listening tests. The apparent selectivity is excellent: We find no problem separating stations well on alternate and, in most cases, even adjacent channels. With signals of reasonable strength, the sound is extraordinarily clean, and the stereo reception of strong stations is excellent. We suspect that this reflects the T-3030’s ability to tune to the station with greater precision than we could do ourselves. We would prefer a conventional meter to the five LED signal-strength display, which we find less than adequate as an antenna-orienting aid. For that matter, some means of indicating multipath would also be helpful.

Certainly the JVC here demonstrates the level of technical excellence that can be achieved in a synthesized tuner. Station selection is notably accurate, and—while manual tuning is not so convenient as with conventional techniques—the choice of presets assures you that your favorite stations can be tuned quickly as well as precisely.

**A “Less Is More” Preamp**


If “control preamplifier” is accepted as the description for this genus of product, the CM-301’s species might be called “minimum-control preamplifier.” Basically, the CM-301 includes a phono preamplifier/equalizer, a means of choosing among its four inputs, and adjustments for volume and channel balance. The only deference given to tonal modification is the low-cut filter. The rationale behind least-is-best designs is that each stage through which the signal must pass on its way to the speaker cannot help but introduce some additional noise and distortion. So why have what isn’t needed? (And, in this era of graphic equalizers, tone controls may be considered redundant in many home systems.) Furthermore, the manufacturer can concentrate his design efforts and construction costs on fewer circuits and thus can increase the quality of each.

Indeed, the bench tests at CBS Technology Center verify that the CM-301 accomplishes its task with a high level of competence. Distortion—both harmonic and intermodulation—is negligible. Throughout most of the audio range, what harmonics are generated appear to be lost in the residual noise—which, itself, is very low. Distortion per se makes its presence known only at the topmost test frequency...
(20 kHz), and there it is less than 0.04%. The output provides more than adequate drive for typical power amps; clipping occurs only above 11 volts.

The frequency-response curve from a high-level input can be drawn with a ruler over the entire audio band and is down less than 1½ dB at 100 kHz. The phono equalization comes close to the mark, with a maximum deviation of 1 dB throughout the measurement range. Phono sensitivity is adequately high for typical fixed-coil cartridges, and the input-circuitry overload level suggests that the preamp will gladly accept whatever even the most sensitive cartridges will deliver. High-level sensitivities are equally appropriate; though the S/N ratio figures may not astonish today's super-spec world, the CM-301 sounds quiet indeed.

On such a unit, in our view, the purpose of the low-cut filter should be elimination of infrasonic signals—rather than tonal modifications, as in the sort of rumble filter that modern turntables have made largely obsolete—so we find the CM-301's filter less than ideal. While it effectively copes with such things as warp pickup, it takes a large slice out of the deep bass content as well.

This electronic-design decision could, perhaps, be argued either way, and there are others in the human-engineering department that also are arguable. For example, the CM-301 has no AC convenience outlets, so it cannot be used to turn other components on and off with the system. Audio International suggests, in fact, that it be turned on before, and off after, the power amplifier or even left on permanently since current drain is minimal. The preamp's muting circuitry lets through some transient burbles. When the muting fails, as it did on one sample we tested, the transients are powerful enough to endanger speakers. And some users will miss a tape-dubbing feature.

We found the volume control's twenty-two detents sufficiently close together to afford a smooth adjustment over the typical operating range. The balance control lacks a center detent, although its marked center position seems to be accurate. Its action is atypical: As one channel is faded, the other increases. Actuating the various switches elicits no annoying clicks or noises. The phono preamp is truly quiet. You can hear only the slightest sizzle, and then only if your ear is practically at the tweeter. It is also exceptionally clean, and the sound—especially from directly recorded or digitally mastered discs—is transparent though a hair brighter than average. In any case, the CM-301 seemed to make our cartridge quite well.

Keeping in mind that some options can be outboarded—via an equalizer to control tonal balance, a switching box for tape dubbing, a switched AC extension to turn the system on and off—to what extent does the CM-301 ask you to trade features for performance? It affords fine phono reproduction and the unencumbered signal routing implicit in the design concept. And (with the probable exception of the low filter) it concentrates on those elements that will not be redundant in any modern system. The intent is worthy; the effectiveness of its realization will vary with the priorities of the individual user.

CIRCLE 122 ON PAGE 89

A Moving Coil for the Price of a Moving Magnet


As head amps become more commonplace in preamps and even receivers—and they are beginning to—we suspect that more home listeners will want to try moving-coil cartridges and explore for themselves the special quality that many fans and reviewers find in them. One deterrent to this exploration has been the rather steep prices that moving-coil models command. Ortofon has made the cost barrier a good deal less formidable by introducing the MC-10 at a price competitive with high-end fixed-coil types, here at last is a way to get your feet wet without going to the cleaners.

Like most others of its kind, the MC-10 requires what is by today's standards a relatively high vertical tracking force for proper operation. The manufacturer recommends 2 grams, ±0.3 gram. Tests performed in the lab indicate that the pickup tracks acceptably at the bottom of this range and even...
Burwen’s Elixir for Ticks and Thunks


Peeping out from beneath the prose describing “highly advanced state-of-the-art signal processing” in Burwen’s manual—far more straightforward than most in the mysticism-ridden field of noise elimination—we found the provocative statement that the detection system, which is designed to differentiate musical from nonmusical transients, puts a premium on what happens above the actual audio band. Scratches and dust motes produce transients that imply energy at all frequencies, without respect for human auditory limitations. But musical sounds, even when their overtones structures extend beyond 20 kHz, contain little if any ultrasonic energy by the time their signals have passed through tape recording and disc-cutting heads, though most phono pickups will deliver a fair amount of output between 20 and 50 kHz. It is in this range that the TNE-7000 “looks” for tell-tale signs of nonprogram transients.

According to the circuit description, it looks there for fast slightly below (although it would be foolish, in our opinion, to let this tempt one into cheating on the specified VTF). The frequency response curve (as measured through Ortofon’s MCA-76 head amp, which presumably supplies ideal loading) is reasonably flat, showing just a hint of a dip in the upper mid-range and a peak near the highest extreme of the audio bandwidth. Balance between the channels is accurate to within a fraction of a dB at midband and proves excellent elsewhere as well. Good separation remains throughout the audible band, falling off just a trifle in the highest octave. Square-wave traces at 1 kHz show fairly rapid rise followed by modest overshoot and some ultrasonic ringing.

Measured second harmonic distortion is kept under good control in the frequency range in which the spurious products are audible. Intermodulation distortion also is well controlled, and the vertical tracking angle is a reasonable match for the nominal values used in cutting most discs.

Mounted in an SME 3009 tone arm, the MC 10 shows a low-frequency resonance that is fairly pronounced but located almost ideally between the lowest audible frequency and the frequency at which disc warps are worst—that is, at the point where it will cause the least trouble. In practice, we found that the Ortofon tracks warps very well indeed and can maintain contact with discs on which warp-induced wow is clearly audible and annoying.

We listened to the MC 10 through our own head amp to maintain consistency with our tests of similar pickups, though the Ortofon head amp used for the lab measurements checked out well; the pickup’s separation and distortion data, for example, are not compromised by limitations in the head amp. Overall, we would characterize the MC 10 as one of the brighter sounding cartridges we have heard. It tends to emphasize sharp transients in a way that lends a little extra definition to prominent rhythmic features and individual vocal and instrumental lines, particularly when the texture is not very dense. Special clarity is thus afforded chamber music. In heavier textures that are complex or massed, the transient emphasis and brightness may strike some as rather excessive and apt to compromise smoothness. Voices, particularly in choruses, take on an edge that makes them seem more emphatic and robust than they could be in reality, and a string orchestra assumes an almost surreal gloss. The stereo image is stable and highly plausible with any program material.

A transducer always leaves its signature on the music it reproduces, and that of the MC 10, though bolder than some, is consistent with artistic quality and integrity. This, in view of the pickup’s relatively modest price, represents a considerable achievement.

CIRCLE 135 ON PAGE 89
rise and fall times (acoustic transients decay more slowly because of reverberation), which is the primary operating characteristic discernible through the verbal smog surrounding other transient eliminators we have examined. And, like them, the Burwen uses a delay line to hold signals long enough for the detector to determine whether the latest spike is of the offensive type; if so, this minute portion of the signal is blanked out.

There are two controls for adjusting the denoising action. The SENSITIVITY knob is turned clockwise during a relatively quiet passage until the pilot next to it dims, meaning that the overall level through the processor is adjusted to the residual high-frequency noise "floor" in the source; the THRESHOLD knob is then advanced far enough to remove transient spikes riding above the floor (as indicated by flashings of the pilot next to the knob) but not far enough to "chop up" the music through overeager blanking (as indicated by more or less continuous lighting of the pilot or by audible distortion).

Like most noise eliminators, the Burwen is intended for use in a tape loop and therefore has a tape/source monitor switch; unlike most, it processes the signal ahead of the tape recorder operating through it. This means that transients can be removed from the signals you are taping but not (without reconnection) from those being played back on the deck in question. This is as it should be, in our opinion. By denoising the signal before taping, you are spared the job of getting the denoiser controls just right for each playback, and in any event the Burwen's noise-eliminating action will be inhibited by some tape equipment—particularly cassette decks—because of their want of output above 20 kHz.

When the 7000 receives the highs it needs for correct operation, the audible effect still will vary with the nature of the noise in the program as well as the control settings. In general, deep scratches—the kind that go "thunk" on playback—will be softened by removal of some high-frequency content but with the bass content virtually intact; light scratches—best called "ticks"—may be removed altogether without trace; some ultra high transients that can't be heard at all in normal playback will trigger the blanker and it will create a small but audible thunk. Thus optimum results require good judgment not only in setting the controls, but also in deciding whether the recording in question would be best served by using the TNE at all.

These properties were confirmed by measurements made at Diversified Science Laboratories. Continuous tones representing the desired program and superimposed short tone bursts to produce the tick that the Burwen was "asked" to remove covered a wider range of frequencies (for both) and durations (for the ticks) than we were able to find in real-world examples. The duration of the blanks produced varied between about 0.1 and 1.8 milliseconds, depending primarily on the duration of the simulated transient. Cleanest removals occurred with the shortest tone bursts (for example, a single cycle at 10 kHz or above) superimposed on relatively low-frequency "music" (say, 100 Hz), where the removal was complete and the side-effects inaudible; with longer bursts and higher "music," audible thumping began creeping in as a byproduct of the removal.

Measurements are shown (in the box) for both the noise elimination mode and for the DEFEAT because the 7000 includes a buffer amplifier through which the signal must pass even in the latter mode—for example, when you are playing a tape on a deck whose system connections the TNE is sharing. The worst case distortion figures are all at 20 kHz; all measurements were 0.01% or lower below 10 kHz in DEFEAT and below 4 kHz in the active mode, where distortion begins creeping upward. But both distortion and noise can be characterized as materially absent. In the audible range, response is virtually flat; it remains so to beyond 100 kHz in the bypass mode but cuts off sharply with the processor activated, being down about 50 dB at 50 kHz.

That any transient noise can be removed successfully once it has crept (from whatever source) into a recording is, perhaps, among the minor miracles of modern technology. The Burwen is miraculous to that extent. But, like other noise-elimination devices, it will only perform these small wonders, and he who greedily expects it to banish every noise and do so without side effects is destined for disappointment. The 7000's forte, certainly, is the removal of sharp ticks of moderate amplitude, and that is an ability to be grateful for, since the defect is common and the remedy generally less effective with competing devices.

**Burwen TNE-7000 Transient Noise Eliminator**

- **Output at clipping**
  - L ch: >8 V
  - R ch: >8 V

- **Voltage gain**
  - L ch: 0.0 dB
  - R ch: 0.0 dB

- **Frequency response, signal-processing mode**
  - +0.0 dB, below 5 Hz to 22.0 kHz
  - +0.1 dB, below 5 Hz to 26.0 kHz

- **Frequency response, bypass mode**
  - +0.0 dB, below 5 Hz to 115 kHz

- **S/N ratio (A-weighted, re 0.5 V)**
  - processing: L ch: 89 dB
  - bypass: L ch: 94 dB
  - R ch: 88 dB
  - R ch: 98 dB

- **THD, processing mode**
  - L ch: <0.22%, 20 Hz to 20 kHz
  - R ch: <0.15%, 20 Hz to 20 kHz

- **THD, bypass mode**
  - L ch: <0.02%, 20 Hz to 20 kHz
  - R ch: <0.018%, 20 Hz to 20 kHz

*Processing mode tested with rotary controls at midpoints.*
You’re looking for a tape recorder. You’ve heard from friends and salesmen that cassette is the answer. At TEAC we make both cassette and reel-to-reel tape recorders. Because we make each for a specific person and application, you should depend on fact, not hearsay, before spending your money.

**IT’S A MATTER OF PHYSICS**

There are immutable reasons why cassettes can’t match open reel fidelity.

Take tape speed. Open reel tape running at 7 1/2 ips is running four times faster than a cassette. And speed has more to do with the relationship between frequency response and signal-to-noise than anything else by far.

At 7 1/2 ips all audio frequencies can be recorded at full level without tape saturation. Recording at 1 3/8 ips forces you to make drastic compromises in record levels. The more you have to back off on recording levels, the more you hurt the ratio of signal-to-noise.

In short, with a cassette deck you cannot have high frequency response and good signal-to-noise. So a cassette deck is always operating on the ragged edge of disaster. It’s so much easier to get into trouble than out of it because there’s a difficulty for every solution.

And while we’re on the subject of magnetism, an open reel tape has twice the oxide coating of a cassette.

Upshot: A total tape volume 16 times greater than a cassette, which means 16 times more magnetic particles to store and remember music.

If that sounds better to you, if we’ve convinced you the cassette format is a high price to pay for convenience, then you ought to look at the TEAC lineup of open reel tape recorders.

Tape saturation vs. level at 7 1/2 ips and 1 3/8 ips.

Comparative dropouts between 7 1/2 ips and 1 3/8 ips at 15kHz.

**MORE IS MORE**

The faster the speed the longer the wavelength, the longer the wavelength the more protection you have against dropouts. You also have an easier job of editing.

Now take track width. Open reel gives you twice the track width of cassettes. The wider the track width the higher the output, the higher the output the better the signal-to-noise ratio. A wider track is also less sensitive to dropouts and, obviously, a wider track retains more magnetism.
INSIDE INFORMATION
TEAC is a leading designer and manufacturer of computer and instrumentation recorders. In medical centers, for example, physicians depend on special TEAC units to record vital data in life-or-death situations; in remote wilderness areas, scientists depend on TEAC to monitor now-or-never phenomena like earthquakes.
From that experience we’ve learned that the quality of the transport mechanism is the single most important consideration in a tape recorder. For the computer industry, and for you. That’s why many of the same engineers have designed the tape recorders we make for both.
Our entire reel-to-reel line has three motors and micro-switched solenoid operated transport systems, a blend of computer age sophistication and brute strength that nothing else can equal. Ask anyone whose opinion you respect.

FOUR EXAMPLES
The TEAC A-2300SX is the best selling, most successful open reel machine ever. Over 300,000 have been sold. The SR version of the A-2300 features an auto-reverse function so you can play music in two directions. Both use 7” reels.
The A-3300SX and its reversing version, the A-3300SR, are classic heavy-duty machines designed for 10” reels.
Whichever TEAC open reel recorder you choose, you can be sure it will last a long, long time. It was designed and built that way.

FACE IT
In the end, the cassette recorder is for those who are fonder of convenience than fidelity. If you want fidelity you can’t ignore open reel.
In all crucial specifications, open reel tape recorders are better than cassette decks. And that message comes from the people who make the best of both, TEAC.

OPTIONAL REMOTE CONTROL
Unlike some reel-to-reel machines, TEAC decks have full-function remote capability. Our optional remote units are the perfect answer for recording sessions where you can’t be next to the recorder, or for operational access to a recorder in a custom installation.

TEAC®
First. Because they last.
Bits and Particles

Are the “new” technologies threatening to make your tape equipment obsolete?

by Larry Zide

The two current developments that have most captured the imagination of audiophiles are digital recording and metal-particle tape, sometimes called alloy tape. Digital recording is of greater interest in the record industry; we’ll first consider the new particle, which portends so much for the home recordist and has created such confusion even before its introduction.

What is metal-particle tape? It is not a reel of thin, solid metal, like a carpenter’s coiled ruler, but a tape that looks very much like conventional recording tape and whose magnetically active ingredient consists of pure metal particles. The tapes you are used to come coated with oxides of metal. Since the beginning of tape recording, ferric (iron) oxide powder has served as the basic “pigment” that gives the tape its magnetic properties. In recent years, another oxide—one of chromium—has been substituted (in so-called chrome tape) for ferric oxide or (in ferrichromes) layered over it. Chromium dioxide tapes have, indeed, been promoted as the new ultra of the cassette field, but manufacturers of iron oxide tapes have improved their formulations to the extent that today there is little performance difference between good tapes of either oxide. Iron oxide frequently has made use of the metal cobalt as an additive, but pure cobalt has never made it out of the laboratory as a recording medium.

The magnetic properties of oxides are inferior to those of the metals—including alloys—theirseleves. Then why have we not had a pure metal-particle tape before? Perhaps the biggest problem has been that, when you grind iron into a powder fine enough to be used as a magnetic pigment, the particles oxidize (rust) spontaneously—explosively, if there are enough of them—and what you are left with is a batch of good old iron oxide powder. Industrial hazards aside, that puts you back to square one.

Most of the problems of iron (and other metals as well) were controlled sufficiently for laboratory purposes back in the Sixties, when Philips, for one, demonstrated samples of metal-particle tape. But winning a battle of this dimension in the lab is a far cry from winning the mass-production war. Those problems took many years to solve. But one company—3M, maker of Scotch tape products—found means of protecting industrial quantities of iron particles from oxygen (apparently by some form of particle encapsulation) and announced last year a metal-particle tape called Metafine.

What, in practical terms, precipitated all this effort to produce a metal-particle tape? What will it offer, and what will it exact? To understand the answers to these questions, you should be familiar with three tape terms:

- Retentivity describes the ability of a magnetic medium to retain a magnetic charge. As an example, soft iron may be magnetized easily but will rapidly lose this magnetism; it thus has low retentivity. Retentivity is measured in gauss (a singular and plural form, incidentally).
- Remanence measures the amount of magnetism left on the tape after you stop applying magnetic force (from the recording head). It also can be interpreted to indicate how much magnetism can be placed on the tape before saturation (the point at which the tape can absorb no more magnetism). Remanence is measured as lines per 1/4-inch.
- Coercivity specifies the magnetic force required to reduce the residual magnetism on the tape to zero—in other words, how hard it is to demagnetize (and, conversely, how hard to magnetize) the tape. Coercivity is measured in oersteds.

As tapes have improved over the years, all of these characteristics have gotten better. Improved retentivity and remanence combine to offer tapes of higher output. (Retentivity affects the midrange frequencies, while remanence affects the highs.) Coercivity figures tell us how hard we must work to put that higher output on the tape and take it off again. The advantage of metal particles is their high coercivity, along with significant improvements in both retentivity and remanence.

What follows shows how 3M rates its new tape in respect to these characteristics in comparison with its top ferric oxide and a typical chromium dioxide tape. Some of the numbers vary in tabulations from other sources, but not by significant margins.
TABLE 1

<table>
<thead>
<tr>
<th></th>
<th>Typical Chrome</th>
<th>Scotch Master II</th>
<th>Scotch Metafine</th>
</tr>
</thead>
<tbody>
<tr>
<td>Remanence (lines per 1/4-in.)</td>
<td>0.43</td>
<td>0.60</td>
<td>0.80</td>
</tr>
<tr>
<td>Coercivity (oersteds)</td>
<td>550</td>
<td>550</td>
<td>1,000</td>
</tr>
<tr>
<td>Retentivity (gauss)</td>
<td>1.400</td>
<td>1.500</td>
<td>3.400</td>
</tr>
</tbody>
</table>

What do all these numbers actually mean in terms of improved performance? If we take chrome tape as the "zero reference," Metafine will have 3 dB more sensitivity at both middle and high frequencies and can take an impressive 9 dB more signal before saturation in the midrange and 7 dB more at the high end. And distortion can be as much as 21 dB lower (better than 100 times less)!

The data just quoted are for a cassette tape in a deck with separate record and play heads. Those machines with 1.25-micron combination record/play heads still will do much better with Metafine than with chrome, but there will not be as much improvement as there is with a separate 2.5-micron recording head.

It's not a matter of just running out and buying a metal-particle tape, however. Decks must change to handle the new tape—and the tape itself may be subject to change.

A Question of Compatibility

Even higher coercivities are possible in metallic pigments (1,300 oersteds has been suggested), but there is some question whether practical systems could make use of this theoretical improvement. As long as such questions exist, some industry insiders have argued, it is too early to standardize bias and equalization; and standardization, the argument continues, is necessary in order to head off the sort of anarchy that has been confusing consumers in the market for ferric oxide cassettes.

Well, folks, a standard does exist: The practices that 3M and Tandberg (which first introduced a deck capable of using Metafine tape) adopted in their initial products appear to have set a pace that will be matched in the many wares—soft and hard—that are due for unveiling in this country before you read this article. And even the more hesitant manufacturers seem to agree that the de facto standard probably will continue to represent excellent choices even after more of the smoke has cleared.

Specifically, those choices include a bias point some 6 dB higher than that for chrome (the exact value depends on head-gap width), which to a considerable extent is a function of the assumed 1,000-oersted coercivity, and a playback equalization of 70 microseconds—which not only suits Metafine well (better than it does chrome, according to Tandberg), but has the added advantage of playback compatibility with existing decks having the chrome EQ switch position.

In recording, however, the higher bias and erase currents required by the higher coercivity and remanence of the metallic pigment generally overtax conventional equipment. Even if the circuitry is redesigned to generate the higher current levels (which are almost universally beyond the adjustment range of existing decks), they would drive many conventional heads into magnetic saturation, much the way an overrecorded tape is saturated and hence produces distortions instead of the desired extra output. (This consideration is particularly critical if successful narrow-gap record/play heads are to be developed for the new tape.)

The solution lies in very careful choice of material and design configuration for recording and erase heads. Conventional materials can be used, but unconventional materials may offer greater promise. In a paper presented before the Audio Engineering Society convention in New York last fall, Tandberg's Herman Lia pointed out that in traditional magnetic materials, with regular crystal structures, the price of the magnetic "softness" (low remanence) needed to prevent saturation is a physical softness that raises questions of head durability. But new, amorphously structured materials (actually, in some cases, developed to solve similar problems in miniature transformers and the like, whose requirements are very similar)
First metal–particle tape to be announced was 3M’s Metafine cassette. Before its market introduction, other major tape companies had already produced prototype samples of similar tapes.

couple magnetic “softness” with physical hardness—the ideal combination.

The present head-core saturation limits might also be stretched at the design stage. On Nakamichi’s recent Model 580 cassette deck (which, be it noted, is not touted as Metafine-compatible) the so-called Direct Flux erase head is significantly more efficient than conventional heads: It concentrates more magnetic flux in the tape coating for the same level of magnetic flux within the head. Whether the Direct Flux head presages Nakamichi’s approach to metal–particle tapes, the company isn’t saying, but the potential for a happy symbiosis seems obvious.

But, again, metal–particle tapes need not wait upon adoption of these specifics—at least in three-head designs. Tandberg, in fact, determined that its existing cassette decks can be converted to Metafine use with comparative ease and plans to offer kits for the purpose. And—though at this writing they have yet to be introduced here—the prototype decks from other companies that plan to adopt metal–particle tape appear to rely on relatively conventional technology in the heads and associated drive circuitry.

The Next Round

Though 3M and Tandberg appeared to stand alone until recently, behind-the-scenes activity was intense and nearly universal. Recorder designers, whether pro or con on the metal particle, commented on the variability and high dropout counts of early tape samples, implying (whatever their public stands on the matter) that they were at least experimenting. Virtually every major tape manufacturer—Ampex, BASF, Fuji, Maxell, Memorex, Sony, and TDK—had something revealing to say on the particle, its manufacture, and its potential. Some have begun making the tape already or are expected to shortly; the remainder are preparing for manufacture but want to see how the market shapes up before committing product to it. About a dozen companies showed prototype decks for the tape several months ago in Japan, and some have brought the prototypes here.

Those machines will enable you to produce cassettes with 6–9 dB better signal-to-noise ratios, and—with much less high-frequency recording drive for a flat output—significantly lower high-frequency distortion. With Dolby B noise reduction, expect dynamic ranges in excess of 70 dB!

Even without a deck capable of recording on the metal–particle tape, you can realize some of its advantages. Cassette duplication equipment for it was introduced last fall, and prerecorded tapes likely will be on the market this year. That will be a real step forward—with about 6 dB better signal-to-noise and cleaner signal at all levels than the best present prerecorded cassettes.

Unfortunately one major disadvantage of cassette tapes will not be alleviated by the improved tapes. At the slow transport speed, flutter will remain a problem. You also will have to pay about twice the price of present premium tapes for the metal ones, with little hope for the sort of volume market needed to pay off development costs and bring prices down in the near future.

“Anything that cassettes can do, open reels can do better” is virtually a maxim, since the wider tracks and higher tape speeds of the open-reel format offer distinct technical advantages. At this writing, however, no open-reel metal–particle tape is on sale, nor is it clear how it would best be used. It seems likely that the current equalization standards will not produce best results from the tape. Here, indeed, a new standard will be needed. Companies such as Ampex and 3M’s Mincom division have been playing with metallic tapes, and presumably it is from such producers of profes-
sional recording equipment that the standards will come—giving studios and semipros using 15 ips as the standard speed a distinctly superior product and perhaps allowing consumer gear to operate one speed slower than before without compromising specs (except flutter).

A more immediate thrust of the metal particle reaches in the opposite direction. Sony has announced its use in microcassettes playing for up to 90 minutes per side (that is, a total of three hours of recording), though this is not to say that the format is imminently to be used for stereo music recordings. More likely is a conventional cassette playing at 15/16 ips (half the present standard)—a proposition that at least one major deck manufacturer is exploring.

Prognostications

As for digital recording, there’s no getting away from the fact that it exists (see “An Old Show with New Numbers” by Harold A. Rodgers, March 1978). A variety of equipment is available for studio use, and some of it already is at work making the master tapes for superior discs. Outside the professional studio, digital recording offers much promise, but the price may be too great for some time to come. It represents an entirely new operation; conventional machines cannot be adapted and, generally speaking, conventional editing techniques cannot be used even with open reels because the cut upsets the digital coding and produces audible “glitches.” The alternative—new recorders plus electronic editing equipment—will strain the pocketbook of any organization without strong investment-capital backing.

But metal-particle tape changes the picture considerably. If you have a pro machine such as an Ampex ATR-100, the investment may require a new head nest and some modifications to electronics that can be had by replacing a circuit card. At worst, a new machine will be needed, but editing and dubbing still respond to present techniques.

Metal-particle tape together with the present level of noise-reduction equipment should offer performance characteristics similar to what is now promised in digital equipment. Accordingly, its introduction will undoubtedly retard digital recording in the market for open-reel recorders having four channels or fewer. And the present audio-cassette transport speed is too slow to deliver the “packing density” needed for digitalization. The potential of the metal pigment may change all this, however. The digital technology can benefit from the new tape’s higher recording density, permitting slower tape speeds (and lower costs) with no sonic degradation. We might then have the best of both worlds: an audio cassette that, being digital, needs no noise reduction and is not plagued by flutter.

The advantages of the metal pigment will certainly accrue to video tape equipment. Picture and sound quality on present systems are fair to good; metal tapes can provide sparkling pictures and high-quality sound on those systems. And their transports already form the basis of digital audio cassette systems, with the purchase of a video tape recorder and a digital conversion box. This represents more than $2,000 in hardware costs, and the tape costs too are relatively high. Compare this to three-head audio cassette decks, which can be bought for $750 or less.

Above all, therefore, metal-particle tape appears to be just what the analog cassette has needed to reach sonic maturity, so to speak. And its playback compatibility with present equipment makes it a serious contender as a quality playback medium for recorded music. All told, 1979 should be an exciting sonic year, with much of the attention centered on metal-particle tape.
Your choice between these new LUX turntables depends on how you feel about bearing arms.

Although these two turntables are being introduced simultaneously, the PD-272 (with integrated tonearm) was actually designed and produced first. Its operation is purely manual—no automatic assist whatever. So if you believe that any amount of automation implies compromise, the PD-272 should appeal to you.

The performance will certainly appeal to purists. The servo-controlled direct-drive brushless DC motor with its gapless pole design is totally free of the cogging (pulsing) that plagues many other direct-drive motors.

The straight, statically-balanced tonearm has several important design features. For example, the vertical pivots extend through the arm rather than simply suspending it from the outside. This minimizes lateral play and assures that the stylus will always remain perpendicular to the record. Also, the arm's nested tube construction and internal damping deal very effectively with resonance.

Then for those audiophiles who like to go their separate ways, we produced the PD-270 (like the PD-272 but less tonearm) and the TA-1 (separate tonearm). With TA-1, you change cartridges by changing the entire tonearm tube. This system is much better than changing headshells since it minimizes mass at the critical point of the tonearm. The TA-1 also has a built-in stabilizer below the arm base which damps vibration.

As you can see, you do have to decide how likely you are to want interchangeable tonearms in the future. Think about it on your way to your LUX dealer. If it's still a problem when you get there, he'll help you bear up under it.

LUX Audio of America, Ltd.

160 Dupont Street, Plainview, New York 11803 • In Canada: White Electronics Development Corp., Ontario

PD-272. Effective tonearm length: 240mm. Tracking force calibrated 0.3 grams. Accepts cartridges from 4-11 grams. Anti-skating, viscous-damped cueing, adjustable height, illuminated strobe, pitch variable ±4%. Wow and flutter less than 0.03% (WRMS); rumble more than 60 dB. Some drive system specifications apply to PD-270. Both include removable dust cover.

Taped Programs for Your Car

Some tips on making and choosing them—for better on-the-road listening.

by Harold A. Rodgers

Compared to the general run of what you get free from broadcasters, having your own in-the-car stock of music programs recorded on tape wins hands down. Not only is the music your personal choice, but it is uninterrupted by irritating commercials, prattling disc jockeys, and repetitive news briefs. The catch, of course, is that these custom programs are not free—they will require an outlay of time and/or money. Making them yourself is not a difficult or abstruse matter in most cases, but attention to a few details can make tapes intended mainly for use in the car more enjoyable than they otherwise might be.

Despite increasing popularity as a listening environment, an automobile's acoustics are generally far from ideal. Normally a room of similar volume would be thought impossibly small for listening and would suffer from standing waves and poor intrinsic frequency response. And since the car usually is in motion while you're listening, noises from wind, engine, transmission, tires, and suspension vibration also obtrude.

Noise transmission can be alleviated to some degree by absorptive interiors and by the sound-deadening options that can be installed in many cars. (It is a good idea, if you plan to do much listening, to be sure that your car has had liberal noise treatment.) This acoustic "deadness" is a mixed blessing, however. It offers some immunity from unpleasant effects like high-frequency focusing and beaming due to reflections from curved surfaces, but it does so by damping the highs rather severely. Since many automotive cassette players do not offer much in the way of treble response anyway, you may find yourself listening to a very muffled sound. Signal shortcomings might well be fairly innocuous in a better acoustic environment, but the high noise level of the car and the high sensitivity of the ear to noise in the upper midrange (3-4 kHz) aggravate the shortcomings and render some important parts of the program inaudible or nearly so.

At a cruising speed near the national speed limit, a quiet automobile may have an interior noise level of 65 dBA or so. If equipped with a cassette player whose features and performance are akin to those of a fine home deck (most notably, Dolby decoding and frequency response substantially flat to 15 kHz or beyond), the music system of such a vehicle could do a fine job of reproducing most recorded program material, which has a dynamic range of 45 dB or so. Thus, in order for you to hear the softest passages above the noise, the peaks would have to be around 110 dB sound pressure level, which, while loud, is not uncomfortable unless the peaks last too long. We are tacitly assuming that the power amplifiers and loudspeakers in this rolling pleasure dome have the muscle that such a sound pressure level implies.

Most of today's cars are not this quiet, nor are they so opulently equipped. And even if the sound rig could produce levels that would override the higher background noise, the resulting playback would be uncomfortably loud and could conceivably even cause hearing damage. In circumstances such as these, some judicious doctoring of the program material can make listening far more pleasurable and would seem to be in order.

Wrong May Be Right

Since the most annoying noise found in the automobile interior falls in the mid- and high-frequency region, boosting this part of the spectrum a bit can help to mask acoustic interference with minimal falsification of the music. One convenient way of accomplishing this while keeping the collection of car tapes compatible with home playback equipment is to record on chromium dioxide—or other tape formulations using 70-microsecond equalization. The fact that most automotive decks offer only the ferric (120-micro
second) EQ won’t matter here, since we intend to play the tape “wrong” to get a brighter top end in the car.

A similar trick can be played by choosing Dolby-encoded tapes and playing them back in the car without Dolby decoding. Now the top end gets progressively brighter as the level gets lower, which should make a considerable contribution to the intelligibility of soft passages. Either of these methods (using both together might be necessary but probably is overkill) allows tapes for the home and car to be interchanged freely, with the “correct” playback characteristics reserved for the less problematic home environment.

The Graphic Solution

If you’re the seventh child of a seventh child, one of these procedures will give you the exact high-frequency boost needed for maximum audibility of music in your particular mobile listening room. Otherwise, the spectrum of noise—which differs from one vehicle to another—will still create minor annoyances as the music gets soft.

In some respects, the ideal way of approaching a solution is via a graphic equalizer in your car. Not only can you adjust it by ear as you go—and re-adjust it to match changing ambient-noise conditions—but your aural perceptions also will lead you to correct automatically for response anomalies introduced by the rest of the system (meaning, in all likelihood, the playback deck) and the car’s acoustics. This approach has three drawbacks: You may find it difficult to concentrate sufficiently on the road if you are constantly adjusting a multiband equalizer; today’s cars are often too crowded to make comfortable room for an equalizer; and it’s an added and perhaps unnecessary expense.

Why not, then, equalize in advance, right on the tapes that you intend to listen to on the road? It is difficult to determine what the optimum boost will be, and this system will net you a library of tapes that sound really good only when played in the car for which they were made. Therefore, it is a good idea to standardize the corrective EQ and to prepare only a limited number of cassettes (say, ten or so—whatever number your dust-free automotive storage will accommodate) for this use, erasing an old one each time a new one is recorded. That way the current mobile library can be kept in the car.

Obviously, most if not all of the material especially recorded for this use will be copies of other sources—most notably discs. This may violate the copyright laws, but I’ve never heard of anybody being pulled over by a traffic cop for copyright infringement. At any rate, in recording at home for the car, in order to pre-emphasize the highs appropriately, you will need a reference that approximates the noise spectrum of your car. If you own or can borrow a portable cassette recorder and a good quality microphone to use with it, recording the ambient noise inside your moving car is the first step. Then play back the noise (possibly via a temporary hookup that puts the noise on one channel of your system and leaves the other free for the program, in mono) while listening to the music you intend to record, and you will be able to hear what part of the music is masked by the noise. By adjusting an equalizer inserted into the system between the program source and the recorder, you should be able to find the EQ setting that best overrides the noise.

You can get more accurate results with the help of a sound level meter to make sure that your noise recording is reproduced at the same level as that in the car. In addition, you may want to pre-emphasize still further to correct for response shortcomings (which typically occur at high frequencies) in your car’s playback system. But be careful: If you overdo the pre-emphasis, you may overload the tape. Once you have found an optimum EQ setting, that should be it until you change cars or your mobile sound system.

Compress and Conquer?

Dynamic-range compression is another method that tends to enhance the audibility of music when the background-noise floor is high. The Dolby B circuit is, in fact, a high-frequency compander, and playing Dolby tapes without decoding delivers up to 10 dB of compression—but only in the operating frequency band of the Dolby encoder, above about 2 kHz.

Ideally—if some auto-sound manufacturer will rise to the occasion by producing one—an adjustable full-range compressor could be mounted in the car. That would allow, once again, the use of the regular home cassette library for enroute listening. Failing that, a device such as the DBX 119 could be used (with a setting determined by experiment) to make compressed tapes that would be compatible to the extent that, if the compression setting is known, it can be reversed for home playback. (Simultaneous use of other forms of noise reduction probably would be problematic at best with some systems.) The degree of compression would be specific for the vehicle but would offer some enhancement in any noisy environment. And even in the absence of noise, moderate compression is not onerous.

Whether you will want to make use of any of the suggestions given here depends on your listening situation and how fussy you are about what you hear while driving. But unless your car has been stripped to near racing trim and lacks such sound-deadening niceties as mufflers, tailoring the sound for the road can offer a bonus in increased listenability and reduced ear fatigue.
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There's a lot more to the STR-V7 than power. This receiver takes the best that contemporary technology has to offer, and offers it in a single machine.

Other manufacturers may have the power to bring you power. But only Sony has the power to bring you more than just power.

SONY AUDIO

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Eumig, one of the world’s leaders in electro-mechanical research and development, has introduced a revolutionary new technology to cassette recording. It’s the CPTO-ELECTRONIC SERVO CAPSTAN DRIVE SYSTEM incorporated in the unique Eumig CCD. This technology offers so many advantages that the Eumig CCD will out-perform every other cassette transport.

Ultra-Precision: The unique Eumig photo disc
Other decks use old-fashioned belts and flywheels to control the capstan. In the Eumig design these are replaced by a lightweight disc, photo-etched with 2500 radii, spaced precisely 1/50mm apart. When rotated, these radii create 15,000 pulses per second for instantaneous optically-sensed speed corrections. Wow and flutter is a mere 0.05%, WRMS, and speed accuracy is ±1%.

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The Opto-Electronic Servo System is only one among many dramatic advantages of the Eumig CCD. It offers three precision heads of our own design, mounted in a die-cast aluminum carrier made at our own facilities (as are virtually all parts of the CCD), for greatest precision. The Eumig CCD is engineered with circuit boards rather than wires, for utmost reliability.

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The comprehensive features of the CCD reflect Eumig’s innovative technological approach. Two parallel LED displays allow simultaneous monitoring of both channel levels. Full solenoid/MOS logic is operated by feather-touch controls with logic-programmed LED indicators, and the flexible two-input mixing facilities use strictly DC controlled circuitry.

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Perfect performance is guaranteed with every type of tape because the Eumig CCD offers virtually flat frequency response to 20,000Hz (chrome); Dolby calibration adjustment for different tape sensitivities; and an azimuth adjustment to optimize high frequency performance with each and every tape.

The Eumig CCD, probably the finest deck in the world, is now available for $1300, including full-function remote control, at select audio outlets throughout the country. Write to us for the name of the dealer nearest you. Then listen and compare. We believe you’ll agree—it’s incomparable.
THE BROADWAY VOICE: PART II
JUST SINGIN' IN THE PAIN

CONRAD L. OSBORNE CONCLUDES HIS DIAGNOSIS.
BEGIN IN THE JANUARY ISSUE. OF THE AFFLICKTION CALLED
BROADWAY SINGING AND WRITES A PRESCRIPTION.

I have devoted what no doubt seems disproportionate
discussion to the belt because it is the single out-
tanding technical usage native to American popular
music, and because we have an epidemic on our hands—
nearly all nonclassical female singers employ some
variation of it. A few recording and concert artists, par-
ticularly among the jazz-influenced or modern "pop ec-
lectic" singers, use it sparingly and have access to a tim-
bral smorgasbord that includes head-register fare.
Sarah Vaughan and Cleo Laine would be among the
more interesting of them, vocally speaking. But by and
large, the only preserve left for nonclassical "legit" fe-
male singers is in ingenue roles of the Broadway musi-
cal. Nowadays, this means mostly in revivals of '40s and
'50s shows, but since such revivals occur with some fre-
cuency and continue to form the backbone of dinner
theater and summer theater repertory, the species hangs
on. It is descended directly from the operetta soprano
leads of the more grandiose Herbert, Friml, Romberg,
and de Koven shows. These roles frequently embraced
a full operatic compass (though usually with a rela-
tively low tessitura), and the most ambitious of them
(such as Fifi in Herbert's Mlle. Modiste or Nina in
Friml's The Firefly) called for runs, trills, staccati, crush
notes, and other graces—the standard paraphernalia of
the virtuoso soprano. Indeed, they were often written
for operatic fugitives (e.g., Emma Trentini, Fritz Schell,
Alice Nielsen), some of them very accomplished singers
more or less in their primes. The usages of these parts
gradually narrowed to the much-eased demands of the
"legit" leads in the Rodgers-Hammerstein shows
(Laurie in Oklahoma! and Julie in Carousel) and others
of that ilk (Fiona in Brigadoon, Hilda in Plain and
Fancy, Guinevere in Camelot) or in "nostalgia" shows
like Little Mary Sunshine. It is sometimes found in such
secondary parts as Tuptim in The King and I or Lady
Larken in Once Upon a Mattress, survives vestigially
(purely for musical coloration) in the ensemble sections
of Sondheim's Company and A Little Night Music, and
is occasionally used for parodic effect.

In all these parts, we find the characteristic timbre/
range slippage—a light, lyric quality is wanted, but
the writing is mezzo in range and often plants the voice
in the lower-middle range against brassy accompaniment,
where such voices have to strain to compete, and usu-
ally wind up resorting to belt mix. An extreme example
of the contradiction is the role of Lili in Carnival, where
an ingenues, girlish quality is indicated but three-
fourths of the writing is in the octave between Cs, and
often up-tempo. In the original cast, we find Anna Maria
Alberghetti, who began professional life with a pretty, if
somewhat thin and undeveloped coloratura timbre,
kicking a reinforced pop mix up to D, where a rather
dark "covered" quality makes a sudden appearance for
a third or so. Though she once displayed the high sop-
ranpo extension, she evades the B natural at the end of
"I Hate Him," even on the recording.

The two singers who have made the most of female
legit in the modern sense are Julie Andrews and Barbara
Cook. For this discussion, Cook is the more interesting,
since she has covered more ground and offers some re-
sent evidence. It is a long distance from Cunegonde in
the original Candide (1956) to "Barbara Cook as of To-
day" (Columbia PC 34493).

Cunegonde's "Glitter and Be Gay," the last of the vir-
tuoso operetta display pieces (and a send-up, of course)
is a tough little scene but, as one is reminded every time
a set of auditions comes up, it is within striking distance
for quite a crowd of energetic young ladies. In fact,
among the more talented young operatic coloraturas,
renditions of it vocally superior to Cook's would not be
a rarity, though I hasten to add that I'm not sure but
what eight times a week, in the context of the full show,
is a rarity. Cook sings it with reasonable accuracy and
without cheating, and with the musical imagination and
phrasing sense that still serve her. She also employs
the bright, somewhat brassy tone and vowel formation
made almost inevitable by what coaches like to call
"clear diction" in common American speech, and at
several points we pick up the edge of the thinned-out
belt, especially in phrases heading up from the bottom.

After Candide, Cook settled into a lengthy career in
the ingenue leads of many stage and studio projects. In
her recordings of Music Man, the Show Boat and King
and I remakes, and Grass Harp, she is consistently ef-
factive within the Broadway legit pattern. She repres-
ents it at its best, as Merriman does the belt and Strei-
sand the belt mix, but it is still there: the bright, light
timbre that seems high but isn't, the rather weak lower
range, and some gradually increasing signs that the
voice is being tugged at from below. In Show Boat
(1962), the upper-middle tessitura (F and G) flows rather
fluently, and a high B-flat emerges from the line with
nice ease and freedom; but by Grass Harp (1971), the
upper-middle is a bit sticky and tight, the one carefully
setup B-flat (at the end of "Yellow Drum") more effortful
and a bit shy of pitch. Another nice comparison of the
Mary Martin/Patricia Neway sort is afforded by the two
remakes of King and I (Columbia OS 2640, RCA LSO
1092), starring Cook in 1960 and Rise Stevens in 1964,
respectively. Stevens was an operatic mezzo-soprano,
by the time of this revival at the end of her singing ca-
reeer. Of special interest is "Hello, Young Lovers," in
which Cook, trying to shed off on the final ascending
line, appears to be nearing the limit of comfortable range
at low intensity (around C and D), whereas Stevens floats
into it with room to spare. Stevens, the mezzo, then in her mid-fifties, finds the tessitura an easier "sit" than Cook, the lyric soprano more than twenty years Stevens' junior—and upon checking, we find further that the mezzo is actually singing the piece a half-step higher. It is still perfectly possible to prefer Cook to Stevens or Gertrude Lawrence to both—I am speaking only to the vocal point.

After Grass Harp, Cook called it quits with Broadway ingenuies, and unless I have missed an item, there is a six-year recording gap before "As of Today." To judge by this album, she has more or less given up the soprano struggle. There is a good deal of breathy mike voice in the middle, not much at all at the bottom, a light, popish but unmistakable belcanto mix carried to D, and a top extension of only F, taken once nicely and once not, the difference being the vowel. Though at points there is a bit more constriction and nasality in the sound than formerly, the actual timbre of the voice is little changed, and this supports the observation that between the belcanto mix vocalist and the Broadway legt "soprano" there is a sometimes fine line, both types offering slightly differing balances which have in common a proportion of thin chest involvement that constricts the voice and holds down its range. The bell pervades the usages even when disguised.

And expressively, the "belt" and "legit" categories represent terribly narrow, stereotyped choices. On the one hand, whiny complaints, crudely bouncy "comedy," and bitchily aggressive or brassily sentimental heroines: on the other, shallow sticky-sunny fairy-girls, model hometown U.S.A. But only with greatest rarity the suggestion of emotional or intellectual depth and range, reflected in the developed and integrated sound of a grownup woman. Sisters, arise!

About the male voice on Broadway, there is much less to be said from a technical viewpoint. Historically, the process has been attritional, a natural selection in reverse to guarantee survival of the unfittest. We have so far eliminated the vertebrates, and are still working our way down.

Traditional vocal usages have always been represented on Broadway in two male categories—"legit" tenor and baritone, each bearing the same relationship to operatic equivalents as obtained in the female voices: lighter timbres in lower tessituras. The tenors of pre-1930s usages, whether assuming leads in operettas or performing in minstrel and revue shows, were closely related to European operetta tenor and Irish tenor models. The voices tended to be light, pretty, and high-sounding, but with an effective range of only about an octave and a half, to A or so. Styles were lyrical and cultivated, often with use of falsetto co-ordinations for special effects. Mini-McCormacks—an example is John Steele, who introduced Berlin's "A Pretty Girl Is Like a Melody" in the Ziegfeld Follies of 1919. Tenor is also undoubtedly the proper vocal classification for many of the talk singers and personality performers of that time, and later—Eddie Cantor, Al Jolson, and Cab Calloway come to mind. As the singing leads in shows changed from tenor to baritone, the tenor voice gradually faded from the scene in any recognizable form. Postwar, the parts of Cable in South Pacific (William Tabbert), Mr. Snow in Carousel (Eric Mattson), Charlie Dalrymple in Brigadoon, and the title role of the original Candide (Robert Rounseville—perhaps one should also mention the part of the Governor in the same show, taken by William Olvis) are among the handful of any importance at all—only one is a lead, and none is recent. The bass voice has never been accorded any importance on Broadway. Joe in Show Boat, the Pinza roles in South Pacific and Funny (and Cesare Siepi's in the short-lived Bravo Giovanni!), a couple of supporting parts like Jigger in Carousel and George S. Irving's mock-operatic turn in Gentlemen Prefer Blondes, just about constitute the bass literature. (N.B.—Dozens of male roles are written in what looks like bass tessitura minus the low notes, but they are all sung by light baritones. Fully developed tenors and baritones have of course been present in the Broadway operas, as with Brian Sullivan and David Poleri, Lawrence Winters and Robert Weede.)

Baritone has been the sole male voice of any importance on Broadway for many years. It is the classical type America has produced in the greatest quantity and quality, so it is not surprising that this is reflected on Broadway, where it accounts for almost all the "real singing." There has been room for quite a line, from John Charles Thomas to Dennis King and on down: Alfred Drake, John Raitt, Howard Keel, Ray Middleton, Earl Wrightson, Robert Goulet, Richard Kiley, Jack Cassidy, George Owens, Lawrence Guiltred, Harvy Pressnell, John Cullum—the list could be extended. A bright, manly tone is sought, and some access to softer dynamics in the more lyrical moments. Most of the voices sound like high baritones, but turn out to have only a clumsy approach to the top, or none at all—E or F is the usual limit. Of all the postwar "legit" baritones mentioned, only Raitt possessed a convincingly comfortable and reliable upper range, and as we listen to his recorded work since Carousel (e.g., the Pajama Game soundtrack, the Show Boat remake), we suspect the voice may well be tenor. The general singing habits of this sort of voice are classically derived, with certain limitations of size, range, and technical command, and the overall track record as to health and durability seems to be tolerable.

Then there is a category of role in which the singing is supposed to be word-based and the performer's attributes as actor or personality are assumed to carry the impact. Leaving aside the parts clearly created to work glorifier performers like Rex Harrison, Robert Preston, or Richard Burton into a musical context, most of these fall into the "regular guy" category, calling for singing that demonstrates the (usually) likable "naturalness" of the character by eschewing anything so threatening as a professional singer's sound and technique. The most ambitiously worded parts of this nature (and they are not easy) lie in the anomalous range of the "baritone/tenor"; Tony in West Side Story and Bobby in Company are instances—the latter's "Being Alive" lies in the same compass (but with emphasis on the higher end) as the baritone Prologue to Porgy and Bess, but this is hard to realize in the listening, since it is virtually a requirement that the vocal quality remain nondescript throughout.

These parts range downward in technical requirement to such roles as the male leads in Mame, Funny Girl, or the current Annie. Some of their singers (for example Jerry Orbach, heard in Fantasticks, Carnival, Chicago) show some vocal strength and patches of tonal quality, but on the whole their performances do not bear discussion in terms of musical effect. This male
writing is no more consciously considerate of the voice than the female, and is less interesting in what it attempts. But it is also safer. Like the female, the male is asked to punch and talk-sing against midrange accompaniment. But the untrained male voice, usually having greater chest strength than the female, is better equipped to handle it with minimal strain, and is not expected to ring the registral changes asked of the female. One recent development in male usages, drawn from rock practice, deserves some comment. It is typified by the Broadway performances of such vocalists as Ben Vereen (Jesus Christ Superstar, Pippin) and other performers found in those shows and in Hair, Godspell, and other rock-influenced scores. Often it is a bit hard to pin down functionally because of a heavy disguise of glottal rasps, scrapings, and pitchless screaming, but it involves the driving of a high male voice up through the normal tenor range on wide-open vowels at strong intensities until it snaps into a reinforced falsetto around B flat or B. This falsetto sometimes extends a fourth or even a fifth, and in some vocalists is only slightly distinguished from the full voice.

The falsetto can then also be brought farther down for lyrical, "intimate" effects, and at quieter moments some of these singers recall another male "mike voice," the crouch. In this usage, the belt problem is inverted, with a slack, weakish head register made to serve below the break. It has been little used on Broadway. (Between the belt and the crouch, we have the spectacle of each sex crippling itself vocally to attempt the other's capability—is transsexualism the mass American closet kink?)

Apart from the interesting fact that these rock usages represent the first professionally legitimized employment of extreme upper male range since the pre-Duprez operatic tenor, it is also notable that it duplicates the female belt practice, at precisely the same pitch levels, with the same highly aggressive tonal properties, and I venture to predict, the same tonic effect on medical profiles. Most Broadway male singers employ what is sometimes justly termed "male belt" for the upper range, and they clearly demonstrate what it really amounts to: the attempt of any vocal amateur, male or female, to push an unintegrated voice above the break.

Practically speaking, can anything restorative be done about Broadway voices without sacrificing too much aesthetically and economically? The answers are obvious, and they will be practical as soon as someone does them and sells them to an audience [ah, then we'll never be rid of them!], which would seem a modest challenge for our vaunted promotional expertise. Here they are:

1) We must take singing seriously enough to return it at least partway to the position it has always held in any music-theater form, including the lighter ones—that of the primary expressive device, which it is necessary to employ with at least more competence than that of the talented amateur, and which has specifically musical attributes. Right now, it is simply not looked upon as a discipline: I daresay no one would assume that some fine operatic baritone, say Robert Merrill or Sherrill Milnes, could be thrust into the choreography of a demanding dance/act/sing role with a dozen jazz classes and a few weeks' rehearsal. But the fine dancer Edward Villella was dragged into the part of Paul Joury, and friends, it's a singing role, too, with real songs that are not easily sung to good purpose. Knowing the extreme
difficulty of learning how to act or dance or sing even moderately well, and with the greatest admiration for those who become professionally adept at even one of these disciplines, I would submit that a more serious division of labor is called for, from each according to his trained abilities to us, according to our needs. We do not have to forgo the musical's unique blend of these crafts; we just have to be more careful of emphasis and more specific in role creation and casting.

2) Composers and arrangers need to score with more imagination and care. This will be far easier if well-trained, extended voices are used for leading roles, because they are comfortable in tessitura that carries better and gets away from the easily covered midrange. It is preposterous that no use is made of the bass, tenor, or true soprano categories. Instrumental scoring can be spread out more (adding to, not restricting, the style range and timbral possibilities), and the practice of doubling the voice in midrange with brass or heavy reed instruments should just be stopped. Songs should be written to express what singing has to add, not what any actor can convey better plus loud accompaniment. Dialogue underscoring should be kept lighter, ditto the accompaniments to talk-songs or other vocal settings that convey primarily verbal information. Somehow, composers have solved these problems, in much larger theaters with much larger orchestras, for quite some time now. It's a matter of competence. If the scoring really requires belt writing, it can certainly be lowered in range, shortened in length, and more considerately accompanied.

3) In conjunction with (2), the use of amplification for general purposes should be discontinued—starting here, starting now, if I may wax titular. It is currently used to simply lay on quantities of sound that are better obtained (more musically, more clearly) by other means, or to disguise the inadequacies of performers who have not trained their voices or of composers/arrangers who haven't learned how to do (2). It penalizes the performers whose voices do attain the frequency and intensity levels suitable to theatrical use (they are made to adjust to the conditions designed for the vocally handicapped), and lends support to the assumption that singing need not involve any expertise or all the nasty work that goes into acquiring it. Shall we apply the same principle to dancers, using pulleys and wires to extend limbs and levitate bodies, hidden trampolines to project leaps?

Again, these problems have all been routinely solved by professional competence, in the recent past and yes in these very same theaters, gentlemen. I say right here in River City. Of course, this does not preclude the use of amplification for special effects or to some genuine artistic purpose. The latter is lurking about somewhere but not yet, I assure you, on Shubert Alley.

4) Performers have a responsibility, most of all to themselves, to secure adequate amounts of knowledgeable vocal training, and to protect themselves in selection of repertoire. For a performer of no special vocal gift (which describes most), this takes a considerable commitment of time and money. Without it, such a performer should stay out of the musical theater. Everyone involved, including composers, producers, agents, and musical directors, has a measure of ethical responsibility in this regard, but teachers and coaches bear a special degree of such responsibility. If those who know

"OF ALL THE POSTWAR 'LEGIT' BARITONES, ONLY JOHN RAITT POSSESSED A CONVINCINGLY COMFORTABLE AND RELIABLE UPPER RANGE."

will not fight to protect performers, who will? And if they don't know, why are they teaching?

5) A real campaign must be mounted for performer protection against unreasonable, abusive, and exploitive use of the voice in rehearsal and performance. Singers simply cannot rehearse and perform full-out with the same sustained frequency as actors. Eight a week for many leading roles, and for ensemble singers in heavy shows, is too much. Seven shows per week, with alternate leads for matinees and more swing relief for ensemble singers, is a punishing enough level—or eight, with nightly alternation in the leads, if preferred. Rehearsal sequencing and pacing need to take vocal endurance into account. Incredibly, the onus for difficulties arising from the present conditions is laid on the singer, when the real problem is the lack of care and knowledge among those who do the structuring. Unions should take the lead in this matter; unfortunately, Broadway shows do not fall under the jurisdiction of AGMA, the singers' union, but of Actors' Equity, wherein singers' considerations are not a majority matter.

There you have it. Please do not write with the plaintive commercial excuses—I doubt they'll stand up if we call the bluff. Besides, where did we acquire the notion that art is supposed to turn it over for speculators? Only in America...
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I'm sure this is one experience we all dread, and is one of the main reasons to buy name branded guaranteed tape you can trust.

Enter DAK. We manufacture over one million units of cassette tape each month, and many of our cassettes are used for high speed duplication, which causes more cassettes to fail than any other use.

When we first started, DAK's cassettes failed, just like many others. So we installed over $20,000 worth of high speed duplication equipment at our factory and set out to design the perfect cassette.

FAILURE

Failure after failure, we substituted, remade, tested and resold our 20 parts of our cassette, and checked everyone else's cassettes. Finally after over 6 years we positively linked cassette failure or the prevention of failure to the slip sheets, or liners in the cassette.

We were not alone. Scotch, TDK, and several others must have been doing the same research because they have also been coming out with special improved slip sheets.

BOLYSULFIDE

A new chemical named molybdenum sulfide, that reduces friction within the cassette several times better than graphite gave us success.

We developed polyester slip sheets with raised spring loaded ridges coated with a unique formulation of molybdenum sulfide and graphite.

The tape ran more smoothly than ever before within the cassette. The new formulation is also much tougher than the graphite formulation, so it is extremely resistant to wear.

Static electricity within the cassette was drastically reduced by the low friction, and easily bled off, so its tendency to erase very high frequencies was drastically reduced. A very important consideration for often played tapes.

The molybdenum sulfide formulation gives both superior electrical and mechanical performance, thus it has formed the basis for the birth of the new DAK ML cassette.

MAXELL IS BETTER

Yes honestly, if you own a $1000 cassette deck like a Nakamichi, the frequency response of Maxell UDXL is superior to DAK and you just might be able to hear the difference.

DAK ML has a frequency response that is flat from 400cps to 14,500cps ± 3db. Virtually all cassette recorders priced under $600 are flat from 400cps to about 12,000cps, so we have over 2000cps to spare, and you'll probably never know the difference.

No apology We feel that we have equalled or exceeded the mechanical reliability of virtually all cassettes and offer one of the best frequency responses in the industry. Maxell UDXL is truly the Rolls of the industry, and DAK is the 100% US made Cadillac or Corvette!

Price DAK manufactures the tape we sell, you avoid paying distributor and retailer markup. While Maxell UDXL 90's may sell for $3.50 to $4.50 each, DAK ML90's sell factory direct to you for only $2.19 each.

YOU WIN

You are paying less for the 10 90 minute cassettes than you would pay for the bribes we are offering if you went to a Radio Shack Store.

CHECK THE VALUE OF THE BRIBES AT RADIO SHACK

Think of it, 10 six foot hook up cords with RCA plugs at each end. Whether you use the cords now, or when you buy new equipment, those of us who are tape recorder nuts, never seem to have enough. Radio Shack sells six foot cords for $1.89 each.

You will find dozens of uses for this deluxe battery eliminator AC adaptor around your home or office. 4 voltages, 3, 4.5, 6 and 9 volts. 4 plugs will fit virtually any calculator, radio, or battery operated recorder we have seen. You'll save a lot of money on batteries. Radio Shack sells a similar 4 volt adapter for $9.95.

The deluxe 12oz can of spray head cleaner will clean your tape heads for years to come. The handy snorkel included, can reach just about any tape head, even 8trk heads. Radio Shack does not sell a large 12oz can, but 12oz from them costs $6.36.

The Radio Shack prices are not list prices, but the actual prices you would pay when you walk in the door.

WE WIN TOO

Customers like you are very valuable in the form of future business. We anticipate receiving over 6000 orders and 4500 repeat customers from this advertisement. We are betting you will buy our cassettes again, and we are putting our money where our mouth is!

TRY DAK ML90 FREE

We want you to try these high energy cassettes on your own recorder without obligation for 30 days. If you aren't 100% satisfied for any reason, simply return the tapes and bribes to DAK for a full refund.

To order your 10 DAK ML90 minute high energy cassettes and receive your $35.21 bribe with your credit card, simply call toll free 800, 423-2636, (in Calif. call 213-984-1559) or send your check for $21.90 plus $3 for postage and handling for each group of 10 cassettes and bribes to DAK. (Calif. residents add 6% sales tax).

DAK unconditionally guarantees all DAK cassettes for one year against any defects in material or workmanship.

Why not order an extra group of 10 DAK ML90 cassettes for yourself or a friend? We will add one free ML90 cassette if you try the DAK ML90 to reach additional 10 you buy and of course you get all 3 groups with each group of 10 tapes.

DAK INDUSTRIES INCORPORATED

CALL TOLL-FREE (800) 423-2636
In California Call (213) 984-1559
10845 Vanowen St., North Hollywood, CA 91605

CIRCLE 82 ON PAGE 89
Close observers of the audio scene know that just beyond the foreground of mammoth mass-market multinationals and names that have been around long enough to be synonymous with quality audio lies a significant and promising multitude of companies that rarely receive the attention they merit: the smaller and specialized manufacturers (and importers) of audio equipment and accessories. Though they are often somewhat imprecisely referred to in the trade as the "esoteric" or "high-end" manufacturers, their products—and the potential purchasers of them—probably vary even more widely than those of the "majors." But such companies have a few things in common: limited production facilities and similarly limited or regional distribution, and budgets that seldom permit access through advertising to the broad national public reached by such journals as this one. With this in mind we extended a blanket invitation to these companies to tell their stories in their own words for readers of this special section. What follows is selected (and in some cases slightly adapted) from the responses. The first installment of this directory appeared in January 1979, and subsequent installments are planned for forthcoming issues.

**Apt Corp.**
P.O. Box 512
Cambridge, Mass. 02139
Danny Kumin, Sales

Apt Corp. was formed early in 1977, with the goal of research for and development of high-quality, cost-effective audio equipment. Its first product is the Apt Holman preamplifier, the first full-function control preamplifier to deal effectively with the wide range of interactions present in modern audio systems. Designed by Tom Holman, the preamp includes cartridge termination switches, newly designed tone controls and loudness compensation, and a unique mode control, as well as anticrostal and RFI-proof circuit design. The Holman preamplifier sells for $47 in the East, $458 in the West.

**GLI**
29-50 Northern Blvd.
Long Island City, N.Y.
Paul Friedman

GLI, a division of VSC Corp., is a major manufacturer of discotheque speakers and electronic components. GLI started in the discotheque business, and their speakers have been installed in the finest discos all over the world. Recently they have seen a broadening of the market for their products and have been selling speakers for rock groups, skating rinks, theaters, electronic music, nightclubs, schools, stadiums, restaurants, and discos.

GLI has just introduced a portable heavy-duty speaker. Nicknamed the Dwarf, Model FRA-1 is about the size of a suitcase but delivers sound comparable to much larger units. It has a wide range of applications, including vocal and instrumental amplification, movie and legitimate theaters, stage monitoring, skating rinks, discotheques, restaurants and clubs, on-location recording, multimedia presentations and sports events. The Dwarf has an array of four solid-state superweters and eight 5½-inch cone drivers facing forward, plus a 15-inch passive radiator facing to the rear.

**The Great American Sound Co., Inc.**
20940 Lassen St.
Chatsworth, Calif. 91311
Adam Zareba
(213) 998-8100

The Great American Sound Co. introduced its first product—a solid-state power amplifier named Ampzilla—four years ago. GAS quickly earned a reputation as a company committed to making high fidelity components that, through the use of self-developed technological advances, are sonically and mechanically unsurpassed. Thaedra, the company's first preamplifier, enlarged this reputation with such innovative features as an integrated, single-stage, RIAA-equalized head amp and servo-controlled line amplifier. Today we manufacture products in several price categories that take advantage of the sonic benefits of servo control. GAS has grown so that now, in addition to its distinguished line of power amplifiers and preamplifiers, it offers four moving-coil cartridges (the Sleeping Beauty series), two auxiliary moving-coil cartridge phone preamplifiers (Goliath II and Self-Powered Goliath II), and a passive phase inverter (called, simply, The Bridge) and will soon introduce its first tuner. Charlie, a digital-display, keyboard-operated, phase-locked loop FM model. A power amplifier called Godzilla, with the ability to put 1,000 watts per channel into 2-ohm loads and featuring a slew rate of 1000 watts per microsecond, is also soon to be marketed.

**The David Hafler Co.**
5817 Roosevelt Ave.,
Pennsauken, N.J. 08109
Edward J. Gately, President
(609) 662-6355

David Hafler has developed a formidable reputation in the audio industry. Shortly after World War II he built an output transformer that quickly became the key to the best-selling amplifier kit on the market. This invention led to the founding of Dynaco in the early Fifties. He also invented the passive matrix for two-channel stereo, which offered quadriphonic effect, and developed an inexpensive bookshelf speaker that caught the nation's fancy. Eventually he sold Dynaco to Tyco Labs, and soon afterward he surfaced as a principal in Ortofon, which has a well-respected place in the tone-arm and cartridge market. Ortofon was later sold to Harman International.

About a year and a half ago he founded the David Hafler Co., which currently offers one product, the DH-101 preamp. Our claim is that the new preamp delivers the same specs for $200 that $1,000 models do. We have about 10,000 square feet of production area and ten employees. Our products are distributed through more than 100 dealers.

**Janis Audio Associates, Inc.**
2889 Roebling Ave.
Bronx, N.Y. 10461
John Marovskis, President
(212) 892-7419

The Janis line of products is the result of designs by John Marovskis, the president. Our focus is on equipment that enables the user to obtain as accurate low-frequency sound reproduction as is allowed by the listening environment, and to do this with the
minimum of complexity and need for specialized knowledge. To this end Janis produces two woofer systems (W1 and W2) of a specialized design that enables the response characteristics to be accurately measured, predetermined, and defined. The sole concerns are the room/speaker interface, and the interface of the woofer with the rest of the system. These concerns are resolved through such features as comparator-switching, which, when used with Janis’ special sound sources, allows the total system to be optimally balanced to a 1-dB accuracy by ear alone and also allows the optimum location of the woofer and the associated wide-range speakers.

Another Janis development is the DC electronic compensation technique, introduced on the Companion 1 single-channel full-range power amp and Interphase 1 single-channel crossover amp for one or two subwoofers. The compensation technique repositions the cone of the woofer driver under in-use conditions for lowest distortion and maximum bass performance.

In sum, the aim of our products is to enable the user to obtain the flattest and most accurate bass response possible for his listening room. A full exposition about bass reproduction is available from Janis.

Mordaunt-Short, Inc.
1919 Middle Country Rd.
Centereach, N.Y. 11720
Joel Schwartz, Vice President
(516) 981-0066

Mordaunt-Short Ltd. was established in London in 1967 for the design and manufacture of high-quality loudspeaker systems. Early in 1970 the parent company moved to the Hampshire market town of Petersfield and in 1975, following further growth in the demand for our products, to a converted mill on the River Rother in the pastoral West Sussex countryside bordering the town. By no means unfittingly for the premises of a company dedicated to the greater enjoyment of music, Durford Mill dates from 1756, the year of the birth of Mozart.

Amid the wealth of accomplishment of audio technology worldwide, the design of quality loudspeakers remains a sphere of British eminence. In this tradition, our products have become ever more highly regarded not only for their specifications, but for the uncompromising craftsmanship of their manufacture and for their surpassing "musicality" in performance. Now, following the development of our outstanding bass and midfrequency transducer, the DSB 208, we have pleasure in introducing a new generation of loudspeaker systems, the Mordaunt-Short Carnival Festival, and Pageant Series 2. In the prototype stage is our Signifier model.

Mordaunt-Short Ltd. is a progressive, closely knit private company, devoted to the traditional standards of commercial practice, to the advancement of audio technology, and to the greater pleasure of the truly discerning. Whether you be primarily music-lover, high fidelity enthusiast, or homemaker, these products have much to offer you.

Pedersen Acoustics
Box 47
Chestnut Hill, Mass. 02167
Paul Schindler, Director of Marketing
(617) 877-8103

Founded in 1976, Pedersen Acoustics (a division of Pedersen Research) set out to develop a product of uncommon quality and value, to satisfy an especially demanding segment of the consumer audio market. This product, our Model HF-1, a large full-range loudspeaker system, was designed by a dedicated group of scientists willing to approach the problems in achieving convincingly realistic musical reproduction with completely open minds.

Founder Dr. Norman E. Pedersen maintains that convincing loudspeaker performance is a function of efficiency, dynamic range, and distortion, coupled with the effective elimination of unwanted or parasitic cabi-
net resonances. Since dynamic range is a critical function of efficiency, and since low distortion is a function of dynamic range, the most suitable low-frequency solution proved to be the time-tested folded horn. Unlike other systems of speaker porting, a properly constructed folded horn can provide essentially resonance-free propagation of bass down to extremely low frequencies. Transient response, a critical aspect of realistic loudspeaker performance, has been painstakingly optimized over the entire rated bandwidth.

An electronic equalizer utilizing passive filtering precisely compensates for the natural low-frequency rolloff of the folded horn and provides the user with level controls below 100 Hz and above 3,500 Hz. Bandpass filtering capability is also provided. With use of this equalizer we have been able to obtain a smooth, wide frequency response spanning the limits of audibility.

Precedent Audio Products, Inc.
306 E. Oliver St.
Baltimore, Md. 21202
Brad Olschansky
(301) 685-6620

Precedent announces the availability of two new products, the MZ-Mod III and MZ-Mod II speaker systems. The design goal of the speakers was to incorporate the many positive qualities of today's so-called reference systems and eliminate the negatives to create what can become a reference system for the next decade. After five years of research and development and many thousands of hours of listening, designer Murray Zeligman has realized his goals in these two speakers.

The MZ-Mod III is of modular design and consists of three drivers in three separate cabinets that stack upon each other. The woofer consists of an 8-inch KEF driver in a 9½-foot transmission line. The midrange consists of a 4-inch KEF driver in a 7½-foot transmission line, the first such application of a true transmission line. The tweeter is a KEF T-27, standing on a cabinet that contains the crossover network.

The two models are housed in identical midrange and tweeter cabinets. To convert the Mod II to a Mod III, you add the woofer modules and flip a switch on the crossover from two-way to three-way. This allows for higher power handling by taking a load off the midrange and increases bass response by an octave and a half. The MZ-Mod III sells for $1,333 a pair and the MZ-Mod II for $666.50 a pair. The woofer modules sell for $666.50 a pair.

Thiel Audio Products Co.
4158 Georgetown Rd.
Lexington, Ky. 40505
Kathy Gornik, Marketing Director
(800) 254-9427

Thiel Audio is a small high fidelity loudspeaker manufacturer dedicated to making quality products with a strong emphasis on cost-effective designs. In the spring of 1976, the Model 01 bookshelf system was introduced, and now the company has three models distributed through audio specialist retailers.

The people at Thiel Audio, with backgrounds in such areas as studio and stage sound reinforcement, acoustical guitar construction, and musicianship, appreciate the subtle and precise demands of music. The Thiel speaker systems meet exacting performance standards in the realms of audible excellence as well as rigid engineering specifications.

To satisfy more completely a broader range of performance characteristics in our speakers, innovative engineering approaches are developed, circumventing limitations that are inherent in conventional designs. For example, electronic equalization is employed to achieve deep bass response without compromising efficiency. Two characteristics that are mutually exclusive in conventionally designed systems. Another very important engineering goal is to develop designs that achieve the highest possible level of performance for the price.

To be continued
YOU'VE SEEN ALL THE CASSETTE ADS... NOW GO HEAR THE PROOF!

The Proof is a pre-recorded demonstration of sounds you've never heard. Sounds made possible because of BASF Professional Series cassettes.

The Proof is proof that BASF, the inventor of magnetic tape, has once again gone one step ahead in sound.

New, highly advanced, second generation coatings make BASF Pro-Series the most sensitive recording tapes.

Pro-I's (normal bias) maximum output level is unsurpassed among ferric cassettes.

Pro-II's (chrome high bias) incredibly advanced chrome formulation enables it to perform up to reel-to-reel specifications.

Pro-III's (ferrichrome) formulation gives superb results on all recorders, especially car stereo cassette players.

And all BASF Pro-Series cassettes have a patented Security Mechanism™ for jam-proof performance.

Sensitivity is impossible to prove on paper. But easy to prove by simply going to your audio dealer and asking for The Proof. Or, you can send for it. Either way, once you hear it we're sure you'll believe it.

TO HEAR IT IS TO BELIEVE IT

GIVE ME THE PROOF.

Send $3.50 with this coupon to: The Proof, Box 18367, Boston, MA 02118. We'll send you The Proof Professional II-C-30, $4.99 value. Or, for a free demonstration of The Proof, bring this coupon to your audio dealer.

Name: ___________________________
Address: _________________________
City: __________ State: ___________ Zip: ___________

BASF
THE INVENTOR OF MAGNETIC TAPE
HiFi-Crostic No. 42

by William Petersen

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.

Comp" means compound, of 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 the Input, reading down.

The answer to HiFi-Crostic No. 42 will appear in next month’s issue of HIGH FIDELITY.

<table>
<thead>
<tr>
<th>INPUT</th>
<th>OUTPUT</th>
</tr>
</thead>
<tbody>
<tr>
<td>A Italian conductor (1892-1967) (full name)</td>
<td>42 13 57 192 180 204 102 83</td>
</tr>
<tr>
<td>B Brand of loudspeaker</td>
<td>163 147 213 7 136 119</td>
</tr>
<tr>
<td>C Italian soprano Butterfly and Turandot on Angel (full name)</td>
<td>125 10 38 77 210 149 162 186</td>
</tr>
<tr>
<td>D Cripples (slang)</td>
<td>63 106</td>
</tr>
<tr>
<td>E Bach keyboard composition</td>
<td>87 31 64 41 198 207 165</td>
</tr>
<tr>
<td>F Offenbach opera (3 Fr wds.)</td>
<td>151 128 112 96</td>
</tr>
<tr>
<td>G Book by Irving Kolodin (3 wds.)</td>
<td>105 27 217 153 201</td>
</tr>
<tr>
<td>H American composer (1901-1974) Delusion of the Fury on Columbia (full name)</td>
<td>25 101 53 211 2 171 191 129 72</td>
</tr>
<tr>
<td>I With Word M. German opera composer (1810-49) Merry Wives of Windsor</td>
<td>190 167 4 170 23 37 67 99</td>
</tr>
<tr>
<td>J French conductor (1875-1964) director of Boston Symphony before Koussevitsky</td>
<td>205 184 46 54 84 107 138</td>
</tr>
<tr>
<td>K Nightingale (Jenny Lind)</td>
<td>123 148 169 1 29 51 80 104 24</td>
</tr>
<tr>
<td>L Eg. c.g. (2 wds.)</td>
<td>209 188 59 175 44 15 134 66 203 91 34 218</td>
</tr>
<tr>
<td>M See Word I</td>
<td>215 154 5 194 11 111 36 174 146 88 124</td>
</tr>
<tr>
<td>N Writer of popular songs Around the World (full name)</td>
<td>39 74 176 214</td>
</tr>
<tr>
<td>O Alvin on Red Seal’s Pacific Overtures</td>
<td>82 49 195</td>
</tr>
<tr>
<td>P Squealed</td>
<td>127 216 182 61 160 109 145 155 28 30</td>
</tr>
<tr>
<td>Q After the Johann Strauss operetta (2 wds.)</td>
<td>39 74 176 214</td>
</tr>
<tr>
<td>R American composer (b. 1923) Hana Hung from the Sky</td>
<td>82 49 195</td>
</tr>
<tr>
<td>S Czech composer (1854-1928) Taras Bulba (full name)</td>
<td>24 75 219 40 150 56 121 110 179 92 19</td>
</tr>
<tr>
<td>T After the and with Word V. Giannini opera recorded by CGRI</td>
<td>143 9 48 30 55 71</td>
</tr>
<tr>
<td>U Sang without articulating</td>
<td>58 200 148 115 73 130</td>
</tr>
<tr>
<td>V See Word T (3 wds.)</td>
<td>89 139 16 118 185 168 33 22 3 132</td>
</tr>
<tr>
<td>W Mi chiquito</td>
<td>161 95 181 69</td>
</tr>
<tr>
<td>X For we like</td>
<td>120 137 173 53 208</td>
</tr>
<tr>
<td>Y 15th century Netherlands composer Missa sub honum praeedium</td>
<td>122 35 93 177 197 166 20</td>
</tr>
<tr>
<td>Z Donna Anna’s aria in last act of Don Giovanni (3 wds.)</td>
<td>70 21 97 159 43 212 133 189</td>
</tr>
</tbody>
</table>
Who says you can't afford a moving coil cartridge?

Two things are quite clear: a moving coil cartridge reproduces music more accurately than any other cartridge design. Ortofon, the developer of the design, makes the finest moving coil cartridges in the world.

But a moving coil cartridge represents the tip of an expensive music system. For one thing, the coils have to be painstakingly wound under a microscope. For another, its low output, which pays dividends in high performance, requires a transformer to boost the signal (unless your receiver already has provision for a moving coil cartridge).

So the moving coil cartridge is the best way to get the most out of your records. But expensive. Best? Yes. Expensive? No longer.

The MC10 Moving Coil Cartridge
Since 1948, when Ortofon invented the moving coil cartridge, the company has been seeking ways to improve performance and make it available to more and more listeners. The new MC10 is a major step forward in both of these areas.

Construction
The new cantilever in the MC10 is constructed of a special alloy, chosen for rigidity and low mass. With its tiny super-polished elliptical diamond, you get very low tip mass and its many benefits: excellent tracking, easy handling of transients and minimal record wear. Gold plated terminal pins eliminate the possibility of corrosion. Solderless pressfit contacts secure internal wire contact to the pin shells. In short, everything has been done to make the MC10 a high performance cartridge. What makes it affordable, is that new and artful methods of production have made the MC10 easier and faster to produce.

The Affordable Combination
The best moving coil cartridges require that the signal be boosted before entering your receiver. If your receiver has no provision for a moving coil cartridge, we suggest that you consider the STM72. It's a double-shielded transformer designed to function beautifully in tandem with the MC10.

The good news is that the price of either or both of these Ortofon products makes moving coil performance available to many more music lovers who've had to satisfy their desire for exquisite musical performance with a less accurate cartridge.

Write to us. We'll forward full information about the MC10 and STM72. Better yet. Visit your Ortofon dealer with your favorite record. You'll hear qualities in it that will make you value that recording more than ever. You'll also learn that you can afford a moving coil cartridge.
"EVERY RECORD WE PLAY ON WPLJ-FM OWES ITS LONGER LIFE TO SOUND GUARD."* "

Bob Deitsch, Assistant Chief Engineer, WABC-AM and WPLJ-FM, New York City

"Controlling the quality of sound on both WABC-AM and WPLJ-FM. That's my job.

"And on FM, all of our music is on records. And a record's life on the air is about a week. That is, it used to be.

"With Sound Guard, it can be months. Because the protection it gives against our normal wear is extraordinary. That's why, after making our own tests, we now preserve the fidelity of every record with Sound Guard."

As Sound Guard® preservative works for WPLJ-FM in New York, it can work for you. On your favorite LP's. Even 78's. And indefinitely, with repeated use. Just spray it on. Buff it in. And a microscopically thin, dry film protects the sound of your records against the dust and static that wear them out.

Like all our products, Sound Guard preservative is sold in audio and record stores. Try it. It's worth hearing.

**Sound Guard** keeps your good sounds sounding good.

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An Otello to Challenge the Best

Levine’s RCA recording claims a top spot, though Solti’s London set has its points—and Turnabout offers Furtwängler as Verdian.

by David Hamilton

As well as a great opera, Verdi’s Otello is (along with the subsequent Falstaff) arguably the most remarkable piece of orchestral writing ever penned by an Italian composer. There are the obviously spectacular features, of course: the organ pedal (on three adjacent semitones) that persists through the opening scene; the flashy string writing, like the beating of rain and the crashing of waves, that depicts the storm; the dancing strings and skirling winds over which the Cassio/Jago/Otello trio in Act III is played; the massive scales in octaves that drive Otello’s fury (“A terra! e piangi!”).

There are subtler inspirations as well: the quartet of solo cellos introducing the love duet; the obbligato of violins in repeated-note octaves that suffuses the start of the Desdemona/Otello scene in the second act with a special luminescence; the all-woodwind scoring of the fourth-act prelude, three unison flutes in their thickest register replying to the English horn’s plaintive melody; the contrast of the wind-dominated “Salce” with the strings-only “Ave Maria”—and then the terrifying plunge to the lowest E of the double basses as Otello enters. It’s a score full of technical know-how; the more Verdi learned about the orchestra, the more adventurous his imagination became, and the sheer technical proficiency of Otello—in details such as the violins alternating arco and pizzicato near the end of the “Fuoco di gioia” chorus—is a constant source of wonder.

Yet one would be hard put to find another opera (Falstaff again the obvious exception) in which sound and substance are so inextricably related. This orches-
oration is no mere clothing for thematic ideas; one feels that many of these must have sprung into Verdi’s brain fully garbed. Take the opening chord: Not merely a sustained sonority, it quickly dissolves into distinctive syncopations in the brass. Long after the storm has gone, this pulsing on the off-beats comes to represent Otello’s internal tempest; we hear it first gently throbbing in premonition during the love duet, as if in warning (“I fear that such a moment will not be granted me again”). Beginning at “Misera mia!” in the second act, it is rarely absent from his music.

The role the orchestra plays in Otello is very much on my mind because it is so brilliantly realized by James Levine and the National Philharmonic Orchestra in RCA’s new recording. I don’t mean simply the matter of getting the notes (though that is certainly done to a fare-thee-well), but also such things as the way those syncopations “rub against” Levine’s firm, forward-moving beat, as if they had a life of their own. They are always a palpable rhythmic event, no routine pattern. They sound fresh and significant in unexpected places, too; I don’t recall ever before hearing them pulse so richly and vibrantly in the horns during the recapitulation of the vengeance duet, for example.

Making everything on the page sound is clearly one goal of Levine’s conducting, and making it mean something is another; both are realized with remarkable consistency. I admire, too, the specificity of orchestral color, the way timbres are more vividly and sharply realized than in most performances: the lustrous vibrato of the cellos at the start of the love duet, or the many varieties of string staccato, differentiating the percussive pounding of the storm (some of this played rather louder than Verdi’s dynamic) from the seething rush in Otello’s mind (after “Ora e per sempre addio!”).

Such matters spring into higher relief in juxtaposition with Georg Solti’s recording, for he too has a fine orchestra and they play the score very well—but it hardly ever springs to the ear with as much character as in Levine’s performance. Or with as much brio either, for the bounding vigor of Levine’s rhythm, its flexibility of tension and relaxation, is not ever matched by the steady, underarticulated tread of Solti’s beat (which, though marginally faster in some passages, never sounds as energetic). This is another of those curiously uninvolved performances Solti has been giving in recent years; everything is shipshape, but somehow the guts are missing.

In this respect London’s recording faithfully mirrors the Paris Opera production heard in New York and Washington in 1976, with which it shares conductor and several singers (while fortunately improving on the orchestral playing and sparing us the eccentric sets). Margaret Price is a vocally accomplished Desdemona; her sound is even, firm, and perfectly controlled. She’s lovely to hear, but I wish she seemed more involved in Desdemona’s plight.

Carlo Cossutta surprised many people; as a colleague said, “I didn’t know he had an Otello in him” (he was previously known as a soloist in Karajan’s Verdi Requiem recording and an uncomfortable Pollione at the Met). He certainly does have an Otello in him; though the voice is serviceable rather than clarion, his intelligence and intensity are decidedly involving. Similar virtues do not enable Gabriel Bacquier to overcome his vocal limitations; too many ugly sounds and strained emphases now compromise his work as Jago. The rest of the cast is strong, and so is the choral work.

Smoothly registered though this performance is, I miss the presence and impact of London’s earlier Sfsenaisal effort under Karajan (OSA 1324). By way of sound effects, we hear the clinking of glasses in the Brindisi; to my relief, that “realism” does not extend to the smacking of lips when Verdi indicates that Otello should kiss Desdemona.
The RCA set, of course, calls to mind live performances conducted by Levine at the Metropolitan Opera. In this case, however, I have regrets about some of the substitutions. Since the Met orchestra has now reached an extraordinary level of expertise—and particularly in this score—it seems a shame that it could not take part in the recording. And I’m especially sorry that Cornell MacNeil will probably not now have a chance to record Jago in the studio. Though his recent performances in the theater have been uneven, for reasons of health and stamina, he appears to have been Levine’s Jago of choice, and with reason. At its best the MacNeil voice is still powerful and open in sound, and he’s the only modern baritone I know who can really articulate all the small but significant characterizing grace notes and similar finesses that Verdi asks for. (Have you ever heard anyone else really sing the little appoggiatura on the middle syllable of “tracanna” in the Brindisi?)

Sherrill Milnes can’t match that, but he does bring plenty of force, albeit a somewhat rough tone, to the role. He’s vocally enough of a presence to carry weight in the drama, come hell or high water; at the same time, he never defines an individual as much as a type of generalized nasty baritone.

This lack of “face,” of personal specificity, is also characteristic of Plácido Domingo’s splendidly sung Otello. We aren’t accustomed to such vocal plenitude in this part, and we would be churlish to undervalue it. Domingo is tonally glamorous and musically accurate—either of these an uncommon accomplishment, and even rarer in combination. He’s also obviously sincere and intense—but that good will and fervor hasn’t yet been translated into the kind of imaginative verbal-musical detail that individualizes a character. Otello relies on declamation more than any other Verdi tenor role, and our expectations are very high in this regard, for many vocally limited Otellos in the past have worked hard to make their mark in terms of the eloquence with which they read the lines. Strikingly, a rare lapse from Domingo’s usual accuracy is his departure from the written pitches in the third-act monologue—the point where Martinelli made one of his greatest effects by vividly colored enunciation of Verdi’s specified monotone.

The relative neutrality of these two principals certainly affects the character of the RCA performance. The first act is as good as any I have ever heard, partly because the principals don’t matter here as much as they do later; the conflicts haven’t really begun, the undercurrents aren’t flowing yet. The main thread lies in the hands of the excellent chorus and orchestra, and Domingo’s pliant and sensuous tone is certainly no disadvantage in the concluding love duet.

Renata Scotto sings with great distinction, if with the now expectable hardness on a few high notes. She is a passionate, very Italian Desdemona: through the second and third acts, she, more than the others, focuses the drama at a personal level, and in the fourth act she and Levine weave a spell that sustains the performance to the end. The supporting cast includes such Met stalwarts as Jean Kraft (Emilia) and Paul Plishka (Lodovico); even if Levine couldn’t bring his Met orchestra to London, these skilled hands were worth taking along. The RCA recording then preserves a performance of considerable stature. Not quite as fine, I think, as some Levine has directed in the theater, it is recognizably in the same class—and, taken all in all, as far as recordings are concerned, that’s in the same class as the Toscanini (RCA LM 6107) and Karajan/Vienna sets. Next to these, the Solti set lacks commitment, like the Serafin and Barbirolli recordings (RCA Gold Seal AGL 3-1969 and Angel SCL 3742, respectively), it has features of genuine appeal but also serious drawbacks (as does Karajan/Berlin, Angel SCLX 3809, with its unwarranted cuts in the score).

Furtwängler’s 1951 Salzburg performance, issued by Turnabout in a fashion parallel to the Callas recordings I discussed last month, is interesting as his only known recording of Verdi. It’s remarkably parallel and idiomatic, but not a source of much pleasure. At least on this particular evening, a variety of mishaps came to pass: e.g., at two crucial points in Act I (Jago’s “Rodrigo, beviamoi!” and Montano’s entrance after the Brindisi), a singer lets the tempo continuity lapse badly. Little of the singing is more than serviceable, and there’s a good deal of German-accented Italian. The sound is basically pretty clean and clear AM quality, but Turnabout has managed to get only Acts I and III in pitch. The side breaks are novel and generally disastrous. (RCA and London make conventional and acceptable choices in this regard.)

Both Furtwängler and Solti raise a textual problem: At the cadence of Desdemona’s “Quando narravi” speech in the love duet, recent Ricordi scores show an unusual reading of the vocal line, ascending to an E rather than to the F familiar from most modern recordings. Curiously, virtually all pre-1940 records of the duet used this unusual reading, but after that it pretty well disappeared—the Furtwängler performance is the last occurrence of it I can trace until Solti’s recording. Yet the earliest scores I have been able to examine all show the familiar (and more plausible) reading.

The ballet music is (quite correctly) omitted in all three of these recordings. The Turnabout set includes no libretto; RCA and London reprint their familiar versions (both translated, with minor differences, by Peggy Cochrane). Considering the speed with which the RCA set must have been edited (the sessions took place in August, and discs were in the stores by November), it’s remarkably free of flaws, but two different sets had bad grinding noises during the chords preceding the third-act ensemble.

Verdi: Otello.

Desdemona Renata Scotto (s) (1)  
Emilia Jean Kraft (ms)  
Otello Plácido Domingo (t) (2)  
Casio Frank Little (t)  
Rodengo Paul Crook (t)  
Jago Sherrill Milnes (t)  
A Herald Malcolm King (bs)  
Lodovico Paul Plishka (t)  
Montano Paul Plishka (t)  
Muntano Malcolm King (bs)  
(1) Ambrosian Opera Chorus and Boys Chorus, National Philharmonic Orchestra, James Levine, cond. [Richard Mohr, prod.] RCA RED SEAL CRL 3-2951, $26.98 (three discs, automatic sequence) Tape ** CRK 3-2951, $26.98.  
(2) Vienna Choir Boys, Vienna State Opera Chorus, Vienna Philharmonic Orchestra, Georg Solti, cond. [Ray Minshull, prod.] LONDON OSA 13130, $23.94 (three discs, automatic sequence), Tape ** OSAS 13130, $23.95.  
(3) Vienna State Opera Chorus, Vienna Philharmonic Orchestra, Wilhelm Furtwängler, cond. TURNABOUT THS 65120, $14.94 (three discs, micro, manual sequence) [recorded in performance, August 7, 1951].

February 1979
Beethoven Piano Sonatas by Three Specialists

Maurizio Pollini’s late sonatas, Alfred Brendel’s now completed cycle, and Bruce Hungerford’s final Beethoven disc form a study in contrasts.

by Harris Goldsmith

Integral recordings of the Beethoven piano sonatas are no longer the rarity they once were: still, the project is a considerably more ambitious undertaking than the symphonies or the string quartets, and Alfred Brendel is only the second pianist, after Wilhelm Kempff, to accomplish it twice. (The octogenarian Wilhelm Backhaus died one sonata—the Hammerklavier—short of his second cycle.) Brendel’s remake began appearing as single discs in the early Seventies, and just over half the sonatas have been released (and reviewed) in that form, with the balance scheduled to appear coupled as follows: Nos. 12 and 16, Nos. 3 and 11; Nos. 2 and 15; Nos. 1, 20, and 26; Nos. 4 and 5; Nos. 13, 17, and 22. The set follows the sequencing of the single discs; the advantage to purchasers is that its thirteen discs are offered at the price of nine.

A project of this scope, realized over nearly a decade, necessarily displays some inconsistencies. This is especially the case here, since Brendel seems to have undergone changes of several sorts during this period. In terms of career growth, the Austrian-born artist was making the transition to international celebrity; when he began his Philips series, he had a group of ardent admirers, particularly in London musical circles, but he had yet to gain general wholehearted acceptance. It is sometimes difficult to separate career growth from artistic growth, and the sense of confidence and well being produced by success in the first can spur the second.

Did this happen with Brendel? For whatever reason, the earlier Philips Beethoven performances, though better recorded than the Vox ones, were musically similar—if anything, slightly more fustian and exaggerated. Some of the less admirable features of the older recordings remained, such as the occasional cosmetic daintiness and the more than occasional pininess of tone (which could no longer be blamed on the unflattering Vox sonics). The more recent installments, however, give evidence of a consistent darkening and toughening of Brendel’s approach—all to the good for Beethoven, particularly as delicacy is not slighted when called for.

Although I listened to the sonatas in numerical order, without noting respective recording vintage, I discovered afterward that I did tend to favor the most recent performances, and I am inclined to regret that Brendel began his re-recording with some of the very works that would have most profited from his evolution, most notably the Hammerklavier. At times sequential listening produced a startling juxtaposition of old and new: The prim and petite Appassionata, first released in 1971, makes the work sound altogether slighter and more diminutive than its immediate predecessor, Op. 54 (often considered one of the smaller sonatas), which Brendel plays with granitic weight and imposing force.

There is also greater directness in Brendel’s later performances, although they are not free of annoying tinkering. His toying with tempo in the second theme of Op. 10, No. 1’s finale anticipates, and therefore detracts from, Beethoven’s variant in the coda, where it is marked both ritardando and calando; in the finale of Op. 31, No. 2, the mordents of bars 43–46 and 271–74 are executed before the beat, giving these passages an affected-sounding rhythmic dislocation. Yet even the idiosyncrasies now appear to emanate from a stronger basic pulse, and there is a more robust spontaneity rather than the former pickiness. I particularly relished the performances of Op. 7 and Op. 31, No. 1, both of which sound as if Brendel were thoroughly enjoying himself. Op. 31, No. 2, that third-movement quibble aside, is also first-class: full of breadth, drama, and lyricism, with welcome attention to such often overlooked matters as the angular expression marks in the Adagio at bars 25–26 and 69–70. The little G major Sonata, Op. 49, No. 2, gets a surprisingly robust treatment. In fact, the only disappointments among the newer performances are Op. 26, which is beautifully delineated rhythmically but emotionally remote, especially in the outer movements;
the Lebewohl, where Brendel's insistence on "correct" rhythm results in foursquare solidity; and Op. 22, which is tonally unlovely and lacks the engaging lift of the Serkin recording or the mono Kempff.

Space does not allow a detailed reassessment of the earlier releases, but then, my reactions did not change all that much. The performances of the Waldstein, Op. 110, and the Andante favori—happily contained on one disc (500 762 in separate form)—still seem to me of distinction; structural, sculpted playing of exceptional sensitivity and refinement.

A few generalizations can be made about the cycle. In the matter of repeats, Brendel takes most but not all, tending to bypass da capo ones (the Menuetto of Op. 31, No. 3, the scherzo of Op. 110), even when they are clearly called for by the composer. He is also inconsistent in textual adherence, more inclined to purism in the keyboard's upper reaches than in the bass; he never alters treble passages to contain notes not included on the keyboard of Beethoven's time but regularly amplifies by putting octaves at the bottom (e.g., the beginning of the first-movement repeat in the Hammerklavier). Brendel's tone is admirably transparent from pianissimo to mezzo-forte but generally turns metallic and bodiless at forte, although some of the more recent recordings are attractive—indeed, the Adagio of Op. 7 is gloriously rounded and seductive. And the disprocessing, at least on my copy, is remarkable even by Philips standards: twenty-six sides with scarcely a click or a thump.

If Brendel's tone often appears incongruous with the prevailing Romanticism of his approach, Maurizio Pollini's purposeful bleakness and icy linearity—as heard in his DG set of the last five Beethoven sonatas—are in perfect harmony with his direct, modernistic style. I, for one, find it easier to adjust to him because his pianistic method is more orthodox than Brendel's. One crucial difference is that Pollini's legato is more often than not produced in the usual manner—with the fingers—whereas Brendel frequently relies on an overlay of sustaining pedal. Passages with massive chords are therefore likely to sound more focused and solid as Pollini plays them—a decided plus in the Hammerklavier, the first movement of Op. 111, and the second of Op. 101.

Heard alongside Brendel's unusually accomplished playing, Pollini's superhuman finish and digital mastery become all the more miraculous. The fugal finale of the Hammerklavier and the chains of trills in Op. 111's final pages, negotiated with unbroken limpid evenness, seem less like piano playing as we know it than a theoretical paragon. Precisely because of Pollini's Olympian detachment and controlled perfection, some listeners may well imagine that the playing is soulless. I disagree.

The Hammerklavier, played at tempos considerably slower than Beethoven's controversial metronome markings (this is, incidentally, the only one of the sonatas for which such markings exist), nevertheless succeeds in conveying the power and stride implicit in those indications; the long Adagio is wonderfully sustained. The variation movement of Op. 111, played with obvious but never uncouth spiritual devotion, provides the perfect foil for Pollini's pithy, knotted musculature in the sonata's opening movement. Pollini's rhythm, moreover, is solidly anchored but actually quite flexible; Phrases are tapered with a grace that never calls attention to itself.

I like the recording of Op. 101 far better than the performance Pollini gave at Carnegie Hall last season: there is more weight and stronger bass; the clipped, alert articulation sounds less abrupt. On the other hand, in concert Op. 108 and 110 seemed to carry his rarefied approach farther than do the recordings made a few years ago. While I must admire the heroic lucidity and shape of the DG readings, I found the concert renditions—in particular the last, symmetrical account of Op. 110's first movement—more robust and communicative. (The closeness of DG's sound, as opposed to the Carnegie Hall balcony, may be a factor.) But everything considered, this is an extraordinary set.

Readers are probably aware of the tragic death of Bruce Hungerford in a January 1977 automobile accident. Ten sonatas remained unrecorded in his Vanguard Beethoven cycle, which thus joins the similarly incomplete cycles of Gieseking and Solomon: the newly issued disc containing Op. 31, No. 3, and both of the Op. 14 sonatas is the last we will be hearing of Hungerford's Beethoven, unless some of the missing works can be retrieved from tapes of live performances.

Perhaps it is fitting that Hungerford's last words on the subject should come in these works, for in many ways the restrained, undramatic, but solid merit of these sonatas summarizes the quintessential features of his Beethoven. His style was midway between Pollini's austerity and Brendel's editorializing: in its solid seriousness, periodically enlivened by vehement excitability, it often recalls Schnabel's way with this music. The central variation movement of Op. 14, No. 2, is given massive breadth without detracting from its implied whimsy. Op. 14, No. 1, gets an appropriately ascetic reading (without the ritardando that Brendel imposes just before the subito forte in the first-movement recapitulation). Perhaps the first three movements of the high-spirited Op. 31, No. 3, sound a bit sober alongside Brendel's unusually volatile performance, but the vigor of Hungerford's finale (taken at a true Presto con fuoco, but avoiding Schnabel's messy scrambling) completely wins me over.

Vanguard's colorful reproduction suggests the tasteful application of echo to an originally close, unreverberant sound. But the bass line is impactive enough, and the disc is highly recommended.

**BEETHOVEN: Sonatas for Piano (32). Alfred Brendel, piano. Philips 6768 004, $80.82 (thirteen discs) Tape 7699 080, $80.82 (nine cassettes).**


**BEETHOVEN: Sonatas for Piano, Nos. 28-32. Maurizio Pollini, piano. [Rainer Brock, prod.] Deutsche Grammophon 2709 072, $26.94 (three discs, manual sequence).**


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Neville Marriner's recording of Handel's Messiah (Argo DIBD 3, April 1977) although problematic in a number of ways, left no doubt about the admirable tone quality, balance, and virtuosity of the new Chorus of St. Martin-in-the-Fields, but I'm afraid that the B minor Mass is a disappointment. To begin with, in place of the nicely focused tone that I found so gratifying on the Argo recording, Philips has captured a dull and murky choral sound that often turns Bach's already dense scoring into brown paste. What's worse, whole sections of the choir—most egregiously the tenors—completely disappear in the murk for long stretches, with most unhappy implications for the counterpoint.

The second problem has to do with the soloists. We are, it is true, treated to some of the finest singing I can remember from Janet Baker, but still I find the hard edge to her voice unpleasant and at the bottom of her range (which we hear all too clearly in the "Ei in unum Dominum" duet in the Credo) the sound is indubitably ugly. Robert Tear, whose voice I have enjoyed elsewhere, is out of his element here: He delivers everything with more than a soupcon of nineteenth-century histrionics, and his struggles at high notes are distressing. Bass Samuel Ramey produces a reasonably pleasant sound (reminiscent of John Shirley-Quirk at his best) in the middle of his range, but here again the tone quality is ill suited to the music at hand and the effect is hardly enhanced by thin bottom notes and forced top ones. Indeed, only soprano Margaret Marshall manages to produce consistently acceptable results.

One could perhaps overlook some of these flaws if Marriner had a really compelling conception of the Mass, but I'm not convinced that he does. My chief reservation is that, while fast movements are generally taken quite briskly—as they should be—the slow ones tend to be too slow, even ponderous. Such is certainly the case in the Agnus Dei, which at Marriner's plodding tempo is transformed from a petition for mercy into a funereal lament. and the "Qui tollis" in the Gloria is similarly moribund. As a result of this tendency toward overdone slow movements, moreover, tempo contrasts are sometimes exaggerated and applied in illogical places. The disconcerting speedup at the "Christe," for example, would have been unnecessary had Marriner allowed a bit more movement (which would have been desirable in any case) in the first Kyrie.

Of stylistic problems there are fewer than might have been expected. I noticed some missing cadential trills, and elsewhere long trills tend to be too fast and mechanical. In the "Laudamus te," Baker sings little slides before the beat rather than on the-beat trills indicated by Bach. On the positive side, though, someone has referred to Bach's copy of the flute part in the "Dominus Deus" duet and the Lombardic ingente provides a welcome variation from the equal sixteenth notes of the full score.

The instrumental playing here is of a very high standard, and Marriner has done a remarkable job of overcoming the problems of balance that often bedevil renditions with modern instruments. Still, it is to the Nikolaus Harnoncourt performance—warts and all—that I return, with renewed respect for its uncanny freshness. This recording, now ten years old, captured the Vienna players before they had fully mastered their period instruments (especially the winds), and the choral sound is sometimes a bit crude, but these weaknesses are compensated by some truly distinguished solo singing—especially from Helen Watts and Max van Egmond—and by some revelatory interpretive choices. Marriner is probably a good second choice, but for my money the competition cannot really be said to be close.

S.C.


The Kyrie and Gloria of the Catholic Ordinary were retained (under the designation Missa) for occasional use in the Lutheran liturgy, and, since musical settings of these two texts could be used in either denomination, it is not surprising that Bach should have been attracted by the implicit versatility of such settings. After all, he was anxious to obtain recognition in both Catholic and Protestant circles—milieu as different as the Dresden court and the Leipzig town council—so double-purpose sacred music would have seemed a profitable investment of compositional energies. In any case, Bach is known to have produced at least five Missa settings—one of which, composed in 1733, was later expanded into the B minor Mass.

The other four Missae, included on these two new Argo discs, are generally thought to have been completed around 1737, in response to a commission from Franz Anton von Sporck, a Bohemian count (and, incidentally, a Roman Catholic who hoped for a reconciliation between Catholics and Lutherans). In preparing these settings Bach drew heavily from earlier compositions (especially cantata movements) and, predictably, certain infelicities of word-setting do occur. Still, there is much beautiful and moving music here, and even moments of rare genius—notably in the Kyrie of the F major Mass.

These new performances, distinguished by well-chosen tempos and obvious care in shaping musical phrases, are commendably engaging, and the recorded sound is nothing if not vivid. Both choral (of about twenty singers) and orchestra perform with a welcome minimum of vibrato, yielding an intimate and transparent sound admirably suited to the music. Nothing is said about "original instruments," but the silvery sound of the violin obligato in the "Quo-
nium" of S. 233 suggests the use of gut strings and elsewhere we are reminded of the real beauty of stringed instruments when played without the blunt tone and relentless thrashing that too many mindless fiddlers seem to consider de rigueur.

My only real reservations are with the soloists, and I suspect the problem here is simply that the microphones are too close. A more realistic placement might not have camouflaged Paul Esswood's big "whoops" on high notes, but it certainly would have smoothed his machine-gun vibrato (and that of soprano Wendy Leider). And Stephen Roberts' occasionally tempos control might well have passed unnoticed.

RUDOLF SERKIN: IDIL BIRET: PURCELL:


We think nothing of accepting concerto performances in which an outstanding soloist is prosaically, even inadequately, supported by conductor and orchestra; but if the orchestra's role in a classical concerto is equal to that of the soloist—a viewpoint I have advanced without difficulty in the past—why not accept conductor-dominated performances in which the soloist soberly furnishes the required patterns? The chemistry of the Karajan-Weissenberg collaboration shares some attributes with the Szell/Gilels (in an older Angel album), but certain factors, one of course being personal inclination, make me more tolerant of the newer performances.

It must be said at the outset that, were all other factors equal, I could more readily accept Gilels' plainness than Weissenberg's, slavish bravura. Weissenberg, for all his virtuosity, is a less posed instrumentalist. His strong fingers indeed often suggest an overinked typewriter ribbon, with mordents and passagework sometimes brilliantly clear and sometimes blotty and indistinct. But those other factors are not equal. Karajan's orchestral realizations, aptly reproduced and often seductively phrased, have far greater appeal for me than Szell's cut-and-dried work with Gilels. Szell displayed more virage and passion in his earlier career with Leon Fleisher, and those performances—despite the aging, hissy sound—are still my first recommendation for the Beethoven concertos.

Weissenberg's subordination is emphasized by the prevailing recorded balance, which puts the piano comfortably behind the orchestra, thereby robbing it of impact at climaxes. This previously issued Emperor seems to have been remastered here to approximate the sound of the more recent recordings. In any event, I miss a certain stride and cutting brilliance of the earlier version (S 37002. February 1975). In the other concertos the orchestra sounds firmer and brighter—magnificent, in fact—and the pressings are superbly quiet, a big improvement over Angel's norm.

Tempos are rather slow in the first two concertos, and the orchestra in No. 2 sounds a shade large. Weissenberg's curious speedup up for the first movement cadenza of No. 1 (like Gilels and Gesekhin, he plays Beethoven's op. 27 No. 2, not the cadenza) suggests that he recorded that unaccompanied segment separately (before being introduced to Karajan's slower-than-usual tempo?). The composer's cadenzas are used throughout—in the first movement of No. 4 the customary one, beginning with the repeated Gs. Of the solo works, Weissenberg's surprisingly Schnabelesque account of Ruge over a Lost Penny appeals to me more than his bloodless clangor elsewhere. In summation, Weissenberg does some things quite nicely, but it is Karajan and the Berlin Philharmonic who save the day. H.G.

BEETHOVEN: Fidelio:

Leonore: Gundula Janowitz (s) Lucilla Poli (z) Rene Kollo (b) Adolf Dallapiccola (t) Poitiers: Karl Terwald (t), Alfred Stare (bs) Don Fernando: Hans Sotin (bs) Don Pizarro: Karajan/Weissenberg.


Leonard Bernstein's conducting of Fidelio at the Vienna State Opera in January 1978 seems to have been triumphantly successful. On the evidence of the present recording, made in Vienna at that time with virtually the same cast (on disc the more marketable Dietrich Fischer-Dieskau replaces Hans Helm as the minister), it is hard to see why. Perhaps people find it easier to succumb to Bernstein's idiosyncrasies when caught up in the excitement of a live performance than when simply listening at home. Even so, I find it hard to believe that this ponderous, woefully slow account of the music could ever have proved effective in the theater.

Even poor Marzeline's aria, a light-hearted piece partly designed to provide a contrast with the more solemn music introduced into the opera at Fidelio's entrance, is rendered sluggish, weighty, and stilted. At the conclusion of the aria, Bernstein delivers a lethal blow to what should have been a charming little interlude by introducing a big sentimental ritard, the effect of which is to emphasize the inflated and rhetorical nature of his conception. There are big ritards, too in the graver sections of the
score: at the conclusion of the canon quartet, for example, in the middle and at the end of Pizarro's aria, in the orchestral postlude to Florestan's aria. These are equally unsuccessful, for they add an element of calculation, of imposed feeling and self-consciousness, to what should sound straightforward, uninflected, frank.

A great deal of the opera is simply too slow. An exception is the finale, whose allegro sections take on an almost manic energy. In moments of dramatic stress, moreover, the orchestral textures become unpleasantly coarse, too insistently urgent in sound to do justice to the noble classicism of Beethoven's sensibility. For me the most egregious example of Bernstein's insensitivity to the essential nature of this music is the way he spatchcocks the ending of the Fidelio/Florestan duet "O namenlose Freude" into the opening of Leonore No. 3 (which is in any case obscure) by omitting the timpani stroke that opens the latter. So much for the music's integrity, so much for Bernstein's music-dramatic intentions. Bernstein's work on this occasion, in sum, is overwrought and unfelt.

Most of the singers are either below par or unsuited to their assignments. Lucia Popp is a charming Marzelline, though, and Fischer-Dieskau, a dignified Don Fernando, one who delivers his noble utterances with dry tone but exemplary legato. Neither Adolf Dallapozza (Jaquino) nor Manfred Jungwirth (Rocco) is very distinguished as either a singer or a personality. Hans Sotin, the top of whose voice sounds dangerously overextended, makes a colorless Pizarro.

Rene Kollo is in still, unconvincing voice. With what some people, I imagine, might adjudge laudable intentions, he begins Florestan's very first note, the high C of "Gott, welch Dunkel hier!" very softly, in due course swelling it to a forte. Unfortunately, the result is extremely ugly, more like a prolonged moan than a note, and thoroughly unmoving. Gundula Janowitz, white in tone, insecure at the top (her unnerving B flat at "Tot erst sein Weib" being a case in point), and interpretively bland, is not a Leonore to cherish.

The chorus is fine, however, and the Vienna Philharmonic, whenever Bernstein permits it to, sounds beautiful. The singers are closely miked—but even more absurdly so in the spoken dialogue. The libretto is trilingual (German, English, French), the accompanying articles quadrilingual (Italian is the other language). The Fidelio recording to get, so far as I'm concerned, is Kemper's on Angel, with Christa Ludwig and Jon Vickers. D.S.H.

BEETHOVEN: Sonatas for Piano, For a feature review, see page 64.


In this recital, one's admiration for Janet Baker's artistry—her clear, sensitive diction, her strong feeling for the shape of a phrase, the generous commitment of her delivery—is unavoidably qualified by two significant reservations. First, a penchant on her part and Andre Previn's for slowish tempos, not only in appropriate places (the viola songs, most of the Serious Songs), but also much less convincingly in such songs as "Standchen," "Der Jager," and "Vergebliches Standchen." Resisting the blandishments of cuteness in these pieces is all to the good, but not, surely, at the cost of devitalizing them altogether; the huge dimensions in the last stanza of "Vergebliches Standchen": pretty nearly tear this little piece apart. Too, the total program is thus of diminished contrast and effect, thereby misrepresenting Brahms's range as a song composer.

Second, there is the singer's vocal condition. An obtrusive heat invades the voice above the break, especially at the top of the staff, and occasionally even in the chest register (the middle C at the end of "Auf dem Kirchhofe"), giving rise to a good deal of imprecise pitching. At times the passage over the break is clumsily managed also. These problems are most evident in the strenuous music: the lighter "Therese" is altogether steadier, though it might have gone better still at a faster tempo.

Aside from his possible role in the choice of tempos, Previn is a positive presence at the piano, his dynamics particularly well judged. Angel provides texts and translations, along with some excellent commentary on the music: "from notes by Bernhard Johnson,"—which I take to indicate an abridgment of some sort; although there's a fair amount of blank space on the text leaflet. (Perhaps the omitted material included the desirable clue for listeners that the "new" melody in the last section of "Auf dem Kirchhofe" is certainly intended to recall the most prominent chorus in Bach's St. Matthew Passion.) Note that the "Regenlied" sung here is not the familiar setting of another poem of the same title, also by Klaus Groth, published as Op. 59, No. 3, not a song from the 1860s that was not published until after Brahms' death; as far as I can trace, it has not previously been recorded. D.H.


Bruch's Eight Pieces, Op. 83, a mature work dating from the composer's seventy-second year, was composed with the clarinet/ viola/piano combination in mind. Three Schumann's Fairy Tales in mind; Glinka's early Trio pathétique, an 1826-27 work reflecting classical antecedents rather than the Russian nationalism familiar from the composer's later years, was conceived for clarinet, bassoon, and piano.

Both works were published in alternate versions for standard piano trio (i.e., violin, cello, and piano), and the Glinka was recorded in that form by David Oistrakh, Sergei Kushevitzky, and Lev Oborin (WERM attributes the arrangement performed to one Hrimaty; the Delos annotations imply the composer's own hand). It is also available in the original scoring, with appropriate percussion, on Oiseau-Lyre (DSLO 524) or with modern instruments on Musical Heritage Society (MHS 1973) and Varése Sarabande (81003).

Strangely, the far more substantial Bruch is virtually never performed in its entirety. For some reason, Nos. 2, 6, and 7 are occasionally heard on their own—as they are on the only previous recording of this music I know, a 1967 Library of Congress performance by Harold Wright, Boris Kroyt, and Murray Perahia on Turnabout (TV 34615). My delight at finally having an integral recording is tempered by the substitution here of cello for viola; the lower-pitched instrument makes the timbre perceptibly less
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CIRCLE 56 ON PAGE 89

supple and rapturous. (There are few actual changes in the notes—merely a few figurations shifted down an octave.)

The Wright/Kroyn/Perahia performance makes clear how much more magical the original scoring is, although the difference also has much to do with the exceptional artistry of the Turnabout musicians. The Montagnana performance is basically fine, but its No. 2 does not soar as the Turnabout version does. In the scherzo No. 7, I was surprised to find that the slightly hard-pressed Montagnana is really not much faster than Wright/Kroyn/Perahia, whose flexibility and nuance elevate hair-trigger technical virtuosity into the realm of tonal magic. But in the absence of a complete recording of the clarinet/viola/piano version, the Delos performance provides admirable proof that all eight pieces are of comparably high quality.

In the Glinka trio, one could hardly imagine a greater disparity than that between Osceau-Lyre’s honking penny-whistle clarinet, buzzing bassoon, and washboardlike antique piano and Delos’ lushly intertwining modern clarinet, cello, and piano. I view the intermixing of string and wind instruments in this work suspiciously, for the tonal result comes too close to Brahms’ clarinet trio: the violin/cello/piano Oistrakh Trio version at least preserves some classical rigor. For that matter, the penetrating sound of Osceau-Lyres Music Party—though sometimes downright raunchy and unpleasant—projects the slight substance of Glinka’s phrases with a touch of melodrama missing with the Montagnana’s softer-contoured tonal blend. The best solution seems to me modern clarinet, bassoon, and piano. I haven’t heard the Norwegian Chamber Soloists on Varese Sarabande, but the New American Trio on MHS is excellent.

Delos has been making big strides in capturing sound with suitable room resonance, and the pleasing ambience is abetted by clean disc surfaces.

H.G.

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Ashkenazy’s Chopin cycle continues in its sensrle arrangement by vintage rather than genre, an approach that proved most fruitful with the “late” works (Opp. 60-69) gathered in Vol. 2 (CS 7022, August 1978).

In Vol. 3, the shorter pieces are especially well played. In the Berceuse, in essence a Romantic vision of the passacaglia. Askenazy delineates the repeated bass with just enough rigor to make structure gently insistent without straitjacketing the melodic material. In the three Op. 59 mazurkas, among the richest and most varied of the series, the interplay of rhythmic license, delicate nuance, and hints of extravagant vehemence intensifies the emotional complexity without sacrificing charm or flow. The two Op. 55 nocturnes, too, are handsomely rendered—the F minor with a par-
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ticularly fleet accelerando conclusion, the E flat with an ascendant, cloudlike serenity.

An interpretive style that conveys Chopin's stature in shorter works tends to undermine the larger ones, and I find the B minor Sonata unsatisfying. For all Ashkenazy's probing of linear detail, he overinterprets. The rallentandos, diminuendos, and rhetorical adjustments drain the outer movements of their requisite sweep and rhythmic power.

London's sound is of the ambient large-hall variety. H.G.


**Comparisons**

Ansermet/Suisse Romande (excerpts) Lon. CS 6185
Bonyngé/New Philharmonia Lon. CSA 2236
Fistoulari/London Sym Mer. SRI 77005

As with his recording of Delibes's Coppélia (Angel SB 3843, December 1977), Jean-Baptiste Mari's handling of Sylvia is dutiful but without real distinctiveness. On the evidence of these sets and of his Pérènne and Chabrier recordings, Mari strikes me as temperamentally unsuited for the qualities of grace and sprightliness that lie at the heart of such nineteenth-century (and, in the case of Pérènne, early twentieth-century) French music. Tchaikovsky's enthusiastic report to Tanyev after seeing Sylvia for the first time, in Vienna, sums up the score's essential features: "What charm! What eloquence! What a wealth of rhythm and harmony!"

To hear what is missing from Mari's performance, one has only to turn to Ernest Ansermet's irresistible London disc of excerpts (coupled with excerpts, equally fine, from Coppélia). Ansermet, alas, did not record the entire work, but Richard Bonynge's London performance is an excellent one, and, unlike the far from negligible Anatole Fistoulari/Mercury set, it is absolutely complete. Bonyngé puts Mari out of the running, though the Paris Opera Orchestra plays very well and Angel's engineering is big and bright.

Notes, illustrations (too small and murky, however), and an excellent full synopsis of the action are included, but no list of musical numbers. D.S.H.


This is said to be the first volume in a series of "Organ Music by Pupils of Paul Dukas," which raises the prospect of a stimulating juxtaposition of music by Duruflé, Messiaen, and Jehan Alain, three of the twentieth century's more notable contributors to the organ repertory.

Of these three composers, Maurice Duruflé is the least innovative (and, in quantity, the least productive), but his music does offer a rare blend of consummate craftsmanship and sheer beauty, along with a performer's understanding of the organ's expressive possibilities. Plain-song—whether actually quoted (as in the Requiem, and in the Veni Creator triptych recorded here) or merely suggested by the music's pervasive modality—is at the heart of his style, although some of the more obvious external aspects are the legacy of Impressionism. The plain-song basis harks back to Duruflé's years as a chorister at Rouen Cathedral and to his studies with Charles Tournemire; the Impressionistic aspects reflect his training under Dukas and Louis Vierne and his admiration for the music of Debussy and Ravel. Fastidious craftsman that he is (and here the example of Dukas comes to mind), Duruflé has considered only a handful of his compositions worthy of publication—a pity—but the value of these works is perhaps all the greater for their scarcity.

The organ in Coventry Cathedral (built by the British firm of Harrison and Harrison in 1962) is one of the most successful ecclesiical designs I've encountered, and here it manages to produce a very good approximation of the French "néo-classique" instruments for which Duruflé conceived his music. Virtually all the "authentic" sounds are here, then, and Walter Hilsman scrupulously adheres to the composer's precise registration directions. I was surprised at a few wrong notes that apparently escaped editing, and I somehow felt a need for a bit more punch, but there is no denying the sympathy and fluency of Hilsman's playing.

The recorded sound is good but distant, and the pressing is occasionally marred by distortion and miscellaneous pops and crackles. For Felix Abramian's sleeve notes, though, there can be nothing but praise, and the insert containing the organ's specification and a diagram of its layout (1) is a model of what such things should be.

S.C.

**Dvořák: Concerto for Cello and Orchestra.**


**Dvořák: Concerto for Cello and Orchestra.**

in B minor, Op. 104. Josef Chuchro, cello; Czech Philharmonic Orchestra, Václav Neumann, cond. [Josef Kuhn, prod.] SUPRAPHON 4 10 2075, $8.98 (SQ-encoded disc)

All three of these recordings merit consideration, but the most interesting is the one by the gifted young Hungarian Miklos Perényi, which strikingly resembles the famous Casals/Szell version in its blunt dynamism and the rapid tempos that become even faster at the slightest provocation. Even Perényi's nasal tone is reminiscent of Casals.

For my taste the virtues far outweigh the defects—have always loved the Casals recording (still available in a bright Saphir transfer) and welcome so close an approximation in modern sound. Ironically, Hungaroton's engineering also recalls the Casals/Szell version: the brass is slightly gritty; timpani and lower strings delineate tuttis with terse, boxy emphasis; concerto detail, which gives this music so much of its rustic allure, is consistently underplayed. Géza Oberfrank gets responsive playing from the Budapest Philharmonic, and only those who look for more color will find this elemental, vigorous performance wanting.

An interesting alternative to the more usual historicomic approach is the light, trim, refined new reading of Josef Chuchro. Chuchro, who is somewhat more removed from the microphone than in his previous
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Maurice Hendron and Bernard Haitink play with cool, aristocratic poise, and their decade-old recording still sounds superbly realistic (the new Festivo import more...) and surpasses the original domestic Philips). The inclusion of the charming Silent Woods and G minor Rondo, both lovingly performed, makes the disc even more of a best buy.

H.G.


HAYDN: Concerto for Violin and Orchestra.

Supraphon recording (with the Czech Philharmonic under Jiří Waldbauer), takes an easygoing, underplayed approach, occasionally slighting rhythmic precision and articulation; one or two of his shifts are distracting. Although the basic tone is lush and appealing. Vaclav Neumann and the Czech Philharmonic provide patien
t almost chamber-music-like support. I was consistently delighted by finely tapered woodwind solos and by the resourceful flexibility of the orchestral playing in general. Tempos are well chosen, animated but never rigid. Supraphon's big-hall sound presents the instrumental dialogue in a sophisticated understated manner.


The two works on the DG disc—the relatively youthful violin concerto from the early 1770s and the Sinfonia Concertante of 1792—share a spirit of virtuosity and a unmistakably intended for performance by extraordinary artists. The man who inspired the solo concerto was Luigi Tomasi, appointed concertmaster soon after Haydn's arrival at his first—and last—secure position in the service of the Esterhazys. The Sinfonia Concertante, though called a quartet of soloists, was also composed for a virtuoso violinist (the violin principe
domine), the London impresario Johann Peter Salomon, who must have been a very good fiddler, because his part was elaborate and difficult as the one earlier devised for Tomasi.

The concerto still shows traces of the late baroque genre, but it is symphonic, especially the first exposition section, through immediately thereafter Haydn provides the soloist with plenty of fireworks. The Adagio is an impassioned piece, with a glowing cantilena carrying the solo into the stratosphere; while the finale is a typical Haydnesque rondo—fast, witty, and entertaining.

The Sinfonia Concertante is something else. It is of course far more symphonic, yet at the same time more rhapsodic, even though Haydn had to reckon with not one, but four soloists within a symphonic context, with no hinting of the full orchestra. He succeeded so well that the London press gave him unanimous praise amounting to ecstatic. (Haydn must have smiled when the conservative English made him conduct this modern work from a continuo harpsichord.) The combinations are endless: Here the orchestra and the soloist play together, developing the thematic material there. The bassoon suddenly appears from nowhere, darting into the solo violin's cantilena again the oboe twitters while the cello takes over the violin's territory in the heights. The finale is especially delightful, with plenty of Haydn's unexpected musical jokes and general laughs. It begins with an unmistakable introduction to an operatic finale and sometimes the violin enters with a mock accompanied recitative afterward we are treated to a typical concerto finale modeled on the buffa, fast and funny—no one can nod in this lively rondo.

The DG performances are excellent and full of life, and in fact all participants deserve the title virtuoso. Pinchas Zhuken
can has only one stylistic blind spot—dil
teated cadences and a long wait between the last two chords (in some instances there is enough time to drop three shoes). The

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CIRCLE 43 ON PAGE 89

74 High Fidelity Magazine
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sound is good, though in the Sinfonia Concertante it is a little too open and forward, making the tubas and the very high violin tones a little shrill.

The first of the two cello concertos dates from about the same time as the C major Violin Concerto, and it too was composed for one of Haydn’s own men, who must have been a very good instrumentalist—Haydn did not spare the Robin. The first movement is a fairly routine Allegro, but Laslo Varga plays it so well that one’s attention never wavers. The Adagio is an articulate piece, both solo and orchestra singing warmly. The first Allegro is bounding and energetic in Haydn’s delightful middle-period symphonic vein; it rushes along, neither its physical velocity nor its musical vigor impeded for a moment. Though the virtuosity demanded is considerable, both soloist and orchestra cope with it admirably: this is an exhilarating piece.

Side 2 offers the Haydn cello concerto, composed in 1766 for Anton Kraft, a skillful cellist in the Escherz Company, and published as Op. 101. The more sophisticated nature Haydn begins the concerto with a sweet songlike theme instead of the usual bulleye, and while there is of course a good deal of passagework, the cantabile quality is maintained throughout, even in the perilously high regions. We notice one of Haydn’s favorite means of establishing cyclic connections: The theme of the first Allegro starts out with material taken from the end of the principal theme of the first movement. This is a classically poised slow movement, pensive and expressive. In the finale, Haydn turns to his very own folkish dialect, but while the dialect may be popular, the craftsmanship is of a very high class and the solo part gratifying for the performer.

The performance is superlative. Varga is an artist of the first water; his warm, beguiling tone can plead or command, soar or whisper, and it never turns nasal, even when the cello is made to climb into the violin’s ballpark. And Varga has taste combined with elegant musicianship. Antal Dorati and the Bamberg Symphony support him alertly and with accuracy, and the sound is very good.

The concert suite from Janáček’s The Cunning Little Vixen was arranged by Vadim Kotelnikov, who recorded it himself in the Fifties. For Supraphon—also coupled with the “orchestral rhapsody” after Gogol, Taras Bulba. Exquisite though Talich’s Vixen selections are (mainly from the first of the opera’s three acts), there is much more haunting music omitted, and the animal characters’ high tessitura, much of it meant to be sung by children, loses something in translation to instrumental garb. Nonetheless, since both Supraphon recordings of the opera leave something to be desired, the suite serves as a delectable appetizer. The better-known Taras Bulba, whose three movements depict scenes of brutal horror and transfiguring courage and idealism, is still less performed than it deserves.

Andrew Davis has established himself as a Janáček specialist with his performances of the Glagolitic Mass in London and Boston. While the Toronto Symphony isn’t quite in the Boston Symphony class (to say nothing of the Czech Philharmonic as heard with Talich, it is a stylish, responsive, and energetic ensemble, able to come to terms nicely with the delicate whimsy of the Vixen music), even if Talich conveyed a bit more tenderness and atmosphere, (Davis, incidentally, mentioned to me that he had discretely adjusted some of Talich’s orchestration to bring it more in line with the original.)

The brooding power of Talich’s Taras Bulba remains to my taste unmatched, and even Supraphon’s dimmono sound cannot conceal the amber incandesence of the Czech Philharmonic’s playing. But Davis’ driving and extroverted account is quite effective, and I recommend it among current domestic editions. Columbia, however, has not captured the organ part in the final peroration quite as excitingly as DG did in Kubelik’s somewhat unkept Bayerische Radio Symphony account (2550 073), which also features a valuable “basic” coupling in the Sinfonietta.

A.C.


Comparisons

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KETELBELY: Various Works. Ambrosian Singers; Philharmonia Orchestra, John Lanchbery, cond. [John Mordier, prod.] ANGEL S 37483. $7.98 (SQ-encoded disc) Tape • 4XS 37483, $7.98.

In a Persian Market; In a Monastery Garden; Chai Romano; in the Mystical Land of Egypt (with Vernon Midgley, tenor). The Clock and the Dresden Figures (with Leslie Pearson, piano). Delias Across the Meadow; In a Chinese Temple Garden; In the Moonlight; Sanctuary of the Heart (with Jean Templey, mezzo-soprano).

Is there any health-fad fanatic who hasn't at some time yielded to the temptations of junk food? Or any musical purist who hasn't succumbed momentarily to the seductive catchiness of a schmaltzy tune? As every old-timer is aware, the McDonald's—ever the message parlor—of music long was an extraordinary British institution wearing many pseudonyms but whose real name was Albert Ketelbey: he lived from 1875 to 1959, but his incomparably juicy tunes and "exotic" orchestral effects will never die.

Ketelbey's greatest days were those of the silent movies, when theater orchestras, organists, and pianists would have been helpless without his immense repertory of what were called "characteristic intermezzi" to draw upon. In the analysis of an astute HF reviewer of twenty years ago, Ronald Eyer, it was Ketelbey who "taught us what Oriental music is—and thereby set back East-West musical relations by a hundred years, or maybe forever. . . . The fact is that to all Western ears Oriental music is: Ketelbey music: the clashing cymbals: the little pinging bells: the minor modes: the amazingly graphic mincing step created by rapidly reiterated notes: the coy taps on the woodblock."

Ketelbey-isms of course continued to re-echo in film, and even more in TV scores, but there have been no adequate recent recordings devoted to this poor man's combination of an Richard Strauss: perhaps no fully satisfactory ones since the 78-rpm era when the Master (who doubled as a publisher and record-company executive) was conducting his own works for English Columbia. Now this long neglect has been richly averted. John Lanchbery, best known as a ballet conductor, resurrects Ketelbey in glorious sonic Technicolor. He and his collaborating instrumentalists and singers provide true, noncamped-up epiphanies of such unforgettable and quite incomparable (thank God!) masterpieces as the Persian Market, Monastery Garden, and Chinese Temple Garden scores. And EMI engineer John Kurlander supplies lush, resonant (especially in the organ passages), exotically percussive, irresistibly hypnotic sonorities. These prime examples of Ketelbeyana are sui generis in either disc or cassette stereo; in quad playback they drip even richer juices.

Unfortunately," as Eyer was quick to qualify his tribute, "Ketelbey was a one-dish man. The minute he departed from chop suey, he was dead." The exoticism begins to bleach out in the Gypsy overture Chai Romano, and the rest of these diversifications are inconsequential at best—-with the possible exception of Sanctuary of the Heart, sufficed a meditation religioso, which well may plumb the all-time depths of sentimentalization.

Anyone for a junk-food urge? R.D.D.

MAHLER: Symphony No. 1, in D. London Philharmonic Orchestra, Klaus Tennstedt, cond. [David Mottey, prod.] ANGEL S 37508. $7.98 (SQ-encoded disc) Tape • 4XS 37508, $7.98.

Comparison
Horenstein London Sym None H 71240

Tennstedt's debut recording, intended as the beginning of a Mahler cycle, is a piece of solid musicianship. The composer's directions are heeded respectfully, if not fanatically: textual points are made without the sometimes ostentatious "Romantic" exaggeration of Bernstein (Columbia M 31034) or Pau (London SPC 21167). Tempos are moderate and well maintained: both repeats are observed. The London Philharmonic plays well, though without the jewel-like refinement of the Concertgebouw under Haitink (Philips 6500 342).

What most dampens my enthusiasm is the sound, clouder and less detailed than I would wish. The low disc: modest and also allows some surface-noise intrusion in softer passages.) Even the rousing climaxes of the first, second, and fourth movements lack vividness and brilliance. The virtues of Tennstedt's First can be had in Horenstein's Unicorn/Nonesuch recording, along with a cool-led spring tension and excitement that make it, for me, the most thrilling and authentic account of the work on disc.

A.C.


Comparisons—No 5
Haitink Concertgebouw
Phl 6700 048
Solti/Chicago Sym
Lon. CSA 2228
Bernstein/Y.V. Phil.
Col M 75398
Walter/N Y Phil.
Odyns. 32 26 0016

Comparisons—No 10 (complete)
Gimandi/Philharmonia
Col M 75375
Morris/New Philharmonia
Phl. 6700 067

Nowhere does Mahler make more stringent demands on the conductor than in the Fifth Symphony, and in no recorded performance have I encountered those demands been realized as thoroughly as in James Levine's. In the opening Funeral March, Levine differentiates the three main pulses even more clearly than did Solti, and in the slow interlude of the scherzo he is painstaking in his adherence to Mahler's tempo gradations for the horn recitatives (which change with almost every phrase), producing a wonderful sense of remoteness and meditative calm opposed by latent restlessness. Finally, the epitome of a Mahler "booby trap" comes in the closing pages of the symphony, where the triumphant brass chorale is to be taken slowly and heavily only at No. 33, and not at its first appearance shortly before: everyone else either slows down prematurely or
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fails to do so at all, but Levine takes the composer at his word and the carefully judged timing is electrifying and exalting in its impact. The conductor's rhythmic incisiveness and ear for complex counterpoint are everywhere evident, but note too his ability to scale down to the more modestly lyrical proportions of the Adagietto.

One doesn't normally associate the suave "Philadelphia sound" with either Mahler's laconic and bracing sonority or the crisp objectivity of such conductors as Levine. However, the combination works hand-in-hand, and I find the orchestral execution of an energy, precision, and virtuosity fully competitive with the recordings by the Chicago Symphony and the Concertgebouw. There are lapses: Compare the Philadelphians' mushy handling of the string fugue early in the finale with the Concertgebouw's bite and precision for Haitink. Yet, much as I admire both the Concertgebouw version and the more aggressively dazzling Solti/Chicago one, neither has the humor and swagger of the Philadelphia under Levine.

Levine's influence on the orchestra (with which he is scheduled to conduct the Mahler Ninth) can be more directly gauged in the Adagio of the Tenth Symphony, which Eugene Ormandy recorded as part of Deryck Cooke's early performing version of the five-movement score. The difference is not so much in sonic characteristics as in the intensity and commitment of the playing, the greater breadth, and the clarity of the woodwinds. (The latter, though, is at least partly due to Levine's use of Cooke's final version, in which winds are quadrupled rather than tripled, as in the version recorded by Ormandy.) My own preference with this movement, however, is to hear it as the first movement of the complete symphony, which for now is best done by Wyn Morris on Philips. (Levine hopes to record a complete Tenth.)

Save for a subdued disc cutting level, RCA's sound is exemplary in spread and clarity. Strongly recommended to all except those who want a more voluptuous Fifth; to them I suggest the slightly aging, mildly heavy recording by Leonard Bernstein and the New York Philharmonic (Columbia), the very aging but exquisitely flowing and splendidly played one by Bruno Walter and the Philharmonic (Odyssey, rechanneled), or the similarly trim and taut but remarkably effettuoso one by Kiril Kondrashin and the U.S.S.R. Symphony (Melodiya—available from Germany on Eurodisc, in a three-disc set with the Seventh Symphony, 27 398 XKG).

L'Anthologie sonore: in the mid-Thirties, and since then a considerable recorded repertory has been built up. It's good to discover that he did write for other instruments. Although the Telefunken notes are vague on the source of the present two recorder suites, it's a pretty safe guess that they come from Marais's 1692 published set of Pièces en trio pour les flûtes [i.e., recorders], violon, et dessus de viole. The suites, comprising eleven or twelve mostly very brief dances or divertissements, are generally lightweight—disarmingly lifting in faster tempos, dreamily plaintive in slower ones. They rise to poetic eloquence only in three larger-scaled movements: the first suite's 'La Marimore' with its following oture (i.e., variation) and the second's admirably varied and expansive 'Passacaille'.

The period-instrument performances by the young Quadro Hottelterre (whose two recorder players are Bruggen pupils) lapse into soulful sluggishness at times, but when they come to life they are delightfully graceful and vivacious, commanding a remarkable variety of warbling and cooing as well as whistling tonal charms. And there is interest in the unusual use of a five-string cello-1740 violoncello piccolo rather than a gamba for the continuo part. R.D.D.

The references to her dead father in Act II of "I Pagliacci" failures to evoke a more somberly expressive tone, so that in the oldish version, which the composer's widow, Clara, herself shared the stage. The present version, which does not feature a third act, is projected with much greater vividness. So is the passage about American methods of divorce in the Act II Butterfly/Sharpless duet: Where before Butterfly simply referred to the dialogue between judge and plaintiff, she now acts it out for us, thus bespeaking her passionate involvement in the subject. In replying to Sharpless's question about what she would do if Pinkerton were to come back to her, she is incom-

Puccini: Madama Butterfly

Cio-Cio-San
Renata Scotto (s)
Suzuki
Gillian Knight (ms)
Angel Magg (p)
Anne Mutter (p)
Pinkerton
Placido Domingo (t)
Goro
Florindo Andreoli (t)
Yamadori
Alan Byers (t)
Sharpless
Ingvar Wixell (b)
Prince Yamadori
Jonathan Summers (b)
Yuki Yutaka
Leslie Fyson (b)
The Bonze
Makihiko Nakata (male)
The Imperial Commissioner
Christopher Keefe (ms)

Ambrosian Opera Chorus, Philharmonia Orchestra, Lorin Maazel, cond. (Paul Myers, prod.) Columbia M3 35181. $23.98 (three discs, automatic sequence). Tape: M3 35181. $23.98.

Ambrosian Opera Chorus, Philharmonia Orchestra, Lorin Maazel, cond. (Paul Myers, prod.) Columbia M3 35181. $23.98 (three discs, automatic sequence). Tape: M3 35181. $23.98.

Comparison
Scotto, Bergonzoli, Barbieri; Rome Opera. Ang. SCL 3702

Ever since it first appeared several years ago, Renata Scotto's Angel Butterfly, under the direction of Sir John Barbirolli, has been for me the most impressive and touching performance of the role on disc. It is now surpassed by the same artist, who as both interpreter and vocalist here demonstrates a capacity for self-renewal within the grasp of no other major operatic performer I know of today.

With the passage of time Scotto's conception of Butterfly's character has deepened. There is now more light and shade, more color and texture, in her portrayal. The references to her dead father in Act I are projected with much greater vividness. So is the passage about American methods of divorce in the Act II Butterfly/Sharpless duet: Where before Butterfly simply referred to the dialogue between judge and plaintiff, she now acts it out for us, thus bespeaking her passionate involvement in the subject. In replying to Sharpless's question about what she would do if Pinkerton were to come back to her, she is incom-

MARIAS: Recorder Suites, Vol. 1; in B flat, in G minor, and in F minor. Quadro Hottelterre (Kees Boeke and Walter van Hauwe, recorders; Wouter Moeller, cello; Bob van Asperen, harpsichord). TELEFUNKEN 6.41992, $8.98. Tape: 4.41992, $8.98

The modern-era phonographic renaissance of the long-neglected Marin Marais (1656-1728), greatest of all French—or any—gambists, was pioneered by Eva Heinitz for the "Victor Legacy" label with her landmark recordings of the complete suites, recorded in the 1950s. The last of the six suites to be issued, this first one, for the most part, according to the concertos (published in 1691) and the other two excerpts of similar character. The present performance, recorded in 1982, is already familiar to many listeners via the Philips sampler (434 013-2) and the complete suites recording on that label (424 326-2).

MARIAS: Recorder Suites, Vol. 1; in B flat, in G minor, and in F minor. Quadro Hottelterre (Kees Boeke and Walter van Hauwe, recorders; Wouter Moeller, cello; Bob van Asperen, harpsichord). TELEFUNKEN 6.41992, $8.98. Tape: 4.41992, $8.98

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parably more affecting than on Angel, as she is later in the same scene when, holding up her child, she disavows the possibility of a return to her old life as a geisha. In the former, a chill enters her voice as she looks ahead to the possibility of death; in the latter, we hear a memorable feverish intensity as she talks with horror of begging for alms.

Perhaps the most expressive evidence of Scotto’s deepened awareness occurs at the end of Act II, when Butterfly acknowledges in her face the evidence of time’s degradations; “Non son più quella! Troppi sospiri, la bocca mondo, e Turchio riguardo nel lontano troppo fisso!” (“I am no longer what I used to be! My mouth has breathed too many sighs, my eye has stared too hard into the distance”). Scotto sings the passage with so much meaning, so deep and quiet a sense of personal loss, that we feel as never before the full extent of Butterfly’s suffering. She even manages to infuse new life into the well-worn phrases of “Un bel di,” which she projects, like a great actress, with individual vivacidity.

She also vocalizes the role better than she did in the earlier recording, managing her resources with unobtrusive mastery. As might be expected, she is sometimes squally on top. The high B flat and A flat toward the end of her scene with Sharpless (on “torna, ohi!”) are strident. Yet moments like this are few, and on the whole Scotto sings with beauty as well as expressiveness, as witness the exquisite high A on “ninni!” shortly before “‘Un bel di,” and the radiant high B flat she wisely substitutes for the alternative D flat at the end of her Act I entrance.

In a passage like “Amore e grillo,” Plácido Domingo, an intelligent artist, can no longer make his dark and heavy timbre respond to his interpretive intentions with the necessary pliancy and variety of tone, but when the music calls for ardor, as it so often does, he is wonderfully thrilling. Invar Wixell’s Sharpless is reliable, if less luxuriously stable than it might be. Florindo Andreoli’s Goro is well characterized. The remainder of the cast is less authentic in Italian enunciation, especially with respect to consonant placement. In addition, Gillian Knight (Suzuki), whose timbre I find unattractive, often distorts her vowels.

Chorus and orchestra are highly satisfactory. Lorin Maazel leads a puzzling and rather featureless performance. On the whole it is too slow, but more important it is aimless, lacking any real sense of overall comprehension. The flood tide of the Act I love-duet, for example, is meaninglessly impeded in its final stages. Luckily Scotto, especially in Act II, provides the stronger artistic personality and, since she is scarcely off-stage for the rest of the opera, provides the determinative artistic leadership.

The recording is good, though curiously lacking in perspective, so that characters supposed to be heard from adjoining rooms sound far too close. The Italian-English libretto is faintly printed on gray-blue paper and needs more careful proofreading.

D.S.H.

RABAUD: Márouf, savetier du Caire
Sùahîchîdîône: Amîr-Mâmîe Bîansat (s)

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Nantes Opera Chorus. Orchestra Philharmonique des Pays de la Loire. Jesus Etcheverry. cond. PETERS INTERNATIONAL PLE 061 3. $2394 (three discs, automatic sequence)

I was curious about Mairoff, Cohler of Cairo. It was created at the Opera Comique in 1914 with Jean Peier, the first Pelléas, in the title role and Félix Vigneul, the first Arkel, as the Sultan. By 1923 it had notched a hundred performances. In 1928 it moved over to the Opera (Georges Thill sang Mâiroff, Marcel Journet the Sultan), and in 1948 scored its century there, holding the boards until 1950. In 1917, Naim Vailin took the piece to the Scala, Rio, and Buenos Aires, and the same year the Met heard it with Frances Alda, De Luca, and De Segurola. It lasted three seasons, and was then revived for two performances (in English) in 1937. In other words, Mairoff made its mark and has a place in the history of twentieth-century opera.

Curiosity is now satisfied. It proves to be a flimsy, eleugently made piece, which in an elegant, spectacular staging, with charming artists, would probably provide a diverting and attractive evening in the theater. Hender-son in his review of the Met premiere remarked that the audience "must have found its youthful dreams of the splendors of the Arabian Nights realized in the brilliant picture of the Orient. There was much to see and admire in the new opera, which is one of fancy, humor, and sentiment without a trace of the tragic." I agree with him about the music. Raband's "voice parts move almost wholly in arisso. There are no sharply defined song or aria forms... The greatest amount of illustrative and descriptive detail is inevitably given to the orchestra. There is no great vocal movement in the opera. The greatest pleasure, therefore, will be obtained by regarding the music as a colorful background for a legendary comedy." In other words, not the sort of score to make, in sound alone, an ideal phonograph opera.

The recording derives from a production in Nantes first mounted in 1974-75 and revived in 1976-77. Critics praised the appearance of the cast. As a vocal personality, Michel Lecocq, the Mâiroff, seems to me to lack wit, charm, and vivisarity. He is fluent but creates no character. He sings the role of its Pelléas pitch. (In an appendix to the score, Mâiroff's solos appear in downward transpositions for a true baritone-baritone.) Unless there are later, revised prints of the score (the one I used once belong to Alda), the spelling is pretty cavalier about the notes, but it doesn't seem to matter. Anne-Marie Blan-za's Princess (she first appears in the third of the five acts) is neat but not wonderful. In fact, all the singing is tolerable but unremarkable. What is not acceptable is the vocal instrumental balance. The orchestra is rather dimly recorded, and again and again Oriental details that look attractive in the score disappear beneath the voices.

The plot is a Thousand and One Nights tale. Mâiroff runs away from his nagging
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VERDI: Otello. For a feature review, see page 61.

VIVALDI: Cello Concertos. Miklos Perenyi and Laszlo Mezo, cellos. Ferenc Liszt Chamber Orchestra, Albert Simon, cond. [Istvan Juhasz, prod.] Hungaroton SLPX 11872, $7.98. Concertos in E flat, RV 408 (P. 424), in G, RV 413 (P. 120); in B minor, RV 424 (P. 180); in G minor (for two cellos*). RV 531 (P. 413).


Except for his well-nigh countless violin concertos and his thirty-seven bassoon concertos, Vivaldi wrote more concertos for the cello—twenty-seven—than for any other instrument. The size and significance of this repertory, the foundation stones of the cello literature, has never been ade- quately reflected in either concert halls or record catalogs. Luckily none of the works on the present Hungaroton disc duplicates those on the Philips collection by Christine Walevska and Kurt Redel (9500 144).

Thirty-year-old Miklos Perenyi's playing is remarkably bold and assured. Indeed, his elan and reckless lack of restraint often remind me of Casals. His big tone may seem at times overly nasal to some listeners, but his enthusiasm, uninhibitedly driving bravura, and obvious relish of the music at hand add further bracing freshness to the already considerable Vivaldian invigorations. The accompanying ensemble is ca- pable if less distinct; the recording-par-
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Lagos-Kozma (t)
Sesto Bruscantini (hc-b)
Nicola Zaccani (bs)

Ezio Pinza, harpsichord; Giuseppe de Marzi, organ; Amici della Polifonia, 1 Solisti Veneti, Claudio Scimone, cond. RCA RED SEAL AR 3-2869. $23.98 (three discs, automatic sequence). Also available as MUSICAL HERITAGE SOCIETY MHS 3918/20.

Now that Vivaldi is before us in his true stature, as a master of both instrumental and choral music, all of us have been waiting for an extended glimpse of the opera composer. Since opera was the focal point of music in Vivaldi's time, no baroque composer's artistic portrait is complete until we know his dramatic works. Among the great of those times, only Corelli was exclusively a composer of instrumental music; even among Bach's contemporaries, there are several that are obviously operatic works, and stageable.

The Erato/RCA Orlando furioso is not easy to evaluate. To be sure, the work has much fine music, beautiful arias and highly dramatic recitatives, disclosing the power of a born music-dramatist, and it is sung by an excellent cast. The trouble is that Claudio Scimone, who is both conductor and editor of the score, has no idea how to re-create a baroque opera. He is a fair musician, keeping the orchestra neatly under control, but his unimaginative leadership does not extend to style; he seems not to see the work as a whole and simply proceeds from number to number. Pace, phrasing, dynamics, and pretty nearly everything else are routine. What finesse there is is supplied by the singers. Scimone drives hard and is chary of those little pauses so necessary between sections, yet the opera falls apart like a new bride's pie crust.

Besides being a conductor, Scimone is also a specialist in baroque music, but he Continued on page 93

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The new open reel: roundup/prospects. Compared with last month's imposing roster of 1978 musiacassette achievement, that of the revised open reel is modest indeed. Yet it is substantial enough to italicize anew the gross exaggeration in the reported demise of the original tape format. To be sure, only two classical labels debuted on reel last year, but two more are welcomed below and another two are scheduled for early appearance. Even more significant, the overall recorded-reel repertory is once again steadily growing—this time not only with Dolby encoding, but in processes of consistently high technical standards and with notes and texts provided.

I should warn those of you who are not Old Believers (whose faith in the reel format has never wavered, and who have followed every step toward a new lease on life) that recorded-open reel production is confined nowadays almost exclusively to two manufacturers: Barclay-Crocker on the East Coast, Stereotape/Magec on the West. The former, the mail-order reel specialist whose first productions were of Musical Heritage Society and Vanguard classical recordings and the Halcyon jazz series, last year added the Unicorn and Desmar labels; now B-C has added Ent'acte (symphonic film scores) and Argo to its catalog, with Oiseau-Lyre and Telefunken to follow shortly. Meanwhile, Stereotape/Magec continues its increased production of Archiv, Deutsche Grammophon, London, and RCA reel editions (along with various pop and jazz series), plus a very few quadrifilar reels.

A comprehensive open-reel catalog with bimonthly "Reel News" supplements is available for $1.00 from Barclay-Crocker, 11 Broadway, New York, N.Y. 10001. You can get Stereotape's catalog and new-release service for $1.00 from its consumer-trade representative: The Reel Society, P.O. Box 9337, North Hollywood, Calif. 91609. (N.B.: Reel Society prices for Stereotape reels are lower than the list prices given below.)

Following are samplings of all the currently active classical reel series, including the two newcomers:

Argo/Barclay-Crocker. The first four reels ($8.95 each), by Neville Marriner and his Academy of St. Martin-in-the-Fields, are led in offbeat programmatic interest by E 711, a 1973 coupling of Walton's quintessentially English, neoclassical Sonata for Strings (transcribed by the composer from his 1947 Quartet in A minor) with Rudolf Barshai's fabulously ingenious string-orchestra transcriptions of fifteen of Prokofiev's Visions fugitives.


In all of these the reel processing is first-rate, the recorded sonics still an aural delight, and Marriner's readings consistently delectable. It is only in the fourth reel, E 719, 1973 recordings of the endearing little Bizet Symphony in C and Prokofiev's Classical Symphony, that connoisseurs will be disappointed. No novice can fail to be enthralled by the irresistible charms of these miniature symphonies, but Marriner's performances uncharacteristically lack the subtlety and elegance of the best recordings.

Archiv/Stereotape. A milestone of opera history enters the reel repertory with 3650 070 A (list price $9.95); Marco da Gagliano's La Dafne of 1608, in a 1977 recording by mostly British soloists with the Hamburg Monteverdi Choir and Camerata Academica under Jürgen Jürgens. The long stretches of solo declamation may seem monotonous except to specialists, but the lively choruses and piquant-timbred instrumental dances still retain vital life.

Deutsche Grammophon/Stereotape. The "complete" four-hand piano music of Debussy and Ravel (3650 006 M, two reels, $19.95 list) is superbly played by the incomparable Kontarsky brothers, superbly recorded, and superbly fascinating in its lamentably unfamiliar as well as its familiar music.

Ent'acte/Barclay-Crocker. Max Steiner's 1933 King Kong film score is heard to spectacular effect on D 6504 ($7.95), exploiting the full powers both of the National Philharmonic under Fred Steiner and of present-day audio technology.

London/Stereotape. The outstanding series of complete operas is augmented by a Jussi Björling recital (33254 A, $9.95 list) featuring extended excerpts from his 1958 Mascagni Cavalleria rusticana plus the seven Italian arias that filled out that set—and incongruously—Lehár's "Dein ist mein ganzes Herz."

Musical Heritage/Barclay-Crocker. Pianist Claudette Sorel's grand-mannered Rachmaninoff recital (J 3338, double play, $13.95) includes three early nocturnes, which she edited for first publication, along with romanticized, heavily pedaled, but sonically thrilling versions of the (revised) Second Sonata, Moments musicaux, and seven preludes.

RCA Red Seal/Stereotape. A double-play reel, ST 717 ($15.95 list), conveniently combines Vladimir Horowitz' two golden-jubilee programs: the Carnegie Hall live performance of Rachmaninoff's Third Concerto with the New York Philharmonic under Eugene Ormandy, and the studio recordings of Liszt's B minor Sonata and Fauré's Impromptu No. 5 and Nocturne No. 13. Horowitzians will be ecstatic; my response is more restrained.

Unicorn/Barclay-Crocker. For those who know Bernard Herrmann only by his film scores, D 0332 ($7.95) provides provocative corrective: first, a brooding 1966 string quartet (Echoes), recorded in 1967 by the Amici Quartet; then a more vivid 1975 recording, by Robert Hill and the Ariel Quartet, of the nostalgically evocative 1967 clarinet quintet.

Vanguard/Barclay-Crocker. Kurt Masur's set of the five Mendelssohn symphonies with the Leipzig Gewandhaus Orchestra (Z 10133, two reels, $29.95), a gloriously big and bold recording, is notable for infectious relish. There are certainly more virtuosic versions of the Italian Symphony, and perhaps of the Scotch and Reforma tion as well, but none that reveal a more virile, less precious Mendelssohn.
has only an external concept of history and possesses more antiquarian earnestness than musical sensibility—the task of an interpreter is to bridge history. He does not appreciate the nature and role of the recitative in baroque opera. Vivaldi constructs his work very carefully: There is only one brief aria on the whole first disc side, but as the emotional barometer rises he gradually introduces others until he reaches the great compound recitative that is the climax of the opera.

The recitatives are extensive and of prime importance in the unfolding of the drama: they must be paced and delivered with great discernment. The declamation should be impeccable; inflections, accents, and the length of syllables must be weighed, and the whole subjected to fine dynamic shadings—there are no "terrace dynamics" in opera. Above all, recitatives must never be driven. The delivery must be senza battute—i.e., barlines suspended. For here the special sung speech rhythm takes precedence over everything.

Very little of this is realized in Scimmone's direction though a student of the period should know that the Italians of Vivaldi's time had a highly tuned sense of dramatic declamation. Vivaldi's dramatic imagination is compelling, and he builds remarkable scenes, alternating secco, arioso, accompagnato, bits of aria, and some vehement orchestral ejaculations. The climactic scene in Orlando furioso must surely be among the finest in the operatic literature, but in this performance it is anachronistic—riddled because of the contrived use of the continuo. Scimmone knows that baroque composers liked to add plucked instruments to the continuo, but this was not the case with secco recitatives, unless the lute or theorbo was the sole instrument to furnish chords. He throws in everything at his disposal—harpischord, lute, cello, organ—and keeps all of them doggedly busy. It is difficult to follow the recitatives, even when reading the libretto, without getting lost.

The most unlikely, indeed disconcerting, role is assigned to the organ. Whenever Orlando is ranting the orchestra is properly furioso, but when he breaks down in despair and meditates, the organ takes over and we listen to an incongruous quasi-church piece (at that, the organ registration is badly anachronistic). It appears that Scimmone orchestrates not only the continuo, but the organ as well. The ultimate in this travesty is reached when Orlando, bereft of his senses, begins to sing and dance inarticulately to a very articulate and sustained organ accompaniment. The only thing missing is "Here comes the bride"—and we come pretty close to that too.

The vocal ornamentations is puerile. Somewhere, usually toward the end of an aria, everything stops and the performer is made to sing an unaccompanied cadenza that makes one wince in embarrassment. These sad details could be multiplied, but it should be obvious to the reader that while he will hear a great deal of fine music, largely because of the caliber of the singers, he is going to listen to an opera en clef—except that the clef is missing because of the subordination of musical to historical values, and even the latter are the result of undernourished scholarship.

Marilyn Horne in the title role is superb, she is as much at home in the elaborate coloraturas in the soprano range as in the agonizing parlando in the deep alto register, and she can color her voice to suit every occasion. Victoria de los Angeles (Angelica) sings most attractively; just listen to her plangent aria "Poveri affetti" in the third act. Lucia Valentini-Terrani (Alcina) makes worthy company for her while Carmen Gonzalez (Bradamante), a good alto, is fine in her arias but gets a little rattled when the excitement grows. The men have secondary roles (Orlando was of course originally sung by a castrato), but they do well, though Nicola Zaccaria (Astolfo) has a somewhat unsteady and dry bass voice.

The choral scenes are vivid, they are Scimmone's best contribution. The Solisti Veneti play very well, and the sound is good, though the "spatial" tricks are silly. This recording is worth acquiring despite the many sparks left unkindled, for Vivaldi's genius breaks through the obstacles placed in its way. But the listener must try to forget the poorly digested historical rectitude and concentrate on the music.

The Chopin and Liszt pieces on this recording were taped in studio sessions in 1950, the remaining items derive from acetates of live recitals at Carnegie Hall. (Barere had recorded them all but five of these works for RCA and Odeon a decade earlier, but to my knowledge those 78 versions have never been transferred to LP.) Though the studio products are closer and fuller in sound, everything here is eminently listenable.

In contrast to the Barere Liszt recital on Turnabout (THS 65001, November 1974), which showed the pianist exclusively at his best, the present collection gives a fuller view. When he had his enormous technique and free-wheeling personality under control, his playing was both communicative and imaginative: The resplendent accounts of Ismaily, with its flexible Russian songfulness in the lyrical central episode, and the feverish reading of the Scriabin Op. 8, No. 10 Etude are particular triumphs, as is the old-fashioned but formidable left-hand etude by Felix Blumenfeld (1863-1931; the teacher of Horowitz), done with staggering

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assurance. The fleet, stylish Liszt Leggie- rrezza and the sonorously energetic Chopin C sharp minor Scherzo demonstrate Barere's adeptness at re-creating concert hall excitement under controlled studio conditions.

On the other hand, his excess supply of facility and adrenaline occasionally prompt him to pile up sonority with jagged overlapping and to distort musical structure with ill-considered precipitously. The Schumann Toccata is driven and incoherent (his studio version, if memory serves, was no better), and the humping of phrases also inflicts damage on "Traumes- wirren" and the Rachmaninoff G minor Prelude. Barere's account of the Rachmaninoff Polka de W.H. is reminiscent of the composer's 1928 recording, although of course some of its inimitable rhythmic sophistication and style is missing.

Mstislav Rostropovich: Cello Concertos—See Vivaldi: Cello Concertos.

Colin Tilney: Music for Virginal. Colin Ti-
ney, harpsichord and virginal. [Heinz Wile-
hagen and Andreas Hotschneider, prod.] Ar-
chiv 2533 579, $8.98.


MADAME BOVARY. Original film score by Miklós Rozsa: Royal Philharmonic Orches-
tra, Elmer Bernstein, cond. and prod. Film Music Collection Album 12, $8.00 plus 70c handling, to members only (annual membership $5.00; Elmer Bernstein's Film Music Collec-
tion, Box 25198, Los Angeles, Calif. 90025)

Comparison—Madame Bovary et al. Rozsa (soundtrack)

It was inevitable that Faubert's lurid and sensational classic novel, Madame Bovary, would be a prime subject for film adaptation, particularly in Hollywood's most prestigious-conscious. Usually, MGM. Fortu-
nately, MGM's 1949 version was graced with the sophistication and good taste of Vincente Minnelli's direction and an ex-
quisite and sensitive score by Miklós Rozsa. (Madame Bovary received prior film treatment in 1904 by Jean Renoir, with music by Darius Milhaud: piano excerpts from the score are on Golden Crest CRS 4001.)

Madame Bovary was the first assignment

pieces—the "Why ask you" variations of Farnaby and Bull and Byrd's "The Hunt's Up"—are played on a double virginal built in 1580 by Martinus van der Biest of Antwerp, while the remainder are heard on a single-manual harpsichord by Carlo Grim-
ald of Messina. The date of the latter in-
strument (1687) may seem unduly late, but it should be remembered that Italian harpsichord construction remained remarkably standardized from at least the middle of the sixteenth century to the beginning of the eighteenth.

The "golden age" of the English virginalists lasted less than a century—from Byrd's coming-of-age to Tomkins' death—but it left its monument in a substantial body of often imaginative and virtuosic music. The selections recorded here give a nice idea of the age's chronological boundaries, as well as a representative sampling of two of the most popular forms: the pavane-and-gal-
liard pair and song variations.

Colin Tilney is a skillful and expressive player, and he seems determined to avoid any suggestion of dullness or insensitivity in his performances. If anything, in fact, he tends to stretch tempos too much, calling excessive attention to the sectional aspects of the music. Nobody is more aware than I of the absolute indispensability of a certain rhythmic elasticity in playing the harpsichord (or organ), but in Tilney's performance of such works as Byrd's Passamezzo Pavan I feel a need for a firmer tactus, a clearer underlying pulse. Perhaps others will be less uneasy with his rhapsodic style, though, and the instruments and recorded sound are certain to give pleasure. S.C.
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in Różsa's newly begun MGM tenure to of-
fer him significant potential for musical de-
velopment. He took full advantage of this
subject so well suited to his own Romantic
sensibility and composed one of his out-
standing scores, featuring several of his
most gorgeous and compelling melodies.
Despite the story's nineteenth-century
French setting, the music is rooted in his
singular Hungarian modal idiom, but this
anachronism is overshadowed by the
score's undeniable effectiveness, proving
once again Różsa's ability to maintain his
stylistic identity regardless of a film's sub-
ject.

The emphasis in Flaubert's novel is on
the scandalousness of Emma Bovary's ex-
tramarital affairs, but Minnelli and Różsa,
partly through personal preference and
partly because of Hollywood's strict moral
code at the time, chose instead to focus on
the tragic, unfulfilled aspect of her charac-
ter. This somewhat diluted interpretation
was made credible by adroit direction and
the poignancy and inner warmth of the mu-
ic—for example, the anguished, ascending
minor-key motif representing Emma; the
tender, idyllic love theme for Emma and her
husband, Charles; and the plaintive, yearn-
ing theme depicting Emma and her lover,
Leon.

This is Różsa's third score (following
Young Bess and The Thief of Bagdad) to
be recorded by Elmer Bernstein's Film Mu-
sic Collection; unfortunately, it is the least
successfully executed. Bernstein gives us a
good deal more of the score than in-
tained in the brief composer-conducted
soundtrack suite (on an MGM disc shared
with Różsa's Ivanhoe and Plymouth Ad-
venture), and this additional music alone
makes the disc worthwhile. But the per-
formance is less than ideal: Bernstein
wields too heavily on the brooding ele-
ments of the score, glancing over its pas-
sion and intensity and thus shrinking its broad
emotional range. This miscalculation is
most apparent in the turbulent "Prelude"
and the beautiful "Leon's Love," two espe-
cially moving sequences to which only
Różsa does full justice.

The most blatant misinterpretation,
however, is Bernstein's treatment of the fa-
mous "Waltz" sequence, the last and most
elaborately stylized of five period ballroom
dances that collectively are a rare and
highly successful departure from Różsa's
 métier. In the film the waltz's rhythm-
ic pulse, ecstatic melodic leaps, and Ravelian
orchestral pyrotechnics propel Emma into
a breathtaking realization of her ultimate
romantic fantasies: the brilliantly choreo-
graphed camera work and the intoxicating,
accelerating music combine for a cinematic
tour de force. But Bernstein's slow tempo
and substitution of an abrupt tempo change
for the accelerating negate much of the
waltz's effect.

In addition to these problems, the Royal
Philharmonic seems at considerably less
than full strength, the surfaces of my copy
sound like Rice Krispies, and the veiled
sonics and excessive background hiss are
well below current standards. (No other
Film Music Collection disc can compare
sonically to the superlative Ghost and Mrs.
Muir LP, engineered by Richard Lewzey.)
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On the plus side, Christopher Palmer has done an impeccable job of reconstructing the score from source materials and a tape of the complete film soundtrack.

R.F.

The Boys from Brazil. Original film soundtrack recording. Composed by Jerry Goldsmith. National Philharmonic Orchestra, Jerry Goldsmith, cond. and prod. A&M SP 4731, $8.98 Tape. • CS 4731, $8.98; • BT 4731, $8.98.

For this contrived and preposterous, though quite entertaining, thriller about the cloning of Adolf Hitler in South America, the amazingly fertile and gifted Jerry Goldsmith has come up with a typically clever and apt musical conceit. The main theme, a Rosenkavalier-type waltz gone ponderous and sour, is gradually "de-composed" into a series of progressively pathological mutations that, interspersed with Wagnerian dying cadences and Mahleresque echoes of the Ländler, results in a kind of Teutonic La Voix.

Goldsmith has marshaled all his inimitable melodramatic trademarks—the abrupt, portentous plunges into pounding double meters, the wailing strings, the muffled off-beats of an asphyxiated death march—which came to prominence in his landmark score for another Frank-P. Schaffner fantasy, Planet of the Apes. There's no doubt that, like Omen I and II, this is thoughtful and strikingly original film music from a composer commonplace not now and that it is highly effective in reinforcing the film's aura of historical as well as potential cataclysm.

In fact, there are times, as in much of Goldsmith's work, when the music on the soundtrack projects a far more subtle and sophisticated sense of duplication and distortion than the simplistically antitribal items on the screen. Even this fine score parades some-as-tact of the film's basic artificiality and banality in its insistent reliance on that battered waltz theme. Moreover, the element of tenderness and compassion often present in Goldsmith's best thriller scores, such as Seconds, Orphans, and The Long Goodbye, is entirely lacking, along with the tragic despair of his greatest dramatic efforts, like Sand Pebbles, Blue Max, and Papillon. But then, this film does not call for that order of intensity and depth.

Nevertheless this is a distinguished addition to the already enormous and unflaggingly vivid Goldsmith canon on disc. The interrupted suite format of Side 1 enhances the music's continuity and cumulative power, while never duplicating the two substantial cuts on Side 2, which follow the inevitable pop-vocal throwaway. The muscular playing of National Philharmonic, the realistic but not exaggerated engineering, and the composer's own hand as producer all contribute to this release's authenticity and permanence value. A final word of praise is in order for Goldsmith's long-standing but relatively unsung associate, orchestrator Arthur Morton, who by now must have developed a sixth sense for anticipating the composer's instrumental and textural requirements.

P.A.S.
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United Audio, 120 So. Columbus Ave., Mt. Vernon, NY 10553
Chick Corea’s Musical Macrocosm
by Len Lyons

In Hermann Hesse’s novel The Glass Bead Game, Magister Ludi, the game’s master, can condense all of the world’s scientific and aesthetic principles into a musical microcosm. Chick Corea aspires to just the opposite. He sees himself as expanding and creating a vast musical macrocosm. “On one level I am sitting at the keyboard playing the piano,” he says. “Yet I can also sit there and play the song, so my attention isn’t on my fingers, but on the music. I can expand that into the group, letting my attention and intention go all through the other musicians. We’re not just playing a song, we’re playing a performance—a continuous two-hour communication.”

In spite of these rather grandiose-sounding aspirations, Corea is an intense worker and very much the pragmatist. He’d have to be. Aside from managing his own career and that of three other jazz artists, since leaving Miles Davis’ band in 1971 this composer/arranger/pianist has been the leader on two dozen albums (that’s an average of three per year) in a variety of musical settings: acoustic free jazz with the group Circle, fusion with Return to Forever, a little of both with his current thirteen-piece ensemble, and solo piano.

The guiding principle behind this whirlwind of activity is scientology, which Corea calls the second greatest discovery of his life after music. He first took L. Ron Hubbard’s writings on dianetics to heart in 1970 because they seemed to simplify his life, and they still influence his approach to composing and producing. “The mechanisms of the mind, when uncontrolled, get in the way of a person’s intentions,” he explains. “If you create, the best way to do so is without these mechanisms. This will increase your clarity.”

This helps to explain how his new album, “Secret Agent,” was written, recorded, and mixed in only
twenty days. "When I'm in the studio, I know exactly what I'm going for, so I can make my decisions real quick. I'm not one to deliberate over alternative A and alternative B for several days to see which one I want to use. It's a matter of knowing yourself. For me, it's 'this works, this doesn't.' Otherwise, it feels gluey to me. ... I used to ponder—maybe ten years ago—but scientology has helped me get through those barriers."

Corea is equally pragmatic in conversation. He says he always knew he'd be a musician so he "smiled and gibbed" his way through nonmusical subjects in school. (His only formal study was with Salvatore Sullo, a classical piano teacher.) Besides, real life was going on at home: His father, Armando (after whom he is named), was the leader/arranger of an eight-piece society band in Boston. "He wrote out arrangements of popular tunes for me," Chick recalls. "He always kept them to my level, so the language of music became familiar to me."

Chick often played with informally organized bands at Bar Mitzvahs and weddings. In more inspired moments he copied Horace Silver's entire repertoire off the albums recorded with Blue Mitchell and Junior Cook. "That proved to be an extremely valuable stage," he says, "because I really learned how to duplicate music from a recording." Miles Davis was his idol during these years.

Chick moved to New York City after high school because that's where all the musicians were. He entered Columbia University but left after one month and decided to try for Juilliard instead. After practicing for ten months (eight hours a day) for the audition, he was accepted as a piano major. This time he lasted two months: "Suddenly, I told myself, 'Cut out the protocol, and start doing what you really want to do.'" He took a small apartment on Seventy-first Street and worked with as many bands as possible. He was soon accompanying Sarah Vaughan.

One day a call came from Herbie Hancock...

One day a call came from Herbie Hancock who was on his honeymoon and could not return in time for a Miles Davis club date in Baltimore. "I freaked out," Chick says. "Playing with Miles's band was the oldest of my goals. I got wild on the phone trying to find a replacement for Sarah. Bob James, who had accompanied her before, did the gig for me."

He called Miles immediately to see when they were going to rehearse. "Just play what you hear," he was told in Davis' terse, hoarse style. He rushed to Baltimore early in an attempt to go over the band's repertoire, even though he knew all their albums. "It didn't..."
make any difference," Corea recalls. "That band
never played tunes the way they sounded on the
albums—I mean ‘Nefertiti,’ ‘Miles Smiles,’ all those
albums with Wayne Shorter. I had to get up on stage
with just that one instruction.

“The band took off like a rocketship on the first
piece. It was Apasion—’I’ll never forget it. It was like
the shock of suddenly traveling five hundred miles per

"With Miles there were grunts,
glances, smiles, and
no smiles."

hour. I just hung on. I knew they were playing tunes,
but they had them so facile and abstracted that not
even a musician’s ear could tell what chord changes
were going by.

"After the set I went up to the bar to buy myself a
drink. Miles came up behind me and whispered in my
ear, ‘Chick, you’re a mutha.’ That was it! What more
could I ask for?"

Subsequently, Corea spent several years with the
band, trying to soak up Miles’s creative visions. He at-
tempted to find out what was needed from him as a
pianist, but it wasn’t easy. “With Miles there was
never any sitting down to discuss the music, like, ‘a
little more of this, less of that.’ There was no analysis,
no instructions. There were grunts, glances, smiles,
and no smiles.” The adventure with Miles lasted three
years. Then he was on his own.

He and Davis’ bassist Dave Holland, who rented
a loft in his building, were constant companions dur-
ing this time, and together they formed the basis of
Circle. Completing the group were drummer Barry
Alschul and, occasionally, multi-reed player Anthony
Braxton. “The goal,” Corea recalls, “was to investigate
and expand the quality of communication between us.
It was based on pure improvisation—we had no prior
agreements melodically, harmonically, rhythmically,
or structurally. That game can be fun, but it can get
weird. When you don’t have rules or agreements, you
begin to wonder what the point is of what you’re doing.
What made it work was the musical conversa-
tion, friendship, and the desire to create something
together.”

Corea sees Circle as a period of searching, and,
indeed, the public missed its message entirely. Return
to Forever, formed with bassist Stanley Clarke, was
thus a conscious attempt to reach out to the audience.
And it worked. RTF’s synthesis of jazz improvisation
with rock elements (and, on the first two of its eight
albums, the novel vocals of Flora Purim) won them a
Best Jazz Performance Grammy in 1975 for “No Mys-
tery,” and in 1977 they were named Top Jazz Group
by Playboy. RTF, Weather Report, and Hancock’s
Headhunters became the triumvirate of the new jazz.
RTF’s albums remain Corea’s best-sellers, topping

out at 300,000 for “Where Have I Known You Be-
fore.”

Although he has won nine best-keyboardist polls
since 1973, Corea’s favorite vehicles for communi-
cation are composing and arranging, particularly in
the form of the suite. “A suite is like a collage of
themes with transitions between them,” he says. “It’s
like traveling down one road and seeing many differ-
dent scenes along the way. It’s episodic, as opposed to
playing one theme, varying the theme, and then re-
turning to it.” His suites are playful and varied in tex-
ture, and listener response has been good despite the
unconventional format. “The Leprechaun” (’76) won
two Grammies, and “My Spanish Heart” (’77) though
it is a double-disc set, has sold 170,000 copies.

“Secret Agent” departs from its predecessors in
two respects. First, it is made up of short songs (“each
one makes only one statement”), with Corea taking
airplay and “the variety of situations in which a per-
son listens to music” into consideration. Second, all
but one of the cuts have been built from basic tracks
and overdubs. (He previously had recorded his group
live.) His goal is to “treat a record for what it actually
is and can be,” not simply as a documentation of the
band’s performance.

The work was done at Producer’s Workshop, a
small studio in Los Angeles. “All of the basic tracks
were me with bass and drums,” Chick explains. “In
some cases the overdubs were improvised. On Golden
Dawn, I brought the tapes home and improvised some
Mini-Moog overdubs on my four-track. Later, I tran-
scribed it and wrote a second harmony part. But on
Gieb St. Blues and Central Park, the overdubs were
completely scored before the basics were even laid
down.”

This was not the case on Bartók’s Bagatelle No. 4.
"I found a collection of records on a Hungarian label—performances of early Bartók orchestrations. Only the bagatelle wasn't something he had composed; he arranged it. After reading the lyrics and hearing it, it impressed me as a blues—it's the same sort of communication, but from a different culture. I started playing around with it at the piano, imagining a choral background with some wailing going on over it. That was my basic concept.

"The piano became the basic track, and I played the song through three times. I added the Oberheim 8-Voice at a choral setting on the second and third choruses. Then Gayle [Moran—his roommate and protegé] sang the same notes as the Oberheim, and I improvised Mini-Moog over that."

Chick's favorite synthesized sound is the whimsical, whistling Mini-Moog solo voice that has found its way onto every album. (Listen to the opening licks on the first track of "The Leprechaun" for example.) "If I could play trumpet or sax, I think that's just about how I'd sound. I really enjoy the ability to bend a note, modulate a note, and do things with timbres that the piano doesn't offer. As a piano player—especially a jazz piano player—I'm primarily in the rhythm section. When I do solo, unless conditions are A-1 optimum, I never really get to sing that solo line. That's what I get to do with the Mini-Moog. As far as the other instruments go [the list is long: Moog 15, Polymoog, Arp Odyssey, Oberheim, MXR Digital]

"I think you can really interact with a part that's already been put down."

Delay, Yamaha organ, Eventide Harmonizer], I rely on what sounds I've been able to acquire on them thus far. I stopped studying them actively a few years ago."

For the critic, Corea's multiple overdubs and elaborate arrangements raise doubts about his sense of continuity with his improvisatory jazz roots. Spontaneous interplay between musicians cannot be preserved through successive overdubs. "Agreed," says Corea. "But the art of overdubbing requires being able to re-create a mood or feeling. If I know what feeling I'm going for, I should be able to get the effect by overdubbing, too. I think you really can interact with a part that's already been put down. I agree it's a time warp, but it can be done."

And how is his note-for-note arranging and composing compatible with spontaneity? "The fixed idea is that spontaneity equals differentness: If you're not playing something new, it's not spontaneous. This isn't true. The only prerequisite for spontaneity is having all of one's attention on the moment. The idea is that something needn't be new; it must be now. "Structuring music is a way of gaining a clearer idea of what you're trying to communicate."

Which brings us back to clarity, communication, and scientology, the very purposes and principles behind Chick's macrocosm. It extends far beyond what we've covered here. For example, his production company—Chick Corea Productions—is about to acquire a new 24-track studio. Also he has set aside performing activity through the summer to make time for composing a concerto for piano and orchestra. And last month he moved from Polydor to Warner Bros. (Return to Forever will remain with Columbia), where he will record as a solo artist and produce Gayle Moran. To what extent can Corea create his musical macrocosm? How widely, and on how many levels, can he communicate? At worst, he will be remembered in some distant day as a skillful musician who captured the public's fancy for a decade or more; at best, a composer who dissolved the boundary between serious music and pure fun.

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**Discography**

(For Works as a Leader)

**Circle**

- Circling In Blue Note BNLA 472H2
- Ciculus Blue Note BNLA 882J2
- A.R.C. ECM 1009
- Paris Concert ECM 1018/19ST
- Chick Corea Blue Note BNLA 395H2

**Piano**

- Piano Improvisations, Vol. I ECM 1014
- Piano Improvisations, Vol. II ECM 1020
- Crystal Silence (with Gary Burton) ECM 1024ST

**Return to Forever**

- Return to Forever ECM 1022
- Light as a Feather Polydor PD 5525
- No Mystery Polydor PD 6512
- Where Have I Known You Before Polydor PD 6509
- Hymn of the Seventh Galaxy Polydor PD 5536
- Musicmagic Columbia PC 34682
- Romantic Warrior Columbia PC 34076
- Return to Forever Live! (4-record set) Columbia PC C4X 3535

**Ensemble**

- The Leprechaun Polydor PD 6062
- My Spanish Heart Polydor PD 2-9003
- The Mad Hatter Polydor PD 6130
- Friends Polydor PD 6160
- Secret Agent Polydor PD 6176
The Oldest Established Permanent Floating Disco in New York
by William A. Kanner

A young lady in jeans and a sweater answers the phone's second ring: "Stoy, good morning." While stay means "stop" in Russian, and this office—with its record-lined walls and large, mysterious-looking black boxes scattered about—could easily be a covert KGB operation, in fact its occupants specialize in one of America's favorite pastimes. Stoy is among the country's oldest and most well established mobile discos, providing music for dancing wherever it's needed.

The author is a free-lance audio journalist.

With the current disco explosion, businesses like Stoy are cropping up in every major city. "You'll find a bunch in Los Angeles, in San Francisco, and even in a city the size of Atlanta," says founder/president Norman Dolph. One difference is that Stoy is older than the rest; another is in the music it provides. "'Mobile Disco' is a somewhat misleading term for us," Dolph says. "We play everything from Harry James, to Fifties do-wop and the Beach Boys, to Grace Jones and the Village People. Besides, we got into it in the early Sixties, when disco music wasn't even
Dolph is a New Yorker from Tulsa, Oklahoma via Yale, from which he graduated in 1960 with a degree in electrical engineering. His first job was with the Custom Manufacturing Division of Columbia Records, so Stoy started as a part-time operation. “I liked art, paintings and such, but couldn’t afford to buy them. I would do a gig at an artist’s opening in return for a piece of art. From there it grew.”

People who attended the openings would ask him to bring his turntables, records, speakers and (sometimes) lights to fiestas they were planning. What does he charge when a nice painting is not available? Well, that depends. It’s a flat music rate regardless of whether the gig is one hour or all night. But there’s also a charge for transportation: A party fifty miles away is more expensive than one down the block. A weeknight costs $225, weekend rate is $300. If you want lights, add another $125.

So what’s the advantage to having records when you can hire a decent band for the equivalent? Dolph explains, “Each cut we play already has an investment of $15,000 in the music. That’s $15,000 every three minutes in musicians, orchestrations, recording, and so forth. Compare that with a live band and see what you come out with. We’re a bargain.”

At present, Dolph has three deejays working for him, one of whom is the young lady who answers the phone. He believes that his spinners must first and foremost have affable personalities. “If they can deal with the public, I can teach them the music.”

And teach he does. Dolph is gradually disengaging himself from deejaying because the repeated exposure to music at disco volume has impaired his hearing. “It’s subtly subversive,” he says. “You almost don’t notice your hearing’s going, but you find yourself straining to hear people talk in a crowded restaurant or asking people to repeat things.” Understandably, he is now a devout believer in ear protection and rarely leaves home without at least one set of earplugs.

His intention to devote more time to songwriting is the other, more positive reason Dolph is phasing himself out. If you look at Jane Olivor’s current LP, “Stay the Night,” you’ll find that he wrote the lyrics to the title cut. (“I’m not going to get any real money for that until the summer,” he laments.) That song and the 1974 hit, Life Is a Rock (but the Radio Rolled Me) are among his better-known works.

Norman’s heir apparent and longtime friend is Stoy’s general manager and chief deejay, Gary Waskow. Recently I observed Gary and trainee Elizabeth in action at a posh benefit—black tie, celebrities, politicos galore—in the grand ballroom at New York’s Waldorf Astoria. Since Stoy’s equipment is designed to be handled by one person, each piece is either on wheels or can be stacked onto one that is. In rolled two large JBL speakers, two slightly modified Dynaco tubed amps with boxes of records stacked on top, and a long box that housed the mixer and two Pioneer PL 61 turntables (also modified). Next came a box of records, followed by another box of records, and another box of records. Stoy comes prepared.

Gary’s setup is only one of Stoy’s four systems, each of which has been refined in various ways to suit the task. “The basic system starts out with a pair of Dynaco tubed amps,” Dolph explains, “which produce 70 watts per channel. These units are getting harder and harder to find, but they are extremely reliable. Since they are designed as home units, they are not perfectly suited for us, and over the years I’ve adapted them. We found, for instance, that the on/off switches were particularly prone to failure in constant use, so we eliminated them. We also put a hole in the cabinets so the bias control, which normally would be set and forgotten, can be adjusted. We also brought the fuses to the outside.
The turntables are belt drive units. Again, we’ve outboarded the fuses and disabled the cueing. The tables work reliably, they are a lot lighter than the standard direct-drive units now in vogue, and they have a higher starting torque than all but the heaviest direct-drive models. In fact, I’m going to have a little difficulty replacing them.

“The tables feed into Shure mixer/pre-amps, and the speakers are generally JBLs or a facsimile. One set we’re using has JBL drivers, but it’s assembled by somebody in Maryland.

“The keynotes of our operation are portability and reliability,” Dolph continues. “We have simplified everything for easy access and made everything easy to transport—anything that can roll, rolls. I think we’re successful because we’re reliable. In fifteen years we’ve had very few equipment failures. Generally, if we have a problem, like a fuse or a tube going, we’ll have one table down only for a couple of minutes.

“The worst thing that can happen is permanent silence,” says Dolph. “The second worst thing that can happen is temporary silence.” This means not only having the right music and plenty of it, but also having fall-back gear on hand in case of mechanical breakdown. At the Waldorf, for instance, Gary had complete sets of spare tubes and fuses for both the amps and turntables, and extra cartridges.

Nonetheless, things can go wrong. Dolph recounted one serious nightmare story—when he had to shut down for an hour. “We went into a room that had dimmed outlets and we didn’t know it. First we just thought we blew a set of tubes. We replaced the tubes and the second set blew. Then we discovered the problem, found some more tubes, taped the dimmers in the open position, and were back in business. One result of that experience is that we have developed a list of rooms and halls with dimmed outlets.”

Technically that makes for an excellent party. If the machines work, then there’ll be music, but what about the kind of music? “We generally have a pretty good idea what people want to listen to,” Dolph explains. “Country club crowds want everything from Big Bands on, kids are generally into ’50s and disco. I think the surprising element is the universality of disco. It’s the great equalizer. Since Saturday Night Fever and Grease, even the older elements in the parties we work respond. There’s no longer a feeling that the music is beneath them. They’ll get up and dance. Also, we talk to the host or hostess to find out what kind of music he or she would like to hear.”

With 10,000 discs to choose from, the odds are good that Stoy’s clients will get what they want. Part of the company’s varied and extensive library is made up of the vintage collection Norman started with. Nowadays some record companies provide promotion copies directly but most of the hard-core disco material comes through the New York Record Pool for disco deejays. The Pool acts as a middle man between record companies and legitimate disco operations by supplying the latter with the week’s current releases as it receives them free-of-charge from labels. This enables record companies to get feedback on their product, and, since the Pool is a members-only operation, it saves labels the hassle of credibility checks.

How do the deejays decide which discs to take to which gigs? “Well, we take a wide, basic selection and, for a large, heterogeneous party, we’ll go through a variety of genres,” says Dolph. “I want everyone to know that we have the kind of music they like. I don’t want anyone to feel embarrassed about coming up and asking for something. I think it’s possible for a good deejay to go from Lester Lanin to Bohannon in a half hour.”

Gary’s evening at the Waldorf, for instance, was a self-contained course in popular music from the Thirties to the late Seventies. His first pick had been a big band number. “But the man in charge felt we should go disco, since the affair had been billed that way,” says Gary. So he put on Tangerine. “I would have taken longer to get there. Show them the music they’re more comfortable with first.”

In 1978 alone, Stoy did over three hundred parties. “We’ve done everything—” says Gary “from the new Life party aboard the Queen Elizabeth II to weddings, proms, Bar Mitzvahs, dinner parties, and country club socials. One of the most unusual gigs was a recent one—a birthday party for a dog.

“Really. It was in one of those high-rises over the bridge in New Jersey. Apparently when one of the building’s dogs has a birthday, his owner gives a party for all the other dogs and their owners. They’ve had parties at clubs and on boats. This was a disco held in the complex’s party room, complete with catered food and personalized match books.

“The dogs were very well behaved. Mostly they just sat near their master’s chairs and ate some of their presents. A few got nervous and had accidents. But I
think what really threw me was how much masters really do look like their dogs."

One of the more unusual aspects about Stoy is its guarantee: "If you don't have a sensational time, you don't pay for it," says Dolph. (Ironically, the one person who called him on that offer has since become one of his best customers.) Since that can cost him money and is not entirely dependent on his own performance, Dolph has developed a few rules for the successful party: One is to overcrowd it—if the room can handle fifty people make sure at least seventy are invited. Close quarters means that no one can hang back and the party will look very active at all times. Another is to avoid putting the bar in a separate room or a long way from the music. If a drinker is near the music and hears something he likes, he'll put the drink down and jump in. If, however, he has to make a "policy decision" to quit the bar and go to the dancing area, chances are he'll never get there. The effect should always be of one big party, rather than three little parties with one centered around the food, one around the liquor, and one around the music. Also, chairs are death: "Let 'em stand," says Dolph, "then they'll dance.

"But we can make a go of just about any situation," says Norman. "The trick is to have something for everybody. We always carry forty times more music than we expect to need, and most of it is clustered around a particular style. If the host says he likes John Denver, we can be pretty sure that he'll like Joni Mitchell. If somebody says that he likes Glenn Miller, we know that other big bands will go over well. But we try to have ourselves covered with other kinds of music as well.

"While having people feel comfortable enough to come up and make a request is what we strive for, sometimes it can be a pain in the neck," Dolph continues. "I remember once a few years ago we were doing a high school prom and one girl came up and every few minutes she would ask for Rock On by David Essex. I told her that I'd play it when it fit in. Suddenly I looked down at the table and discovered she had put the disc on it. I ostentatiously took it off, waved it in her face and broke it over my knee. A few minutes later she came over and asked if I had another copy of it! But that was the only time we've ever really had trouble that way."

Dolph probably knows his way around the disco business as well as anyone in the country, and he has worked in every aspect of the music and recording industry. What kind of music does he listen to? "Well, my Oklahoma upbringing leads me to Taj Mahal and Doctor John, but my real love is Arnold Schoenberg. I have his complete recorded works."
RMI Keyboard Computer KC-2. No, it's not a synthesizer, or a piano, or an organ. The KC-2 is described as a Musical Digital Computer, but lest that frighten you away, let me say that it's easier to play than a basic synthesizer. It offers a huge variety of voices, surpassing almost anything I've heard on the market to date. And the way in which it produces these voices is wholly unique and innovative.

An ordinary synthesizer makes its sounds by generating a tone with an oscillator. The tone is modified by various filter circuits, envelope generators, and amplification circuits, and the processed signal is then fed through amplifiers and loudspeakers. The KC-2 has no oscillators, filters, or amplifiers other than the one for the output signal. Sounds are generated by digital reading of binary codes. Let's take, for example, a simple wooden-recorder voice, RMI has analyzed the recorder sound in terms of timbre and wave shape and has plotted the results on a graph. The envelope and spectrum are converted to binary numbers that can be called up by a button on the console. The digital reader then converts the "graph" of the sound to audio-ready status, the key depressed on the keyboard telling the computer the frequency (pitch) at which the tone is to sound. Thus, if you press A440 (A above middle C), the computer runs through the preprogrammed RECORDER graph 440 times per second. Again, there are no oscillators to tune—only preset data for the computer to read.

RMI has analyzed several commonly used voices and programmed them into the preset section of the instrument, so that at the touch of a single button, the user can hear ORGAN (indistinguishable from a B-3 and a Leslie) or CLAV(ine), for example. But the manufacturer realized that no one would be happy with just a handful of preset voices and so included another row ranging from BASS REED TO SPANISH TRUMPET. These voices can be combined to "add up" to what the presets sound like, or to create sounds not available from the presets.

So far, it sounds pretty much like a description of an organ keyboard, but at the right of the keyboard is the ALTERABLE VOICE PROGRAMMER, which reads computer cards supplied by the company for more than 200 additional voices. Those selected by the user and fed to the PROGRAMMER become audio-ready on four different tabs marked ALTERABLE VOICE. If this is not enough, RMI will supply blank computer cards so that you can design your own graphs to customize the instrument or to try to improve on some of the built-in voices. This is a quantum leap in flexibility.

The controls of the KC-2 comprise a five-octave keyboard with an excellent action (borrowed from the parent Allen Organ Co.) and two rows of tabs. The top row is divided into three sections, the first feeding Channel 1 and the others feeding both channels. (This is a discrete two-channel instrument, with channel mixing available at the touch of a finger and easy summing for mono.) Each of the three sections contains tabs for individual voices, such as SINE WAVE, PERCUSSION, BASS REED, and WOOD CLARINET, along with others to control functions, such as ALTERABLE VOICE, ADD CHANNEL, CANCEL CHANNEL, and CHORUS VIBRATO. (The chorusing effect is achieved by "detuning" the second channel slightly from the original, as happens when two similar acoustic instruments play together.) To the right of the tabs is the aforementioned PROGRAMMER, with a four-position selector and a slot for programming cards. The second row of tabs begins at the left with pots for VIBRATO RATE, 16' TUNE and 8' TUNE. Next are several more function tabs, including activating switches for the pedal board, keyboard and envelope controller pedal, followed by the preset voices, such as ECHO, PIPE ORGAN, BELLS, CLAV, ORGAN, and ELECTRIC PIANO. Finally, next to the keyboard itself, there's a POWER ON/OFF switch.

To give your feet something to do, the KC-2 comes with a pedal board that features master volume pedals for Channels 1 and 2, as well as ATTACK/DECAY, VIBRATO, and LATCH pedals. The PITCH BEND pedal, which is quite remarkable, can shift what you're playing through a continuous range of a perfect fourth up or down, and it is spring-loaded to assure return to the proper pitch when released. No more tying up one hand on the ribbon controller.

As for the sounds produced, most are spectacular; the rest are at least fair. I've already raved about the ORGAN sound, but the CLAV is at least as good as its namesake and is more versatile. The RECORDER voices were indistinguishable from a trio sitting in the room with me, and the tone of the STRINGS is more realistic than that of any string synthesizer I've heard.

The lower sounds are startlingly realistic and beautiful to hear, especially the BRASS simulations. The CHIMES are almost as good, leaving the SPANISH TRUMPET and ELECTRIC PIANO the only voices that are no more than distant relatives of the real thing.

Of course, most synthesists (this is what many call a synthesizer player) are not looking to imitate acoustic instruments, and even from that point of view, the KC-2 is outstandingly versatile. But when you need a string section and can't afford real players, this is surely your best bet. A bonus (people who are tired of hauling a big organ and its accompanying speaker system will get the point) is that this unit has built-in speakers.

If you're a serious keyboard player, composer, or orchestrator, the KC-2 will captivate you—you won't be able to help yourself. The suggested list price of $4,750 may terrify the dilettante, but the professional will find it a sound investment. —Fred Miller

CIRCLE 121 ON READER-SERVICE CARD

It’s almost impossible not to surrender to the profound humor and warmth of British singer/songwriter Charlie Ainley. On “Bang Your Door,” his second album, he moves comfortably from blues-based rock & roll to r&b to folk balladry and uses such stylistically unrelated vocal reference points as Stevie Marriott and Kris Kristofferson. His husky, strong voice is as effective on Pig Farm Blues, where it babbles and cackles, as it is on The Whistler, a moving ballad of romance and loneliness.

His blues-oriented material is less spectacular than some of its performances. Over Richard Worthy’s hot guitar lines and forceful rhythm in R U I Ainley spots out some amusing nonsense verse. On Bang Your Door he hilariously parodies his own uncontrollable sexual urges. Taking his cue from the boozy abandon of Dr. John, he plays tug-of-war with the song’s insistent riff and lock-step drums.

But for all this inspired craziness, Ainley is most effective on the quiet, meditative tunes. His tender treatment of Try To Be A Good One turns the ballad into a resonant anthem of self-discovery. Better yet is The Whistler, an acoustic number that he sings with longing, fear, and quiet anger.

The record is not without problems: Heat of the Night and New York, New York sound incomplete, so it’s no wonder Ainley sings them without emotion. But for the most part, “Bang Your Door” is pleasurable listening, from its neat rockabilly guitar fills to a great remake of I Don’t Need No Doctor, whose mechanized, industrial beat may well have been inspired by Talking Heads’ version of Take Me to the River.


The period from Papa’s Got a Brand New Bag (1965) to (Get Up I Feel like a) Sex Machine (1971) may have been James Brown’s best. Charting a course for Parliament, Bootsy’s Rubber Band, and progeny, he invented funk: a propulsive, complex rhythmic scheme, topped with instrumental accents and vocal shrieks.

But then Brown shifted focus. With singles like 1972’s King Heroin and concept albums like ‘73’s “The Payback,” his long-time social conscience (e.g., the 1966 hit Don’t Be a Drop Out) resurfaced. Trouble was, Marvin Gaye and Curtis Mayfield were doing the same thing a lot better. Worse, Brown’s preaching seemed to thin out his famous grooves. Cognizant of r&b’s erosion by disco, he finally returned to danceable bitches with 1975’s Hustle!! (Dead On It). One wonders if he was too late, for since then most of his music has sounded more and more like lame crowd-following.

Because of one, exceptional cut, “Take A Look at Those Cakes” may be Brown’s best LP in well over five years. (For Goodness Sakes) Take A Look at Those Cakes, a devilish eleven-minute exercise in ostinato, features not only a new vocal gimmick (“booga booga booga”), but also a brilliant, hybrid rhythm track. It’s a sort of shuffling disco piece that isn’t led by disco’s standard hi-hat and cold, metronomic pattern. Brown has made disco as warm and loose as funk by using auxiliary percussion instruments to state Cakes’ pulse.

Otherwise, “Take a look” is typical late ‘70s Brown, full of high potential grooves (of the five tracks, Spring and As Long as I Love You stand out) but marred by clinkers, generally amateurish musicianship, and low Brown vocal energy. There’s no reason to think things will get better, either. Soul Brother Number One, please come home.

Cindy Bullens: Desire Wire. Tony Bongiovi & Lance Quim, producers. United Artists UA LA 9331H, $7.98. Tape: • CA 9331H; • EA 9331H, $7.98.

To those who fondly remember writhing in sympathy with the Shirelles, Shangri-
Bullens—love battle cries

Brown—amateurish musicianship


Except for food, I am not a devotee of things particularly ethnic, and that includes Irish music. Aside from some Chieftains albums, the only ethnic record I own is a Folklyric LP called "Irish-American Dance Music & Songs," which I keep for the strange little song Paddy McGinty's Goat.

But I listen to the Chieftains as much as I listen to anyone else because I think there is something in their wedding of pagan joy and Gaelic melancholy that makes for a music unlike any other. I usually don't know anything about the compositions they play, and, while they are kind enough to print the histories of those pieces in their liner notes, I don't generally read them. Although the Chieftains may be preserving ancient Irish folkways, they are also—more importantly—one of the hottest bands on the face of the earth. Once one of their records is in a jukebox, it rarely gets taken out.

There is a delicate and sensuous balance in "The Chieftains 7," Away We Go Again, a raucous and drunken series of reels, is followed by the austere Dochas (Hope); and The Fairies' Lamentation and Dance, which is in parts as dark as death, is followed by a piece of effective revelry called Oh! The Breeches Full of Stitches. There is a certain magic and mystery in the Chieftains' music, because it can be whatever you want it to be. And that is a quality that goes far beyond being merely ethnic, or even merely entertaining.

Dr. John: City Lights. Tommy LiPuma & Hugh McCracken, producers. Horizon SP 732, $7.98. Tape: •• CS 732. •• 8T 732, $7.98.

Dr. John, the fat boy from Broadmoor, has been at it for a long time. In a manner that is no less elegant than it is coarse, he makes songs that have thirty years of New Orleans rock & roll in their blood. To hear him sing and play the piano to experience one of the hottest two-steps the moon has ever looked upon.

More than any of his work in the past, "City Lights" is imbued with an early-fifties bop sound. Two of the album's strongest pieces, Rain and City Lights (whose simple lines and cigarette-ember brevity are a masterpiece of poetic and powerful plainness), are arranged with a lush orchestration reminiscent of Charlie Parker with strings. David Sanborn's alto-sax solo on Rain invokes that demimonde among which sin walked in scanted nylon.

Like the title song, much else here is about night life. Street Side is a story of unrequited love set against a background of bars and guns and shiftlessness. Snake Eyes is a sort of philosophical discourse upon the nature of scared money, free money, and no money. Sonata/He's a Hero, written with the never-ending Doc Pomus, is a song about a honky-tonk hero that'll make you forget about Waylon.

My favorite moment is Dance the Night Away with You, also coauthored by Pomus. It's a party song the likes of which only a few others besides Dr. John could even aspire to these days. And that's really what "City Lights" and Dr. John are about: not a music-heritage lesson, but a party. A good party—the sort that gets you into trouble.


Kate and Anna McGarrigle's first album was issued three years ago in the wake of Linda Ronstadt's rendering of Anna's Heart like a Wheel. It wound up on several Best of the Year lists, and "Pronto Monto," their third LP, should as well. Their music is in the folk tradition, sensitive without being self-consciously so. Add to this the facts that the McGarrigles are Canadian (from Montreal, no less), that they've included a nicely belted version of the obscure Trin'm to Get You (associated with Elvis Presley in his preconcert days), that they sometimes sing in French and play what sound like concertinas and that they use Bonnie Raitt's bassist and a couple of English folkies (Jerry Donahue, Pat Donaldson) in the band, and trendiness among critics is a certainty.

But reviewers, I'm told, get their albums free, and this one's likely to become a collector's item due to lack of commercialism and exposure. It's a damn shame, because "Pronto Monto" is really good. Kate, particularly, is a writer with a lovably quirky sense of humor. A Side of Fries sounds like Maria Muldaur singing something Warren Zevon had written for her (though it's
better than either could write or perform). And Na Cl is, believe it or not, a subatomic love story. The voices, winding around each other, are distinctive and appealing, and the arrangements are really unusual, clever, and apt. Miss this at your own risk.

T.E.


Southern rock bands usually don't have an easy time translating their box-office successes to record sales, and the Outlaws are no exception. Though this Florida band has tried both a hot producer (Eagles' mentor Bill Szymczyk on "Hurry Sundown," 1977) and a live-greatest-hits package ("Bring 'Em Back Alive," 1978), they've been unable to match the gold success of their 1975 debut album.

On their fifth effort, "Playin' to Win," the Outlaws have turned to Robert John Lange (City Boy, Graham Parker) in the hopes of transforming their guitar-pow- ered sound into vinyl success. It looks like Lange has succeeded—at a price. The nine new songs are slick, tightly packaged entries in the FM-m.o.r. sweepsstakes, with the emphasis on simple lyrics and high harmonies. There's also a guitar break thrown in at the end to remind listeners that this is the self-proclaimed Florida Guitar Army. Every song is appropriate for airplay, but all are so predictable and colorless that programmers may have a hard time deciding among them.

Star guitarist Billy Jones and Hughie Thomasson again handle the bulk of the songwriting, but, despite being away from the studio for two years, they do little more than rehash past melodies and lyrical ideas. Jones' best, the glis- tening "If Dreams Came True," is similar to the second LP's "Prisoner." Thomasson's "You Are the Show" may become a concert staple due to its theme, but the song pales in comparison to Green Grass and High Tides, Stick Around for Rock & Roll, and other, earlier high-powered tunes. The country numbers that added variety to the early albums are in- long gone, what with the departure of guitarist Henry Paul after "Hurry Sundown." His replacement, Freddie Salem, contributes only the dreary "Falling Rain." The best tune, Iain Sutherland's "Dirty City," is the only one not written by a band member and features some nice guitar work by Jones and Thomasson.

Initial sales of "Playin' to Win" are high—300,000 in three weeks, according to Arista—and the album should serve to broaden the group's following. But its lack of musical progress will not doubt disappoint long-time fans.

Tanya Tucker: TNT. Jerry Goldstein. producer. MCA 3066, $7.98. Tape: • MCA 3066, • MCA T 3066, $7.98.

Watch out, Linda Ronstadt—you've got some new competition, and from the most unlikely source. Tanya Tucker, country music's slightly ill-at-ease child-woman (and, lately, save-the-seals ecologist), has turned to rock & roll. Recorded in Los Angeles with long-time heavy Jerry Goldstein. "TNT" is not laidback, pre- tentious, or embarrassing in any way. It is powerful, believable, and exciting. Most importantly, it shows promise of greater, more comprehensive rock efforts to come from Ms. TNT herself.

Tanya has finally realized that her ratchey voice, perhaps a smidge too jarring for country laments, is best suited to traditional rock. Two of the album's most successful cuts are her covers of Heartbreak Hotel and Brown Eyed Handsome Man. The former is belted with so much emotion and guts that it recalls the fervor of Presley's original. The latter, from its dedicated opening riff straight through to its emphatic conclusion, illustrates how Chuck Berry ought to be sung. Its sincerity only underlines lovely Linda's wimpy slickness on Living in the U.S.A.

Although she's gone West and traded in her tight blue jeans for tighter hotshot stretch pants, Tucker has not forgotten her origins. On "TNT" she exercises her voice as relentlessly as she did her figure for the album photos. Backed by a group of superb instrumentalists, she reaches from Jim Weatherly's whispery ballad, The River and the Wind, to a yee-haw finale of Texas (When I Die). The latter comes closest to country and even sounds somewhat out of context.

Most faults of this record are minor. Not Fade Away's hollow ending might have been cut a minute sooner, and Goldstein's It's Nice to Be with You—complete with schmaltzy strings—should have been cut altogether. Next time out, let's have ten tracks of the pure joy that Tanya can express when she sings to rock's master craftsmen.


I have always tried to like Jerry Jeff Walker and have given his albums eager auditions. There seemed to be a breezy flow, a certain smiling recklessness in his music that someday might blossom into something more substantial. But, in the ten years since Mr. Bojangles, it hasn't happened. Worse, that breezy flow has become a stale puddle and that certain smiling recklessness an annoying pose.

"Jerry Jeff" is self-indulgent unto ruin. When he strikes a tortured-troubadour profile, he sounds like a bad actor; instead of being drawn into the abyss of his terminal sensitivity, one withdraws in embarrassment. Eastern Avenue River Railway Blues means nothing but sounds excessively blue. Banks of the Old Bandera, written by that desperado hit machine Rodney Crowell, shows that Texas is fast devolving into the cliché dump of pop culture and that the spirit of Stephen Foster does, indeed, live on. In Her Good Lovin' Grace, the only song here written by Walker, we are told that it is in the outlaw's moments of weakness and pain—hangovers, soundchecks—and such—that a good woman finds her fulfillment. And the virility here is almost as runny-nosed as the tenderness. Lone Wolf, written by Lee Clayton, one of my favorite tongue-in-cheek bad-asses, is stripped of all irony as Walker delivers such lines as "Lock up your women and hide'em with adolescent gravity."

His party-boy profile is less embarrassing, but no less effete. I'm Not Strange sounds like something from the first Mothers of Invention album. Bad News sounds like the blues according to Donnie Osmond. And the title of Boogie Mama says it all. Walker may yet make something substantial of all this. But so far, it's a cowboy hat, a can of beer, and a crooked smile that's known too many mirrors.

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The Clash: The Quietest Debut in Corporate History

by Toby Goldstein


The Clash began their career in 1976 as an opening act for the Sex Pistols in Britain's punk cellars. At the time they were raw, directed, and angry. Since then they have become a lot more polished, but their aim at selected targets is still arrow straight, and they're angrier than ever.

Their first LP, “The Clash,” was released by CBS in England, and sounded like it had been recorded in a laundry room with a buzz saw as the featured instrument. Through the garbled production emerged such songs as Police and Thieves (a lengthy cover of Junior Murvin's reggae classic), London's Burning, and I'm So Bored with the U.S.A.—just the sort of pleasantries that corporate ears love to hear. The album became a U.K. best-seller and an import favorite.

British Clash tours were subject to the same problems as other top New Wavers: cancellations, oversupervision, and arrest for nuisance crimes. But they remained true to the uncompromising nature of both their music and politics, issuing such singles as Complete Control, Clash City Rockers, and Capitol Radio. The last was a limited-edition disc dedicated to London's only commercial rock station that took Elvis Costello's Radio Radio one better.

All of these are powerful songs you should know by heart, but you've probably never heard them since the Clash have been anonymous in the U.S. until now. Not that CBS's meager debut campaign for “Give 'Em Enough Rope” should improve matters much. A music trade has called the LP an important New Wave product, but only in small print way in the back pages. And at least part of “The Clash” was to have had its U.S. release almost a year ago, but it got buried in corporate politics. No, the Clash will not have an easy time of it in the U.S. There is no media charmer like the Pistols' Johnny Rotten in this group, and Mick Jones. Joe Strummer. Paul Simonon, and Nicky “Topper” Headon don't extend themselves to the press. Currently split from their manager, their direction lies in their own hands.

About the only link between the Clash and the American marketplace is Blue Oyster Cult producer Sandy Pearlman. And if “Give 'Em Enough Rope” is received as the first class rock & roll album that it is, some of the credit must go to him. With the possible exception of the cut Cheapskate, he has not made the Clash into BOC II. What he has done is sharpen the focus of their political messages, now more sophisticated and tinged with irony. For instance, a song about a notorious drug setup case in Britain (Julie's in the Drug Squad) is underscored by deliberately rinky-dink instrumentation. He has also cleaned up production in general, making Strummer's spewed vocals far more audible than on the first LP. Not all are discernible, however, and, like the ear-records by the Rolling Stones, when a lyric is hidden, it takes on a far more sinister context.

While the Tom Robinson band's political songs are a subgenre of their rock albums, the Clash handle radical politics and rock as separate, focused entities that reinforce each other. A Safe European Home is anything but, Tommy Gun is both a rattling machine and a person who chucks up victims, and Johnny may not come marching home again after the English Civil War.

The Clash are not above using a riff from, for instance, the Who's I Can't Explain and turning it into the foundation of Gun's on the Roof—a documentation of several group members' arrest for shooting pigeons. Their delivery is as ugly as the reality they depict: The rhythm section of Simonon and Headon is relentless and over it Strummer's voice is as gravelly as the city dump. As if to reinforce their own goal of straightforwardness, they changed the title of the album's conclusion from That's No Way to Spend Your Youth to All the Young Punks (New Boots and Contracts), acknowledging in one line Mott the Hoople, Ian Dury, and their breakup with management. In the Hoople's case, "all the young dudes carry the news." But on "Give 'Em Enough Rope," all the young punks make the news—even if they hang themselves in the process.
Jazz

BY DON HECKMAN & JOHN S. WILSON

Air: Montreux Suisse Air, Michael Cuscuna, producer, Arista Novus AN 3008, $7.98. Tape: • ATC 3008, • AT8 3008, $7.98.

Air is woodwind player Henry Threadgill, bassist Fred Hopkins and drummer/percussionist Steve McCall. It's not too far off the mark to say that it sounds very much like what an Ornette Coleman trio would sound like if Ornette ever decided to record actively again. But the comparison doesn't come off in Air's favor, even though it should be given credit for maintaining a strong dedication to the avant-garde style of the mid-Sixties. D.H.


"Happy music, no anger or hostility or any crossover stuff." That's drummer Frankie Capp's description of the seventeen-piece Capp/Pierce Juggernaut, a big band in the best Swing tradition with echoes of Basic and Herman via coleader and pianist Nat Pierce. This performance, recorded at the Century Plaza, pulses with vitality. Besides being a convincing demonstration that the halcyon days of big bands are not necessarily over, the disc also features Joe Williams live in a recording that captures the full charisma of his style. J.S.W.

Pete Fountain: Alive in New Orleans, Pete Fountain & Bill Evans, producers. First American FA 7706, $7.98. (First American Records, Inc., 725 South Fidalgo, Seattle, Wash. 98108.)

Pete Fountain, with Al Hirt, represented New Orleans Jazz (tourist division) in the '50s and '60s. For those who may have wondered what happened to him, he is, as this disc declares, alive in New Orleans. The key figures in his band are tenor saxophonist Eddie Miller, whose warm and wooly sound is a match for Fountain's rich, bony clarinet tone, and Teagarden-influenced trombonist Jack Delaney. Along with a couple of obligatory dixieland standards, the set includes such less frequently heard old pop tunes as Diane, Little Girl, Margie, and When Your Lover Has Gone, and it's all done with a warm, friendly glow. J.S.W.

The Art Hodes Notebook: Friar's Inn Revisited, featuring George Brunis and Volly De Fault, Robert G. Koester, producer. Delmark DS 215, $7.98.

The group that Art Hodes has brought together here includes two of the actual members of the New Orleans Rhythm Kings in trombonist George Brunis and clarinetist Volly De Fault. They give the disc an air of distinctive authority and steer it away from the freneticness that colors many attempts to reproduce early dixieland. But the star of the session is Nappy Trottier, a veteran Chicago trumpeter who uses a mute with the punch and panache of Muggsy Spanier and whose solos bristle with rhythmic color. J.S.W.


Hank Jones plays the piano in such an inobtrusive way that initially it almost sounds like musical wallpaper. But, on further listen, it can become quietly compelling. This disc is an odd mixture. One side is given over to good, unacknowledged pop songs (I'll Be Around, Sweet Lorraine, I Didn't Know What Time It Was), on which Jones works his magic unabashedly. The other is primarily spirituals (plus, inexplicably, Eubie Blake's Memories of You) into which he does not put the delicate breath of life he infuses into his pop material. J.S.W.


Laws's unquestioned gifts as a first-rate woodwind player are mostly buried in this let's-get-a-disc-o-hit production. The thick textures are overloaded with synthesizers, percussion, and voices, and Laws's occasionally nice turns of phrase on tenor, soprano, and alto saxophones are virtually undecipherable. Things reach their nadir on Live Your Life Away, when he makes the unfortunate decision to sing the lead vocal. D.H.


As one of the true progenitors of the blues-based saxophone style that dominates much of contemporary pop music, David Fathead Newman isn't heard often enough. But Prestige here frames him in the pop glossiness usually accorded such innovators of his style as Dave Sanborn, and even Newman has a hard time keeping his head above an ocean of up-front rhythm instruments and murky vocals. D.H.


A strange record, this one. Recorded in the summer of 1976, it was licensed from Nippon Phonogram for release by Inner City. The presence of some of New York's most notable studio musicians - Mike Brecker, Cornell Dupree, Eric Gale, Steve Gadd, etc. - has resulted in surprisingly bloodless music. Only Brecker, who plays most of the lead lines, occasionally rises above it all, especially on a piece called It Ain't No Use. Ironically, that piece's title casts a prophetic pall over the entire album. D.H.
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On this disc, Nash is part of a very crisp, precise quintet. His saxophones (mostly alto, some tenor) and Ross Tompkins' piano provide the colors. Bellson's drums and Joel De Bartolo's bass supply the lifting rhythmic drive, and Blue Mitchell's trumpet adds some lacy filigree. It's a tight little group and an attractive, unselfconscious setting for a provocative new talent.

J.S.W.

The Heath Brothers: Passing Through.


The Heath family is a self-contained musical package: Jimmy plays reeds and flute and composes and arranges. Percy has twenty-two years of buss-playing experience with the Modern Jazz Quartet under his belt. Brother Albert (Tootle) plays drums, and Mtume (Jimmy's son) is a percussionist. All they lack is a pianist, and on this, their debut as a group, that role is filled by their old friend Stanley Cowell.

Jimmy is the busiest of the tribe on "Passing Through." Not only is he the most prominent and varied soloist, but he has written or cowritten five of the eight compositions. As a writer he shines as well on the brooding, romantic ballad "Light of Love" as he does on the oddly balanced, slightly Monk-line melody of "A New Blue" and the funky riffs of "Aritherdoc Blues.

But despite Jimmy's ubiquitous presence, the most distinctive personality here is Percy. Among his best moments are an unusual solo version of Yardbird Suite (played on his baby bass), a fascinating variation of Body and Soul—which he calls In New York—which Cowell's piano echoes his bass solo line, and some zestful contributions to the unorthodox Aritherdoc Blues. Cowell and guitarist Tony Purrou add glimpses of solo color, and a brass quartet looms gently in the background of some of Jimmy's arrangements.

J.S.W.

The Woody Herman band playing pieces by Chick Corea and Steely Dan's Donald Fagen and Walter Becker? It seems like a peculiar idea, but then I hear Mantovani playing Beethoven tunes in elevators all the time.

The real point, of course, is that we are dealing with two quite distinct entities. Corea has acknowledged skills as a composer and arranger for wind ensembles. The only question is whether or not his Suite for a Hot Band is good music. It is, with reservation. Corea's affection for bullfight-like trumpet fanfares has never been a favorite of mine, and he doesn't seem to really understand the rolling, rhythmic groove that has always characterized Woody's bands. Still, Suite is a good enough piece.

The five Fagen and Becker contributions—Green Earrings, Kid Charlemagne, I've Got the News, Aja, & FM—are a bit more questionable, however. Each has been orchestrated by a different arranger, all of whom are good enough to make Twinkle, Twinkle Little Star sound like pure jazz. I suspect that in the hands of a pop reviewer the order of priorities would be reversed, but although the lightweight compositions are pleasant enough, the real guts of this music comes from the work of Joe Roccisano, Bill Stapleton, Victor Feldman, Alan Broadbent, and Gary Anderson. (Listen for Feldman's off-the-wall insertion of a quote from Strong of Pearls on I've Got the News.)

One more carp: Why the inclusion of outsider Tom Scott as a soloist? Scott is surely a fine player, but a band that includes players like saxophonists Bruce Johnstone and Frank Tiberi and trumpeter Dennis Dotson doesn't need help from anyone. "Chick, Donald, Walter & Woodrow" is a good but not great album, flawed by the obvious attempt to tie the Herman band into the "youth" market. Woody's got plenty of his own credentials—he doesn't need the connection.

D.H.


Alberta Hunter was one of the more celebrated '20s "classic" blues singers. She was also a songwriter (her Downhearted Blues was one of Bessie Smith's classic recordings) and enjoyed a successful career as a pop singer, performing in the London production of Show Boat in the late '20s. Her reappearance in the fall of 1977 after twenty years of retirement seemed, initially, as curious as discovering a living, breathing dinosaur. But at the age of eighty-two, she proved to be a vital performer, amazing audiences at the Cookery in New York by singing three long sets six nights a week with all the vigor and skill of a woman in the full flush of her talents.

Robert Altman signed her to write a couple of songs for his film Remember My Name and to perform them along with her regular repertoire. The soundtrack is therefore a representative cross-section of her work and, as produced by John Hammond, puts her in a superbly accommodating setting with such distinctive musical voices as Vic Dickenson's insinuating trombone and Doc Cheatham's lightly dancing trumpet.

Hunter's voice is sure and strong and, while she wisely does not overextend her range, she is easy and relaxed within its limited scope. Even when she moves from blues to pop ballads on her early Some Sane Day (which was a memorable Louis Armstrong recording), or on her new The Love I Have for You, she sings with an intensity that sweats aside any suggestion of the normal quavers in an aging voice. The Love is a charming, slightly old-fashioned melody that has the evocative power of an established standard, while her other new song, the title tune, is a traditional slow blues. Despite the inherent sameness in a series of basic blues, the peppery zest of Hunter's personality lights up all of her material, giving it color and flavor. And the instrumental backing, organized by her pianist Gerald Cook and saxophonist Bud Johnson, adds a new dimension to her usual piano and bass accompaniment at the Cookery. J.S.W.


Matrix is a jazz-styled band from the Midwest that has arrived on a cascade of adulatory publicity. This is its first recording for Warner Bros., its only other LP being a self-produced one for RCA in 1977. The presence of John Simon in the producer's chair and the trumpeted description of "Wizard" as a "programmatic album" testify to the fact that Warners views Matrix as Important Stuff.

It's hard to agree. Certainly Matrix is an interesting band; in live performance it can even be exciting. But Simon's penchant for urging young groups into pretentious, brass-dominated puffery in combination with Matrix leader John Harmon's overbaked tributes to his favorite literary lights makes for an ex-

Eddie Palmieri is the bane of budgeters, time-and-motion men, and the tidyminded in general. So many silent months went by after he had begun work on this album that Epic no doubt wondered what kind of flake they had acquired this time. Now that it's finally out, I find it almost unreviewable in less than 20,000 words and without a trayload of fireworks. What can you say about music so beautiful that it makes you want to weep and shout?

Palmieri is simply staggering. The man is a kind of Jackson Pollock of the music world: He takes the great Cuban tradition, tints it with jazz and rock, daubs in his own schizophrenic piano, and then hurls it in great handfuls onto an aural canvas. Yet there's a formal logic and love of tradition under the apparent anarchy that acts as a classical counterpoise to his romanticism.

Each of the major cuts on "Lucumi Macumba Voodoo" works like a miniature suite. The title track includes Afro-Latin percussion and singing, densely menacing brass and reed ensembles that blend with four cellos, the first truly integrated rock guitar I've heard in salsa, and a masterly baritone sax solo by Ronnie Cuber. Colombia Te Canto opens with an old white-gloves danzon played by cellos with maximum beauty and no camp at all. This is followed by a piano duet between Eddie and his brother Charlie. After an infinite pause comes a real rumba that starts with just drums and Afro-Cuban voices and proceeds to move in and out of more thickly clotted ensemble work, heart-breaking trumpet solos by the great "Chocolate" Armenteros, and more keyboards from Eddie and Charlie.

Nothing is perfect, and a couple of somewhat disco-oriented tracks let down the tension. But even these Eddie shoots full of his on-the-brink front line and percussion, like a shot of 100 proof rum in a Shirley Temple cocktail. I don't know who's going to buy an album so resistant to being stuffed into any of the Biz's handy little bags. I do know that those who do will get more than they bargained for in all the best senses of the phrase.

J.S.R.


Trumpeter Woody Shaw is a classic example of that familiar jazz entity, the under-appreciated musician. For as long as I can remember he has been a world class improviser, one who is blessed with originality, highly articulate technical skills, and, best of all, a creative and finely honed sense of pacing. His present group is here presented in live performance at New York City's Village Vanguard, and there are those who will find it almost anachronistic in these days of high energy, high decibels, crossover, and fusion. None of the instruments are electrified, not even Clint Houston's bass or Onaje Allan Gumbs' piano. The latter, in fact, sounds like an inadequately tuned upright, but that presents no problems for Gumbs, who more than makes the best of it. And the material—three tunes by Shaw, one by Gumbs, and one by drummer Victor Lewis—owes more to hard bop than to fusion.

But the performances are alive, stirring, and filled with the kind of exuberance that is at the core of all good jazz. Listen to the strong, aggressive reed work of Carter Jefferson, to Gumbs' two-handed piano playing, and to the exceptionally musical drumming of Lewis. And don't overlook Shaw. He is quite capable of giving such better-known trumpeters as Donald Byrd or Freddie Hubbard a hard run for their money.

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I'ELIRUARY  1979

Phil Woods Quintet: Song for Sisyphus.

When Phil Woods came to New York more than twenty-five years ago, he quickly established himself as the most adept of the younger Parker-influenced saxophonists. Since then his playing has shown steady growth and maturity while maintaining its early slashing razzle-dazzle. On "Song for Sisyphus," his two-year-old quintet (four of its members have been with him for four years) supports with confidence both the virtuosic surface and the distinctive depths of Woods's playing.

Woods is one of the most fiercely positive jazz musicians playing today, yet he can also project shading and color with a full, open, exposed quality that can be overwhelming. For instance, in Harold Arlen's tender *Last Night When We Were Young* he manages to be both delicate and sinuous, creating sensual energy on a piece that can easily become listless and sentimental. He is exuberant and dashing on Irving Berlin's *Change Partners,* punching up a marvelously agitated, driving, swinging line. On this piece and his own title cut he is always in complete control of his strong, challenging expressions, no matter how involved or forceful they become.

The quintet is primarily an effective backdrop. Woods gives pianist Mike Melillo and guitarist Harry Leach unaccompanied solo pieces (Berlin's *When My Dreams Come True* and Reinhardt's *Naugles,* respectively), seemingly to compensate for his otherwise overpowering presence. These though a pleasant change of pace, merely take up space that would've been better utilized by further explorations of Woods's varied talents.

J.S.W.
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