Stereo Review
JULY 1973 • 75 CENTS

CALENDAR OF CLASSICAL COMPOSERS

1. W. A. Mozart
2. Johann Strauss II
3. John Dowland
4. Henry Purcell
5. Antonio Vivaldi
6. Joseph Haydn
7. Luigi Boccherini
8. Carl Maria von Weber
9. Giuseppe Verdi
10. Richard Wagner
11. Johannes Brahms
12. Jean-Sébastien Bach
13. Franz Liszt
14. Pyotr Ilyich Tchaikovsky
15. Johannes Brahms
16. Edward Elgar
17. Gustav Mahler
18. Igor Stravinsky
19. Arnold Schoenberg
20. Alban Berg
21. Anton Webern
22. Franz Schubert
23. Johannes Brahms
24. Giacomo Puccini
25.mma Dvorak
26. Gustav Mahler
27. Franz Schubert
28. Johannes Brahms
29. L. van Beethoven
30. Frédéric Chopin
31. Pyotr Ilyich Tchaikovsky

MAZEL CREAM EM 47925 SCP
MAZEL CREAM AIAO 07 DRUVH 2091 977 SF
Power Bandwidth: 15-50 KHz -0.9% dist.

FM Sensitivity (IHF): 1.9 uv [-30 dB noise & dist.]

Capture Ratio: 2.8 dB.

Distortion: 0.5% @ 100% mod.

Alternate-channel selectivity: 50 dB
What you don’t see
is what you get

SHERWOOD S-7100A

Power Output—RMS, both channels driven.
27 watts × 2 @ 4 ohms, 1 KHz.
22 watts × 2 @ 8 ohms, 1 KHz.
14 watts × 2 @ 8 ohms, 20–20,000 Hz.
18 watts × 2 @ 8 ohms, 40–20,000 Hz.

Harmonic Distortion: 0.9% @ 8 ohms rated output, 0.20% @ 10 watts

Walnut case, included in the price.
You won't see Sherwood advertised on television.

Manufacturers are constantly faced with an agonizing choice: How much do you spend on the product and how much do you spend advertising it?

With products like receivers, which require a great deal of handcrafting, whatever is spent on advertising must literally come out of the product itself.

It must be obvious to you that Sherwood is not exactly a household word.

At the same time you see other manufacturers spending a great deal of money to advertise in very expensive places: The Johnny Carson Show, The Today Show, in Playboy, Penthouse, Time, etc.

Advertising dollars must come right out of the product.

Example: one of the two top hi-fi component manufacturers [and advertisers] in this field boasts that their $200 receiver puts out 10 + 10 watts RMS power @ 8 ohms from 40–16,000 Hz. The walnut case is extra.

Compare that to our S7100A spec: 18 + 18 watts from 40–20,000 Hz. And we include the walnut case. For only $219.95.

Another major manufacturer gives you 17 + 17 watts RMS [@1KHz] and charges $260. Our S7100A offers 22 + 22 watts for $40 less.

Spec for spec, dollar for dollar, we'll match our receivers with any other manufacturer.

We put our marketing dollar into improving the receiver and rely on the equipment to speak for itself.

And that, obviously, is what has been happening. Sherwood receivers have been consistently getting "Best Buy" ratings from consumer testing publications.

For a recent review of the S7100A see Stereo & HiFi Times, Spring issue. Or write to us for a complete reprint: Sherwood Electronic Laboratories, Inc., 4300 North California Avenue, Chicago, Illinois 60618.

Who knows, we might be starting a trend:
Television programs with fewer commercial interruptions.

Goodnight, Johnny

Sherwood

The word is getting around.
IMPROVE YOUR HEARING FOR $200.

Sometimes high fidelity people lose sight of what it's all about: Sound. The ultimate test of any piece of high fidelity equipment is what you hear.

That's why, of all the statements made by equipment reviewers about our Garrard Zero 100, the most significant were these:

"Using identical virgin records, and virgin styli in identical good cartridges, the Zero 100 on occasion sounded markedly 'crisper' than other turntables." Rolling Stone.

"A listening test proves to bring new life to many records, noticeably reducing distortion on the inner grooves." Radio Electronics.

"From about 7 in. diameter to runout, the Zero 100 delivers considerably less distortion and greater definition than with the same pickup mounted in a standard arm. The improvement in sound quality is notably impressive." Elementary Electronics.

"The articulated arm of the Zero 100 produced less distortion, and therefore greater definition, on high-level, musically complex passages, from the inner grooves." Hi-Fi Stereo Buyers' Guide.

That's what reviewers actually heard when they tested the first automatic turntable with Zero Tracking Error. This is, to our knowledge, the first time a turntable has been given credit for making records sound better.

Cartridges and other components, yes. But never a turntable—until the Zero 100.

By this time you probably know how we achieve Zero Tracking Error. The principle of the articulating arm, continually adjusting the angle of the cartridge so it is always at a 90° tangent to the grooves, is a simple one. But the ingenious engineering and the development of the precision pivots to make the principle work, took several years.

But enough from us. Let's go back to what the reviewers say about the Zero 100.

"It probably is the best arm yet offered as an integral part of an automatic player." High Fidelity.

"All of these features combined into one automatic turntable make news, even though some are found on other units. Only in the Zero 100 are they all put together." Audio.

When Audio talks about "all of these features" they're referring to such things as our magnetic anti-skating, variable speed control, illuminated strobe, viscous-damped cueing, 15° vertical tracking adjustment, patented Garrard Synchro-Lab synchronous motor and our exclusive two-point record support in automatic play.

But all of this gets back to our original point. It is the sound that makes the difference. After all, a $200 record player should give you a really meaningful difference. And the high fidelity experts agree that people who own a Zero 100 will hear better than people who don't.

If you'd like to read the reviews in full detail, we'll send them to you along with a complete brochure on the Zero 100 and the Garrard line. Write to: British Industries Company, Dept. G33, Westbury, N.Y. 11590.

GARRARD ZERO 100

The only automatic turntable with Zero Tracking Error.

Dist. by British Industries Company/Div. of Avnet, Inc. Mfg. by Plessey Ltd.
Until now, 4-channel receivers could deliver their full power only into four speakers. Playing regular stereo through two speakers meant leaving two channels idle. Half of those expensive watts were unemployed.

Fisher has changed all that with the new Studio-Standard 4-channel receivers. Each has a 2/4-channel front-panel switch, like the one shown here.

In the “2” position, the four amplifiers are “strapped” together in pairs to drive two speakers with their combined power. No unemployed watts! In the “4” position, the four amplifiers are separated for 4-channel operation with four speakers.

The Fisher 504, at $399.95*, is the most advanced of the Studio-Standard receivers. (See specifications.) Two others are available for considerably less, with minimal changes in features and performance.

Write us for detailed literature. The “strapping” feature is just the beginning of the Studio-Standard story.

Fisher Radio, Dept. 'SR-7, 11-40 45th Road, Long Island City, N.Y. 11101.
A pair of peremptory interruptions—space limitation and printing deadline—combined to yank me off this little stage last month before I had quite finished my number on the subject of classical versus (or classical and/or) popular music. So, to resume: perhaps I have already made it clear that although I stand with those who believe there are substantial, if hard to pin down, differences between classical and popular music in both production and consumption, I also believe that both have their natural, occasionally overlapping, places somewhere on the grander continuum we call Music and—particularly—that both ought to have their places in all our lives as well. The differences are not only elusive in themselves; they are also obscured and confounded by a fog of extra-musical concerns—social, moral, and even political—that add more subjective heat than objective light to the discussion.

But there is one difference, it seems to me, that is hard to deny either subjectively or objectively, and that is the position each of these kinds of music occupies in time. Popular music, to put it metaphorically, is like a daily newspaper, chronicling in closely observed detail the almost moment-to-moment happenings, the thoughts, ideas, and concerns of the present tense. This is not to say it simply sets headlines to music, but that it has an almost eerie knack for communicating the feel, the aura, the very essence of comparatively brief moments in time. This is a great and useful gift, but it has its price, and that price is transiency: in general, popular music has all the permanence of a May fly, a hemline—or yesterday's newspaper. Its very completeness is both virtue and fault: the picture is perfect, but it is unfortunately too specific. Classical music, in the terms of our metaphor, is a history book. It does not deal in particulars, as popular music does, but in generalities—the bigger picture, the larger abstract, mythical, learned—and difficult. Its gifts are, though different, as great and useful as those of popular music, and the price—the sacrifice of the broader audience to the needs of the elite and that of peremptory interruptions—space limitation and printing deadline—combined to yank me off this little stage last month before I had quite finished my number on the subject of classical versus (or classical and/or) popular music. So, to resume: perhaps I have already made it clear that although I stand with those who believe there are substantial, if hard to pin down, differences between classical and popular music in both production and consumption, I also believe that both have their natural, occasionally overlapping, places somewhere on the grander continuum we call Music and—particularly—that both ought to have their places in all our lives as well. The differences are not only elusive in themselves; they are also obscured and confounded by a fog of extra-musical concerns—social, moral, and even political—that add more subjective heat than objective light to the discussion.

But there is one difference, it seems to me, that is hard to deny either subjectively or objectively, and that is the position each of these kinds of music occupies in time. Popular music, to put it metaphorically, is like a daily newspaper, chronicling in closely observed detail the almost moment-to-moment happenings, the thoughts, ideas, and concerns of the present tense. This is not to say it simply sets headlines to music, but that it has an almost eerie knack for communicating the feel, the aura, the very essence of comparatively brief moments in time. This is a great and useful gift, but it has its price, and that price is transiency: in general, popular music has all the permanence of a May fly, a hemline—or yesterday's newspaper. Its very completeness is both virtue and fault: the picture is perfect, but it is unfortunately too specific. Classical music, in the terms of our metaphor, is a history book. It does not deal in particulars, as popular music does, but in generalities—the bigger picture, the larger abstract, mythical, learned—and difficult. Its gifts are, though different, as great and useful as those of popular music, and the price—the sacrifice of the broader audience to the needs of the elite and that of peremptory interruptions—space limitation and printing deadline—combined to yank me off this little stage last month before I had quite finished my number on the subject of classical versus (or classical and/or) popular music. So, to resume: perhaps I have already made it clear that although I stand with those who believe there are substantial, if hard to pin down, differences between classical and popular music in both production and consumption, I also believe that both have their natural, occasionally overlapping, places somewhere on the grander continuum we call Music and—particularly—that both ought to have their places in all our lives as well. The differences are not only elusive in themselves; they are also obscured and confounded by a fog of extra-musical concerns—social, moral, and even political—that add more subjective heat than objective light to the discussion.

But there is one difference, it seems to me, that is hard to deny either subjectively or objectively, and that is the position each of these kinds of music occupies in time. Popular music, to put it metaphorically, is like a daily newspaper, chronicling in closely observed detail the almost moment-to-moment happenings, the thoughts, ideas, and concerns of the present tense. This is not to say it simply sets headlines to music, but that it has an almost eerie knack for communicating the feel, the aura, the very essence of comparatively brief moments in time. This is a great and useful gift, but it has its price, and that price is transiency: in general, popular music has all the permanence of a May fly, a hemline—or yesterday's newspaper. Its very completeness is both virtue and fault: the picture is perfect, but it is unfortunately too specific. Classical music, in the terms of our metaphor, is a history book. It does not deal in particulars, as popular music does, but in generalities—the bigger picture, the larger abstract, mythical, learned—and difficult. Its gifts are, though different, as great and useful as those of popular music, and the price—the sacrifice of the broader audience—and that difference may be significant?
Can you live without a 400 watt amplifier?

Maybe. If you're content to listen to music at a less than realistic level. Or if you don't mind the loss of quality caused by clipping during the more dramatic passages in your favorite records. On the other hand, if you want to listen at a real-life level without distortion, you need at least 400 watts of amplifier power. Other things being equal, the more power you have to drive those fine speakers, the more faithful the sound. Julian Hirsch put it this way: "Anyone using a low-efficiency speaker... with an amplifier in the 30 to 50 watt class cannot approach realistic listening levels without severe clipping." And Audio, after listening to the Phase Linear 400, said, "...many people do not realize just how much power is necessary to handle peaks without clipping..."

Stereo Review summed up: "A superb amplifier, furnishing the essential qualities of the (Phase Linear) Model 700 at a much lower price (almost a bargain in today's market)."

At $499.00 why live with anything less than the Phase Linear 400? Ask your dealer for an audition.

Phase Linear 400

THE POWERFUL DIFFERENCE

PHASE LINEAR CORPORATION
P.O. BOX 549
EDMONDS, WASHINGTON 98020
Rachmaninoviana

I was extremely interested in the tribute to the great Sergei Rachmaninoff by Victor Seroff in the May Stereo Review. However, as a collector of Rachmaninoviana both substantial and trivial, I must question one of Mr. Seroff's observations: "I cannot even imagine him having a hamburger and a cup of coffee at a drugstore lunch counter." It may be that by 1943 Rachmaninoff had indeed abandoned all frivolity in his personal life, yet as late as 1937 he had not, if at least one source of information is to be trusted. I offer this paragraph:

"Waiting his turn at a soda bar a couple of years ago where he had come for a double orange juice, he heard a girl ordering a cherry malted milk float. He watched, fascinated, as the soda jerk put together this mysterious beverage. He asked for one. It tasted fine. He got the recipe and carefully memorized, 'Cherry syrup, malt, milk, a scoop of ice cream.' The sight of a fancy soda counter evokes in him an immediate desire for the drink. If he happens to be in a one-arm joint where the soda jerk has never graduated beyond an ordinary malted milk, Rachmaninoff patiently instructs him in the mysteries of his drink."

This trivial observation was made in the course of an article entitled "Musical Triple-Threat" by Howard Taubman, in the December 19, 1936 issue of Collier's magazine.

In more substantial aspects, however, Mr. Seroff's article is enormously valuable, and no one who claims to know Rachmaninoff can afford to ignore it.

BRUCE S. BROCKWAY
St. Paul, Minn.

In his "Rachmaninoff Da" and "Rachmaninoff Nyet" pieces (May), Eric Salzman has pulled off a performance of "dialectical personality opposition" (nowadays we call it schizophrenia) all his own. Re the Salzman phenomenon, I am of two minds about Rachmaninoff. His music seems to be the apotheosis of the ancient regime and, whatever the composer's intention, the result is emotional escapism. On the other hand, I have always felt sympathy for the romantic composer who, more than any other so far, spoke for free, unfettered joy, exultation, and serenity (called self-pity, bathos, or melancholy) all his own. Re the Salzman paradigm, perhaps I could sum up the point of "Rachmaninoff Da" and "Rachmaninoff Nyet" by saying Rachmaninoff's music has great intrinsic value, that its artistic anachronisms matter less and less as time goes on, but that it nonetheless represents a kind of decadent cultural situation (Kultur, Concerto, Carnegie Hall; Great Artiste) which is now coming back (look how many Rachmaninoff pieces are performed these days) to plague our "classical" musical life and prevent its further growth. No art, no matter what its "intrinsic" worth, can be judged entirely on either a personal or abstract level, but Rachmaninoff, however great or small as an artist, is frankly a monkey on our backs. Like it or not, that is our problem and, increasingly, our passion.

McCormack's Rachmaninoff

The John McCormack-Fritz Kreisler performance of O cease thy singing, maiden fair was an untrumped attack on the composer's best musical virtues in the guise of a pro-and-con appraisal.

Mr. Salzman's articles are not worth rebuttal, but why, in a centenarian memoir, when one would expect above all to find an affirmative appraisal of the man's music, did Stereo Review instead print this vitriolic attack? Was there nowhere to be found a rational discussion of the music's merits? Why, if you couldn't get a writer who appreciated the music, did you substitute such a shameful insult?

CATHERINE MONROE
Washington, D.C.

"Will history be kind to Rachmaninoff?" asks Eric Salzman in the May issue ("Rachmaninoff Nyet!). He doubts it. I doubt it, too. Any culture without the courage to say what it feels about Rachmaninoff is profoundly sick. Music is not a "point of reference," and a composer who, more than any other so far, spoke for free, unfettered joy, exultation, and serenity (called self-pity, bathos, or melancholy) all his own. Re the Salzman paradigm, perhaps I could sum up the point of "Rachmaninoff Da" and "Rachmaninoff Nyet" by saying Rachmaninoff's music has great intrinsic value, that its artistic anachronisms matter less and less as time goes on, but that it nonetheless represents a kind of decadent cultural situation (Kultur, Concerto, Carnegie Hall; Great Artiste) which is now coming back (look how many Rachmaninoff pieces are performed these days) to plague our "classical" musical life and prevent its further growth. No art, no matter what its "intrinsic" worth, can be judged entirely on either a personal or abstract level, but Rachmaninoff, however great or small as an artist, is frankly a monkey on our backs. Like it or not, that is our problem and, increasingly, our passion.

Mr. Salzman replies: In a schizophrenic society, schizophrenia is a very fashionable disease, so I guess I'll accept gracefully Mr. Farrand's diagnosis of my "dialectical personality opposition" concerning Rachmaninoff. Of course, on a personal and emotional level—obviously the most valid approach for the individual—the question of Rachmaninoff's music in the eyes of John McCormack and Fritz Kreisler is probably more intimidating approach in Mr. Salzman's view. As a correlative, one longs for a reprise of William Flanagan's Sergei Rachmaninoff: Twentieth-Century Composer (in the British publication Tempo, 1952).

NOEL FARRAND
New York, N.Y.

Mr. Salzman's comments on Rachmaninoff as a "kind of background for day-dreaming—music to stupefy the listener," are more intimidating approach in Mr. Salzman's view. As a correlative, one longs for a reprise of William Flanagan's Sergei Rachmaninoff: Twentieth-Century Composer (in the British publication Tempo, 1952).
IF OUR $1000 SPEAKER DOESN'T GET YOU, MAYBE OUR $55 ONE WILL.

People who hear about the Linear Sound of EPI invariably ask, "How much?" To which we respond: "It depends." If money is no object, we're only too happy to recommend our Model 1000. "The Tower," we call it.

This is a $1000 item (each), and it is the absolute epitome of EPI's Linear Sound. (The Tower is The Stereophile's most recent addition to its select list of five Class A speakers.)

On a frequency response graph, the Tower will record a virtually straight line from the lowest bass to the highest treble. Meaning that what you hear is a pure, uncolored, natural sound from bottom to top. With no artificial boosting of the bass to impress the innocent. And all the nuances and overtones at the treble end that, on ordinary speakers, just fade away.

In short, what you hear is something rather sensational. (At $1000 a crack, you might say it ought to be sensational. It is.)

But since, for most people, money is an object, you'll be happy to know our Model 1000 is just one of eight Linear Sound speakers from EPI.

When Audio Magazine reviewed the Model 50, it recorded a response that extended from 45 to 16,000 Hz ±3db, and dispersion was excellent. When Audio tested 14 small speakers for dispersion, our Model 50 beat the pack of them.

So, getting back to the question of the cost of EPI's Linear Sound: How much did you want to spend? (You can reach us at Epicure Products Inc., Newburyport, Mass. 01950.)

THE LINEAR SOUND OF EPI.
It is indeed unfortunate that critics these days tend to berate the old swashbuckling romantic movies as banal and trivial. This might be the "in" thing, critically speaking, but it is a result of lack of identity, or an absence of the ability to feel. For example, The Sea Hawk as a movie was horrendous Tudor history, but what great escapist fare it was! How it and the other Kornold scores enlivened a whole generation and more, washing away some of the tears of everyday reality. Eyewash? Yes indeed.

Harvey Margolis
Cranford, N. J.

Mr. Kresh replies: Whenever a Hollywood composer is discussed in terms that might not meet the requirements of his studio publicity department, the kitch-lovers of the world unite and send up a plaintive howl. Their cry: all reviews of movie music must be unqualified raves! The difficulty is not that I am unfamiliar with Mr. Korgold's music, nor with the movies for which he wrote it, but that I grew up with both, knew them all too well, and apparently have committed the unpardonable sin of outgrowing them. Let's face it— I prefer to obtain my movie popcorn from the popcorn machine.

The Late Istvan Ketész

It was difficult for me to open the May issue of STEREO REVIEW when I received it, for I knew that it contained a feature article by Stephen E. Rubin on my long-time friend and client István Ketész. Destiny ordained that the two songwriters, one Hungarian and the other Viennese, would meet, and thus a brilliant career ended with the similarity of a series of incredibly distinguished performances on four continents; and second, an outstanding catalog of more than fifty London recordings.

It was sad to read his own words quoted in your interview: "I never felt in my life that I am a man of whom writers must later write a book. I am a simple musician. As a simple musician who enjoys music, and in the same way tries to enjoy life, I have completed my life. Whatever comes after is a gift." 

Audrey Michaels
New York, N. Y.

Give a Guy a Break

The two songs Noel Coppage deems the high points of Jerry Jeff Walker's new album (May), That Old Time Feeling and L.A. Freeway, are credited to Jerry Jeff's prolific pen. These songs (as Mr. Walker makes clear in his linking notes) were written by one of the finest guitarist-singer-songwriters in the country, Guy Clark. A Texan now moved to Nashville, Guy deserves all the recognition that is rightfully his. Maybe one day we'll have an album of Guy doing his own material for Mr. Coppage's review. This is not meant to take away any glory from Jerry Jeff Walker, who continues to create songs with the wonderful insight and humor that are his own.

David Harig
Houston, Tex.

Paul Kresh said in your May issue: "The archeological branch of the record industry is ever ferreting out old artifacts—and some of them I only wish could be put back in their mummy cases and kept there. The music of Rudolf Friml is the sort of thing my mother used to sing to herself during the Depression to keep her spirits up when it was time to start pawning the furniture. I have waited patiently for it to go away. . . . no restaurant is safe from some Muzak resurrection of one medley or another."

What an awful thing to really say about poor Rudolf Friml. Do you honestly believe your readers could place an iota of confidence in any man you would hire to review musical comedy who is against it from the start, let alone a record from which all detest is whether favorable or otherwise? We might say the same for any category of music, be it opera, the classics, or music by Paul McCartney. Led Zeppelin, Glenn Campbell, or whoever. Who's really to blame for such irresponsible—STEREO REVIEW or your assigned reviewer?

Frank Flanagan
New York, N. Y.

The Editor replies: What would truly be irresponsible would be to indulge in the kind of pre-censorship Mr. Flanagan seems to be endorsing, to assign a record only on the basis that we were sure ahead of time that the reviewer would like it. The result would be a paltry world from which all detest was absent by prearrangement, one in which even Mr. Flanagan's letter would fail to see print. The world being instead the richly various place it is, I am sure that reviewer Kresh's low tolerance for Friml music is shared by at least a few others. But even if it were not, and he stood quite alone in his opinion, that is hardly sufficient reason to shut him up. On the contrary, such rare, unusual, maverick eccentricity ought to be preserved and encouraged for the good of the species.

A Good Move

Many thanks to Greg Shaw for his excellent account of the Move (April). Even though, in my opinion, it was a retrospective long overdue rather than one "well timed." He is the only writer save for Lillian Roxon, to make mention of the group's first single, Night of Fear, which I remember all too fondly, having heard it upon its release in 1966. Some of the early singles by the Move mentioned in Mr. Shaw's article (Blackberry Way and Carly, as well as a few minor masterpieces such as Wild Tiger Woman and Omnibus) are available on the "Best of the Move." an import 1LP on the Fly label.

John W. Ingram
Trenton, N. J.

STEREO REVIEW
The most frequently asked question about loudspeakers:

Does the sound of a speaker depend upon the method by which the air is moved?

All speakers sound different from each other and when you hear a difference between two speakers that employ different principles of moving the air, it is only natural to wonder whether the variance in sounds is a consequence of the principles involved. After all, moving the air is what produces the sound.

Back in the 1950's, when electrostatic speakers reached a peak of popularity, some people thought that they might have a fundamental advantage because of the lower mass of the moving element compared to that of a cone speaker. Then, in the 1960's, ionic speakers were developed with no moving parts at all, and therefore, zero moving mass. Today, in the 1970's, a wide variety of transducers exists using principles ranging from piezoelectric to magnetostrictive, which either push the air with a diaphragm or squeeze the air out between moving surfaces.

Indeed, some of the principles of moving the air do have advantages over others in terms of size, weight, efficiency, and cost. But there is absolutely no advantage of any particular method of moving the air in terms of the potential quality of the sound that can be produced.

Let's see why this is so. We experience sound through the medium of acoustic waves traveling in air. It has long been known that once the air is set into motion, it moves by the laws of acoustic wave propagation which are totally independent of the method by which the air was set into motion.

Therefore, a source (speaker) influences the sound field only through the amount of air it moves at each frequency and through the directions that the speaker moves the air. The method of moving the air in no way affects the sound that you hear.

In a basic experiment presented at a meeting of the I.E.E.E. professional group on Electro-acoustics in 1964, it was demonstrated that a multiplicity of full-range cone speakers can produce music that is subjectively identical to that produced (with the aid of computer simulation) by an ideal massless membrane free of all resonances and distortion. While this very basic result was proved only for full-range cone type speakers, the above discussion indicates that the same result could be obtained by the use of other types of full-range speakers as well. Thus, the secret of excellent performance doesn't lie in the type of speaker used (i.e. the way the air is moved). It lies in the use of a multiplicity of full-range speakers in one enclosure, in the exact proportioning of the ratio and the directions of direct and reflected sound radiated by the total enclosure, in the precise equalization of the speakers to radiate the correct balance of frequencies, and in extreme quality control measures that select and match all the speakers in the enclosure.

To fully appreciate the effect of a multiplicity of full-range speakers, with precise equalization and the optimum combination of direct and reflected sound, simply A-B the BOSE 901 Direct/Reflecting® speaker with any other speaker. Hear why the BOSE 901 is the most highly reviewed speaker regardless of size, price, or type of speakers.

References
2. The results are documented in the Audio Engineering Society Paper, ON THE DESIGN, MEASUREMENT AND EVALUATION OF LOUDSPEAKERS, by Dr. A. G. Bose. Copies are available from the Bose Corporation for fifty cents.

For complimentary copies of the reviews, circle your reader service card or write Dept. RS.

You can hear the difference now.

BOSE

The Mountain, Framingham Mass.
NEW PRODUCTS

Poly-Planar DS60 Sound Panels

- The Magitran Company, which manufactures the extremely thin Poly-Planar speakers with rectangular expanded-polystyrene diaphragms, has taken the logical step of installing them in picture frames with decorative grilles to create the Poly-Planar Sound Panels. Each solid walnut-finish wood frame, approximately 29\(\frac{3}{4}\) x 23\(\frac{3}{4}\) inches, holds two identical Poly-Planar drivers, wired in parallel for a nominal impedance of 4 to 8 ohms. The grille-cloth assemblies, held on with snap fasteners, are available in thirteen interchangeable designs and colors. Overall depth with the grille in place is 2\(\frac{1}{4}\) inches. The speakers can be driven with as little as 5 watts of amplifier power. Price: $79.95. Additional grilles are $14.95 each.

Stanton Sixty Five Four C
Four-Channel Headphones

- Stanton's latest offering in the Dynaphase series of stereo headphones is the Sixty Five Four C, a four-channel model with a switch control that connects the two drivers in each earpiece for conventional stereo listening. The phones are of the acoustically isolating type, with foam-filled vinyl ear cushions and a thickly padded length-adjustable headband. Internally, the headset employs a total of four dynamic drivers with 1\(\frac{1}{2}\)-inch diaphragms. Frequency response is specified as 20 to 20,000 Hz, and distortion is under 0.5 per cent for a sound-pressure level of 110 dB. At 1,000 Hz, an input of 0.1 volt produces a 100-db sound-pressure level; continuous power-handling capability is 1.25 volts, with provision for transient peaks that exceed that level by as much as 10 dB. Nominal impedance is 15 ohms ±20 per cent. The headphones have an 11-foot coiled cable that terminates in two color-coded stereo phone plugs for the front and rear channels. The switch control is integral with the cable. The unit weighs 1 pound, 3 ounces. Price: $64.95.

Sony PS-2251 Direct-Drive Manual Turntable

- Sony's finest turntable, the new Model PS-2251, is a direct-drive manual design with a pitch control that permits a ±4 per cent adjustment around the two motor speeds of 33\(\frac{1}{3}\) and 45 rpm. The motor, which is integral with the 12\(\frac{3}{4}\)-inch turntable platter itself, is servo-controlled by a motion-sensing system that detects and electronically corrects any deviation from true speed. A built-in illuminated stroboscope indicates on-speed operation. The cast-aluminum alloy platter weighs 3 pounds, 5 ounces. Wow and flutter are 0.07 per cent (DIN), and rumble is lower than -67 dB (weighted, DIN). The arm that comes with the PS-2251 is a statically balanced tubular design with an adjustable counterweight for initial balancing, and includes anti-skating and stylus-force adjustments calibrated from 0 to 3 grams. Lateral tracking-angle error does not exceed 2\(\frac{1}{4}\) degrees for any record radius. A lever-operated cueing control, viscous-damped, is integral with the tone arm. The PS-2251 comes with a wood base and hinged, removable dust cover. The dimensions are approximately 19\(\frac{3}{4}\) x 15\(\frac{1}{2}\) x 7\(\frac{1}{4}\) inches. Price: $299.50.

Empire Jupiter 6500
Speaker System

- Empire's new weatherproof indoor/outdoor speaker system, the Jupiter 6500, is a floor- (or patio-) standing three-way design employing a vented enclosure of unusual shape. The system's woofer, a downward-facing 12-inch unit, crosses over to a forward-facing 6-inch direct-radiating mid-range at 450 Hz. The 2-inch dome-type tweeter mounted just above handles the frequencies from 2,500 Hz up. The round enclosure is made of Uniroyal Rubicast, an abrasion-resistant material unaffected by moisture and direct sunlight; it is integral with a molded pedestal base. Specifications for the Jupiter 6500 include a frequency response of 30 to 20,000 Hz, power-handling capability of 75 watts program material, and a nominal impedance of 8 ohms. The system is 17\(\frac{1}{4}\) inches in diameter at its widest point, has a flat top, and stands 25\(\frac{1}{2}\) inches high. Weight of the unit is 40 pounds. Price: $139.95. The Jupiter 6500 speaker system is available in glossy white only.

Pioneer TX-9100
AM/Stereo FM Tuner

- Pioneer's finest and most elaborate tuner, the Model TX-9100, has several unusual features. The front panel has three output-level controls: one for FM, one for AM, and the third for the front-panel headphone jack (which is usable with 8-ohm phones). The interstation-noise muting function is switchable between two different threshold levels or can be deactivated entirely. The tuner also has a switchable "pulse-noise suppression" circuit said to be effective in eliminating electrical-equipment noise interference from sources such as automobile ignition systems, fluorescent lights, and other appliances. The TX-9100's more conventional facilities in-

(Continued on page 14)
The sound you buy now is the sound you'll hear three years from now. Hitachi guarantees it.

Hitachi guarantees that nothing will go wrong with our Maxi-Fi' tuners, amplifiers, receivers or loudspeakers for three years after you buy them.

If anything does, bring it in and we'll fix it free. Parts and labor.

Three years is a lot longer than most manufacturers give you. And we go even further on the transistors. We guarantee them for five.

For a very good reason. Practically everything that goes into a Hitachi is made by Hitachi. Our own transistors. Our own IC's.

Many stereo companies make few, if any, parts of their own.

Hitachi believes in realistic sound. Nothing to get in the way of pure, natural sound.

Like distortion or coloration.

Those transistors we were talking about, for instance. We developed a new type called LTP (for Low Temperature Passivity). They reduce amplifier noise to practically nil. And increase FM tuner sensitivity at the same time.

We also did away with input and output transformers on many of our models in favor of ITL-OTL circuitry. Doing away with one of the major causes of frequency distortion and deterioration.

Our patented gathered-edge woofers are more flexible than conventional bellows-type suspension speakers. And our damped bass reflex enclosure, with a special ducted port, produces a deep, rich sound without that "boxed-in" effect familiar to so many bookshelf speaker systems.

For more about Hitachi Maxi-Fi components, write for our brochure. Dept. SR-5, Hitachi Sales Corp. of America, 48-50 34th Street, Long Island City, N.Y. 11101.

Quality always comes first at HITACHI
NEW PRODUCTS

include tuning meters for signal strength and channel center, a switchable multiplex noise filter, and a function selector with positions for AM, FM auto, and FM mono. The large tuning dial has linear calibrations. Specifications: IHF sensitivity, 1.5 microvolts; capture ratio, 1 dB; alternate-channel selectivity, 90 dB; image, i.f., and spurious-response rejection, all better than 110 dB; AM suppression, 65 dB. Frequency response is 20 to 15,000 Hz ±0.2, −2 dB. and stereo separation exceeds 30 dB from 50 to 10,000 Hz. Harmonic distortion levels are under 0.2 per cent for mono reception and 0.3 per cent for stereo. The multiplex stereo decoder section employs phase-lock-loop circuitry. The TX-9100 measures approximately 5¼ x 13½ x 17 inches overall. Price: $299.95.

Circle 119 on reader service card

Sansui Model SF-1 Speaker System

The second and smaller design in Sansui's series of omnidirectional speaker systems is the SF-1, also a floor-standing model, with fretwork grille panels on all four vertical sides and walnut-finish top, bottom, and upright supports. The SF-1's drivers are conventional (two 6½-inch woofers and one 2¼-inch cone tweeter), but they are mounted with one woofer facing down, the other two drivers up. All the drivers radiate into cone-shaped deflector elements that disperse the sound over 360 degrees horizontally. The two woofers share a common internal enclosure with a circular ducted port. The tweeter is mounted above the upper woofer within a small sub-enclosure that serves as the woofer's deflector. Sansui rates the frequency response of the SF-1 as 55 to 20,000 Hz, with a nominal impedance of 8 ohms and a power-handling capability of 45 watts on program peaks. The crossover frequency is 2,000 Hz. The SF-1 has four 14½-inch sides, is approximately 22¼ inches high, and weighs 26½ pounds. Price: $139.95.

Circle 120 on reader service card

Ampex 20/20+ Cassettes

- AMPEX is using a new magnetic-oxide coating originally developed for professional mastering tape in a recently introduced line of blank cassettes designated the 20/20+ series. Besides providing a very smooth coating surface that reduces dropouts and improves tape-to-head contact, the new oxide affords increases in sensitivity and output, resulting in a 1.5-dB bettering of overall signal-to-noise ratio and a 3-dB improvement in output at 10,000 Hz. Like other Ampex cassettes, the 20/20+ series employs screw-fastened cassette shells. The cassettes are packaged in flip-open plastic containers. Playing lengths and prices available are: 42 minutes ($2.60), 60 minutes ($2.80), 90 minutes ($4.20), and 120 minutes ($5.95).

Circle 121 on reader service card

National Tel-Tronics Speaker Cabinet Kit

- For those interested in the satisfactions and economies of assembling their own speaker systems. National Tel-Tronics has fashioned several air-suspension speaker kits, available in two- or three-way versions, that go together with a minimum of time and effort. All panels are pre-cut and finished, and ready for gluing with the adhesive supplied. The four side panels, which come attached end-to-end by vinyl covering, have slots that mate with the edges of the speaker-mounting board and the rear panel. After acoustical padding has been inserted and the driver units and crossover have been wired and bolted in place, Velcro fasteners are used to attach the grille cloth, which completes assembly. All enclosure panels are ¾-inch thick, and the speaker-mounting panels are pre-cut for the appropriate drivers. The kits come complete with drivers manufactured by Peerless. The two-way system includes an 8-inch woofer and a 2¼-inch cone tweeter, with a crossover network that acts at 2,500 Hz. The three-way kit adds a 5-inch mid-range and crossover components that operate at 750 and 6,000 Hz. Both systems have a nominal impedance of 8 ohms, and both use enclosures of approximately 20 x 10½ x 9½ inches. Prices: two-way kit (CK20-2), $99.95 per pair; three-way kit (CK20-3), $119.95 per pair. National Tel-Tronics is also introducing a smaller two-way kit employing a 6½-inch woofer ($59.95 per pair) and a four-way kit with a 10-inch woofer ($179.95 per pair).

Circle 122 on reader service card

TDK Guide to Cassettes

- A 48-page booklet, packed with useful information on home tape recording methods and equipment, is available at no charge from TDK Electronics Corporation. The well-illustring pocket-size booklet offers a wealth of facts and tips on tape recording techniques. In effect, it offers a short course in tape recording terminology and technology for the layman, including an explanation of the various types of tape formats, their relative merits, and applications.

Emphasis is on cassettes, with sections on how to obtain the best results when recording, how to care for cassettes, how to perform routine maintenance on recording equipment, the importance of internal mechanical design features and construction details, and even how to make minor repairs.

Free copies of the TDK Guide to Cassettes are available from TDK dealers or by writing to TDK Electronics Corporation, Dept. SR, 23-73 48th Street, Long Island City, NY. 11103.

Circle 123 on reader service card

STEREO REVIEW
SONY PS 2251:

a declaration of independence.

Independence of belts, pulleys, idler wheels and all the other paraphernalia that can cause wow, flutter and rumble. Independence from fluctuations in power line voltage that can effect the precise speed of the turntable. And independence of acoustical feedback. The new direct-drive Sony PS-2251 has declared itself independent of all these potential intruders upon the enjoyment of your records.

Most turntables use belts, pulleys, idler wheels to make their turntables spin at the record's speed, instead of the motor's. Look underneath Sony's new PS-2251 and all you'll see is the motor. We don't need all those extras, because our motor's speed is precisely the same as the record's.

Eliminating all those parts also eliminates the wow and flutter and rumble they can cause. So, our rumble figure is a remarkable —58 dB (NAB).

And because our motor turns so much slower than conventional ones, the rumble frequency is lowered too, making the rumble even less audible than that —58 dB figure indicates.

To maintain precise speed accuracy at slow speeds, we use an AC servo system (superior to a DC servo system because of its uniform magnetic field strength). Its precise speed is not affected by variations in line voltage or in line frequency. But its speed can be varied ± 4% by the built-in pitch control and returned to a precise 33 1/3 or 45 rpm, with the built-in self-illuminated strobe.

Then we matched it with a statically-balanced tonearm that tracks records as precisely and faithfully as our turntable turns them. We added viscous-damped cueing and effective anti-skating. And we mounted the PS-2251 on a handsome wood base using an independent spring suspension system to completely isolate it from externally caused vibrations.

At $349.50 (suggested retail) including arm, wood base and hinged dust cover, the PS-2251 is today's most advanced turntable.

We also offer a moderately priced, single-play component turntable with the convenience of automatic operation, the PS-5520. The complete system: turntable, arm, walnut base and hinged dust cover, $159.50 (suggested retail) Sony Corporation of America, 47-47 Van Dam St., Long Island City, N.Y. 11101.
"AN EVENING WITH MANTOVANI."


What a way to spend an evening.

CIRCLE NO. 27 ON READER SERVICE CARD
The Quadraflex Model 55
$99.95

Need we say more?

Quadraflex
1301 65th Street, Emeryville, California 94608

JULY 1973
of the report he will see that Mr. Hirsch wrote that music with a wide dynamic range, played at "live" levels, had an average output of perhaps 20 to 30 watts. However, on sonic peaks, the power demand on the amplifier hit 450 to 500 watts per channel—and higher! This being the situation, the amplifier "clipped regularly." An equally good amplifier, but with less power reserve, would clip more often, and an amplifier with greater power reserve would clip less often. The point that Mr. Hirsch tried to make was that even a 700-watt super-amplifier, when feeding normal low-efficiency speakers with certain types of common program material, can be driven into frequent clipping. He was not saying that the particular amplifier used was unusually prone to clipping.

Quadraphonic Decoder Installation

Q. All the instructions for quadraphonic matrix decoder/adapters I have seen (except the Dynaco passive unit) require that they be installed between the tape-monitoring output/input jacks of the equipment. Like a large number of audiophiles, I have a separate preamp and power amplifiers. Is there any reason why I can't install my decoder between the preamp outputs and power-amp inputs?

Charles Roberts
Orange, N. J.

A. I can think of two reasons why it might not be the best thing to do. There's a possibility that under certain conditions the signal levels coming out of your preamp's output jacks may be high enough to overload the decoder's input circuits. As a rule, no such risk is run when the decoder is connected via the tape-monitoring input/output jacks.

A second possible problem has to do with phase shift. Since the correct decoding of the directional information in a matrix-encoded disc depends upon the proper phase relationships being preserved, the additional stages—including the tone controls—that the encoded signal must pass through before being decoded could result in improper decoding. By tapping off the encoded signal early in the preamplifier (at the tape-output jacks, that is), potential phase problems are avoided. However, aside from theoretical considerations, it may be that the convenience of installing the decoder at the preamp's main outputs will be more significant than the possible confusion of directionality. In any case, it seems to me you have nothing to lose by trying it both ways.

Because the number of questions we receive each month is greater than we can reply to individually, only those questions selected for this column can be answered. Sorry!
When you build the Heathkit deck with Dolby circuitry, you get pride of accomplishment plus features you won't find on others.

If you have built a kit, you know the kind of pride we are talking about. Now imagine the satisfaction of assembling a stereo cassette deck with Dolby circuitry. One that is equal, or superior, to the finest components on the market today.

Moreover, you can't miss on this kit. Ask the man who has built a Heathkit component. He can tell you how service outlets in every major metropolitan area, plus a technical correspondence group at the Heath Headquarters, simply won't let you fail.

Actually, the fact that it is a kit gives the Heathkit AD-1530 two of its completely unique features. The built-in test circuit, using VU meters, 2-tone audio oscillator and test cassette supplied, allows you to set up bias and Dolby level for the cassettes you will be using, also permits you to do your own periodic recalibration or reset the levels for any new types of tape in the future. Secondly, the assembly manual contains all the troubleshooting and maintenance information you should ever need for self-service. These two items alone make the AD-1530 one of the most economical cassette decks you can buy. The AD-1530 also has switch selection of either high-level or microphone inputs. That lets you record the family band the same way you record Blood, Sweat & Tears — without an additional microphone amplifier.

Other features include automatic shut-off; lever switches for stereo or mono input, Dolby on/off and tape type (conventional tape or CrO₂ tape); record level controls with separate VU meters; large three-digit resettable counter. You can build the Heathkit AD-1530 in about five spare evenings. The tape transport mechanism comes pre-assembled to make the job even easier.

Kit AD-1530, 20 lbs. ........................................ 249.95*
ADA-1530-1, dust cover, 1 lb. .......................... 4.95*

AD-1530 SPECIFICATIONS:
- Frequency Response: Regular (iron oxide) tape; ±3 dB from 40 Hz to 12 kHz typical. CrO₂ (chromium dioxide) tape; ±3 dB from 40 Hz to 14 kHz typical.
- Distortion: Tape dependent; electronics less than 0.2%.
- Hum and Noise: Dolby switch OFF — 48 dB. Dolby Switch ON—Provides Additional Noise Reduction as Follows: — 10 dB @ 400 Hz and up. — 9 dB @ 2400 Hz. — 6 dB @ 1200 Hz. — 3 dB @ 600 Hz.
- Wow and Flutter: Less than 0.05%.
- RMS Inputs: Microphone: Lo-Z 0.2 mV to 10 mV. Auxiliary: Hi-Z 50 mV to 10 V.
- Bias Oscillator Frequency: Approximately 100 kHz.
- Tape Speed: 3 3/4 ips or 4 7/8 cm/s.
- Power Requirements: 120 volts, 60 Hz, 15 W.

Dimensions: 5 1/2" H x 9 1/2" D x 1" W.


World's largest selection of electronic kits

CIRCLE NO. 16 ON READER SERVICE CARD

HEATH COMPANY, Dept. 45-7
Benton Harbor, Michigan 49022

Please send FREE Heathkit Catalog.

Enclosed is $ ....... .......................... plus shipping.

Please send model AD-1530.

Name................................................

Address.............................................

City ........................................ State .... Zip

*Mail order prices; F.O.B. factory.

HEATH

HF-274
GLOSSARY OF TECHNICAL TERMS

Like other technical subjects, audio has its own technical and semi-technical jargon that may be comfortable territory for the initiate, but often puts off and confuses the beginner. In fact, if our daily mail is any indication, for every would-be audiophile who is merely hampered by this language problem there are two or three who are frightened away entirely. And so we've decided to turn this column for a while into a sort of audio dictionary, to be delivered until complete in easy monthly installments. The terms and expressions covered, which will appear in alphabetical order, will be those appearing most frequently in test reports and manufacturers' advertising and literature. Undoubtedly we'll miss a few along the way. When we do, I hope you'll write in to point out our oversights, so that we can work them in at a later time.

- **A.C. (alternating current)** is an electrical current that regularly reverses direction (polarity) and flows back and forth through its conductor (a wire, for example) instead of traveling in one fixed direction as direct current (see d.c.) does. You could get a rather rough kind of alternating current by rapidly interchanging the contacts to the terminals of a dry-cell or storage battery, which supplies only direct current when it is used conventionally.

  Most electric generators in use today produce alternating current. For instance, the giant mechanism that supplies your house current alternates (reverses polarity) at a constant rate or frequency of 60 cycles per second (Hz). Your audio system's magnetic phono cartridge, which converts stylus movement to an a.c. audio signal, could also be considered an electric generator.

- **Acoustic feedback** is a phenomenon that occurs when the sound output from the loudspeaker—in the form of either acoustical or physical vibrations—travels back to the microphone or phono cartridge, where it is then picked up, re-amplified, and sent on again through to the speakers. When the feedback is not severe, the result is a slight tonal blur, "hangover," or a rumbling noise accompanying the music. At their worst, the re-amplified vibrations build up through the feedback process to a self-sustaining roar or howl. Feedback problems can be minimized by physically and/or acoustically isolating the speakers from the input elements of an audio system so as to interrupt the feedback path.

- **Acoustic suspension** (also called "air suspension") is the popular term for a speaker system in which the movement of the speaker's cone is partially controlled by the springiness (compression properties) of the volume of air confined within its sealed enclosure. Speaker cones require some kind of spring to exert a restoring or "centering" force and regulate the in-and-out drive impulses provided by the magnet and voice coil. This spring can be entirely mechanical, acting at the points where the cone is attached to its supporting structure. In an acoustic-suspension system, however, there is a mechanical spring plus a carefully calculated quantity of air (for the desired resonant frequency), that acts as a cushion against which the cone pushes and pulls. (An acoustic-suspension system can be defined as one in which the trapped air provides about two-thirds of the restoring force.) The air "spring" permits larger and more linear in-and-out cone motions (excursions) than can be achieved by any practical mechanical spring alone. These, in turn, provide the potential for greater low-frequency acoustical output with lower distortion than can easily be obtained from a driver unassisted by an elaborate enclosure. Because the acoustic-suspension design generally requires a relatively compact sealed enclosure, the principle is used in many bookshelf-size speaker systems.
Here's an easy and convenient way for you to get additional information about products advertised or mentioned editorially in this issue. Just follow the directions below...and the literature will be sent to you promptly and free of charge.

Tear out one of the perforated postage-free cards. Please print or type your name and address where indicated.

Circle the number on the card that corresponds to the key number at the bottom of the advertisement or editorial mention that interests you. (Key numbers for advertised products also appear in the Advertisers' Index.)

Simply mail the card. No postage is required.

This address is for our "Free Information Service" only. All other inquiries are to be directed to, Stereo Review, One Park Ave., New York, N.Y. 10016.

Name
Address
City State Zip

Name
Address
City State Zip

Name
Address
City State Zip
remarkable listening experience for stereo headphone owners!

The phenomenal realism of binaural sound recording is demonstrated by Stereo Review's AMAZING NEW BINAURAL DEMONSTRATION RECORD

Created specifically for playback through stereo headphones, this unique record presents the listener with sound of unsurpassed realism. It recreates at each of the listener's ears the precise sound that each ear would have heard—indeed, exactly as those sounds would have been heard at the live event.

Binaural recording re-creates the directions, distances, and even the elevations of sounds better than any other recording method. Binaural recording is accomplished by recording the acoustical input for each ear separately, and then playing it back through stereo headphones. Thus the sound intended for the left ear cannot mix with the sound for the right ear, and vice versa.

Binaural recording offers the listener the identical acoustical perspective and instrument spread of the original. The sound reaching each ear is exactly the same as would have been heard at the live scene. "Max"—genie of binaural recording. "Max," a specially constructed dummy head, is a replica of a human head as an acoustical absorber and reflector of sound. Super-precision capacitor microphones were installed in Max's ears so that each microphone would pick up exactly what each human ear would hear. The result is a demonstration of phenomenal recorded sound.

STARTLING REALITY. The Binaural Demonstration Record offers 45 minutes of sound and music of startling reality. You'll marvel at the eerie accuracy with which direction and elevation are re-created as you embark on a street tour in binaural sound—Sounds Of The City... Trains, Planes & Ships... a Basketball Game, a Street Parade, a Street Fabrication Plant, The Bird House at the Zoo—all demonstrating the incredible realism of binaural sound reproduction.

MUSIC IN BINAURAL. The musical performances presented on the Binaural Demonstration Record transport you to the concert hall for a demonstration of a wide variety of music. Selections total 23 minutes, containing examples of jazz, organ, and chamber music.

Although headphones are necessary to appreciate the near-total realism of binaural recording, the record can also be played and enjoyed on conventional stereo systems.

Only $5.98

HERE'S HOW TO ORDER YOUR BINAURAL DEMONSTRATION RECORD

CASH: Mail your order along with your name, address and remittance in the amount of $5.98, postpaid.

CHARGE: Your American Express or BankAmericard account! Mail your order, name, address and credit card number. You will be billed at $5.98, postpaid.

MAIL ALL ORDERS TO: RECORDS, ZIFF-DAVIS SERVICE DIVISION, 595 BROADWAY, NEW YORK, N.Y. 10012. OUTSIDE U.S.A. RECORDS ARE $8.00 POSTPAID.
The Memorex Cassette just got better.

NEW

MRX₂ OXIDE

Superior fidelity to any low noise or high energy cassette designed for all equipment.

New Memorex is the best ferric oxide cassette you can buy. The reason? MRX₂ Oxide. MRX₂ particles are smoother and more uniform than low noise or "energized" particles. So more of them can be packed on our tape surface.

That's why new Memorex picks up and plays back more sound than the competition.

And that's the way we plan to keep it.

MEMOREX Recording Tape

© 1973 Memorex Corporation. Santa Clara, California 95052
Introducing a new word in the Hi-Fi vocabulary:

Technics (tek·neeks’) n. a new concept in components.
A concept that focuses the research, experience and skill of an electronics giant on the creation, design and production of components. A total commitment to audio componentry without peer.

The research has already produced over 23,000 patents. Firsts like: direct drive motors, Hot Pressed Ferrite heads, HiZNR resistors, automatic reversing micromotors, Exicon X-Ray television and new kinds of miniature fiber optics.

CROSS SECTION OF DIRECT DRIVE MOTOR

Experience has taught us to be extra finicky about the parts we use. So we design and make virtually every part of every component ourselves. From the newest type of monolithic I.C.'s to our own exclusive four-pole MOS FET. From the epoxy resin coils in our multiplex sections. To the precision controls on the front panel.

We have learned the virtue of being totally unmerciful in test procedures. All designs are put through tortures like baking, freezing, drenching, shock, extreme stresses and prolonged humidity. Because any unit that can survive that kind of punishment is capable of years of faithful service under normal conditions.

We also know that there is no substitute for all-out quality control. Each subassembly is checked visually and electronically as it is put together. And checked again as it joins the main assembly. Every complete unit undergoes 50 performance checks, involving 170 different test points and measuring things like IHF sensitivity and power output. Sixty additional tests assure perfect appearance and proper operation.

All our units have earned the coveted listing for safety of Underwriters Laboratories®.

The Technics concept has already taken shape. In a line of discrete 4-channel receivers. Direct drive turntables. Dolbyized™ cassette decks. And reel-to-reel recorders. That are ready for delivery today.

So, now that we've been formally introduced, why don't we get to know each other.

Technics by Panasonic

CIRCLE NO. 35 ON READER SERVICE CARD
At class reunions almost everybody has a gimmick. Try picking the one who doesn’t go along.
1. Nope. He’s Don Wand. Won school essay contest with “The Art of Pre-Marital Dancing.”
Gimmick: 200 mm holder to balance his 100 mm cigarette.
4. T. Deious, school bore. Gimmick: His voice, off-key contralto. Smokes oval cigarettes (he sat on his soft-pack and liked it).
5. Curley Gilroy. His hair was voted “Most Likely to Recede.” Gimmick: Staples toupee on. Also staples his roll-your-owns.
6a. Kicky VIII, mascot. Has eyes only for Mendelson (see 2 above).

Camel Filters. They’re not for everybody (but they could be for you).


20 mg. “tar,” 1.3 mg. nicotine av. per cigarette. FTC Report FEB.73.
My daughter Sari is two years old and has begun to teach me a few things about music. Sari, not yet having lived long enough to develop many prejudices, comes to music without the accompaniment of a carload of preconceptions, and handles things very straightforwardly, on the basis of what she hears rather than what she knows. The first classical music she heard was the Brahms Sonata in G Major for Violin and Piano, Op. 78, when she was a couple of weeks old, but it doesn't seem to have made much of an impression on her. It's not only that she doesn't remember the themes, but that hearing the music again, even after being scolded, does not seem to involve her in any Proust-like associations and recollections of earlier, happier times. Ah, youth!

Sari divides all music into two sorts: singing-and-playing music and listening-and-dancing music. She allows an occasional crossover, but, in general, she finds singing along with a record (even if she knows the tune) to be almost as preposterous as not singing or playing the piano when somebody in her presence is. She thus makes a distinction between live music and recorded music, and recorded music that would never have occurred to me. Live music to her is live in all respects. When it is in progress she runs to the piano and pushes her way onto the bench, grabbing whatever notes on the keyboard haven't yet been appropriated, at the same time singing her choice of song and "shushing" the competition.

A record for Sari is a very different sort of thing. She has quite a few years to go before she can physically reach the turntable, so putting a record on to play is an action she delegates to others. But once the record is on, her critical faculties are aroused, and she is sure to let you know what she thinks. If she dislikes it she may simply go to some other part of the house. Since she has been told that she may do so, she sometimes goes to her own room and closes the door. This can be a trenchant criticism. More often, she just tells me her opinion. "Daddy, I don't like that record," was her comment on Maurizio Pollini's new recording of the Chopin Etudes. I agree with her, though I worry about why and she doesn't.

When Sari likes a record she will sometimes sit very still and listen to it or else play quietly with a toy until the side is over. She astonished me the other day, when I thought she hadn't been paying the least attention, by telling me that she liked the music that had just been playing. It was the recent Seraphim release of William Walton conducting his own film score for Henry V.

When Sari really likes a record, though, she will get out of her chair, stand in the middle of the floor, and, with arms held out in front of her, shoulder height, the fingers curved down toward the floor, proceed to turn gravely in a counterclockwise direction while adding a little up-and-down movement of the arms. It is her own private dance, and the music to which she performs it has received a very high compliment indeed. At the moment, probably her favorite record is one of Renaissance duets for the lute (L'Oiseau-Lyre S 325). The modal tunes and harmonies do not seem to offend her ear at all, and the rhythms she finds just conducive to dancing. But that is not to say she finds such rhythms vital. A dance for her is a form of approbation and a pleasurable movement of expression, and she has also danced to Ivan Moravec playing Debussy's Feux d'Artifice (Connoisseur Society S 1866). I defy any adult to do that.

Sari has recently discovered marches, through the medium of a particularly appealing record entitled "Little Marches by Great Masters" (Philips 659 9172). While I had some intellectual doubts about the "greatness" of some of the composers represented (Vráničk? Rosetti? Michael Haydn?), my daughter did not trouble her head over the matter and...

(Continued on page 31)
The ESS Hell Amt:

a revolutionary advance
a revelation in sound reproduction

s22 and hear the exciting ESS amt 1 at any of these 2 ESS franch sed dealers.
for an up-to-the-minute listing of dealers in your area, write ESS, sacramento.
light the way

HEIL amt 1

SOUND AS CLEAR AS LIGHT

© ESS, Inc. 1973
I bought a Marantz 4 channel receiver because I refuse to be stuck with an electronic antique.

Not one to tolerate obsolescence (planned or unplanned), I considered the stereo vs. 4-channel question carefully, then purchased a Marantz receiver for three compelling reasons.

One. Marantz has Dual Power. This means you get full power of four discrete amplifiers working all the time. When you're listening to regular 2-channel tapes and records you can combine the power of all four channels into the front speakers. This means even if you're not ready to commit yourself to a complete 4-channel system, you can buy Marantz now and when you get the other two speakers just flip a switch. You have 4-channel. Meanwhile, you're not compromising 2-channel because you're getting more than twice the power for super stereo.

Reason number two. Marantz receivers feature the exclusive snap-in snap-out adaptability to any 4-channel matrix decoder. This means that your Marantz stereo will never be made obsolete by any future 4-channel technology because the Marantz snap-in SQ module is designed to keep up with the changing state of the art. What's more, Marantz receivers have Vari-Matrix—a built-in circuit that will synthesize 4-channel sound from any stereo source (including your stereo records and tapes) and will also decode any matrix encoded 4-channel disc or FM broadcast.

Reason number three. Marantz receivers, from the Model 4230 up, feature built-in Dolby™ noise reduction to bring you the quietest FM reception ever. And you can switch the built-in Dolby into your tape deck for noise-free, no-hiss recording from any source. A real Marantz exclusive.

I chose the Marantz Model 4270 because it suits my needs perfectly. It delivers 140 watts continuous power with under 0.3% distortion. And it's literally loaded with features. However, your requirements may be more modest than mine. In which case you can own the Marantz Model 4220 which delivers 40 watts with Dual Power. Or you can go all the way and get the Marantz Model 4300 with 200 watts. It is the very best. Choose from five Marantz 4-channel receivers from $299 to $799.95.

The point to remember is this—whichever model Marantz 4-channel receiver you do buy, you can buy it today without worrying about its being obsolete tomorrow. Look over the Marantz line of superb quality receivers, components and speaker systems at your Marantz dealer. You'll find him listed in the Yellow Pages. Think forward. Think Marantz.
almost immediately selected the Beethoven and Josef Haydn examples as her favorites. She has correctly diagnosed the march as a special form of dance, and the step she uses for it is closer to a conventional march step than to her semiballetic pirouette. She still, however, does not find it necessary to put her feet down in accordance with the beat of the music; that there is a beat and that her feet do move seem to be sufficient.

She was also recently exposed to waltzes, and I must say the result was a disappointment, recalling for me Charles Ives' musical question: "Why doesn't one-two-three appeal to a Yankee as much as one-two?" (that's the whole text of Ives' song). Sari, on her mother's side, is half Yankee.

Sari sings quite well—for a two-year-old. She does not have perfect pitch, but her intonation is almost true. She has a repertoire of fifty or sixty songs, mostly classics (if not classical) of their type: Over the River and Through the Woods; Cobbler, Cobbler; Frère Jacques; the theme song from Sesame Street; and so forth. Her espousal of Do You Know the Muffin Man? taught Daddy that its tune forms the basis of Frederick Delius' Second Aquarelle. She knows Twinkle Twinkle Little Star, but she also knows the Haydn version of it as it appears in Symphony No. 94, and she infinitely prefers the melodic intricacies of the Haydn version to the simpler nursery rhyme.

As a creative musician Sari shows the same freedom from learned restraints that is evident in her dancing, in contrast to her efforts at accuracy in singing. When she is at the piano, her improvisations bear no resemblance to the song she is ostensibly playing or even to the one she is actually singing. The dissonances between vocal line and her free accompaniment bother her not at all: in fact, she seems to relish some of them, and they don't usually throw off her pitch.

Heard from a distance, where the voice tends to get covered by the piano, Sari's musical creations bear a striking resemblance to her artistic creations with pencil, finger paints, and the like. In short, they are quite free of rules (like perspective or tonal harmony), and chaotic overall, but they have presumably accidental moments of real and original beauty. She has already discovered the logic of a rising or falling stepwise series of tones, but she does not limit herself to such passages. Rather, she mixes them in with accidental (?) harmonies, at times nearly as luscious as Ravel's, at times as laconic as Webern's.

In too few years it will be time to give her some real lessons in music. She will lose a lot in learning, I'm sure, but she has found music to be so natural a part of life that I don't think she will ever lose her joy in it or turn her back upon it.
The ADC-XLM “...in a class by itself.”

That’s the way Stereo Review described our XLM. High Fidelity headlined their review, “Superb new pickup from ADC” and went on to say, “...must be counted among the state of the art contenders.” And Audio echoed them with, “The ADC-XLM appears to be state of the art.”

With the critics so lavish in their praise of the XLM, there’s hardly any necessity to add anything. Far better to let the experts continue to speak for us.

**Frequency response** The CBS STR-100 test record showed less than ±1.5dB variation up to 20,000Hz. Stereo Review response is within ±2dB over the entire range. Audio Frequency response is exceptionally flat. High Fidelity

**Tracking** This is the only cartridge we have seen that is really capable of tracking almost all stereo discs at 0.4 grams. Stereo Review. The XLM went through the usual torture test at 0.4 grams (some top models require more than a gram). High Fidelity

The XLM is capable of reproducing anything found on a phonograph record. Audio

**Distortion** Distortion readings are almost without exception better than those for any other model we’ve tested. High Fidelity

The XLM has remarkably low distortion in comparison with others. Audio At 0.6 grams the distortion was low (under 1.5 per cent). Stereo Review

**Hum and noise** The XLM could be instrumental in lowering the input noise from the first stage of a modern transistor amplifier. Audio

The cartridge had very good shielding against induced hum. Stereo Review

**Price** This would be a very hard cartridge to surpass at any price. Stereo Review We found it impossible to attribute superior sound to costlier competing models. High Fidelity

Priced as it is, it is a real bargain in cartridges. Audio

The Pritchard High Definition ADC-XLM $50.
SPEAKING OF ACOUSTICS: Loudspeaker evaluation, by both objective and subjective means, is a perennial hot topic among audiophiles, and it was the subject of the Seventh Annual Midwest Acoustics Conference held in April at Northwestern University. The size and enthusiasm of the audience testified to the wisdom of the program planners' choice. The opening speech by speaker manufacturer Paul Klipsch, reviewing the history of loudspeaker development and the levels of performance achieved at various stages, set the tone for the following papers. It would be hard to find a man better qualified than Mr. Klipsch to provide such a historical perspective, for he has an encyclopedic knowledge of the work done by himself and other pioneers in the field and a seemingly total recall of references to technical publications spanning a period of several decades. It was from this background that Mr. Klipsch reminded his auditors, as he has on numerous other occasions, that most "new" loudspeaker designs are really extensions of long-recognized principles. Few in the audience disagreed.

Although our ultimate concern as listeners is with the loudspeaker system performance, the speaker designer must know many specifics relating to the drivers that make up the system. The interrelationships of the magnetic, electrical, and physical parameters of a conventional cone driver, and the basis for their calculation from a limited number of measurements, was ably presented by Prof. Robert Ashley of the University of Colorado. Even with the aid of a large time-shared computer, this is far from a simple matter, as evidenced by the final print-out of a long list of parameters for a single 8-inch cone speaker used as an example for Prof. Ashley's paper.

Measurements in two very different environments—free-field (or anechoic) and reverberant-field—were described in some detail by Ed Long of Quadraflex Industries and Daniel Queen of Daniel Queen Associates. Both men are well-known speaker designers, having been responsible for the creation of some highly regarded speakers during their extensive professional experience.

It was apparent from the information supplied by Mr. Long and Mr. Queen that a thorough, objective measurement of a speaker's performance is a very complex process, requiring a substantial investment in equipment, facilities, and time. Equally apparent was the absence of any solid correlation between these measurements and the sonic qualities of the speaker in its normal listening environment (although that was really outside the scope of their papers). This was further emphasized by George Augspurger, of Perception, Inc., who discussed the effects of room size and acoustic treatment, as well as the placement of the speaker and the listener, on the overall performance of the system.

The last three panelists spoke about the subjective side of speaker evaluation. Dr. Raymond Carhart, Chairman of the Department of Audiology at Northwestern University, spoke from the viewpoint of the psychoacoustician. A number of little-appreciated effects, such as the distortion generated within the ear by a perceived sound, the effect of ambient noise on auditory perception, and the masking of certain sounds by others arriving both earlier and later, were brought to the audience's attention by Dr. Carhart.

Finally, C. G. McProud, founder and longtime editor and publisher of Audio magazine, and I together discussed the more subjective evaluative processes. Mr. McProud offered suggestions for the use of selected music recordings to assist the layman in judging the quality of speakers, and emphasized frequent exposure to live music as a means of providing a frame of reference. It was (and is) my view that the myriad test procedures described by the various lecturers, vital though they certainly are to the total analysis of a speaker's performance (and

TESTED THIS MONTH

<table>
<thead>
<tr>
<th>ESS amt 1 Speaker System</th>
</tr>
</thead>
<tbody>
<tr>
<td>BSR-Metrotec FEW-1</td>
</tr>
<tr>
<td>Frequency Equalizer</td>
</tr>
<tr>
<td>Technics SL-1100A Record Player</td>
</tr>
<tr>
<td>Shure V-15 Type III Cartridge</td>
</tr>
</tbody>
</table>

JULY 1973
to the art of the speaker designer), provide only partial clues to how it actually sounds. An expert in the field can probably classify a speaker in general terms by studying a complete set of measurement data, but to outsiders the data would be all but meaningless, and under no circumstances would they convey a sense of the overall sound quality of the speaker.

After reviewing some early attempts to compare a live program source directly with its reproduction through loudspeakers, I described our simulation of that technique, in which a complete high-fidelity system, whose sound has been accurately recorded under anechoic conditions while playing selected program material, serves as the "live" source. As I took pains to point out, this technique has certain limitations, and is by no means a total test, even subjectively, of a speaker's sound. Nevertheless, since its information is supplied in an audible form readily interpretable by any listener, I feel it goes more directly to the heart of the matter than all the instrumented measurements that have been devised for that purpose. Its major strength—as a "subjective" test—is that its results are quite independent of the listener's preferences in music or, for that matter, in loudspeaker sound.

The day was concluded with a lively give-and-take between the panelists and the audience. There was general agreement that tone-burst tests, as generally performed, are not precise enough to yield much useful information on the strengths or weaknesses of a speaker, unless these are formidable in themselves. In that case, any trained listener can reach the same conclusions without benefit of an expensive tone-burst generator, microphone, and oscilloscope. Another point on which the panelists concurred was the amount of acoustic power necessary for realistic reproduction of music in the home—approximately 0.5 acoustic watt. In other words, a speaker with 1 per cent efficiency requires a 50-watt amplifier, while a speaker that is 10 per cent efficient will produce the same output with only 5 watts input.

There was less unanimity on the importance of modulation distortion in speakers. This term includes various forms of intermodulation distortion and the frequency-modulation (Doppler) distortion caused by the simultaneous presence of low and high frequencies in the same driver. There is no argument as to the physical reality of these effects, which are measurable. Mr. Klipsch and Prof. Ashley consider modulation distortion to be a serious fault of many, if not all, conventional loudspeakers. I expressed some doubts on this, never having heard a clear demonstration of the benefits claimed for a system having very low modulation distortion, or indeed of the severe degradation of quality claimed to result from its presence.

Recalling a recent experience in which severe amplifier crossover distortion was totally masked by the normal program content (STEREO REVIEW, May 1973), I suggested that similar masking effects might hide the subjective results of modulation distortion. However, no one's views seemed to have been altered by the arguments presented on either side, so the question remains open.

---

**EQUIPMENT TEST REPORTS**

**By Hirsch-Houck Laboratories**

---

ESS amt 1 Speaker System

- THE Electrostatic Sound Systems loudspeaker called the "amt 1" features a new type of high-frequency driver, the Heil "air-motion transformer." Built under exclusive license from its inventor, Dr. Oskar Heil, the air-motion transformer is both interesting and radical enough to justify a more extensive technical description than we normally supply in test reports—see the box on the facing page.

In the amt 1 system, the Heil driver operates at middle and high frequencies, beginning at about 600 Hz. Lower frequencies are handled by a conventional 10-inch cone driver in a ported enclosure. The mouth of the ducted port is underneath the enclosure and radiates through a rectangular opening to the rear. The input terminals, a three-position (BRIGHT, NORMAL, SOFT) high-frequency level switch, and a protective fuse are also located under the enclosure.

The Heil driver, mounted on top of the woofer enclosure, is covered by an acoustically transparent grille that permits its nearly 360 degrees of horizontal dispersion to be used effectively. Since its vertical dispersion is relatively narrow, the air-motion transformer is angled slightly upward for best projection of high frequencies into the...
**THE HEIL DRIVER**

The diaphragm of the Heil driver is a rectangular polyethylene membrane, 0.5 mil in thickness, with a grid of parallel conducting strips covering both sides of the plastic film. To form the moving element, the diaphragm is gathered into parallel pleats (resembling the folds in window draperies) and installed in a plastic frame approximately 5 inches high and 2 inches wide. In this configuration the diaphragm has extremely low moving mass and no resonances within its operating frequency range—both highly desirable qualities for a high-frequency driver.

The assembled element is inserted between two large magnetic pole pieces that immerse it in a magnetic field developed by six pounds of ceramic magnetic material. When an electrical audio signal passes through the conducting strips, they move in such a way as to vary the spacings between the folds of the pleated diaphragm. Alternate pairs of pleats move closer together, expelling the air from the folds between them, while the intervening spaces become larger and, in effect, "inhal" air from the opposite side of the listening area from the speaker's intended floor location.

The ESS amt 1 is 14½ inches square at its base, tapering to 13 inches square at the top. It is 31 inches high and weighs about 45 pounds. Price: $299. An original-owner warranty covering parts and labor protects the amt 1 woofer for five years and the Heil transducer for life.

- **Laboratory Measurements.** Our averaged live-room frequency-response measurement, using two speaker locations and a distantly placed microphone, produced one of the flattest curves we have ever measured on a loudspeaker. The low-frequency output, with the port radiation added to the direct output of the cone at frequencies below about 70 Hz, showed a gentle rise below 150 Hz, to +5 dB at 70 Hz. From 150 to 20,000 Hz, the output varied only ±1 dB. If the low-frequency response is included, it was within ±3 dB from 40 to 20,000 Hz. It was interesting to observe that the curve taken in our test room closely matched a free-field (anechoic-chamber) response curve published by ESS. In fact, our measurement did not differ from theirs by more than 3 dB at any frequency from 20 to 20,000 Hz! The high-frequency level switch, in its bright position, increased the output by about 2 dB above 1,500 Hz. The soft setting reduced the output by 2 to 4 dB above 600 Hz. The measurements quoted previously were made with the normal setting, which we also found best for listening.

The low-frequency distortion (measured in front of the woofer) was typically less than 2 per cent down to about 50 Hz under all of our test conditions. At a 1-watt input, it rose to 5 per cent at 42 Hz and 6.5 per cent between 30 and 40 Hz. Increasing the drive to 10 watts produced 5 per cent distortion at 54 Hz, 10 per cent at 49 Hz, and a maximum of 18 per cent at 40 Hz. Possibly because of the radiation from the port, which predominates at very low frequencies, the distortion dropped to 12 per cent at 30 Hz. With the speaker maintaining a constant output of 90 dB sound-pressure level (SPL) measured 3 feet from the front, distortion was 5 per cent at 44 Hz, 10 per cent at 39 Hz, and 26 per cent at 30 Hz. Tone bursts were reproduced well throughout the frequency range of the system, although we noted a single cycle of overshoot at 100 Hz.
HZ. There was also a “build-up” time of four cycles at 10,000 Hz. However, since we rarely have occasion to measure tone-burst response at such a high frequency (for a speaker that exhibits a virtually omnidirectional dispersion pattern at such frequencies, as the amt 1 does), we cannot be sure to what degree the test conditions may have been responsible for this. Certainly such an effect would not be audible under any conditions.

The instructions accompanying the amt 1 describe it as a 4-ohm system. Its measured impedance was 4 ohms at the minimum point (between 90 and 150 Hz), and remained between 4 and 5 ohms over most of the audio range. The low-frequency resonance was at 60 Hz, with a rise to 15 ohms. The ESS amt 1 is moderately efficient compared with acoustic-suspension systems, requiring about 1 watt at mid-frequencies for a 90-dB SPL. This efficiency is essentially determined by the woofer: the Heil driver is far more efficient, and is padded down to the minimum point (between 90 and 150 Hz), and remained between 4 and 5 ohms over most of the audio range.

*Comment.* Even if we had never listened to the ESS amt 1, its measured frequency response alone would invite the use of superlatives. This is one of the few speakers we have tested, in a normally “live” room, whose overall frequency response and smoothness are comparable to those of a good high-fidelity amplifier—and that is no small achievement! We were glad—though hardly surprised—to note that the amt 1 sounded as good as its measurements indicated.

Although there was a distinct vertical “beaming” of the high frequencies close to the speaker, this effect became negligible at the more usual listening distances of 10 to 15 feet. Horizontally, the dispersion was excellent: in fact, it could be considered as essentially omnidirectional over the operating frequency range of the Heil driver. Although the Heil air-motion transformer bears a superficial resemblance to a ribbon speaker, it has none of the ribbon speaker’s fragility. ESS states that it can be used (with care) with amplifiers capable of delivering up to 300 watts per channel to 8-ohm loads, or 500 watts to 4-ohm loads. We drove it with an amplifier capable of well over 300 watts per channel at 4 ohms—at peak powers near that amplifier’s maximum capability—without damage or objectionable distortion until a high-frequency transient blew the speaker’s protective fuse. Even this deliberate abuse did not damage the speaker in any way.

With a pair of speakers in a free-standing position about 3 feet from the nearest wall, there was a moderate but noticeable emphasis of the low and mid bass, evidently corresponding to the measured rise of output in the 70-Hz region. In many cases, the slight additional heaviness could be considered a benefit, in any event, it would be modified by the listening-room dimensions and speaker placement. Overall, the amt 1’s transparency, definition, and overall clarity were “state-of-the-art” in every respect. Perhaps the best way to convey our total impression is to say that the amt 1 has just the listening qualities one would expect from a speaker system with a ±1-dB response over practically the entire range of musical frequencies. Needless to say, it earned a solid “A” rating in our simulated live-vs.-recorded listening test.

From time to time, “new” principles in speaker design make their appearance. Most are more accurately described as variations of established techniques. To the best of our knowledge, the Heil air-motion transformer truly qualifies as a “new” principle. It works, apparently as claimed, and we look forward to further developments of this promising concept. ESS has indicated that a Heil air-motion transformer for low frequencies is under development—a mind-boggling prospect!

For more information, circle 105 on reader service card.

BSR-Metrictec FEW-1 Stereo Frequency Equalizer

- The bass and treble tone controls of the better high-fidelity amplifiers and receivers can boost or attenuate the output at the extremes of the audio-frequency range with little or no effect on the mid-range response. This enables the user to “touch up” the minor deficiencies at the highest and lowest frequencies that recordings (and speaker systems) frequently exhibit without altering the overall sonic balance. Unfortunately, when the need to make major changes in the reproduced sound arises, conventional tone controls are usually useless.

The best solution to the limitations of conventional tone controls is a multi-band equalizer that permits more or less independent adjustment at a number of specific frequencies throughout the audio range. Although the more elaborate equalizers may act at twenty or more frequencies, often spaced at intervals of one-third of an octave, their high cost and the difficulty of adjusting them without special instruments usually limit them to commercial applications. However, a very effective and practical equalizer can be made with only five bands. It can be sold at a reasonable price, is only a little more difficult to adjust than ordinary tone controls, and is considerably more useful in home music systems. Several manufacturers have built such devices into their receivers and amplifiers.

(Continued on page 38)
Realistic 4-Channel with the Luxury of Wireless Remote Control!

"Leave it to Radio Shack to make a 4-channel receiver with a remote control that's really useful! Pre-set your 6 favorite stations, control tuning and volume from your easy chair. And it's wireless, too!"

Arthur Fiedler
Conductor of the Boston Pops

Introducing the Realistic QTA-790
280-Watt AM/FM 4-Channel Receiver

The most powerful, most innovative receiver in our 50-year history. Accepts every kind of source, reproduces every kind of sound. Has the power and outputs for eight speakers—enough for 4-channel anywhere you want it. Accu-Balance™ sliding controls balance left, right, front and rear just the way you like. Perfect Loudness™ adds the right amount of bass at any volume. Jacks for stereo or 4-channel headphones. Bass, treble and midrange controls, hi and lo filters, FM muting, more. Our wireless remote controller is a "miracle" you can put in your pocket. Try it out at any of our 2000 stores in all 50 states.

FREE CATALOG

Values in Home Entertainment, Audio, Parts, Kits, Communications, More!
At your nearby store or mail to address at right.

Name ___________________________ Apt. # ______
Street ____________________________
City __________________ State ______ Zip ______

PLAYS
- SQ Matrixed Records, FM and Tapes
- Synthesizes 4-Channel from 2-Channel
- Has Separate Input with Volume Control
  For Q-8 Discrete 4-Channel Tapes
- Complete 2-Channel Tape Facilities
  Including Monitoring and Dubbing
- Plays Two Separate Stereo Programs
  In Two Different Rooms At Once

REALISTIC
by
Radio Shack®

and ALLIED RADIO STORES
A TANDY CORPORATION COMPANY
2617 W. 7th St., Fort Worth, Texas 76107

FREE CATALOG

Values in Home Entertainment, Audio, Parts, Kits, Communications, More!
At your nearby store or mail to address at right.

Name ___________________________ Apt. # ______
Street ____________________________
City __________________ State ______ Zip ______

REALISTIC
by
Radio Shack®

and ALLIED RADIO STORES
A TANDY CORPORATION COMPANY
2617 W. 7th St., Fort Worth, Texas 76107
The idea of the BSR-Metrotec FEW-1 Graphic Stereo Frequency Equalizer (to give it its full name) is to provide add-on multi-band equalization facilities for existing audio systems that lack them.

The FEW-1 varies the response in each of its five bands with a vertical slider control that affords up to ±12 dB of adjustment range, with flat response at the mid-point of travel. The center frequency of each control is marked on the panel above the slider: 60, 240, 1,000, 3,500, and 10,000 Hz. Each slider acts on both channels. The FEW-1 is designed to be connected in the tape-monitoring path of an amplifier or receiver, and it has its own tape-monitor switch and jacks to replace the amplifier facilities its installation takes up. Alternatively, for use with a separate preamplifier and power amplifier or an integrated amplifier with preamp out/main in jacks, the FEW-1 can be connected between the preamplifier outputs and the power-amplifier inputs. This leaves the normal tape-monitoring circuit undisturbed, and also affords the option—when a recorder is connected to the FEW-1—of modifying the signal to be recorded with the preamplifier's tone controls and filters.

The BSR-Metrotec FEW-1 has impressive performance specifications, including a frequency response of 5 to 100,000 Hz ±1 dB, distortion less than 0.05 per cent at 2 volts output (and typically less than 0.007 per cent at 1 volt), a maximum output of 9 volts, and a noise level of 80 microvolts (unweighted). The FEW-1 is 8½ inches wide, 4½ inches high, and 5½ inches deep; it comes in a metal cabinet with walnut side panels. It carries a two-year guarantee. Price: $99.95. It is also available in kit form, as the FEK-1, for $79.95.

**Laboratory Measurements.** The BSR-Metrotec FEW-1 introduced a 3-dB loss in the signal path, with all sliders centered. There was no output clipping on input signals up to 10 volts (which provided an output of about 7 volts). The output noise level was less than 1 millivolt (unweighted), and consisted largely of subsonic frequencies. When we applied an ANSI "A" weighting curve approximately corresponding to the ear's frequency sensitivity, the noise was below our measurement limit of 100 microvolts, or 80 dB below 1 volt.

As claimed, the FEW-1 is a virtually distortionless device. The distortion at low-level outputs (0.1 volts) was unmeasurable, being less than the very low noise level. At a 1-volt output, the distortion was 0.007 per cent or less across the full audio band (it was masked at 20 Hz by the inaudible subsonic "bounce"). At 5 volts output—beyond the maximum that would ever be required in practice—the distortion was under 0.035 per cent at all frequencies, and at 10 volts it was still under 0.25 per cent.

With the sliders centered, the FEW-1's frequency response was ±0.5 dB from 20 to 20,000 Hz. The individual bands had an adjustment range of at least ±12 dB, and center frequencies were correct. When we applied a square-wave signal, its shape was modified by the equalizer in accordance with theoretical expectations, with peaking, rounding, or tilting of the waveform depending on the control settings. Under no conditions was there any trace of ringing or other transient instability. With the controls set flat, a 100,000-Hz square wave was passed with only slight rounding, which would indicate a frequency response extending to nearly one million Hz!

**Comment.** The BSR-Metrotec FEW-1 was a fascinating unit to experiment with. We have rarely found conventional tone controls useful in compensating for any but the most minor frequency-response irregularities. With the FEW-1, however, it was possible to minimize a peaky mid-range or bass response from a loudspeaker, tame or brighten the extreme highs, or lift the low bass, with a minimum of side effects. We also put the device to good use when dubbing tape recordings that were originally of less-than-distinquished quality. Although it could not perform the sonic equivalent of converting a sow's ear into a silk purse, it certainly made poor recordings tolerable and fair recordings quite good.

We can heartily recommend the BSR-Metrotec FEW-1 to anyone plagued by annoying system response irregularities that are not amenable to correction by ordinary tone controls. In addition to its effective operation, it is reassuring to know that this little box has far less distortion than almost any amplifier one is likely to use with it.

For more information, circle 106 on reader service card.

---

**Technics SL-1100A Record Player**

Technically controlled direct-drive turntable with a new tone arm, mounted on an unusual cast-aluminum base. Four resilient feet support the entire assembly, providing acoustic isolation. The feet are individually adjustable for leveling the unit.

The motor armature of the SL-1100A turns at 33⅓ or 45 rpm, and the 4.4-pound cast-aluminum platter with its ribbed rubber mat rests directly on the rotor (the motor shaft is the record spindle). The twenty-pole d.c. motor is controlled by an electronic feedback system that maintains the proper speed over a wide range of line voltages

(Continued on page 40)
Lend us your ears and we’ll give you a TDK C-60SD Super Dynamic Hi Output Cassette Tape FREE!

You’ve been reading a lot about cassette noise reduction systems lately. At JVC, we think we’ve developed the finest, most advanced system available — ANRS (Automatic Noise Reduction System). It’s the ultimate answer to crisp, clean “reel-to-reel” reproduction. Listen to the JVC 1667 cassette deck. Look at these outstanding features: 2 studio-type VU meters, accurate enough to be used for studio recording... 3 digit counter with a memory... tape selector switch, for either chrome or normal tapes... long life cronios heads... hysteresis synchronous motor to insure accurate rotation, reducing wow & flutter to 0.13% RMS... an automatic eject system with photoelectric cell... automatic eject... 100% solid state construction... precision slide controls... push button function control panel... frequency response of 30-19,000 Hz... and more!

Hearing is believing! Prove it to yourself! Listen to the JVC 1667 Cassette Deck... and just for that we’ll give you a FREE TDK C-60SD Super Dynamic Hi Output Tape. For the name and address of your nearest participating JVC Dealer, call this toll free number, 800-243-6000. In Connecticut call 1-(800) 862-6500, or write JVC America, Inc., 50-35B 56th Road, Maspeth, N.Y. 11378.

Call today. Offer ends July 15th.
and has exceptionally low wow, flutter, and rumble. Vernier speed adjustments on the motorboard vary each speed over a nominal \( \pm 5 \) per cent range.

The effective turntable diameter is 117/8 inches, but a stroboscope ring with raised "dots," which is part of the platter, gives it an overall diameter of almost 14 inches. Separate markings are provided for 50- and 60-Hz power sources (the turntable speed is independent of line frequency as well as voltage). A neon stroboscope lamp plugs into a receptacle next to the turntable, and pressing a button on it allows the stroboscope pattern to be viewed while adjusting the speed. The power switch of the SL-1100A is a short lever that also selects the operating speed. A small red light glows when power is applied, but the turntable does not rotate until a separate feather-touch snap-action START button is touched. A similar button stops the turntable. The tone arm is mounted on a removable metal plate so that other arms can be installed if desired. The arm counterweight is adjusted by a knob on its side. When the arm is balanced, the knob is pulled out slightly, which causes the tracking-force scale (also operated by the counterweight knob) to snap to a zero reading. The desired tracking force is then dialed in, with the scale reading from 0 to 5 grams in 0.5-gram intervals.

Above the arm pivots is a small anti-skating dial, calibrated to match the tracking-force dial. A damped cueing platform under the arm raises and lowers it smoothly under the control of a lever at the front right of the motorboard. In the rear of the base are the two phono-output jacks and two ground binding posts (for the chassis and arm wiring), as well as an a.c. convenience outlet. A 41/2-foot low-capacitance output cable is supplied; other lengths can be ordered if desired.

The SL-1100A measures about 20 inches wide, 153/8 inches deep, and 74 inches high; it weighs just under 29 pounds including its plastic cover. The SL-1100A record player, with dust cover, is $329.95. An optional walnut wood skirt (Model SH-11-B-1) is available for $19.95.

Laboratory Measurements. The only obvious difference between the turntable of the SL-1100A and the SP-10 turntable tested in September 1971 is the former's slightly lighter platter. The measured performance of the two was almost identical and places both among the elite of turntables. The SL-1100A's unweighted rumble was \(-43\) dB (lateral plus vertical), and \(-44\) dB in the lateral plane. With RRLL weighting for relative audibility, the rumble was \(-58\) dB, which is the lowest, by a small margin, we have measured to date. The wow and flutter were 0.03 and 0.04 per cent at 331/2 rpm, and each was 0.04 per cent at 45 rpm.

The range of speed adjustment was \(+7.4, -5.3\) per cent at 331/2 rpm, and \(+6.3, -4.6\) per cent at 45 rpm. A line-voltage change from 100 to 135 volts produced no measurable speed change, and a drop to 95 volts increased the speed by a negligible 0.4 per cent. When starting, the turntable platter reached its full speed in about one second, or one-half revolution.

The arm, which was quite easy to balance, had a very accurate stylus-force dial whose error did not exceed 0.1 gram at any setting from 0.5 to 5 grams. The 91/4-inch arm length (about an inch longer than the arms of most top-quality automatic turntables) resulted in an almost unmeasurable lateral tracking-angle error, which did not, in any case, exceed 0.33 degree per inch for record radii from 2 to 6 inches.

The settings of the anti-skating dial appeared to be correct, whether judged by the criterion of equal distortion in both channels (the correct way) or by the simpler and more common method of adjusting for stationary arm position when the pickup is placed on a rotating blank disc. Since the extra-long tone arm of the Technics SL-1100A requires a relatively small offset angle, skating forces are somewhat lower than those found on most record-playing systems. This makes the setting of the proper corrective force on this particular machine an essentially noncritical procedure.

The cueing lift action was quite slow, requiring three seconds to lift the pickup from the record and two seconds to lower it. However, intermediate positions of the cueing lever could be used to just clear the record and then lower the pickup with a minimum of delay. There was no outward drift of the pickup during descent.

The SL-1100A was designed with the requirements of the quadraphonic CD-4 discrete-disc system in mind. CD-4 cartridges require very low cable capacitance to maintain their response to beyond 40,000 Hertz, and most record-player and arm cables have excessive capacitance for this application. The 41/2-foot cable of the SL-1100A had only 52 picofarads (pF) capacitance (values of 20 to 30 pF per foot are common), and the cable capacitance of the entire unit, including the internal arm wiring, was only 165 pF.

Comment. The SL-1100A is one of the most beautifully finished audio products we have seen. It has an aura of precision workmanship that is more than skin deep. Except for its rather leisurely arm lift and descent, we found absolutely nothing to criticize in its performance.

The plastic cover is not hinged, but simply rests on the turntable top and must be lifted off to use the machine. The relatively firm mounting feet complement the considerable mass of the SL-1100A, so that its arm seems to be immune not only to acoustic feedback, but to all normal handling and control operations. This represents an improvement over the former's.
Now you can create your own 4-channel world with the incomparable Sansui Vario Matrix QRX series of 4-channel receivers. Sansui's sound controls enable you to mix your own 4-channel sound according to your own musical preferences in ways you have never experienced before. Dollar for dollar, ear for ear, the Vario Matrix QRX series gives you greater power, better separation and superior, truly musical 4-channel reproduction from all sound sources: records, tapes, FM, 3-track cartridges or cassettes. The unique Sansui QS Vario Matrix gives you richer, fuller 4-channel sound from CS (Regular Matrix) as well as EQ (Varios Matrix) sources, plus discrete demodulated sources. And with its superior CS synthesizing section, it creates thrilling 4-channel sound from conventional stereo. Get a demonstration today from a branch or Sansui dealer everywhere.

*Sansui QRX Vario Matrix: QRX-6500, QRX-5500, QRX-3300

SANSUI ELECTRONICS CORP.
Woodside, New York 11377 • Gardena, California 90247
ELECTRONIC DISTRIBUTORS (Canada) Vancouver B.C.
SANSUI ELECTRIC CO., LTD., Tokyo, Japan • Sansui Audio Europe S.A., Antwerp, Belgium
The introduction some years ago of the Shure V-15 phono cartridge represented a distinct advance in the then-current state of the art. Subsequently, a series of further improvements resulted in the redesigned V-15 Type II, followed by the V-15 Type II (Improved). This evolutionary process, which is almost inevitable when the initial concept and execution of a product design are fundamentally sound, can continue almost indefinitely. And thus we have Shure’s new top-of-the-line phono cartridge, the recently announced V-15 Type III.

Unlike its predecessor, whose improved stylus assembly could be installed in the older V-15 Type II cartridge body to make it an “Improved” version, the V-15 Type III is an all-new design. Externally, it closely resembles the earlier V-15 models, including the swing-away stylus guard and black-on-chrome body. There have been two major areas of improvement: “trackability” (the ability to play very high recorded velocities at a low tracking force over the full frequency range of modern recordings), and a virtually flat frequency response.

Shure has long emphasized the importance of tracking ability (they coined the term “trackability,” in fact). The V-15 Type II was rivaled in that respect by few cartridges and surpassed by none. Nevertheless, a study by Shure of a number of commercial recordings indicated that their maximum velocities, particularly at the higher frequencies, exceeded the capabilities of the Type II, especially at its minimum tracking force of 0.75 gram. To improve this situation, the effective stylus mass of the Type III was reduced about 25 percent, from 0.45 to 0.33 milligram. This raised the high-frequency resonance from 20,000 to 23,000 Hz, thereby significantly reducing tracking problems in the upper audio range. At 0.75 gram, the rated tracking ability of the Type III is about 2 dB better than that of the Type II at middle and high frequencies, and at its maximum force the improvement is more than 3 dB.

The stylus compliance of the Type III was unchanged, so that its low-frequency resonance (when installed in one of the better tone arms) remains in the “safe” region of 7 to 15 Hz. Low-frequency tracking is therefore essentially the same as that of the previous V-15, which is to say more than adequate for virtually any recording. If the new lower-mass stylus assembly had been fitted to the body of the previous V-15, output voltage would have been reduced. Therefore, a new magnetic signal-generating system was developed, using laminated pole pieces for higher conversion efficiency. The output of the Type III is consequently identical to that of the Type II: its rated tracking force is from 0.75 to 1.25 grams.

The frequency-response curve of the V-15 Type II (Improved) typically had a slight “saddle” shape, with a reduction in output of about 2 dB in the 7,000 to 12,000-Hz range. Although this was hardly objectionable in view of the other virtues of the cartridge, Shure set about to eliminate it in the new model, whose response is rated nearly as flat as that of a good amplifier—within ±1 dB from 30 to 8,000 Hz, and overall an excellent ±3 dB from 20 to 20,000 Hz.

A study of the V-15 Type III with a 0.2 x 0.7-mil elliptical stylus is $72.50. It is also available as the V-15 Type III-G, with a 0.6-mil conical stylus. For those with 78-rpm record collections, the VN78E stylus, with a 2.5 x 5-mil elliptical diamond that tracks from 1.5 to 3 grams, is also available. The Shure V-15 Type III is supplied with a soft brush for cleaning the stylus.

Laboratory Measurements. The Shure V-15 Type III tracked our Cook 60 (low-frequency) and Fairchild 101 (middle-frequency) test records at its minimum rated force of 0.75 gram in an Empire 990 arm. Like other (Continued on page 44)
But she’s no wallflower when it comes to speaking out. Totally horn loaded like the KLIPSCHORN corner horn loudspeaker, the BELLE KLIPSCH is a wall type speaker with the same flat response, the same quality of reproduction, and the same freedom from distortion. Its three horns, because of their high efficiency, can take in their stride anything from a murmur to the loudest rock or classical crescendo. They don’t have to labor or churn the air to achieve full range.

Basically, the BELLE KLIPSCH is a domesticated version of Klipsch theater speakers installed in Radio City Music Hall. Only it’s finished for home use.

Use it as a primary speaker or in conjunction with other Klipsch speakers in multi-speaker systems. They are all compatible. This coupon will bring you valuable information about Klipsch loudspeakers.
Shure cartridges, it produced an essentially undistorted waveform from the 30 centimeters per second (cm/sec), 1,000-Hz tones of the latter record. Most other cartridges, if they are able to track it at all, produce a clipped output from this disc. The output voltage was 3.8 millivolts at 3.54 cm/sec from the CBS STR 100 record. Hum shielding was better than average, and the 1,000-Hz square-wave response showed only a single moderate overshoot in the waveform.

Like its predecessors, the V-15 Type III should be used with a relatively high capacitive load (as provided by the connecting cables and preamplifier input) for flattest response. However, the cartridge is less sensitive to capacitive loading than the Type II (Improved). We checked it with loads of 350 and 600 picofarads (pF), and the latter increased the output by about 1 dB between 4,000 and 9,000 Hz, and reduced it by 2 to 3 dB above 10,000 Hz. Flattest overall response was measured with a 600-pF load, with no more than a ±1.25-dB variation (including the recorded response variation of the STR 100 record) up to 20,000 Hz. Channel separation was notably uniform, exceeding 30 dB at all frequencies from 500 to almost 8,000 Hz, and falling to a still excellent 15 dB between 10,000 and 20,000 Hz. We measured the distortion of the Type III with the Shure TTR-103 test record, which provides separate tests for tracking ability in the lower-, mid-, and high-frequency ranges, at velocities up to 30 or 40 cm/sec. Allowing for variations in test equipment and records, our results were comparable to those claimed by Shure. A quick recheck of a couple of other top-quality cartridges confirmed that the Type III can claim top honors in tracking ability.

We also checked the IM (intermodulation) distortion with our older 78-rpm RCA 12-5-39 test record. It measured under 2 per cent (typically about 1 per cent) up to 15 cm/sec, but warp and eccentricity in the test disc prevented measurement at higher velocities when using the 0.75-gram minimum tracking force. On the other hand, with the 1.25-gram maximum recommended force, the IM was far lower over the full range of the record than anything we have previously measured with any cartridge. Typically only about 0.5 per cent, it was still a very low 1.5 per cent at the maximum velocity of 27.1 cm/sec. The chances are that if you hear distortion from your records with the V-15 Type III, it is coming from the record itself. As Shure puts it, "anything II could do, III can do better."

We have been using the Shure "Audio Obstacle Course" record as a useful though imprecise measure of tracking ability for some time. Since the Type III can hurdle its obstacles with ease, Shure has issued a new test disc called "Audio Obstacle Course — Era III," which is an even more severe test of tracking ability. A copy of the disc is available at no charge to each purchaser of a V-15 Type III.

Operating at 0.75 gram, the V-15 Type III played the "Era III" record without strain except on the highest level of the vocal-sibilant test band. We heard a trace of "sandpaper" quality on this that was not eliminated even at a 1.25-gram force. It may have actually been in the record, but, at any rate, no other cartridge we tried would play it either.

- Comment. As might be supposed, it takes an extraordinary record to reveal the full potential of this cartridge. Having played our most demanding discs with it, we can confirm that the Type III has no difficulty tracking any of them at a 0.75-gram force, and that its sound is as neutral and uncolored as can be desired.

For more information, circle 108 on reader service card.

IF CHARLIE PARKER HAD BEEN ABLE TO PLAY FIVE SAXOPHONES AT ONCE, IN HARMONY, HE MIGHT HAVE BEEN KNOWN AS SUPERSAX.

SUPERSAX PLAYS BIRD
An Exciting New Album Concept

"Supersax Plays Bird, as much as any album I have heard in recent years, is a thoroughgoing labor of love."
—Leonard Feather

( Author of From Satchmo to Miles, Stein & Day)

you're whistling in the dark.

If you think that heart attack and stroke hit only the other fellow's family.

Help your Heart... Help your Heart Fund 😊
KENWOOD brings the luxury of audiophile sound within range of the most modest budget with this pair of handsome components. Newly engineered to incorporate the most advanced circuitry, tough new materials and remarkable new features, this high-performing pair is available together or individually.

**KT-4005 AM/FM-STEREO TUNER:**
Excellent broadcast quality and especially exciting FM-Stereo characterize the KT-4005. With KENWOOD's exclusive DSD Circuitry and a newly designed block filter, stereo separation is effectively improved (35 dB @ 100-8k Hz). High-grade silicon transistors insure maximum sensitivity (1.9 μV); and the excellent FM IF Stage delivers better than 60 dB selectivity and a capture ratio of 2.0 dB, enabling clear reception of FM stations without interference from adjacent frequencies.

**KA-4004 DIRECT COUPLING, 95-WATT (HF) STEREO AMPLIFIER:**
Ample power, sophisticated controls, and high-performance characteristics make the KA-4004 an excellent choice for the heart of any stereo system. Direct coupling circuitry assures flat frequency response, low distortion and high damping throughout the audible spectrum. An exclusive KENViOOD dual protection circuit prevents damage to speakers or transistors from transient power surges; and advanced new PNP can-type transistors assure low-noise performance and circuit reliability. Terminal for two PHONES, two ADC, two TAPE DECKS, TUNER and two sets of SPEAKERS offer tremendous flexibility.

**SPECIFICATIONS:**
- Continuous Power Output: 18 watts/channel, both channels driven into 8 ohms at any frequency from 50-20k Hz
- Frequency Response: 20-20k Hz
- Power Bandwidth: 10-50k Hz

For complete specifications write...
15777 So. Broadway, Gardena, Calif. 90248
72-02 Fifty-first Ave., Woodside, N.Y. 11377

CIRCLE NO. 23 ON READER SERVICE CARD
THE years between 1926 and 1931 were very active ones for Béla Bartók, for it was during that period that he composed the First and Second Piano Concertos, the two Rhapsodies for Violin and Orchestra, the Third and Fourth String Quartets, the Piano Sonata, and the start of his didactic Mikrokosmos, books of graded pieces for piano solo. But, with the notable exception of the Fifth String Quartet of 1934, Bartók composed very little of consequence during the next five years. Then, in 1936, a commission from the Swiss conductor Paul Sacher started Bartók on another, longer creative period. From then until his death in New York nine years later, the composer produced one masterly score after another, even in the very last years when his body was ravaged by the leukemia that ultimately killed him. It is the music of these final nine years, by and large, that has made Bartók one of the most frequently performed of all twentieth-century composers.

Certainly one of the cornerstones of the Bartók catalog is the Music for Strings, Percussion, and Celesta, the work that resulted from the 1936 Sacher commission. Bartók used the cumbersome designation as a working title while he was writing; when the score was completed, and it came time to put a name to it, he decided to let it stand. Sacher conducted its first performance in January 1937 in Basel, and before the year was out it was introduced in this country by the New York Philharmonic-Symphony Orchestra conducted by John Barbirolli.

In the score, Bartók directs that there be two groups of strings, deployed to the left and right of the conductor, with the percussion players ranged in two clusters between them and the double basses strung out along the rear of the stage. The two string bodies are merged in the first movement, but thereafter they are most often treated as separate but complementary units. In his invaluable book, The Life and Music of Béla Bartók (1953), Halsey Stevens characterizes Bartók’s Music for Strings, Percussion, and Celesta as “one of the most intensively organized of all his compositions; the subject of its opening fugue generates the entire work, and yet it is at the same time so spontaneous and so communicative that only the rare listener is likely to be aware of its complexities.” The first movement, Andante tranquillo, is a questioning, mysterious section that rises to an impassioned climax and then subsides again into mystery. The second movement, Allegro, is a rhythmically vigorous and energetic section; the third movement, Adagio, is hushed and atmospheric “night music”; and the last movement, Allegro molto, is a headlong, Hungarian-flavored rondo with variations.

Among the baker’s dozen recordings of the music currently available, four seem to me to be unusually satisfying: Bernstein’s (Columbia MS 6956), Boulez’s (Columbia MS 7206), Kubelik’s (included in Mercury MG 3-4501, a three-disc mono set), and Reiner’s (RCA Victrola VICS 1620). As might be expected, Bernstein’s is the most passionate of the lot; there are some moments of less than perfect ensemble in the playing, but the force and excitement of his conducting are irresistible to me. The Boulez recording is one of that conductor’s most consistently satisfying performances of anything in his repertoire; to the well-known Boulez virtues of clarity and precision are added a lively dynamism and spontaneity—and his recording team also makes most imaginative use of the stereo effects built into the score. Kubelik’s marvelously impulsive reading goes back to his very first recording sessions as conductor of the Chicago Symphony Orchestra; its sound was a miracle of recording technology in 1951, and it is still remarkably vivid today in this remastered re-release. And Reiner’s recording, also with the Chicago Symphony Orchestra, presents a superbly lucid and organized performance with sonics from the early stereo days that are still quite impressive. Moreover, Reiner’s version is now available on the budget-price RCA Victrola label.

Unfortunately, none of these four versions exists in either the reel-to-reel or cassette medium. Tape and cassette collectors will have to content themselves with the Haitink-Amsterdam Concertgebouw Orchestra performance (Philips 5015, reel-to-reel; 7300 017, cassette), which is, I am afraid, a rather prim and proper approach to a score that calls for fiery abandon.

* Mr. Bookspan’s 1972 UPDATING OF THE BASIC REPERTOIRE is now available in pamphlet form. Send 25¢ to Susan Larabee, Stereo Review, 1 Park Avenue, New York, N.Y. 10016 for your copy. *
Incredible as it may seem, six years ago only the most avid followers of authentic sound reproduction were familiar with the Pioneer name. Yet, Pioneer's reputation for quality craftsmanship has been 35 years in the making. And it's continually being enhanced with each new component introduced. Case in point. Pioneer's outstanding AM-FM stereo receivers. They're the superb result of everything we've learned about sound and quality sound reproduction.

Reliability through exhaustive quality control.

Pioneer builds each receiver as though it was one-of-a-kind. To begin with, we produce virtually every part that goes into our receivers on our own production lines. So we know we're putting in the best there is. Until it's a completed unit, each receiver is continuously checked and inspected every step along the way. (A receiver in production travels on the average of twice the length of a football field. You can imagine how many quality checks it undergoes.) Still, that's not where our quality control stops. Because each receiver is then subjected to another rigid round of inspection before it's shipped to your Pioneer dealer. As a result, the Pioneer receiver that ends up in your home is as trouble-free as a trouble-free warranty on parts and labor.

All the versatility you need — plus.

Pioneer designers are people-oriented. You'll appreciate this when you see that each receiver has more than a full complement of connections for every music source available: records, tape, FM, microphone, and 4-channel. You can do your own tape-to-tape duplicating and even make listening tests of different phono cartridges and speaker systems.

Easy-to-use features increase listening enjoyment.

All four receivers share many basic features for simplified operation, such as loudness contour, FM muting, click-stop tone controls, mode lights, signal strength meters, and a super wide FM dial scale. With Pioneer's wide variety of models to choose from, you're bound to find just what you're looking for in the way of sophistication and refinements.

Unanimous acclaim from the experts.

Stereo Review: "Pioneer's moderately priced SX-727 has a degree of operating flexibility and electrical performance previously found only in some of the most expensive receivers... The array of operating features is impressive... in its flexibility and in many areas of its measured performance it is somewhat better than much of the competition at its price level."

Audio: "We find the SX-727 to be a rugged, reliable instrument that certainly represents state-of-the-art receiver technology in its design and performance."

Hi-Fi Stereo Buyers' Guide: "This (SX-828) excellent performer features full power output at all frequencies... excellent reception of weak FM signals... selectivity was excellent."

High Fidelity: "... Solid quality... Pioneer has avoided a make-do approach in the SX-626; we wish we could say the same for all under $300 receivers."

Stereo Review: "... We were especially impressed by the solidity and precise 'feel' of the SX-626's controls. Clearly, nothing has been skimmed in the mechanical design and construction of this receiver. It is a joy to use, a very good value in every respect."

A Pioneer receiver costs less than you'd imagined.

Normally you'd expect to pay a lot more for such quality, performance and features. But not at Pioneer. We believe sensible pricing goes hand in hand with craftsmanship. Let your capable Pioneer hi-fi dealer give you a complete comparison demonstration. It's the only way to find the best in high fidelity and the best high fidelity for you.

SX-828 — $469.95; SX-727 — $399.95; SX-626 — $329.95; SX-525 — $259.95. Prices include walnut cabinet. U.S. Pioneer Electronics Corp. 178 Commerce Rd., Carlstadt, New Jersey 07072. PIONEER when you want something better.
DAR OF CLASSICAL COMPOSERS

★ RENAISSANCE  △ CLASSIC  ○ LATE ROMANTIC
□ BAROQUE  ○ ROMANTIC  ★ IMPRESSIONISTIC
□ ROCOCO  △ NEO-CLASSIC  ◊ MODERN

1523-1594)
1602-1623)
1546-1618)
1611-1625)
Corley (c. 1549-1611)

0 Pier Francesco Cavalli (1602-1676)
0 Jean-Baptiste Lully (1632-1687)

0 Dietrich Buxtehude (c. 1637-1707)
0 Marc Antoine Charpentier (1624-1701)

0 Peter Vincent Sweelinck (1562-1621)
0 Hendrick van Biber (1641-1704)

0 Girolamo Frescobaldi (1583-1643)
0 Marc Antoine Charpentier (1624-1701)

0 Henry Purcell (c. 1659-1695)
0 André Campra (1660-1744)

0 Johann Joseph Fux (1660-1741)
0 François Couperin (1668-1733)

0 Antonio Vivaldi (1678-1741)
0 Georg Philipp Telemann (1681-1758)

0 Jean Philippe Rameau (1683-1768)
0 Johann Sebastian Bach (1685-1750)

0 George Frideric Handel (1685-1759)
0 Domenico Scarlatti (1685-1757)

0 Giuseppe Tartini (1692-1770)
0 William Boyce (1710-1779)
0 Giovanni Battista Pergolesi (1710-1736)
0 Carl Philipp Emanuel Bach (1719-1788)

△ Christoph Willibald von Gluck (1712-1787)
△ Franz Josef Haydn (1732-1809)
0 Johann Christian Bach (1735-1809)
△ Luigi Boccherini (1743)
△ Wolfgang Amadeus Mozart (1756-1791)
△ Luís de Camões (1524-1580)

1582 GREGORIAN CALENDAR INTRODUCED
1665-66 LONDON PLAGUE AND FIRE
1729 JOHN GAY'S REGGAR'S OPERA PRODUCED
and you'll hear the inevitable

in high fidelity the

CRAFTSMANSHIP  RELIABILITY
VERSATILITY  VALUE
CRITICS' REVIEWS  SPECS
WARRANTY  SERVICE
DEALER RECOMMENDATION
ILL reach conclusion...

The best is Pioneer.
A SELECTIVE CALENDAR OF CLASSICAL COMPOSERS FROM THE YEAR 1400 TO THE PRESENT - PREPARED FOR Stereo Review
BY JAMES GOODFRIEND
Revised 1973
Guide: Introduction to the Musical Calendar

Nonetheless, allowing that the calendar is not a substitute for Grove's Dictionary of Music and Musicians, nor for a college course in music history, it has a number of very practical uses. It facilitates comparisons—of composers and their styles with one another, with the historical periods in which they worked, and with certain historical events outside the field of music—and in so doing offers an overall perspective useful to any explorer of music. Second, it shows (by overlapping colors) that periods blend into one another more or less gradually, that individual composers may anticipate a style or an aesthetic view, or may lag behind one; that change may come to one country earlier than to another (Italy, for centuries, was years in advance of the remainder of Europe), or may not come at all (Impressionism never took hold in Germanic countries).

The Calendar, then, offers to the beginner a simplified guide to the intricacies of music history, to the intermediate an opportunity to place his knowledge in perspective, and to the knowledgeable a handy tool for reference and even, perhaps, a few factual surprises. As an adjunct, the major stylistic periods are briefly—and simply—defined below.

—James Goodfriend
Music Editor
THE MUSICAL STYLES OF THE ROMANTIC PERIOD

A persistent and pervasive duality may or may not be the natural climate of the human psyche, but the concept was brought to its intellectual apogee in the arts (including music) of the Romantic era, and it continues to affect our thinking and responses today.

By Eric Salzman

This is the fifth in a continuing series of articles on the historical styles of music from the Renaissance to the present day. The series began with Igor Kipnis’ analysis of Music of the Baroque (December 1966), and continued with Music of the Rococo (November 1967) and the Viennese Classical Era (July 1968), both by H. C. Robbins Landon, and “Modern” Music: the First Half-Century (October 1970) by Eric Salzman. The present article explores the styles of the Romantic period proper—distinguishing it from the late- or post-Romantic, which will be covered in a separate article—placing it, as well, in the context of the larger musical movement that embraced both Classical and Romantic styles.

These articles have been designed to expand upon the necessarily limited information offered by our Calendar of Classical Composers, which was originally published in the April 1966 issue. We are republishing the Calendar in this issue because, although it has long been out of print, we still get many requests for it. Too, we realize that we have acquired many new friends in the interim who might find the Calendar useful. And finally, it gives us an opportunity to make this handy reference tool available again to those readers who may have worn out their copies of the old one. Additional copies of the Calendar (tube-rolled and suitable for framing) are also available. Send 25¢ in coin to: Classical Calendar, Stereo Review, 1 Park Avenue, New York, N. Y. 10016.

—James Goodfriend, Music Editor

The musical age in which we live is a late phase, possibly transitional, of the period that began at the end of the eighteenth century. Romantic art, in the larger sense, is the first “modern” art, the first art of “our” time.

This should not be, upon reflection, as surprising as it at first may sound. Books on “modern” history and “modern” art always used to begin with the French Revolution and the painter David. This is also the period of what is still the standard musical repertoire: nearly all of our basic musical institutions, forms, and media—the concert, the recital, the symphony orchestra, grand opera, chamber music—came into being at this time and, in spite of radio, recordings, and the impact of pop, these are still the touchstones of musical performance. The modern sense of the terms sonata, rondo, symphony, and concerto also dates from this period. Our instruments came into common use or achieved their definitive modern format at this time. Key systems were developed for the winds and even the old string instruments were extensively remodeled. The codification of music theory took place as well, along with the establishment of the modern conservatory. The piano became the dominant social instrument, and art music became an adornment of the rising middle class.

The notion of “art for art’s sake” became widespread, and music came to be regarded as the highest and purest of the arts. the central form of expression of the age; yet, paradoxically, composers tried to make music more literary, more visual, more dramatic. Music became separated from the court, municipal, church, and even theatrical functions with which it had always been firmly connected, and the work of art came to be prized for its own sake; yet, ironically, the composer’s score, more and more precise in all its details, came to be regarded as the work of art itself, a Platonic ideal of which actual realizations in sound were only approximations. The “liberation” of music meant the “liberation” of the artist and his elevation to the status of a culture hero: it also meant poverty and alienation for the composer who had no marketable merchandise. The virtuoso performer and the virtuoso composer thus appeared, and so did the virtuoso listener. Aesthetics, musicology, and music...
appreciation took their modern form. Musical "culture" came to depend on the knowledgeable listener, on the creation of a music public and a musical world dedicated to the sustenance of a rather rarefied art addressed to adepts, to an elite inner circle. Music, in part cut off from its roots, therefore had to flourish as a free entity, the purest and most perfect of the arts and the one best fitted to express its age.

Now, all of this is still our legacy and, though we may be in the middle of a transition to something new, there can be little doubt that the institutions and attitudes of Romanticism are still very much with us. Much of the way we compose, perform, hear, and even think about music today is based on assumptions that, far from being great universal truths, are direct ideological inheritances, now of arguable utility, from the period between the French Revolution and the revolutions of 1848.

Note that I have chosen political landmarks and that I have said nothing about musical "style" in the usual sense. Note too that a generous chunk of what we call "Classicism" is also included in this definition of "Romanticism." The inhabitants of the world of music are only too apt to regard the history of music as an insulated, self-contained succession of "styles"—the notion itself comes from the nineteenth century—and end up trapped in their own pigeonholes.

AFTER the French Revolution and Napoleon, the old aristocracy was replaced by a new and powerful bourgeoisie whose wealth was based not on social status and landholdings, but on commerce and industry. The cities, centers of trade and of the financial institutions, inevitably became the culture centers as well. Instead of assuming the diffused pattern of earlier culture, the major movements of fashion and style spread out from the big centers. Industrial development, spurred by the new availability of investment capital, got up a full head of steam and had a tremendous effect on music. Perfected, standardized instruments, such as the piano and those of the "modern" orchestra, became uniform from place to place: composers were thus able to write for a European market with reasonable expectations of standardization. At the same time, specialization, originally a development of industrial technology, spread throughout the society and also had great influence on the arts. The role of the composer became more and more distinct from that of the performer, and composers even became specialists in piano or symphonic music, in songs or in opera. Similarly, the notion of individual and national "styles" became important. The nation-state, with some measure of parliamentary or public participation, became the basic political unit, and national consciousness was evoked and awakened. Ideas of individuality and freedom and a new hierarchy of wealth and talent spread all over Europe in the wake of the French Revolution and Napoleon. The return of the old regimes after Napoleon's downfall really marked the consolidation of the position and power of the new middle class.

In a real sense, Romantic art is schizophrenic: it springs from a number of dualities. "Two souls
dwell within my breast,” says Goethe’s Faust, and the age is surely full of paradoxes, contradictions, and oppositions. Even great historical philosophies like those of Hegel and Marx were based on such dualities. Composers too, for the first time, divided their efforts and artistic personalities. Beethoven wrote virtuoso public music and also intimate, private pieces. Schumann consciously divided his personality into two, which he named Eusebius and Florestan. These dualities take a number of forms: public-private, heart-head, intellect-emotion, Classicism-Romanticism, and others. Classicism or neo-Classicism (we are talking about the original meaning of these terms borrowed from the visual arts and not their rather misleading musical application) can even be usefully considered as a phase of Romanticism—and not always an antecedent phase. It is not really helpful to argue whether Goethe or Ingres or Beethoven or Schubert were Classicists or Romanticists; they were clearly both, and, given the paradoxes of Romantic style, there is no contradiction in this at all. In architecture the same designer often turned out neo-Classical and Gothic Revival buildings; both were, in effect, Romantic interpretations of historical styles. There are many pertinent musical examples. Mendelssohn was more strict about his use of sonata form than Haydn, and both Schumann and Mendelssohn parade their Baroque contrapuntal skills, at times almost in defiance of the very expressivity they are supposed to be espousing. This is a musical neo-Classicism.

The true dividing line is between the Enlightenment and the Rococo on the one side and neo-Classicism/Romanticism on the other. The difference is one of intent; the early eighteenth century prized naturalness, directness of expression, “imitation” of reality, faithfulness to “Nature”—in reality, a highly artful and stylized simplicity. This is the art of Rousseau, Watteau, Pergolesi, Voltaire, Gluck, Scarlatti, Boccherini, Haydn. Mozart is almost a transitional figure; his contemporaries thought him overly introverted, complex, and “Germanic,” while the early Romantics adored him. The late eighteenth century accepted the theories of naturalism and imitation but interpreted them in an entirely different way: as the expression of feeling. The late-Classical/early-Romantic period prized individuality and sensibility, and from this grew the new awareness of individual style as a touchstone. The earlier artist assumed a community of interest and strove to express it simply and artfully. The later artist expressed his inner self. He assumed not one public but several. Don Giovanni was written for the connoisseurs, the Italian opera buffs; The Magic Flute is an operetta or musical comedy in the vernacular. The fatal rift between Kultur and Pop had already begun. Schumann consciously identified the Philistines—the very term is his—and excluded them from his Davidsbündler; his difficult, poetic works are for the knowing, the rare few who can understand and feel.

One important aspect of the new stylistic consciousness was the rediscovery of the past. Music, in spite of its reputation, is, in general, the least universal of the arts and the one with the shortest memory—or at least it was before the invention of recording. Although eventually the Romantics were able to extend their grasp as far back as the late Renaissance (the rediscovery of Palestrina took place during the nineteenth century), the musical past that had real meaning for the period was the high Baroque. Through the good works of a Viennese manuscript collector, Haydn and Mozart came to know Bach Sr. and Handel. Beethoven knew at least the “Forty-eight,” and, of course, Mendelssohn revived the St. Matthew Passion and with it the gospel according to St. Johann. For these composers, the discovery of the high Baroque was equivalent to the rediscovery of Gothic and early Renaissance art in the visual arts (the misleading coupling of Bach with Gothic cathedrals, still prevalent, dates from this time!). One specific technical result was the reintroduction of counterpoint and voice-leading as a major principle in German Romantic music. Another was the use of expressive chromaticism, dissonance, and secondary harmony. Baroque music shares with the Romantic a certain care for specificity and expression. In the canons of the eighteenth century, Art must imitate Nature. Music, the one art that has limited external potential for imitation, must therefore mirror the internal world of the soul.

The typically Romantic notions of freedom, individuality, and the liberation of art emanate from France, the home of the Enlightenment and the French Revolution. On the other hand, sensibility, inwardness, and soul, difficulty, alienation, and the divisibility of the public are Germanic (and Anglo-Saxon) motives rather alien to the Latin temperament and contrary to the spirit of the French Revolution. Throughout much of the period, French music was dominated by the populism pioneered by Rousseau—his opera Le Devin du Village remained genuinely popular throughout the period—and carried forward in the works of composers like Gossec, Grétry, Méhul, and Le Sueur. The Napoleonic period brought an official neo-Classicism or “Empire” style largely created by the resident Ital-
ians Cherubini and Spontini. Cherubini, with official state backing, founded and organized the French Conservatoire and formulated the classical conservatory education, still the basis for traditional musical training in Western civilization. Spontini helped spread the Napoleonic style throughout Europe when he moved to Berlin, a city that actually fostered early Romanticism and turned to neo-Classicism only later! Spontini, like his arch-rival Weber, also experimented with fairy tales and exoticism in his later work.

Musically speaking, the vocabulary of the "Classical," the Empire or neo-Classical, and the early Romantic periods is the same. The driving force of the great tonal system, brought to perfection twice by the high Baroque and the late Rococo/Classical periods, had lost none of its power. The cadence was still the milestone, all the rhythmic, melodic, and harmonic patterns continued to move away from and back toward set goals, and meter, rhythm, phrase, period, and larger form took shape around this very definite sense of musical motion. Thus, out of the simplest tonic-dominant-tonic cadence, grew—in the simplest, most natural, and logical way—all the glories of sonata form and symphony.

All this was accepted without question by post-Classical composers: indeed, they were, as we have noted, sometimes stricter formalists than their predecessors. What changed was the attitude toward the expression of musical ideas. The formulas, the standard transitions, even the progressions themselves could no longer be taken for granted; they had to be constantly re-created. Invention within defined limits was highly prized. Subsidiary chords and inflections took on a new weight. Chromatic or dissonant melodic notes and harmonic patterns appeared not merely as developments but as basic ideas to be used together or separately in order to highlight expressive ideas. Similarly, the subsidiary parts of the forms—transitions, developments, and codas—assumed a new importance, and all the parts became more interconnected. Instead of discrete scenes in aesthetic balance, the process of getting from place to place became important. Symphonies and sonatas, even when not all programmatic, took on the character of picaresque narratives in the Hoffmannesque or Byronesque manner.

Church and symphonic music, no longer bread-and-butter work for composers, receded in importance. Choral works and symphonies were basically prestige forms and were used largely as public display pieces. On the other hand, chamber music held its own, and keyboard music, for both public and private use, became central. The characteristic piano piece and the art song with piano accompaniment came into their own as the appropriate music of the rising middle class and as the perfect vehicles for the expression of sentiment. Music strove toward the condition of poetry just as poetry strove toward the condition of music. Sentiment and feel-
ing were the hallmarks of a noble and poetic nature, and the upper middle class was encouraged to strive for noble sentiment, artistic appreciation, and patronage. The newly liberated artist became dependent on the support of the middle class, and both the best and the worst music of the day was created for the home and the salon.

Nearly all of these elements can be quite clearly identified in the works of both Beethoven and Schubert. Both were concerned with an elevated style, invention, the spinning out of ideas, and even a certain formalism and giant scale; sentiment in the later sense rarely enters in. Both composers—but particularly Beethoven—display a certain individuality, even eccentricity, with sudden shifts and contrasts of light and shade within a bigger flow and unity, plus an infusion of humanistic content. Certain of Beethoven's slow movements, the several sets of piano bagatelles, some of his work with folk material, An die Ferne Geliebte, the first movement of the Ninth Symphony, and many striking and expressive details here and there—though perhaps out of the main tonal flow—relate Beethoven's music more specifically to that of the composers who followed him than to those who preceded him or who were his contemporaries. This is even more true in the case of Schubert, whose very isolation from the larger musical world makes his individuality and proto-Romanticism all the more striking. Schubert's piano music and lieder are in the mainstream of the nineteenth century.

The Empire style outlived the Napoleonic era, but it was no longer a real force. Neo-Classicism was, in itself, a dead end, and it had only one immediate result: the late works of Beethoven, music that is unquestionably of its time but almost without direct influence. Though Berlioz sometimes sounds like Beethoven (and so, surprisingly, does late Verdi), his direct influence is extraordinarily small. Weber was far more influential in the immediate evolution of Romantic music than either Beethoven or Schubert, and it is in the work of the second-rank composers of the period that the transition from Empire to true Romanticism can best be observed. Hummel, who studied with Mozart, anticipates Chopin. Spohr, who made an opera out of Goethe's Faust, wrote a "Historical Symphony" (Symphony No. 6, Op. 116) with successive movements in the Baroque, Classical, Empire, and Romantic styles!

As instrumental music gained ground, the larger abstract forms became more and more the means for the expression of will and personality, the more or less arbitrary manifestation of the composer's new God-like role of "genius." Thus "content" was poured back into the old abstract forms and the old idea of illustrative music was revived in a new guise: the program symphony. The model was, of course, Beethoven's "Pastoral," and all the modern refinements of melodic expression, harmonic color, and orchestral timbre were brought to bear on its expression. The first master of this musical type was Berlioz; his Symphonie Fantastique and Harold in Italy remained influential throughout the century. Infusing symphonic form with literary content did not at first imply a major break with the traditional formal restraints. The program works of the early Romantics followed Beethoven's dictum "more an expression of feeling than painting," and kept to Classical forms to a surprising degree; only later did content begin to alter form.

Many of Mendelssohn's works carry titles, and the musical directions are full of terms such as con fuoco or appassionato. But the poetic impulse is always lyric, and the fire and the passion are always restrained, exquisite, and modulated to elegant and tender bourgeois sensibilities. All these same tendencies are present in Schumann, but they are enriched and intensified far beyond the genteel salon Romanticism of Mendelssohn: sentiment is replaced by deep feeling and passion, elegant figuration turns to passionate coloration, graceful voicing becomes an almost Baroque counterpoint. Classical form is intensified and concentrated by motivic unity and cyclical return.

Both Mendelssohn and Schumann wrote important larger works, including showpiece symphonies, learned sonatas and quartets, concertos, chamber works, and large choral works. But the key expressive media for both composers—and, indeed, for the entire early Romantic period—were the characteristic piano piece and the art song with piano accompaniment. Ironically, the piano is a very good example of the influence of industry on art; it is, in fact, a kind of "art machine" that could be produced in large and standardized quantity, easy to play a little, effective to play a lot. Like the modern phonograph, it was used for musical study, to provide music for dances and soiréees, for entertainment in the home, and for musical communication across barriers of distance and culture. It is not the best of melodic instruments, but it is capable of representing the full harmonic dimensions of a piece of music, and it surpasses most of the other chordal instruments in strength and expressive variety.

The piano played apparently contradictory roles in the Romantic period. On the one hand it was the public display instrument par excellence, the showcase of the new Romantic virtuosity that began with Paganini but quickly became the province of the
The intimate side of Romanticism again comes to the fore in this some-time-after-the-fact representation of Chopin performing at the home of Prince Radziwill in 1829. Much of Chopin's music was meant for such surroundings rather than for the concert hall.

Keyboard showmen—Hummel, Moscheles, Czerny, Cramer, Kalkbrenner, and their progeny—études, variations, fantasias, caprices brillantes, and showy concertos without end. On the other hand, it was the medium of the most intimate kind of lyric expression. This genre, prefigured by the eighteenth-century fantasias of C. P. E. Bach and Mozart, the bagatelles of Beethoven, the nocturnes of John Field, and the impromptus and Moments Musicaux of Schubert, became the most characteristic Romantic type. These genres were not always mutually exclusive. Weber, Mendelssohn, and Chopin wrote both kinds of piano music, and Liszt had both a private and a public style almost his whole life. Schumann, while he opposed virtuoso display for its own sake, still composed several big, showy piano pieces, but whereas Mendelssohn's showy pieces are merely showy and his Songs Without Words are simple, accessible, lyric-sentimental, melody-and-accompaniment pieces, Schumann brought the whole array of keyboard figuration, color, dynamics, articulation, and counterpoint together with lyricism and deep feeling into a poetic unity. Motives, ornaments, counterpoints, figurated harmonies with anticipations and suspensions—creating dissonance not always resolved—chromaticisms, syncopation, and cross-rhythms are all placed at the service of a rich and powerful expression that leaps from the contemplative to the passionate with great force. If one had to find the epicenter of early Romantic music, one might best look for it in the works Robert Schumann wrote from 1830 to 1840, his Opp. 1 to 23, and piano music all.

Unlike most of the instrumental forms, the high-art lied cannot really be traced back much before Schubert, and he had few worthy followers. The many popular songs of his period have not worn well and, except for some of the ballads of Karl Loewe, almost nothing survives. Schumann turned directly from piano music to lieder and in 1840 wrote more than one hundred songs. His songs, the most important after Schubert's, are an almost perfect fusion of piano style with vocal expression. They are the most highly colored of his works, filled with lyricism, folklore, pathos, exoticism, intense feeling, and humor. The harmonic vocabulary, enriched with passing tones, more dissonant chordal structures, and secondary chords, is mature and always used with the greatest subtlety. Schumann rarely failed to find a balance between the melodic sense of the words, the expression of feeling, dramatic or lyric propulsion, and the formal balance of the work. His influence on the lied can be felt from the songs of Robert Franz right through Brahms and on into the twentieth century.

The larger vocal and choral forms played an important part in the development of Romantic style but, beginning with Beethoven, they lost their religious functions and became concert display pieces. Mendelssohn's oratorios are still sometimes performed—and Schumann's ought to be. But the most important non-operatic vocal pieces of the period are by Berlioz. All of his works in this manner—from the Requiem to the pseudo-oratorio L'Enfance
From the dramatic symphonies — really constitute a new genre of dramatic concert music.

Except for the somewhat special institution of the concert hall — a gathering place of connoisseurs and still a somewhat rare thing — most public musical life in the early Romantic era centered on the theater. We have already mentioned Cherubini and Spontini in their roles as founders of grand opéra. Paris was the center of this new kind of spectacle with its full machinery of acts, choruses, settings, historical or exotic subjects, grand choruses, ballets and marches, big orchestrations, bigger opera houses, massive baritone arias, dramatic sopranos, vibrant tone production and projection, colorful costumes, pageants, ensembles, and grand scenes. Oddly enough, almost nothing survives today from this heyday of grand opéra. The overture to Hérold's Zampa occasionally turns up at a pop concert and Halévy's La Juive still occasionally shows signs of life in concert versions. Auber, who set Little Red Riding Hood, Scott's Kenilworth, and La Muette di Portici (probably the only opera ever to spark a revolution) to music, is today mostly a name in the history books. The dominant figure was Giacomo Meyerbeer, a fellow pupil and friend of Weber and a theatrical genius in the Cecil B. De Mille sense. The typical Meyerbeer opera is a conflation of historical subject matter from the libretto factory of Eugène Scribe, the composer's gift for the telling stroke and the catchy tune, and his genius for managing mass spectacle, chorus, ballet, and all. Grand opéra was the dominant high art form of the day, and both Verdi and Wagner had to surmount it to achieve what they achieved.

But there is another operatic history, one that comes from the opera buffa, opéra-comique, and Singspiel of the late eighteenth century. The simple, vernacular operetta with spoken dialogue is often based on the Rousseauian motifs "know thyself," "be natural," and these works are, in their way, criticisms of the decadent, over-civilized West. However, behind this quite apparent moralism lies the simple taste for exotic subjects that characterizes early Romanticism and influences even grand opéra. There were Oriental operettas, fairy tales, medieval settings, and Northern mythology even before 1800. Grétry wrote an Arabian-Nights operetta, another based on the Aucassin and Nicolette story, a Bluebeard, and a Richard, the Lion-Hearted. Mozart's Abduction and Magic Flute belong here, as does the rather aberrant "romantic realism" of Beethoven's Fidelio. And in 1815 the Romantic writer and sometime composer E. T. A. Hoffmann (later himself the subject of an opera, of course) brought out a romantic fairy opera on the subject of Undine. A year later Spohr presented the first of many musical treatments of Goethe's Faust. But the key work in this genre is Weber's Freischütz, composed between 1817 and 1820, the first full expression of German folklore on the stage. Curiously enough, folklore appears here as still another kind of exoticism.

Most of these works are not full-scale operas but opéras-comiques, or Singspielen. Whereas in France the split between the grand and the popular form was, despite the later attempts of Offenbach and Bizet, eventually fatal, Weber was able to reconcile artistic ideals and popular forms. Mystery and magic, and the countryside, and the supernatural are all evoked in these works with the most telling strokes, and the drama is built up in closely knit scenes, not merely dialogues, recitatives, and arias. The spate of German opera in the first half of the century flows from these works. Heinrich August Marschner, who wrote The Vampire, Hans Heiling (a forerunner of Lohengrin), and a version of Scott's Ivanhoe, was a popular figure, and Gustav Albert Lortzing's bourgeois comedies are still performed in Germany. However, German opera could not escape the growing split between high and popular art. By the middle of the century Spohr and Schumann (in his beautiful Genoveva) had produced through-composed dramatic music; Wagner had passed through Parisian grand opéra, and in Tannhäuser and Lohengrin had created the prototypes of the new German grand opera or music drama.

The split between art and pop did not take place in Italy, however, and the Italians remained apart from the Romantic movement to a great extent as well. Italy was neither unified nor industrialized, and it had only a very small middle class. Northern Romanticism did not suit the Italian temperament, and opera, the traditional and still popular form, continued to dominate the country, eventually to the exclusion of every other kind of music. Stylistically, Rossini can be classified with the Empire or neo-Classical composers, particularly in his operas seri. But unlike the sculptor Canova, whose art is highly intellectualized in the service of ideal beauty, or the architect and etcher Piranesi, whose nostalgia for antiquity and ruins carries us from Empire straight into proto-Romanticism, Rossini created for a popular audience, not for connoisseurs with advanced tastes. In his hands, The Barber of Seville, an Enlightenment subject with real social significance, became merely a chance to make fun of the aristocracy. Cinderella was transcribed in purely human terms, the fairy tale qualities totally
removed. Toward the end of his career, Rossini did turn to Romantic subjects, and in William Tell, written for Paris, he actually created a highly successful grand opéra. He spent most of the rest of his life in Paris composing charming salon pieces and vocal music in a fully nineteenth-century style, but, cut off from his popular roots, he never wrote for the stage again.

Donizetti is Romantic principally in his choice of subjects and in his nineteenth-century thud-and-blunder theatricality. In other respects his very direct melody-and-accompaniment style is an outcome of the eighteenth-century aesthetic of simplicity and “natural” expression. Bellini, although in the same tradition, appeared to his contemporaries as a typically Romantic figure. Many of his works have historical and sentimental subjects, and Norma, although nominally Classical, has a tone of languid melancholy whose influence reached even Chopin. Bellini’s genius lay almost entirely in his long, long melodic lines, which float over the simplest of harmonic figurations. The spinning out of long melodies is a Romantic trait, but it is not the whole thing. It is only with the appearance of Verdi toward mid-century that we find a really distinctive and fully developed form of Italian Romanticism—theatrical, intensely humanistic, utterly without the mystical trappings of the North.

It is possible to say that the center of early Romanticism moved at one point from Vienna to Germany. However, there are three important composers, already mentioned, whose work belongs somewhat outside the “mainstream” and whose innovative ideas point toward later developments: the Frenchman Berlioz, the Polish-Parisian Chopin, and the cosmopolite Liszt. Berlioz, an extravagant genius with mercurial temperament, was (and remains) the very prototype of the volcanic, wild-eyed, Romantic artist, throwing himself into the sea, charging at the Academy, marshalling his Herculean forces against the Philistines; there is nothing of the Northern mystic about him. He was, judged by German standards, not a very good melodist or harmonist, but his long, aperiodic melodies are quite typically French, and his harmonic sense is justified by the orchestral voicing. He “invented” the modern art of orchestration and made it an integral part of musical expression. He introduced the demonic into Romantic music, and perfected the high-Romantic orchestral concept as well as the new form of symphonic program music. He was also the most literary of the Romantics, the most concerned with precise expression. His theater music was symphonic, his symphonic music theatrical. At his best he fused the two media in a synthesis that was to be excelled only later by Wagner. He stands apart from the Germanic Romantics because his passions, no matter how intense, are Southern and outdoorsy, at once naive and stagey, full of temperament, bizarrerie, and originality. Above all, Berlioz was the most alienated of the Romantics, the most anti-bourgeois, and the most defeated by an uncomprehending middle-class public. France, unlike Germany, never developed a large enlightened middle-class audience for the non-literary arts; the intellectual elite was not large
enough or interested enough to support a musician like Berlioz—or, indeed, to encourage the appearance of any successors.

Berlioz's instrument was the orchestra. Chopin's the piano. Berlioz was a master of the grandiose, Chopin of the miniature. Berlioz was an extrovert, a fighter, an exponent of the sublime; Chopin was an introvert, a "small" master, a lyric poet. Like Berlioz, Chopin provides us with a Romantic image: a short but intense life, nationalism and alienation, personal suffering. Unlike Berlioz, Chopin did not attach specific programs to his works, but the poetic nature of the music is always clear. Chopin's origins lie in early Romantic salon music, but he has so transcended these origins that he appears to us as one of the most original composers who ever lived. Except for an acknowledged debt to Bach, his music seems to stand alone, quite outside the developmental tradition of the Central European style. The sound of the keyboard became with him a fundamental part of the language of the music and not merely ornamental; with Chopin the notion of keyboard "style" comes into its own. There is also an attractive element of aperiodicity in his lines and phrases, and he was an extraordinarily daring harmonicist. His innovations, always highly expressive, are never crude or eccentric but are managed with the greatest finesse, subtlety, grace, and conviction. Modal, Slavic, and folkloric elements are introduced into the music, and the overall variety of types is remarkable. Each type, each genre—ballade, nocturne, mazurka, sonata, étude, waltz—has its own stylistic requirements, and Chopin moves easily from a bravura style to salon music to lyric poetry to Slavic melancholy. Everything, apparently, that Romantic sensibility had to express could be said within the narrow confines of a single instrument—the least romantic, to all appearances, and yet the one that spoke most typically for its age.

In their use of timbre as a fundamental element, in their tendencies toward concision and intimacy on the one hand and expansion and rhetoric on the other, in their use of music to evoke states of feeling, in the appearance of the demonic and the elements of darkness and irrationality, in the absorption of styles and forms to new expressive ends, both Berlioz and Chopin introduced new notes into Romantic music and prefigured the developments of the second half of the century. The individual who carried these ideas from one end of the century to the other was, of course, Franz Liszt. Born in Hungary in 1811 and taken to Paris at the age of twelve, Liszt toured all of Europe as a great virtuoso and later lived, in rather flamboyant retirement, in Germany and Italy. As a pianist and keyboard composer he stems from the violinistic model of Paganini rather than from any of the fashionable Biedermeier piano virtuosos. A great deal of his earlier music was material for his own use, a dazzling series of transcriptions, études, and variations exploiting and inventing new keyboard resources and new forms of virtuoso showmanship. Alongside these works, many of them not without musical merit, there are a series of poetic "impressions"—a kind of highly personal musical diary. Later, the personal style and the public personality were reconciled in large-scale works of symphonic scope now definitively outside of the bounds of Classical form. Liszt did not so much create a new form—the "symphonic poem"—as propose a situation in which each work, by its nature, demands new and appropriate formal treatment. Form now follows (or at least is reconciled with) literary and expressive content. In a sense, everything is development and therefore everything is unified. The scope of possible development is thus enormously enlarged; all of the keys, even the most remote, are now available, and a whole new arsenal of rich secondary chords, dissonance, and chromaticism is brought into play; the equality of the twelve tempered tones and their major and minor keys is firmly established. Timbre—orchestration, figuration, articulation, tone-color—is a means of expression almost equal to melody and harmony. Motivic interweaving and dynamic intensity are building blocks, and these expressive ideas in turn spring from literary and imaginative sources. The independent figure of the artist and the magic, transforming quality of his art are removed from the mundane level of everyday life to the highest intellectual and spiritual planes.

Liszt, for all his worldly success, did not write his "serious" music for a large audience; these works were intended for the cultivated, the initiated who can understand the deeper meanings and feelings, the mixture of the demonic and the divine, the extremes of despair and ecstasy. The worldly and the unworldly, the carnal and the spiritual, external display and inner feeling, lyric poetry and bravura virtuosity, Classical restraint and Romantic ecstasy, musical form and literary expression—all are mixed in equal quantities. The figure and the personality of Liszt himself, at once artist and showman, intellectual and publicist, womanizer and abbé, a keyboard athlete and spiritual poet, charlatan and genius, reflect the contradictions and dualities of the age. The Schubert-Schumann tradition of early Romanticism continued in the work of Brahms and some others. But it was the new dynasty of Berlioz, Chopin, and Liszt that opened the way to late Romanticism.
INSTALLATION OF THE MONTH

TOTAL STEREO

A project that began as a "lark" with research into technical books and magazines in the public library resulted in this "total" stereo installation two and a half years later. Robert Letterman, a member of the St. Louis Police Department, confesses that he had no technical or electronic experience before undertaking the design and building of the unit.

The housings and storage cabinets (lower portion of photo) are constructed of plywood with Plexiglas and black and orange Formica veneer with aluminum trim. Across the top of the unit are several light displays. The line drawing will simplify identification of the components: (1) Kenwood KA-6000 amplifier; (2) Pioneer SR-202 reverberation amplifier; (3) Pioneer TX-500 tuner; (4) Bell & Howell 2433 tape deck; (5) Sony 352D tape deck; (6) Ampex Micro 52 cassette deck; (7) Craig 3207 eight-track tape deck; (8) Garrard SL 95B automatic turntable; (9) BSR 610X automatic turntable; and (10) a frequency equalizer built by Mr. Letterman. The two cartridges are the Pickering models V-15/AME and V-15/ATE. Each of the two speaker enclosures contains ten speakers (one 15-inch woofer, one 12-inch woofer, one 8-inch mid-range, one 6-inch mid-range, one 10-inch horn mid-range, three horn tweeters, and two dome tweeters).

Mr. Letterman's system, he claims, still has great potential for growth, and several additions are already in the planning stages. These are indicated by the number 11, and will include a miniature digital computer which will operate some of the equipment via relay switches. Several electronic games are also housed in the console. Mr. Letterman enjoys listening to everything from folk to classical music.

—Susan Larabee

JULY 1973
Julian Hirsch discusses some of the new challenges a continually advancing record-playing technology is posing for the makers of

PHONO CARTRIDGES

The smallest audio component is the phono cartridge. It is so small, indeed, that it is normally partly concealed within a record player's tone arm. But it is the cartridge's big, important task to translate the highly complex and literally microscopic undulations of the record-groove walls into an electrical audio signal. To do this, the jewel tip of the cartridge's stylus must accurately follow the record-groove modulations, ideally without ever losing contact with the groove walls or significantly altering their physical shape. The stylus tip must therefore be able to reverse its direction at rates up to about 15,000 times per second (and now as high as 45,000 times per second if it is to play CD-4 four-channel stereo records). The amplitude of the stylus movement is less than 0.002 inch (2 mils)—usually much less—and in the inner, close-to-the-label grooves of a record rotating at 33 1/3 rpm it may have to trace as many as 2,000 "wiggles" in each inch of the groove walls moving past it.

Although the stylus typically exerts a force of only 1 to 3 grams on the vinyl material, the stylus' actual contact area on the groove walls is a circle or ellipse that is much smaller than the already minute tip of the jewel, whose radius of curvature is less than 0.001 inch. Thus, the pressure on the record is surprisingly high—as much as hundreds or even thousands of pounds per square inch. Combined with the high temperatures generated in the contact area by friction, this can cause erosion of the vinyl record material, and eventually even of the diamond stylus. Although much effort has gone into devising ways to eliminate the need for physical contact between the pickup and the record (there has been some success recently in using laser beams to "play" video disc recordings), all current record-playing systems depend on mechanical tracing of the groove walls by a stylus.

A variety of means have been used to convert the motion imposed on the stylus by the record groove into an electrical signal. These fall into two basic categories: amplitude-responding and velocity-responding systems. The output of a cartridge that responds to amplitude is proportional to the magnitude of its stylus' displacement. Ideally, its output is independent of the frequency of the recorded signals. Amplitude-responding cartridges include piezoelectric types (in which a crystal or ceramic element is bent or twisted by the stylus motion to generate a voltage), strain-gauge types (in which the resistance of the semiconductor elements is varied by the stylus movement), capacitance pickups (in which the spacing between capacitor plates is varied by the movement of the stylus), and light-beam modulation pickups (in which the spacing between capacitor plates is varied by the movement of the stylus), and light-beam modulation pickups (in which the stylus movement is coupled to a vane that controls the amount of light reaching a pair of photocells).

Cartridges that respond to the velocity of stylus motion—and these include the majority of those found in component systems—use some variation of the magnetic-transduction principle. This type of cartridge requires no external power source to operate: it is a miniature electric generator, creating electrical energy from record-groove motion the way a hydroelectric generator creates electricity from the rush of water through a turbine. Stylus
motion acts in such a way as to vary the number of magnetic-flux lines impinging on the turns of the coils built into the cartridge. A voltage is thereby generated in the coils that is proportional to the velocity of the stylus movement. And since the stylus velocity is itself proportional to the mathematical product of the recorded frequency and amplitude, if the amplitude is held constant, then the cartridge's output voltage will increase linearly as the signal frequency increases. It is therefore easy (!) to see why these are called velocity-responding cartridges.

Magnetic cartridges can be—and are—constructed in many ways. The stylus motion can be used to shift or rotate tiny coils in a stationary magnetic field (moving-coil cartridges), to move a tiny armature of ferrous material to vary the distribution of flux from a fixed magnet to stationary coils embedded in the cartridge body (variable-reluctance or moving-iron cartridges), to move a small ferrous element that carries the flux from an external magnet to the poles of the coils, or to actually move a very small magnet.

The question of which type of cartridge transduction system is theoretically best is difficult to resolve for several reasons. Our experience has been that, given the rapidly advancing state of the art, the quality of a cartridge seems to depend upon how well a particular design concept is realized rather than the specific design concept itself. Or, to look at it from another point of view, it is possible for two different cartridges to use the same transduction principle, yet one will be a fine performer and the other quite mediocre. This is not to say that there aren't some designs that have inherent minor or major disadvantages from the purely practical point of view. For example, given two cartridges that perform equally well, the one that does not require an external power supply, or have a very low output voltage, or need to be returned to the manufacturer to have its stylus replaced, is the preferred unit.

Each wall of the stereo record groove carries one sound channel, and it is responsible for moving the stylus at right angles to itself, or 45 degrees to the record surface. Two separate generating systems within the cartridge—one per stereo channel—respond individually to the stylus motions along its two orthogonal (right-angle) axes. (See Figure 1.) Of course, stylus motion is not limited to the left- and right-channel axes, and it gyrates freely between those limits, depending on the degree of stereo-channel blending. The isolation of each output channel from the other (the stereo “separation” spec) is mostly a function of the geometry of the moving and fixed elements in the cartridge. In most cases, a single magnet supplies all the flux, which is channeled, via the system of pole pieces, to the coils. In the case of at least one cartridge model, separate magnets are used for each of the two stereo channels.

As mentioned just above, design problems, and most of the notable advances in performance, relate less to the operating principle employed than to the specific mechanical parameters of the moving parts.
of the system. There are two distinctly different aspects to the interface between stylus and record—tracing and tracking—that are often confused because of their similar names. Tracing refers to the geometrical relationship between the stylus and the groove modulation. The acetate master record is engraved with a special “V”-shaped ruby stylus that is able to produce very sharply defined contour changes in the groove. The playback stylus, on the other hand, has a rounded tip with a radius of curvature much larger than that of the cutting stylus. Obviously, it cannot follow the precise path traced by the cutting stylus. As a result, there are inevitable tracing distortions during playback, as illustrated in Figures 2 and 3.

To minimize tracing distortion, a conical stylus of smaller tip radius, such as 0.5 mil instead of the normal 0.7 mil, was once tried, because it was better able to follow the finer details of the groove modulation. However, the resulting increase in pressure per unit of contact area further accelerated wear of both record and stylus, and in some cases the stylus rode too far down between the groove walls and hit the groove bottom, adding noise or distortion to the signal. A more acceptable alternative, now almost universal in high-quality cartridges, is the use of a stylus with a bi-radial, or elliptical, cross-section. The groove wall is contacted by an edge radius as small as 0.2 mil, yet the radius of the stylus at right angles to the direction of record motion (across the groove, that is) is 0.7 to 0.9 mil, keeping the tip safely above the groove bottom. Tracking refers simply to the ability of the playback stylus to remain in positive contact with the groove walls at all times. Tracking is actually a two-part problem for the designer, involving both the moving mass and the compliance of the stylus assembly. As the vertical tracking force is reduced in an effort to achieve less record and stylus wear, the stylus system must be made more compliant, so that the stylus yields more easily to the vertical movement of the groove. The stiffness of a noncompliant stylus would cause the entire arm to be moved by the groove, with resultant groove damage and loss of bass response. High compliance (the ability of a stylus to be deflected by a very small force) is necessary to track high-level, low-frequency signals, which can cause a pickup with insufficient compliance to actually jump from the groove.

However, too much compliance can lead to difficulties as well, and these arise from interaction with the tone-arm mass. The compliance of the stylus and the effective mass of the tone-arm-plus-cartridge system produce a low-frequency resonance—that is, a “preferred” frequency at which the whole tone-arm/phono-cartridge assembly tends to vibrate. If the resonant frequency is at 20 Hz or higher, tracking of low-frequency program material will be affected and acoustic feedback problems may be accentuated. If it is too low (below 5 or 6 Hz), normal record warp can cause mistracking or even groove jumping in severe cases. The optimum frequency for the low-frequency resonance is generally considered to be between 7 and 15 Hz, and the arm/cartridge mass and cartridge stylus compliance should be so arranged as to achieve this condition. If you have doubts as to the practicality of any particular record player/tone arm and cartridge combination, check with the units’ manufacturers.

The second requirement for good tracking has to do with higher frequencies, where the amplitude of the groove undulations may be low but the velocities (and accelerations) can be very high. In this frequency range the critical factor is the effective moving mass of the stylus system, which is typically a milligram or less for good cartridges. The acceleration of even such a small mass, as it reverses direction thousands of times each second, requires that the record groove exert a large dynamic force on

---

**RECORDED VELOCITY**

- **Recorded velocity** should not be confused with **linear groove velocity**, which is really no more than the speed at which the spinning record surface passes beneath the stationary cartridge, and is a function of the rotational speed of the record and the record circumference at the point where the stylus is playing. **Recorded velocity**, on the other hand, is the speed at which the stylus must move—right angles to the groove direction—in tracing the recorded program. This velocity is proportional to the product of the amount or amplitude (in centimeters) of the groove displacement from center and the recorded frequency in hertz, and is expressed in centimeters per second (cm/sec).

Although typical recorded velocities found on commercially available phonograph records average about 5 cm/sec, short-term values well in excess of 30 cm/sec have been measured, particularly at the higher audio frequencies. These, when present, would severely tax if not overwhelm the high-frequency tracking ability of any phono cartridge presently available.

Since stylus motion is actually a back-and-forth (or up-and-down) oscillation, its velocity is of course not a constant, straight-line quantity, but a series of starts, stops, accelerations, and decelerations. Therefore, when recorded velocity is specified, the figure given is usually the peak velocity—the highest rate of speed the stylus achieves in tracing a recorded waveform, even if that rate is reached only for an instant as it follows the undulations of the record grooves.
the stylus. As with low frequencies, there is a potential resonance problem, this time between the cartridge's moving mass and the elasticity of the vinyl record material. When the high-frequency resonance occurs in the upper audio range (10,000 to 15,000 Hz), it causes several undesirable effects. Transient response is degraded, stereo separation is often affected, and the groove walls can be permanently damaged by the mistracking stylus. Also, the cartridge’s frequency response will drop off rapidly above the resonance point.

Since neither the cartridge designer nor user can control the properties of the record material, it is up to the phono-cartridge designer to keep the stylus-assembly/vinyl resonance above the audio range. The record companies are working to develop some “stiffer” record plastics, and there may be some significant announcements on that in the coming months. But until that happy event is upon us, the phono-cartridge designer must try to keep the stylus mass as low as possible by mounting a very small diamond in the lightest possible supporting structure. Not only is this an expensive procedure (because of the special materials and tolerances involved), but the low-mass moving systems used in the top-of-the-line cartridges tend to be relatively fragile compared with the rugged assemblies used in cartridges that have been designed for 3-gram and higher forces.

The “trackability” of a stylus can be expressed in terms of the maximum recorded velocity, in centimeters per second (cm/sec), that it will track at a given vertical force as a function of frequency. Maximizing the tracking ability at either end of the frequency spectrum involves some sacrifice at the other end: an optimum design must take into account the actual range of velocities and amplitudes—at all frequencies—likely to be encountered on commercial records. Shure Brothers’ engineers have done extensive research on the problem, and Figure 4 illustrates the velocities encountered on a large sampling of commercial discs.

In a real sense, the cartridge, when confronted by a recorded velocity that exceeds its tracking capability, is overloading— or overdriven—in the same way that an amplifier or speaker is driven into distortion by an excessively strong signal. However, unlike the situation with an amplifier or speaker, the distortion produced by an overdriven phono cartridge cannot be reduced simply by turning down a volume control. The cartridge must be able to cope with whatever range of velocities may be engraved in the grooves of the disc, and in many cases these exceed the tracking ability of even a very good cartridge. We have all heard mistracking in the form of spitting or shattering vocal sibilants, bells, or harpsichord sounds, to mention but a few of the most audibly obvious cases. If you want a fast sonic demonstration of mistracking, all you need do is reduce your tracking force a half gram or so below the manufacturer’s rated minimum force. The breakup and shattering on high-velocity recorded material will come through loud and clear. Conversely, the tracking ability of a cartridge can often be improved somewhat by using more tracking force, but eventually the stylus, because of its vertical compliance, will be forced back into the cartridge body. If the mistracking persists at the highest tracking force that can be used, the only recourse is to change to another cartridge with improved tracking ability.

Another aspect of stylus/groove geometry is the vertical tracking angle. As shown in Figure 5, this is the angle formed by the perpendicular line A-B and line C-D, which lies along the path the cutting stylus actually takes when inscribing vertical modulations on a master disc. According to the stated recording industry standard, this angle is 15 degrees. The arc the playback stylus describes in tracing these vertical modulations (curved line E-D) should coincide as closely as possible with the 15-degree cutting angle, or some distortion of the playback signal will theoretically result. In practice, however, this is of limited importance, since deviations (errors) of several degrees from the 15-degree standard are quite common with good modern phono cartridges and record-cutting equipment alike, and yet significant audible distortion does not seem to be produced. (According to industry sources, the German industrial association DIN is likely to adopt a standard of 20 degrees for vertical tracking angle shortly, and other countries may follow suit.)

Figure 4. The range of frequencies and velocities encountered in an assortment of difficult-to-track commercial records is indicated by the dark area. Shure Brothers engineers made the measurements to determine the tracking ability required for playback.
A related potential problem, especially with a cartridge having a very compliant stylus assembly, is the possibility of contact between the cartridge body and the record surface, especially when playing a warped disc. This is a function of the cartridge body shape, the angle of the stylus cantilever, and the arm design; if it occurs, it can usually be corrected (with some sacrifice of vertical-tracking-angle accuracy) by placing a small wedge between the front of the cartridge body and the inside of the cartridge shell, tilting the entire cartridge sufficiently to provide more clearance.

Although we have concentrated up to this point on the mechanical aspects of cartridge design and performance, the purely electrical properties cannot be ignored. For instance, the coils of a magnetic cartridge have considerable inductance and resistance. Together with the capacitance of the connecting cables and the amplifier input circuits, they form a resonant circuit that has a significant effect on the cartridge’s frequency response. This electrical resonance is usually at a frequency at or above the cartridge’s mechanical high-frequency resonance (as discussed earlier), and it can be used to extend and/or flatten the overall frequency response of the cartridge. Excessive capacitance, originating in the preamplifier input circuit or in long connecting cables from the player, will lower the resonance frequency. In some cases, this can result in a response peak in the 10,000 to 12,000-Hz region, which may be heard as an overly “bright” sound or as accentuated record hiss and distortion. Since the cartridge output falls off rapidly above resonance, the subjective effect of excessive cable capacitance can be either an increase or a reduction in apparent high-frequency response. Neither condition is desirable, as a rule. Some cartridges, however, require a higher-than-normal load capacitance for optimum frequency response. In other words, there is no single “right” load capacitance for every case. Therefore, the manufacturer’s recommendations should be followed.

Susceptibility to capacitive loading can be minimized in the design by reducing the inductance of the cartridge coils. This means fewer turns of wire—and hence a lower output voltage for a given magnetic flux. But in order to minimize the moving mass that must be driven by the stylus, most high-performance cartridge designs already use a minimum of magnetic material, and this also operates to reduce the available output. To keep the cartridge output voltage in the vicinity of 3 to 6 millivolts (at a standard 3.54-cm/sec reference groove velocity), the cartridge designer has relatively little latitude in his choice of coil design. Nevertheless, there are significant differences in inductance between different makes and models of cartridges.

At the opposite extreme, cartridges that have very high output voltages can overload some preamplifiers when playing at high recorded velocities. For example, a cartridge whose output is 2 millivolts at a 1 cm/sec groove velocity (typical of many low- and medium-priced cartridges) will produce a 50-millivolt output from a 25-cm/sec recorded signal (not an uncommon level for many recorded transients on commercial discs). Most good preamplifiers can handle 50 millivolts without distortion, but some will overload and “clip” at levels as low as 35 to 40 millivolts. The result of such an unfortunate pairing of a high-output cartridge and a preamplifier susceptible to being overdriven would be intolerable distortion, which could be eliminated by changing either the cartridge or the preamplifier.

There has been some confusion over special cartridge requirements for playing four-channel records. The majority of such discs are matrixed recordings, which appear to the cartridge exactly like any other normal stereo record, except that there tends to be slightly more vertical modulation in the groove. The velocities and frequency-response characteristics of matrixed records are essentially identical to those used for any normal stereo recording. True, excessive phase shift or channel imbalance in the cartridge, particularly at high frequencies, could alter the directional properties of the decoded four-channel program. But in general there are no special cartridge requirements for playing matrixed four-channel records, regardless of the matrix system employed.

Quite the opposite is true for the so-called “discrete” four-channel records cut with the CD-4 system. The frequency range of these recordings extends to 45,000 Hz—well beyond the useful upper frequency range of most stereo systems. Since the output level is high, any additional capacitance will cause a significant decrease in the high-frequency response of the cartridge. Therefore, the designer of a CD-4 cartridge must be very careful to avoid any excessive capacitance, which would lower the effective output level and make it even more difficult to achieve the desired faithful reproduction of high-frequency content.
limit of conventional stereo cartridges. High-frequency tracking ability must be maintained, even though the levels of these ultrasonic signals are rather low. And performance of the two cartridge channels should be carefully controlled over the full frequency range for successful demodulation of the 30,000-Hz carrier and its FM sidebands, and for their subsequent recombination with the base-band audio signals to produce four separate program channels. The CD-4 demodulator must be adjusted and matched to the specific characteristics of the playback cartridge and stylus, so that even a change of stylus requires "retuning" the demodulator.

Earlier, we pointed out the advantage an elliptical stylus has in its ability to trace very short recorded wavelengths without excessive record wear. An extension of this concept to the CD-4 record's unique frequency-response requirements involves a specially shaped stylus jewel (Figure 6), called the "Shibata" after its inventor. The Shibata stylus jewel is shaped so as to contact the groove wall along a line, rather than the usual circle or ellipse. Since the line contact is narrower than the edge of an elliptical stylus, it is better able to trace the highest recorded frequencies. Because of its length, the contact area is reasonably large, and record wear is not a problem even at the 1.5- to 2-gram tracking forces needed by the cartridges presently available. The Shibata stylus is used in all the cartridges we have seen that were designed specifically for CD-4 service, and it seems to do what is claimed for it. Many cartridge designers, particularly in the United States, have expressed reservations about its practicality, since it requires exceptional care in manufacture and must be positioned on the stylus shank with great precision. Although Shibata styli have been a Japanese product up to now, some U. S. companies are reported ready (technologically, at least) to begin manufacturing them. And both Pickering and Stanton have a U. S.-made stylus of a new shape intended to provide the same benefits as the Shibata configuration.

Magnetic cartridges for the CD-4 system are designed with low-inductance coils and have a correspondingly low output voltage. They must be operated with the lowest possible cable capacitance to avoid high-frequency losses, and special low-capacitance cables are usually supplied with the CD-4 demodulators.

It is very difficult for the layman to interpret cartridge specifications in any way that will relate to how a particular cartridge will perform in his own system. As we have seen, high compliance and low moving mass, both of which are necessary qualities of a good cartridge and much sought after by many audiophiles, must not be carried to excess.

As we have stated on other occasions, the best guide to the overall quality of a cartridge is the range of recommended tracking forces assigned to it by its manufacturer, with lower forces indicating, in theory, a better cartridge. Bear in mind, however, that the minimum rated force is at times an unrealistically optimistic figure, and one should normally use a force slightly above the center value in the suggested range. In the final analysis, the best—if not always most practical—way to select a cartridge is to play your most "difficult" record, using various cartridge candidates, and hear for yourself which one produces the least distortion. Otherwise, you'll have to depend on test reports, and perhaps on the recommendations of record-player manufacturers, when available.

If it seems that we have neglected frequency response, the oversight was intentional. Almost any cartridge worthy of consideration for a reasonably good system has a frequency response adequate for any commercial record. Such listening differences as do exist because of frequency-response aberrations generally are not inherent in the cartridge but arise mostly because of some mismatch at the preamplifier input. And even those frequency-response dips and peaks that are built into the cartridge have far less audible significance than the other distortion-producing characteristics discussed above.

I remember attending an engineering lecture once at which a guest speaker expressed awe at the amount of "information" that could be crammed into a record groove. I find it no less awesome that today's phono cartridges can mechanically extract that same information from the record groove with so little alteration of either the content of the signal or the groove itself.
STOP!
IN THE
NAME OF LOVE!

A mercifully brief catalog of some of the odd turns song lyrics have been taking lately

By J Marks

Remember 1967, when everything was coming up records, and Phyllis Diller was the only person on earth who wasn't part of the Love Generation? Remember? Back when the Beatles made a fortune telling us in two dozen different songs that "All you need is love, love, love is all you need"?

Well, you can kiss musical humanitarisman goodbye, because today's songwriters are busy telling people off. Even love songs have taken on a decidedly nonromantic mood, as for example in Mirror by the Bateau brothers (Columbia KC 32063), which has a line that goes "I can swim. I'm a sperm, on my night sea journey turn." A duet, doubtlessly, for Masters and Johnson. And those writers who aren't talking about biology constitute a whole school of composers dedicated to the latest form of that old serenade: "I'll be glad when you're dead, you rascal you!"

But Carly didn't invent the song that says "drop dead!" in fluent rock-and-roll. Way back in 1956, a Mississippi country boy named Elvis Presley did a song by Jerry Leiber and Mike Stoller called Hound Dog that was as thoroughly contemptuous (if far less urban) than just about anything in the world of modern musical put-downs. Presley rode the tune to the top of the charts, and like Carly he made a fortune on the strength of tuneful invective. "When you said you was high classed," Elvis sang, "you ain't never caught a rabbit, and you ain't no friend of mine!" So git, mongrel! "You ain't nothin' but a Hound Dog!"

A very special category of hate song is the declaration of self-contempt, otherwise known as a Schwanengesang, or suicide song. There are many more contenders in this peculiar and rather bizarre genre than one might imagine, but probably the most dreary is the Dress Rehearsal Rag by Leonard Cohen (popularized by Judy Collins in "In My Life," Elektra Records EKS 74027). Mr. Cohen, a Canadian poet-novelist-singer-songwriter, is noted for his dearth of Sturm and abundance of Drang, and he is probably the most afflicted songwriter of the English language—a veritable Job of pop music. The song, at least on one level, concerns the drugged decline of a superstar who, overtaken by ennui while shaving, is about to cut his throat. Some treat.

Another popular suicide song was penned by the obscurantist Mr. Loudon Wainwright III ("Album II," Atlantic Records SD 8291). Typically, Loudon deploys his disturbingly melancholy voice to depict a slightly overripe emotional state with a fair dose of self-mockery: "When you get the blues, and want to shoot yourself in the head... go ahead." Furthermore, he advises, "Do the Monkey. Do the Pony. Do the Sloop. Do the Boogaloo. Twist—cut your throat, twist your wrist! Turning philosophical, Wainwright suggests "When you tire of worldly toil, shuffle off this mortal coil. Turning your body back to soil. It's OK." And finally, "When you get hung up, hang yourself up by the neck," he sighs. "What the heck!"

Of course, as I write this, the most potent several minutes of loathing you can currently hear on AM and FM radio is CARLY SIMON's You're So Vain. It's clearly a song of retribution for all those horrible tunes guys have been writing about unfaithful and vain ladies for centuries. It has been rumored that the tune is addressed to one of several famous gentlemen of rock: Mick Jagger, some say—though it's Mick's voice that you hear singing harmony on the choruses, which sort of excludes him automatically—or, others insist, Warren Beatty. But whoever the unlucky egomaniac is, the lyrics work him over so thoroughly as an s.o.b. that I'm certain he'd very much like to remain comfortably anonymous.
There's always been a question as to whether BOB DYLAN or Mick Jagger wrote more contemptuous lyrics about women. Among feminists who are enamored of rock, it's something of an embarrassment to scrutinize the lyrics of these pop giants. And lots of very elaborate schemes have been devised to vindicate the male chauvinist heroes. But Dylan's Positively 4th Street ("Highway 61 Revisited," Columbia CS 9189) still comes down as one of the most anti-female proclamations since Bluebeard. You got a lotta nerve to say you are my friend" is, I'd say, a pretty rotten first line for any kind of song. But Bob goes on to explain that when he was down his friend "just stood there grinning." Dunno just what it means. But the song evidently got to a lot of people.

Though Dylan undoubtedly has a nasty streak in him, he doesn't leave MICK JAGGER too far behind when it comes to a capacity for contempt. Stupid Girl ("Aftermath," London PS 476) by Jagger and Keith Richard is a most ferocious example of a type of song known as stay-out-of-my-life-you-dumb-broad. In this particular tune, Mick sizes up the lady from top to bottom—her terrible clothes, the dreadful way she combs her hair, the way she powders her nose. "Her vanity shows, and it shows. . . ." He condemns the way she digs for gold, the way she grabs and holds, the way she talks about someone else. "She's the sickest thing in this world." And, Mick concludes, "She bitches about things that she's never seen. Just look at that Stupid Girl!"

Contempt is not limited to the new love songs. It's also the fashion in the current boom in songs with religious themes. Besides David Peel's notorious "The Pope Smokes Dope" (Apple Records SW 3399), there's a show-stopping vaudevillian diatribe in "Jesus Christ Superstar" (Decca DXSA 7206) in which an haute couture hermaphroditic Herod in "Jesus Christ Superstar" (Decca DXSA 7206) in which an haute couture hermaphroditic Herod (above) sings a nasty tune to Jesus: "So," Herod hisses, "you are the Christ. you're the great Jesus Christ! Prove to me that you're no fool! Walk across my swimming pool! If you do that for me, then I'll let you go free. Come King of the Jews!" But then the disappointed Herod huffs, Bette-Davis-style, "You are nothing but a fraud! Get out of my life!"

LOU REED, in the song Vicious ("Transformer," RCA LSP 4807), hits a person of indefinite gender with his purse. (It's rumored that all three photos on the album cover, the guy on the front with eye make-up, plus the 1940's tough and the 1950's cutie in black satin on the back cover, are all portraits of the artist.) Vicious, Lou sings, "you're so vicious! You hit me with a flower. You do it every hour!" "You're the kind of person," he says, "that I don't want to meet." He further suggests, "Hey! Why don't you swallow razor blades—you must think I'm some kind of gay blade." Not exactly felicitous, but, all in all, you do get the impression that Lou doesn't like the party in question.

With the disbanding of the Beatles a whole avalanche of contrariness crashed through the traditionally loving lyrics of the Fab Four. JOHN LENNON unleashed a tide of resentment he had felt for years for his ego-tripping collaborator Paul McCartney. In How Do You Sleep? ("Imagine," Apple Records SW 3379), John levels his former buddy: "Those freaks was right," he says (referring to the rumor that Paul had died and been replaced by a double), "when they said you was dead!" As for McCartney's contribution to the musical world of the Beatles, "The only thing you done was Yesterday." And, Lennon concludes, "The sound you make is Muzak to my ears; you must have learned something in all those years. How do you sleep at night?"

HARRY NILSSON has always had a facility for being quietly outrageous. But he really outdid himself with a song called You're Breaking My Heart, which unquestionably puts the finishing touch on the whole repertoire of derogatory tunes. In a completely unbroadcastable diatribe from his excellent "Son of Schmilsson" (RCA LSP 4717), Harry proceeds to draw and quarter his Lady. She wants, he complains, to drive his car. What's more, she wants to buy a whole lot of stuff. She wants to boogaloo. But Harry's had enough. "You stepped on my ass, you're breakin' my glasses too! You're breaking my heart!" he admonishes sternly, as he heads for the killer line of romantic music: "You're tearin' it apart . . . so I'k you!" It is quite certainly a first in the literature of love.
RICK NELSON

Light years away from Ozzie and Harriet and still moving

By TODD EVERETT

Rick Nelson. Eric Hilliard Nelson, actually. He’s a singer, songwriter, guitarist, and bandleader, though not necessarily in that order. He’s also an actor, having spent more time on radio and TV than just about anybody else has, and having appeared in a couple of movies as well. He’s a husband and a father. He’s an artist, and, as such, he’s always just a bit ahead of his time—recording country music before it was fashionable, recording Randy Newman songs before they were fashionable. The guy who plays lead guitar with Elvis today was doing the same for Rick fifteen years ago. Johnny Cash wrote a song especially for him ten years ago. What other credentials do you need?

Rick was born thirty-three years ago—though he doesn’t look it—in Teaneck, New Jersey. His parents, Ozzie and Harriet Nelson, were already well-known entertainers—he as bandleader and musical director for the Joe Penner and Red Skelton radio shows, and she, Harriet Hilliard, as band vocalist. Later, they began their own situation-comedy radio series, The Adventures of Ozzie and Harriet. In the early years of the radio show, the roles of Ricky and older brother David were played by young actors. When the real Ricky and David entered their teens, though, they started playing their own roles. The program made a highly successful transition into television, where it ran for fourteen years and can still be seen nationwide in reruns.

Although Rick’s first film appearance was in Here Come the Nelsons in the early Fifties, he later made an impressive mark in Howard Hawks’ Rio Bravo, with John Wayne and Dean Martin. Johnny Cash wrote the song Restless Kid for that film, incidentally, but the performance wound up on the cutting-room floor.

Not all of Rick’s youth was spent acting. He attended school, and his friends were, for the most part, other entertainers. Some of them formed a group, which was later to gain national prominence as the Four Preps with songs like 26 Miles and Big Man. “My first public appearance as a singer was with them,” Rick recently recalled in the game room of his spacious Hollywood Canyon home. “They were going across town to perform at a high school assembly. I went along with them, just for fun. They performed and then asked me to come onstage. The kids knew me from television, and there was a minor riot. I couldn’t believe it!”

It was not too much later that Rick told a girl friend he was going to make a record. The story was, he says now, just a story, intended to impress her, but she called his bluff, so Rick asked his father to arrange for a recording session. Ozzie complied, and three sides were cut. Rick premiered one, a version of the Fats Domino hit I’m Walkin’, on the family TV show. As a singer, he was literally an overnight success.

Rock-and-roll purists of the time, if they bothered to think of him at all, tended to dismiss Rick and his singing since it was chiefly the more teen-oriented of his material (Poor Little Fool, Walkin’ in School, and the like) that sold, and Elvis was still the king of rock. In retrospect (a view most conveniently provided through the United Artists “Ricky Nelson” Legendary Masters album, UAS 9960), Rick proves really to have been a lot hipper than he was generally given credit for. He produced all his own records (still in his middle- to late teens and early twenties, remember) and claims to have made a very conscious attempt to emulate the Sun Records sound pioneered by such artists as Johnny Cash, Elvis Presley, and Carl Perkins.

Nelson’s recording success lasted for close to six years, from 1957 until about 1963 or so. He survived (barely) a change in record labels in 1963, leaving Imperial when his father, a shrewd businessman, negotiated a twenty-year contract with Decca (now MCA). Rick’s first few Decca singles did well enough; subsequent releases registered less and less on the national consciousness. By 1965, he was a virtual has-been.

“I’d been doing pretty much the same kind of thing for several years. I was getting tired of it, and obviously the audience was not as receptive as they had been. I went into a long period of feeling around, trying to get a style that fit me comfortably. Fortunately, I had that twenty-year contract with the label. All I had to do was come up with a certain number of records each year. I tried several styles, and used some outside producers. Some of the music was pretty good, but none of it really caught on.”

It was a frustrating period for Rick. Financially, he didn’t need to worry, thanks to past record royalties and residuals from his television shows. But he knew that he was capable of something artistically worthwhile, and he was faced with the inability, for a time, to isolate that capability and turn it into reality. During this period he became familiar with the work of such writers as Randy Newman, Tim Hardin, and Bob Dylan, with which he had had minimal previous contact. And he released a total of eleven albums, starting with “For Your Sweet
Love,” and embracing a variety of styles, types of material, and instrumental backgrounds. Two of the most successful, artistically if not commercially, were “Bright Lights and Country Music” and “Country Fever.” As the titles indicate, both had more to do with Rick’s Carl Perkins influences than with any attempt to play on teenage female heartstrings.

By 1969, Rick had made the decision that would bring him back to the top. The concept was essentially simple: he went right back to what he had been doing at first. “When I was originally recording, through all my hits, I had been working with my own band. We used the same musicians on all my sessions, and got what was a very basic sound to our records. Later I tried everything, but none of the other styles was as comfortable for me. So I formed the Stone Canyon Band.”

The group was made up of Los Angeles-based musicians, largely unknown but all very good. Probably the best-known Stone Canyon picker at the time was Tom Brumley, who had retired a year earlier from a long stint with Buck Owens’ country band. Brumley (whose uncle, incidentally, wrote the sacred favorite I’ll Fly Away) gave Rick and his group solid roots and a credibility that would otherwise be hard to come by with a larger segment of his potential audience. Another early member of the Stone Canyon Band was Randy Meisner, one of the founders of Poco and now an Eagle.

Rick’s first single with the Stone Canyon Band was a Dylan song that had already become a standard of sorts, She Belongs to Me. The combination of singer, song, and band proved fortuitous: it was Rick’s first hit in more than four years. The band immediately cut a live album at L.A.’s Troubadour (“Rick Nelson in Concert,” Decca DL 75162). The performance set the style of Rick’s future format: a couple of Nelson oldies, a couple of contemporary pieces, and a couple of originals. Rick had, through the years, developed into a capable songwriter, and a later album, “Rick Sings Nelson” (Decca DL 75236), was a well-received testament to that talent.

What really brought Rick Nelson back to the center of events, though, was Garden Party. A story-song in the best troubadour tradition, done in Rick’s by-then standard easy-going country-rock style, the tune for some reason communicated to a larger audience than anyone expected. (The album “Garden Party,” Decca 75391, contains the title song and its follow-up, Palace Guard.) The “plot,” as almost everybody knows by now, concerns a performance Rick gave at a Richard Nader “Rock’n’Roll Spectacular” held at Madison Square Garden a year ago last November. Rick had had an aversion to that type of show, he says, though “I’ve never tried to run away from the past. I feel that it’s the other person’s problem if he insists on living that kind of nostalgia. The audience at those concerts is a strange mixture of people. It’s like they’re true Fifties people who wear their saddle shoes and sweaters and really believe. I think that a lot of them are people who would like to be thought of as bikers — sort of like the kind of people who will wear suits to work and put on a long-hair wig for the weekends, only these are from another era altogether. For myself, I’m glad that I was around during that time, but it’s not anything that I feel any need to go back and recapture.

“Now, if they’re put in the right perspective, I think that the old songs are fine. We do some of our old numbers in the regular act, even though a lot of the time we’re playing to audiences, like college kids, who have never heard the originals. It would be dishonest of me not to do some of them. People expect it. I’d hate to see Tim Hardin and not have him do If I Were a Carpenter. But I don’t do a show of old songs. It’s a sign of people stopping. I think that people like Chuck Berry owe more to their audience than just doing hits from fifteen years ago at revivals.”

Nevertheless, Rick was persuaded to attend this one particular “garden party.” “I kind of went against my original reaction. I talked myself into it by saying that it would be good to be seen by that many people, and that I could always sneak in some new material.

“We really tried to get into the spirit of things as much as possible. We opened with Be-Bop Baby, which I haven’t done in years. The response was O.K., I guess, but there seemed to be a bit of uneasiness. It was probably because we dressed the way we do now, and didn’t wear Fifties outfits like a lot of the acts and a great deal of the audience. I don’t know. Anyway, the only thing that could be considered ‘new material’ that we wound up doing was Honky Tonk Woman. The audience got quite hostile, and started booing. We just forgot about doing anything else any more recent than Lonesome Town.”

The reason I’m so happy that Garden Party is the one that made it is because it’s such a personal thing. I guess I’m saying more than just what happened that particular evening; it applies to any sort of putting too much emphasis on the past. You can’t take something out of that era and compare it to what’s going on now, except that that music is the basis of today’s.

“The musicianship is so much better now, for one thing, and so are the studio techniques. All of my early songs were recorded on one track. We did Garden Party on twenty-four. Of course, back in the Fifties everybody was an innovator, because rock-and-roll was totally new. I said earlier that a lot of people at the Garden were trying to recapture the past. Well, I think also that a lot of people were there who missed out on it when it was all happening. There were a lot of people who spent all their time putting it down and who wouldn’t listen to anything but straight-ahead jazz at the time. Now they’re trying to recapture something that just can’t be brought back — and shouldn’t be.

“The song is basically a story of that one evening and that one show. But there is another thought involved — that if you can’t please everybody, you’ve got to please yourself. I came to that conclusion three years ago, when I founded the Stone Canyon Band. For a while, nobody knew what I was doing — not even / did. With the formation of the band, I’ve gone back to what was the beginning for me. Before then, I was trying everybody else’s ideas, because my ideas weren’t really working. The big-production-type records that were becoming hits for other singers just weren’t my style.

“For three years, it was like starting all over again. We began in small clubs, and got going slowly, got sort of a following going from people who had become familiar with us and what we were doing. Now, after Garden Party, we’re able to play the kind of places we want to. People know us, and accept us for what we’re doing today. It’s much more rewarding to me now than it was when I started fifteen years ago. No, I can’t really say that. It was a different thing, then. But it is more substantial now.”
YOUNG American string quartets seem to be springing up these days like mushrooms—or maybe sometimes more like toadstools. Before going any further, perhaps I'd better lay my own stylistic preferences out for all to see: I have never been able to understand, for example, why so much fuss has been made about the Guarneri Quartet, a group that seems to me so surfacy and nerveless in manner, so devoid of real musical sap, that I have on occasion walked out of its concerts at intermission rather than suffer through any more devitalizations of great works. Far more to my taste is the utterly committed playing of the newer Vermeer Quartet, the as yet unrecorded artists-in-residence at Northern Illinois University (their corporate strength is threatened at the moment by the third personnel change they've had in in as many years of existence).

Just now, however, with a magnificent set of the complete Brahms string quartets recorded for RCA, the Cleveland Quartet at one stroke establishes its position in the very forefront of American quartet playing. Formed at Marlboro in 1969, the quartet takes its name from the late Victor Babin's Cleveland Institute of Music, though it has since moved on to the University of Buffalo. Its members are violinists Donald Weilerstein and Peter Salaff, violist Martha Strongin Katz, and her husband, cellist Paul Katz.

I am all the more delighted to be able to greet this recording with almost unqualified enthusiasm because I was sharply disappointed by the Cleveland when I first heard it at the University of Chicago a season ago. What I had heard of Weilerstein at Marlboro several years back, and what I knew of the Katzes' playing, had led me to expect great things. Instead, I found an ensemble sound that didn't quite cohere and a curious sense of tentativeness in the interpretations.

That must simply have been a bad night, for there is no trace of such weaknesses in these extraordinarily mature and skillful performances. The group could hardly have chosen a better vehicle for its debut recording. The three quartets are masterly expressions of Brahms' fundamentally polyphonic cast of mind, and the unusually democratic balance of artistic power among the Cleveland's four instruments makes it ideally suited to be the medium of the composer's richly detailed textures. If the violist and, even more, the violist make the most immediate impression here, that, I think, is only a natural consequence of the solicitude with which Brahms treats the middle and lower parts. The two violinists make just as good use of their opportunities, but they do not try to monopolize the limelight in an un-Brahmsian manner.

What is most exciting about these readings is their glorious sense of uninhibited Romantic warmth. The players' technical command and rhythmic zest...
ensure that the music’s broader lines are always kept firm and lucid. But they are also not averse to a whopping bit of *portamento* when the expressive context justifies it. The cello’s juicy downward swoop at measure 161 in the finale of the C Minor, and the viola’s passionately projected solo in the third movement of Opus 67, are excellent examples of a rhetorical freedom that reflects the Serkin-Marlboro tradition at its best.

I have only two reservations. I think the Cleveland will one day come to play the radiant major passage near the end of the C Minor Quartet with a more rarefied tone than it manages here. And I wish—this is a much more substantial gripe—that the exposition repeats in all three first movements had been observed: in Opus 67, particularly, the omission of the repeat seriously obscures the structure of the movement, with its complex, subtle interrelationship of $\frac{3}{8}$ and $\frac{3}{4}$ meters.

Yet even here the unbridled recklessness of tempo and articulation comes close to carrying the day. These performances fit to stand with the best you will ever hear, recorded with thrilling immediacy, and my quibbles should be read in that context.

*Bernard Jacobson*

**DONIZETTI'S *ANNA BOLENA*: ANOTHER SILLS TRIUMPH**

*Her interpretation lends quiet dignity to the romanticized story of Elizabeth’s mother*

**GaeTANO DONIZETTI**’s opera *Anna Bolena*, introduced in 1830, was his first real success. More than thirty stage works had preceded it in the composer’s prodigious output, but the operas which sustain his fame today all came after *Anna Bolena*, among them *Maria Stuarda* (1833) and *Roberto Devereux* (1837). All three of these operas about famous queens of England, long dormant as stage works but now restored to circulation, are available in recorded performances built around the unique gifts of soprano Beverly Sills. I will therefore waste no further time in coming to the point: her portrayal of the hapless Anne Boleyn in the just-released ABC recording is another major triumph for her.

The character of Anne Boleyn has been idealized but by no means dehumanized in Felice Romani’s historically fast-and-loose but otherwise effective and credible libretto. As played by Miss Sills, she is a woman of quiet dignity who gains our sympathy at the outset because the singer skillfully stresses her vulnerability and her sense of impending doom. In scene after scene, Miss Sills manages to sustain, through her tremulous and fragile tone, an illusion of repressed tears. But there are other colors in her palette as well, making this a rich and varied interpretation that rests on a secure technique and (this time around) an avoidance of over-ornamentation.

As is well known by now, Miss Sills’ is one of those voices that are not always under total control, and there are therefore moments when intonation suffers (the long duet with Percy on side four and the final “*Coppia iniqua*” are two examples of this) — but then the important opening aria comes off splendidly despite its taxing tessitura. She also sings her part of the first-act Sextet exquisitely and invests the melancholy pages of the great final scene, particularly “*Cielo a’ miei lunghi spasimi,*” with heartbreaking poignancy.

*Anna Bolena* is a long opera about arresting personalities who suffer with dignity, connive nefariously, commit stupid blunders, and make noble sacrifices. All this is done to music that is both effective and vocally demanding: happily, Beverly Sills is not alone in standing up to these demands.
Shirley Verrett as Jane Seymour (she has also been quite effectively ennobled in the gallant Romani treatment) is responsible for some of the showiest—and most secure—singing of the production. Always compelling dramatically, particularly in the significant confrontations with the King (these scenes are among the musical highlights of this well-constructed opera), she is most effective in music that engages her brilliant upper register.

Although Enrico (Henry VIII) has no arias as such, his ominous presence casts a shadow over every scene. The young American basso Paul Plishka brings to the role both strong dramatic projection and impressive sonority. And though tenor Stuart Burrows is somewhat overmatched by the fiendish tessitura of his Prison Scene aria “Vivi tu,” his singing is elsewhere distinguished by ingratiating tone and elegant phrasing. Patricia Kern is a very fine Smeton and Robert Lloyd a satisfactory Rochefort, but Robert Tear is weak in the role of Sir Hervey, the bearer of ominous tidings.

Julius Rudel’s leadership combines firm control, sensible pacing, and consideration for the singers. The New York City Opera plans to add Anna Bolena to its repertoire in the near future. Given a cast of a strength comparable to this one, the presence of Sills and Rudel offers a comfortable guarantee of an exciting production.

A comparison with the first complete recording of this opera, released two years ago on London OSA 1436, must begin with the admission that its frequently exciting but vocally rather wayward Anna (Elena Souliotis) has definitely been surpassed by Beverly Sills’ portrayal here. Otherwise, the two sets are closely matched. The London album offers fine leadership by Silvio Varviso and good to excellent singing by principals Marilyn Horne (Seymour), John Alexander (Percy), and Nicolai Ghiaurov (Enrico).

George Jellinek

Donizetti: Anna Bolena. Beverly Sills (soprano), Anna; Shirley Verrett (mezzo-soprano), Jane Seymour; Stuart Burrows (tenor), Lord Percy; Paul Plishka (bass), Henry VIII; Patricia Kern (mezzo-soprano), Smeton; Robert Lloyd (bass), Lord Rochefort; Robert Tear (tenor), Sir Hervey; John Aldis Chorus; London Symphony Orchestra, Julius Rudel cond. ABC/ATS 20015/4 four discs $23.94.

Paul Jeffrey’s “Family” Album

Forty minutes of solid, unadulterated contemporary jazz in a new Mainstream release

Two years with Thelonious Monk’s group—a group that has been sadly unproductive in recent years—earned saxophonist Paul Jeffrey a comfortable reputation within the limits of the jazz world. But now he has leaped over the monastery wall, and if he keeps making albums like his new Mainstream-label “Family,” that reputation should quickly grow to the outer limits of the jazz scene and beyond.

Under the tasteful supervision of Ernie Wilkins, Jeffrey and a fine band of largely unknown musicians (including Monk’s son) treat us to forty minutes of solid, unadulterated drive and beauty, effectively combining old and new elements of Afro-American music. There are no electronic instruments here, no precious tinkles of Eastern thumb bells, no chants in Lenox Avenue Swahili, no tambourine-dressed material from the pop scene, and no attempts at political statement. The message is clear and simple: outstanding contemporary music does not need such accessories. That is not to say that I question the validity of electronic jazz; much of it (Miles and Mahavishnu, for example) is excellent. But the majority of it is just so much pretentious extra-musical nonsense; I, for one, would rather get high on music than have to get high to appreciate it. Nor are political statements neces-
sarily out of place in music (Brecht and Weill, Big Bill Broonzy, Bob Dylan, and others have effectively fused the two), but our ears are lately too often assaulted by anti-this and -that inanities carelessly tacked on to something that only barely passes for music.

Paul Jeffrey's "Family" is, appropriately, very much "together." As jacket annotator Valerie Wilmer puts it, these are "straight ahead, timeless sounds," and the total lack of pretension with which they are presented will, I predict, give them the longevity they deserve. Afro-American music, like any good music, needs no costumes; its naked beauty is quite sufficiently breathtaking. Give us more Paul Jeffreys (the country abounds with them), and jazz, now often adulterated beyond recognition, will once again attract large audiences with its exquisite, original bouquet.

Paul Jeffrey: a total lack of pretension

Paul Jeffrey's "Family." Paul Jeffrey (tenor saxophone); Joe Gardner (trumpet and flugelhorn); Stuart Butterfield (French horn); J. C. Williams (bass clarinet); Hamiet "Bunny" Bluiett (baritone saxophone and flute); George Cables (piano); Stan Clarke and Wilbur Ware (bass); Bob Stewart (tuba); Thelonious Monk, Jr. (drums). F. U.: Immigration; Motor Drive; Ina; Kim; Rodan: Bianca. Mainstream 376 $5.98, © M 8376 $6.98, © M 5376 $6.98.

Way Out There with Roy Buchanan

His blues-based second album is an a-to-z of dazzling electric-guitar technique

Roy Buchanan's "Second Album" for Polydor brings the electric guitar up to date, so to speak, with the veteran picker doing everything from lilting pastoral tinkles to Murderous Michigan Macho-Raunch and never once coming close to losing touch with his distinctive sound. The things he does in After Hours alone would amount to a satisfactory career for a better-than-average electric guitarist. Such praise, I know, suggests showboating, which is supposed to be offensive, but here it doesn't come out that way. Buchanan's work calls for its own definition of good taste—what I'm trying to say, I guess, is that he has his own unique brand of soul.
The selection of material this time out isn’t as wildly unpredictable as it was in Roy’s first album, and he’s coaxed five of the tunes out of his own skull besides—two facts that are no doubt related. Blues is the backbone of this one, and given that circumstance, the melodies are adequate—all you really need is a key and a rough idea. The band is much better balanced here than before, with Dick Heintze playing a particularly good blues piano. The sound is hardly what you’d call integrated, and though the guitar may be said to dominate, it does so gracefully.

If you are a musician—even an amateur one, you’ll know what I mean when I ask if you’ve ever had that Schlitz grab-for-the-gusto soaring feeling, as if you’d just sailed off the edge of the fixed world with that last note and you haven’t the vaguest idea where the next one is coming from or how you’ll make it... but even though you’ll have to do it a split second from now, you aren’t worried about it. Roy Buchanan is frequently out there in that state. And if you have some inkling of what that’s like, you’ll cherish this album all the more.

Noel Coppage

ROY BUCHANAN: Second Album. Roy Buchanan (guitar, vocals); Dick Heintze (keyboards); Teddy Irwin (rhythm guitar); Jerry Mercer (drums); Don Payne (bass); other musicians. Filthy Teddy; After Hours; Five String Blues; Thank You Lord; Treat Her Right; I Won’t Tell You No Lies; Tribute to Elmore James; She Once Lived Here. POLYDOR PD 5046 $4.98.

A NEW, DOWNRIGHT RABELAISIAN DONOVAN

Epic’s “Cosmic Wheels” features some candid explorations beyond the borders of wonderland

REVIEWERS, to the really gifted creators and performers, must often seem to be among the most tiresome people in the world. Our options, supposedly, are to like or to dislike what they have done and to explain our reactions. Our problems, when we have any, usually spring from the realization that the artist knows where he is going, that we don’t, and that we just have to tag tiresomely along behind and try to describe as best we can what is to us unfamiliar territory.

If Donovan will pardon me, then, I will say that I find his new album for Epic, “Cosmic Wheels,” to be the work of a poet who has broken out of his accustomed pastel wonderland with a roar—two of the songs here are downright Rabelaisian. The Intergalactic Laxative is a bit of scatological musing, paradoxically sung in an elegant drawing-room folk style, that could have taken its inspiration from a men’s room scrawl by, say, Brendan Behan. And Wild Witch Lady, earthy to a fault, is about a girl who just might be taken for Linda Lovelace. But then, with the aplomb of the absolutely self-assured, Donovan offers two lovely, romantic, and shimmeringly graceful songs called Sleep and Maria Magenta, and some keen-edged and amusing social commentary in Appearances and The Music Makers. His guitar playing continues to have its usual magical quality, and the orchestrations—especially for Pat Halling’s lead violin—are superb.

“Cosmic Wheels” is, I think, a definite step forward for this poet/composer. Some may find the verbal candor a bit hard to take, though it is really no more than you get from Carmina Burana—but then I guess you can say anything as long as it’s in Latin. Included in the elaborate package is a semi-nude photo of Donovan. This may by now have become mandatory, but it’s where I draw the line; he looks scruffier than his scruffiest lyrics. Otherwise, no complaint, just praise and rejoicing.

Peter Reilly

DONOVAN: Cosmic Wheels. Donovan Leitch (vocals and guitar); orchestra. Cosmic Wheels; Earth Sign Man; Sleep; Maria Magenta; Wild Witch Lady; The Music Makers; The Intergalactic Laxative; I Like You; Only the Blues; Appearances. Epic KE 32156 $5.98, ® EA 32156 $6.98, © ET 32156 $6.98.

JULY 1973
The 400 millisecond miracle.

Most people seem to take for granted the smooth, effortless way in which a Revox works. And that is as it should be.

For a great deal of time, effort and sophisticated engineering have gone into translating extremely complex function into lightning quick, responsive operation.

For example, when you press the play button of a Revox, you set in motion a sequence of events that take place with the precision of a rocket launching.

It begins with a gold plated contact strip that moves to close two sections of the transport control circuit board.

Instantaneously, the logic is checked for permissibility. If acceptable, a relay is activated.

Within 15 milliseconds, power is supplied to the pinch roller solenoid, the brake solenoid, the back tension motor, a second relay and, at the same time, the photocell is checked for the presence of tape. If present, Relay One self-holds.

Elapsed time, 25 milliseconds.

At 30 milliseconds, Relay Two closes and puts accelerating tension on the take-up motor.

The logic checks are now complete and power is available to actuate all necessary functions.

From 30 milliseconds to 300 milliseconds, mechanical inertia is being overcome and the motors and solenoids are settling down.

By 300 milliseconds, the brakes have been released, the pinch roller is in contact with the capstan shaft, the tape lifter retracted, the playback muting removed and the motors have come up to operating speed.

At 350 milliseconds power is cut off from Relay Two, which changes over to another set of contacts, releasing the accelerating tension on the take-up motor and completing a circuit through Relay One that, in turn, restores normal tension to the take-up motor.

Total elapsed time, 400 milliseconds. The Revox is now in the play mode.

And it’s all happened in a fraction of the time it takes to read this sentence.

The 400 millisecond miracle.

More proof that Revox delivers what all the rest only promise.
POPULAR DISCS AND TAPES

Reviewed by CHRIS ALBERTSON • NOEL COPPAGE • PAUL KRESH • PETER REILLY • JOEL VANCE

RECORDING OF SPECIAL MERIT

COLIN BLUNSTONE: Ennismore. Colin Blunstone (vocals and instrumental); other musicians. I Don’t Believe in Miracles: Exclusively for Me: A Sign from Me to You; Every Sound I Heard: How Wrong Can One Man Be: I Want Some More; and five others. EPIC KE 31994 $5.98, ® EA 31994 $6.98.

Performance: Lovely
Recording: Ditto

Blunstone, late of the Zombies, has one of the most haunting and original voices in rock-and-roll, and on this, his second solo outing, he has begun to create a music that approaches, both in style and in quality, his mid-Sixties work with that lamented ensemble. This is especially gratifying because much of his instrumental backing and material is provided here by the other ex-Zombies now known collectively as Argent, who, on their own, have been rather dire.

At any rate, this is probably the prettiest album I’ve heard in some months, but for those of you who understandably equate prettiness with vapidity (a la Joan Baez or Cat Stevens, for instance) let me add that Blunstone has a sly sense of humor, an engaging sexiness, and a rocker’s instincts. In other words, despite his predilection for wistful romantic balladry, and despite a vocal instrument so sweetly feminine as to make Smokey Robinson sound like Captain Beefheart by comparison, the boy has funk.

So does the album, which is gorgeously produced to boot. Highly recommended.

Steve Simels

ROY BUCHANAN: Second Album (see Best of the Month, page 78)

PETULA CLARK: Now. Petula Clark (vocals); instrumental accompaniment. Wedding Song: Solitaire: Don’t Hide Your Love: Shelter: Mother of Us All; and six others. MGM SE 4859 $5.98.

Performance: For retarded teenagers
Recording: Very good

When Petula Clark arrived on the pop music scene along with the Beatles, around 1964, hers was a refreshing voice to hear. It still retains its freshness, but the audience she is catering to nowadays seems to be in the puberty department, and I would like to think she has outgrown such things. Songs like Solitaire (a cautionary tale about a lonely man doomed to a life-long game of emotional solitaire) and Don’t Hide Your Love (“You never give yourself completely—it’s just that you’ve been hurt before”) dispense such fatuous dime-store sentiments that it’s hard to believe so talented a girl is wasting herself on such shoddy goods. She redeems herself with the bouncy It’s a Musical World, but Mother of Us All bears about as much resemblance to the opera by Gertrude Stein and Virgil Thomson as five-cent fudge does to a fine soufflé. It is a pallid charm Miss Clark displays on this occasion. I wish she would tackle some grown-up subject matter.

P.K.

DEEP PURPLE: Who Do We Think We Are! Deep Purple (vocals and instrumental). Woman from Tokyo; Mary Long; Super Trooper; Smooth Dancer; Rat But Blue; Place in Line; Our Lady. WARNER BROS. BS 2678 $5.98.

Performance: Powerful
Recording: Very good

Deep Purple was always a good thumping group, reliable rock-and-rollers with a minimum of nonsense or pretension. The title of this album, as the montage of press clippings on the inner sleeve reveals, is a confident appraisal of their own worth and prowess. It was said of Jelly Roll Morton that “he bragged like hell but he could always back it up.” So can Deep Purple. Woman from Tokyo and Mary Long are the best cuts, but all the songs here are played with the group’s typical dexterity and energy. An honest rock-and-roll album is good for the soul (also the brain and the glands). For me, listening to Deep Purple was like a tonic. Just wait ‘til next summer when those beach bullies try to kick sand in my face.

J.V.

DEREK AND THE DOMINOS: In Concert. Eric Clapton (guitar, vocals); Jim Gordon (drums); Carl Radle (bass); Bobby Whitlock (keyboards, vocals). Why Does Love Got to Be So Sad; Got to Get Better in a Little While; Let It Rain; Presence of the Lord; Tell the Truth; Battle of Red Wine; Roll It Over; Blues Power/Have You Ever Loved a Woman. RSO SO 2-8800 two discs $9.97, OR 2-8800 $9.97.

Performance: Master at work
Recording: Very good

(Continued overleaf)
Eric Clapton is the finest living rock guitarist; only Jimi Hendrix was capable of matching his technical mastery of the instrument and his ability to wield it as an expression of personality, to "translate" the inner voice of the musician into musical statements. But although this two-record set, recorded live at the departed Fillmore East, contains chunks of Clapton's amazing guitar work, it is not a particularly long time since "Layla" appeared. Their adaptation of Neil Young's "Ohio" in a medley with Jimi Hendrix's "Machine Gun", is an Isley masterpiece; nobody else, not even Young, can convey the horror and the ghastly stupidity of the awful Kent State incident so well. Listening to the Isleys' live performances, which take up a whole side of this two-record set, is to be left limp and exhilarated at the same time.

Ronnie Isley is one of the most distinctive stylists in American music—like Little Richard and the late Otis Redding, he is unmistakable. What he is able to do technically in this contemporary idiom becomes even more amazing when you consider that he is (sorry, Lori Jacobs is a former schoolteacher and housewife who gave up both of those careers to hang out nights as a singer at the Ann Arbor (Michigan) Road House, where you can find her, if you really want to, singing her own "autobiographical" songs. Her models in the word department seem to be the kind of verses you find on greeting cards, turned upside down so the effect will be dismal instead of cute: "Don't ask me why I'm leaving you/To move along" but she goes anyhow. Later, she gets mixed up with some new friend ("I've never been a fool like this before") and as her "autobiography" in song continues, does a "heart-tingling" about life, searches for "a full-time man"; decides she's going to "live the life that's best for me"; cooks and cleans for still another "lovin' man"; spurns pursuers who would look at her soul "as a toy"; tells her parents and her own child that love must not be "a blanket I protect you"; and finally becomes "what I've wanted to be all my life."
anything II could do III can do better!

Several years ago, we decided that our next challenge would be to go beyond the best there was. Our computers told us we had taken the existing cartridge structure and stylus assembly of the V-15 Type II Improved as far as we could, and that hereafter, any improvement in one performance parameter would be at the expense of performance in some other parameter.

Therefore, over the past several years, a wholly new laminated cartridge structure has been developed, as was an entirely new stylus assembly with a 25% reduction in effective stylus mass! These developments have resulted in optimum trackability at light tracking forces (3/4-1 1/4 grams), a truly flat, unaccented frequency response, and more extended dynamic range than was possible even with the Type II Improved, without sacrificing output level!

If you like its sound today, you will like it even more as time goes on. In fact, to go back to any other cartridge after living with the Type III for a short while is simply unthinkable, so notable is its neutral, uncolored sound. You must hear it. $72.50.

INTRODUCING THE NEW

SHURE V-15 TYPE III
Super-Track “Plus” Phono Cartridge

Shure Brothers Inc. • 222 Hartrey Ave. • Evanston, Ill. 60204
In Canada: A. C. Simmonds & Sons Ltd.
CIRCLE NO. 46 ON READER SERVICE CARD
days. Of his own songs here, only *Moonshine* really cuts through the skin. *Night Time Blues* is listless and endless, and Oh My Father, with its electric guitar accompaniment, generation gap clichés, and dem-dum-dem-dum melody, is not exactly a sell-out, but it may be some sort of lend-lease deal. *Moonshine* is a simple song, but it has some changes that really catch up the James Lewis in them. This is somehow fitting; and those changes provide an absolutely chilling take-off for a figure improvised by the little backing ensemble of guitar, violin, flute, clarinet, and cello.

That, Yarrow and the other traditionalists, and a striking arrangement of The First Time Ever I Saw Your Face, with Mary Hopkin on answering vocal (this being mistaken for a round by the Reprise promo writer)—these things are more than enough to give an old folkie like me a working-over. I'll even cool it with the harmonica when this is playing. N.C.

RECORDING OF SPECIAL MERIT

**B.B. KING:** *Back in the Alley.* B.B. King (vocals and guitar); various orchestras. Little Angel; Sweet Sixteen; Lucille; Watch Yourself; and five others. **BLUESWAY** BLS 6050 $4.98. © M 8051 6050 $6.98.

**Performance:** Brut.

**Recording:** Variable.

Listening to B.B. King is like being able to order the choicest of champagnes from the wine list. Although his subject matter is generally back-alley muscated, his performances transform everything into rare vintage. This collection is chosen from several of his previous albums, and there isn't a track here that doesn't move, exhilarate, and purify the listener in the way all good art does. Perhaps the best bands are *Please Love Me* and *Sweet Little Angel*, both from his classic "Live at the Regal" album. King doesn't settle for mere communication with an audience, he grabs it by the short hairs and transfixes it.

"Back in the Alley" should be compulsory listening—especially for those middle-class white kids who feel they've got a right to listening—especially for those middle-class kids who feel they've got a right to listening—especially for those middle-class kids who feel they've got a right to listening—especially for those middle-class kids who feel they've got a right to listening—especially for those middle-class kids who feel they've got a right to listening. It's a wistfully anti-racist number. When they finally do sing one of their own songs—Peter Doyle's unhesitant, uncompromising, unadulterated *Rose*—we are ready to listen. It's good to hear young singers who don't try to be too big for their jeans, and at the same time are able to fill so adequately the ones they wear.

**JERRY LEE LEWIS**

**THE KILLER** "I roll my and roars once more..." is perfect for this jam. His version of Pledging My Love is superior to the original (hereby!) by Johnny Ace, and he does some fine new material—the rollicking Jukebox and Music to the Man.

I was fearful that this kind of music—white Southern hoo-haw potliker country rock—would not get recorded again, since the later examples by Dale Hawkins and the late Gene Vincent were commercially unsuccessful and/or sweetened up from the raw original sessions. But my fears have been laid—hell, stamped—to rest by this delirious album. Pure pleasure! N.V.

LINDA LEWIS: *Lark.* Linda Lewis (vocals); orchestra. *Spring Song; Lark; It's the Frame; Old Smokey; Waterbaby; Been My Best;* and six others. **REPRISE** MS 2120 $5.98.

**Performance:** Excellent.

**Recording:** Keep off the tracks!

This is a persuasive and charming debut by a London-based young West Indian girl. Linda Lewis isn't breaking any new ground, but everything that she does (which is considerable in that she wrote, produced, and performed everything on the album) has a secure, unpretentious, musically fine quality. Her songs, particularly *Gladly Give My Hand* and *Spring Song*, have an unforced clarity and simplicity. She performs the songs in a communicative reality in an expert and unmannured jazz-soul style. Push comes to shove, however, and mannerisms abound in her production techniques. She seems to have only just discovered the wonders of multi-tracking, with the result that there is a plethora of Linda Lewises on almost every band. Just how irritating all is doesn't really penetrate until the last song, *Little Indian*, which she sings straight (i.e., solo), accompanying herself on percussion and displaying a delightful pop mini-coloratura.

At twenty-two, Linda Lewis has a lot going for her in all directions, and as soon as she stops confusing herself with the Mormon Tabernacle Choir I think we can expect a good deal of first-rate entertainment from her. Certainly the basic talents are there. P.R.

**RECORDING OF SPECIAL MERIT**

**JERRY LEE LEWIS:** *The Session.* Jerry Lee Lewis (vocals and piano); instrumental accompaniment. Drinking Wine Spo-Dee-O-Dee; Music to the Man; Baby What You Want Me To Do; Bad Moon Rising; Sea Cruise; No Headstone on My Grave; Big Boss Man; Memphis; Trouble in Mind; Early Cruise; No Headstone on My Grave; Big Lewis (vocals and piano); instrumental accompaniment. *Morning Rain; Sixty Minute Man; Boss Man; Memphis; Trouble in Mind; Early Cruise; No Headstone on My Grave; Big Lewis (vocals and piano); instrumental accompaniment. *Morning Rain; Sixty Minute Man; Boss Man; Memphis; Trouble in Mind; Early Cruise; No Headstone on My Grave; Big Lewis (vocals and piano); instrumental accompaniment. *Morning Rain; Sixty Minute Man; Boss Man; Memphis; Trouble in Mind; Early Cruise; No Headstone on My Grave; Big Lewis (vocals and piano); instrumental accompaniment. *Morning Rain; Sixty Minute Man; Boss Man; Memphis; Trouble in Mind; Early Cruise; No Headstone on My Grave; Big Lewis (vocals and piano); instrumental accompaniment. *Morning Rain; Sixty Minute Man; Boss Man; Memphis; Trouble in Mind; Early Cruise; No Headstone on My Grave; Big Lewis (vocals and piano); instrumental accompaniment.

LINDA LEWIS: Lark. Linda Lewis (vocals); orchestra. *Spring Song; Lark; It's the Frame; Old Smokey; Waterbaby; Been My Best;* and six others. **REPRISE** MS 2120 $5.98.

**Performance:** Excellent.

**Recording:** Keep off the tracks!

This is a persuasive and charming debut by a London-based young West Indian girl. Linda Lewis isn't breaking any new ground, but everything that she does (which is considerable in that she wrote, produced, and performed everything on the album) has a secure, unpretentious, musically fine quality. Her songs, particularly *Gladly Give My Hand* and *Spring Song*, have an unforced clarity and simplicity. She performs the songs in a communicative reality in an expert and unmannered jazz-soul style. Push comes to shove, however, and mannerisms abound in her production techniques. She seems to have only just discovered the wonders of multi-tracking, with the result that there is a plethora of Linda Lewises on almost every band. Just how irritating all is doesn't really penetrate until the last song, *Little Indian*, which she sings straight (i.e., solo), accompanying herself on percussion and displaying a delightful pop mini-coloratura.

At twenty-two, Linda Lewis has a lot going for her in all directions, and as soon as she stops confusing herself with the Mormon Tabernacle Choir I think we can expect a good deal of first-rate entertainment from her. Certainly the basic talents are there. P.R.

**THE NEW SEEKERS:** *Come Softly to Me.* The New Seekers (vocals and instrumentals). For You To Sing: Blowin' in the Wind; Come Softly to Me; Goin' Back; Morning Has Broken; Down by the River; and six others. **MGM/Verve** MV 5090 $5.98.

**Performance:** Young and healthy.

**Recording:** Very good.

The New Seekers are a gentle, soft-singing yet spirited group of two boys and three girls who, unlike so many of their contemporaries, have the modesty and decency to sing real songs by real composers instead of their own. Here they do harmonic justice to Bob Dylan's Blowin' in the Wind, Stephen Schwartz's Day by Day, José Feliciano's Rain, and Cat Stevens' Morning Has Broken, along with lesser known but deserving songs by a number of other competent people. Only occasionally do they resort to sound effects and tricks—and then only when they can do it effectively, as when they bring in the voices of children at play in the nostalgic Goin' Back. The rest of the time they concentrate on the music, touching lightly on emotion in Down by the River, braving the "deep dark waters of life" in Captain Stormy, and working up a kind of Baptist beat and fervor in Why Can't We All Get Together, a wistfully anti-racist number. When they finally do sing one of their own songs—Peter Doyle's unhesitant, uncompromising, unadulterated Rose—we are ready to listen. It's good to hear young singers who don't try to be too big for their jeans, and at the same time are able to fill so adequately the ones they wear.

P.K.

**DORY PREVIN:** Mary C. Brown and the Hollywood Sign. Dory Previn (vocals); instrumental accompaniment. The Holy Man on Malibu Bus Number Three; The Midget's Lament; When a Man Plants a Woman; Usually Surrogate He's Almost Blind; Left Hand Talking with Mary Hopkin on an-...
We can warranty our components for five years. Because we know what's inside them.

Dependable stereo performance depends in great part on the parts that make up each component. In order to give you the longest warranty* in the stereo industry Yamaha engineers had to feel confident in the reliability of all the various parts that go into our many audio products. They had good reason to feel confident.

Because we make more of our own parts than other stereo companies. We mill our own trees for the cabinet-wood. We actually make the machinery that forms our chassis and other metalwork.

We make the magnets for our speakers. We make these under stringent conditions, in our own facilities.

The result is stereo that can be warranted for five years on parts, three on labor.

And some very clear, natural sounding reproduction from our receivers, amplifiers, tuners, speakers, turntables and tape decks. Come hear them at your nearest Yamaha stereo dealer.

YAMAHA
We know what's inside.
IGGY (POP) AND THE STOOGES

The apotheosis of every parental nightmare

Reviewed by LESTER BANGS

The biggest trend on the rock circuit this year is decadence. Go to any concert, and you'll be amazed at the sudden change in American youth, who are now as far from last year's organic coversalls and bushy hanks of hair as they are from the madras shirts and slacks of 1963; teenagers of both sexes are piling on clots of make-up and swaddling themselves in flashily indeterminate glad rags. Boys with rouge and glitter on their eyelids, girls with the stark white faces and rinsed-out blonde hair of the Marilyn Monroe look they picked up from the drag queens in Andy Warhol movies—all of them seem to be a mite confused, as if they'd just seen Cabaret and decided that whatever was a band predicated upon extremism on its own aboriginal terms: hypnotic repetitions of a single thumpingly chordal riff that would reduce dogs to agony, over which Iggy would croon and bark and shriek improvised gut-level ditties about adolescent torments in a voice rather like some hemebane mutant shade of Mick Jagger. They were songs about being lonely, shy, and awkward; they were fidgety, self-pitying rants about having No Fun; and, most of all, they were about sexual inadequacy and inexperience, with a strong accent on the ultimate confusion of the two. Identity-crisis music on a perhaps too-basic level, it was as extreme in its aggressive neurosis as everything else about the Stooges. If ever there was a band predicated upon extremism on all levels, this was it—they ended up wasted on drugs, dropped by their record company, their instruments repossessed.

For better or worse, though, time has vindicated the Stooges, and 1973 will see them making a comeback of major proportions. They are possessed of a monomaniacal fury so genuine that it makes the posturings of Bowie and the cheery, beery Alice Cooper seem like something from a Ross Hunter production. Their new album is called "Raw Power," and that's dead right: it creates in an unremitting torrent that may be too much for many listeners to take. The by-now banal words "heavy metal" were invented for this group, because that's all they've got, and they're brutal with it: rampaging guitar lines hurtling out or colliding like opiated dervishes, steady, mindless, four-four android drumming, Iggy outdoing even his own previous excesses with a ragged tapestry of yowls, caws, growls, rantings, epithets, and imprecations. The song titles tell the story: Search and Destroy, Your Pretty Face Is Going to Hell, Death Trip. The ferocious assertiveness of the lyrics is at once slightly absurd and indicative of a confused, violently defensive stance that's been a rock tradition from the beginning: "I'm the runaway son of the nuclear A-Bomb/I am the world's forgotten boy..."

It's the essential terror and pain of growing up, and nowhere in rock-and-roll has it been rendered more vividly—or more energetically—than by this bunch of acne-ridden social reprobates who seem to have made a career out of not growing out of their teenage traumas. Whether you laugh at them or accept their chaotic rumble on its own terms, they're fascinating and authentic. The apotheosis of every parental nightmare.


© CT 32111 $6.98.
Why you should buy the best turntable you can afford.

Chances are you've already put more money into your record collection than into the rest of your entire component system. That's reason enough to make sure that nothing happens to your records when you play them.

Remember, records are made of soft vinyl, and they're played with a diamond-tipped stylus. And there's nothing harder on this earth than a diamond.

If that stylus can't respond easily and freely to all the contours of the record groove, there's trouble. Especially with the sharp and fragile curves which produce the high frequencies. Instead of going around these peaks, the stylus will simply lop them off. And with those little bits of vinyl go the high notes, your record and your investment.

There's still more to consider. The record must rotate at precisely the right speed, or pitch will be off. The motor must be quiet and free of vibration, or rumble will be added to the music.

In short, the turntable should neither add sounds to a record, nor take any away. And that's the kind of turntable you should want. To get that kind of turntable, we suggest you ask someone you know and trust who really knows components. A friend. A record reviewer. An audio engineer, or a good audio dealer.

And if you'd like to read more about turntables, we'll send you two booklets that someone else wrote. One tells you what to look for in turntables. The other tells you what independent test labs have reported about the Duals they've evaluated.

We'll leave it to you to decide if you can afford anything less than a Dual.
brilly leaving a sour taste in her own mouth as well as ours. In the title song, she sings of one Mary C. Brown who jumps off that tall ugly sign that glitters above Hollywood and goes to her death as the symbol of all the refugees who ever went out West pursuing unredeemable dreams ("Give me your poor, your tired, your pimps, your carhops, your midgets, your chumps—your whores, your harlots..."—didn't she sing that on one her last record?). In The Midget's Lament she sees the world from a dwarf's point of view; the effect is predictably grotesque. In Starter Starlet on the Screen she is back berating the ugly side of show business. Later she deals with King Kong's angle on the King Kong story, tests the conformist notion of turning exceptional left-handed children into right-handed nonentities, and in Morning Star/Evening Star discovers the one-ness of her own personality, putting herself together at last: "and what I have joined together let no one put asunder." In her epiphanies for outcasts Miss Previn sings sense most of the time, it is only in ballads like Cully Surrogate, He's Almost Blind that she crosses the line hopelessly into bathtos and tasteless hideosity, telling the story of a boy blinded by the indulgence of a misinformed mother. Otherwise, Dory Previn is a master of the hitler line and the ironic delivery: the only thing her songs lack is music to anchor the wit of her words. Wanna be a composer to collaborate with a gifted, terrifi-

P.K.

RECORDING OF SPECIAL MERIT
TODD RUNDGREN: A Wizard, a True Star.
Todd Rundgren (vocals); instrumental accompaniment. International Feel; No Never Land; Tic Tic Tic It Wears Off; You Need Your Head; Rock and Roll Pussy; Daughght Giggle; You Don't Have To Camp Around; Flamingo; Zen Archer; Just Another Onionhead; Da-Da Dali; and nine others. BEARSVILLE BR 2133 $4.98, © M8 2133 $6.98, © M 2133 $6.98.

Performance: Well done, my boy! Recording: Very good

If Paul McCartney had more of a sense of humor he would be Todd Rundgren. The first side of this album is a giddily entertaining pop concept, some of whose lyrics might have pleased the late Sir Noel Coward. Where the honored second side of "Abby Road" was a medley of unfinished or pasted-together tunes, Rundgren's stuff seems to be carefully put together, and the jabbing, distracting, tickling instruments and sound collages are a deliberate part of the texture.

The first side sounds like a movie score without a movie: listening to the songs brings up visual images of characters and situations, which may have been part of Rundgren's intent. "Serengeti Pepper," the root of all ambitious rock albums, was an attempt at phonograph theater. It acted on the same principle which may have been part of Rundgren's in-

.. .

up, the second side of the album isn't as good. No, it's not, but it's not the same kind of thing either. This is mostly top-Forty material, although Sometimes I Don't Know How To Feel has an interesting construction and arrangement. But getting back to side one: the kid may just be a wizard, after all. J.V.

HURRICANE SMITH: Hurricane Smith (vocals); orchestra. Who Was It?; Take Suki Home; Auntie Vicky; Wonderful Lily; and six others. CAPITOL ST 11139 $5.98, © 8XT 11139 $6.98, © 4XT 11139 $6.98.

Performance: Hoke, hokum, hokiest Recording: Fair

I still can't quite believe this one. Said Hurricane Smith is, according to the liner notes, actually Norman Smith, an English producer-engineer. My friend Margo Lane, who is still dating that dummy, Lamont Cranston, says she knows a lot about secret identities and told me "strictly entre nous" (Margo uses a lot of words like that) that Hurricane-Norman is in reality Ted Weems, moved to England to do those "Next Dylan" pronouncements already starting; computers this minute are scanning Blinded by the Light alongside Like a Rolling Stone for profundity comparison readouts.

The main thing about Bruce Springsteen's semispectacular debut should be that he is a city-minded kid—like most people in such places as Asbury Park, he is preoccupied with New York. The city's toughness, particularly, fascinates him, and its speed, chaos, spontaneity, contriving, and conniving actually do— I believe—pass through him and out into a sort of sidewalk-Baroque style of music. Unfortunately, the main thing about him may be those "Next Dylan" pronouncements already starting; computers this minute are scanning Blinded by the Light alongside Like a Rolling Stone for profundity comparison readouts.

The first side of this album is a giddily entertaining pop concept, some of whose lyrics might have pleased the late Sir Noel Coward. Where the honored second side of "Abby Road" was a medley of unfinished or pasted-together tunes, Rundgren's stuff seems to be carefully put together, and the jabbing, distracting, tickling instruments and sound collages are a deliberate part of the texture.

The first side sounds like a movie score without a movie: listening to the songs brings up visual images of characters and situations, which may have been part of Rundgren's intent. "Serengeti Pepper," the root of all ambitious rock albums, was an attempt at phonograph theater. It acted on the same principle which may have been part of Rundgren's in-

.. .

up, the second side of the album isn't as good. No, it's not, but it's not the same kind of thing either. This is mostly top-Forty material, although Sometimes I Don't Know How To Feel has an interesting construction and arrangement. But getting back to side one: the kid may just be a wizard, after all. J.V.

HURRICANE SMITH: Hurricane Smith (vocals); orchestra. Who Was It?; Take Suki Home; Auntie Vicky; Wonderful Lily; and six others. CAPITOL ST 11139 $5.98, © 8XT 11139 $6.98, © 4XT 11139 $6.98.

Performance: Hoke, hokum, hokiest Recording: Fair

I still can't quite believe this one. Said Hurricane Smith is, according to the liner notes, actually Norman Smith, an English producer-engineer. My friend Margo Lane, who is still dating that dummy, Lamont Cranston, says she knows a lot about secret identities and told me "strictly entre nous" (Margo uses a lot of words like that) that Hurricane-Norman is in reality Ted Weems, moved to England to do those "Next Dylan" pronouncements already starting; computers this minute are scanning Blinded by the Light alongside Like a Rolling Stone for profundity comparison readouts.

The main thing about Bruce Springsteen's semispectacular debut should be that he is a city-minded kid—like most people in such places as Asbury Park, he is preoccupied with New York. The city's toughness, particularly, fascinates him, and its speed, chaos, spontaneity, contriving, and conniving actually do— I believe—pass through him and out into a sort of sidewalk-Baroque style of music. Unfortunately, the main thing about him may be those "Next Dylan" pronouncements already starting; computers this minute are scanning Blinded by the Light alongside Like a Rolling Stone for profundity comparison readouts.

The first side of this album is a giddily entertaining pop concept, some of whose lyrics might have pleased the late Sir Noel Coward. Where the honored second side of "Abby Road" was a medley of unfinished or pasted-together tunes, Rundgren's stuff seems to be carefully put together, and the jabbing, distracting, tickling instruments and sound collages are a deliberate part of the texture.

The first side sounds like a movie score without a movie: listening to the songs brings up visual images of characters and situations, which may have been part of Rundgren's intent. "Serengeti Pepper," the root of all ambitious rock albums, was an attempt at phonograph theater. It acted on the same principle which may have been part of Rundgren's in-

.. .

up, the second side of the album isn't as good. No, it's not, but it's not the same kind of thing either. This is mostly top-Forty material, although Sometimes I Don't Know How To Feel has an interesting construction and arrangement. But getting back to side one: the kid may just be a wizard, after all. J.V.

HURRICANE SMITH: Hurricane Smith (vocals); orchestra. Who Was It?; Take Suki Home; Auntie Vicky; Wonderful Lily; and six others. CAPITOL ST 11139 $5.98, © 8XT 11139 $6.98, © 4XT 11139 $6.98.

Performance: Hoke, hokum, hokiest Recording: Fair

I still can't quite believe this one. Said Hurricane Smith is, according to the liner notes, actually Norman Smith, an English producer-engineer. My friend Margo Lane, who is still dating that dummy, Lamont Cranston, says she knows a lot about secret identities and told me "strictly entre nous" (Margo uses a lot of words like that) that Hurricane-Norman is in reality Ted Weems, moved to England to do those "Next Dylan" pronouncements already starting; computers this minute are scanning Blinded by the Light alongside Like a Rolling Stone for profundity comparison readouts.

The main thing about Bruce Springsteen's semispectacular debut should be that he is a city-minded kid—like most people in such places as Asbury Park, he is preoccupied with New York. The city's toughness, particularly, fascinates him, and its speed, chaos, spontaneity, contriving, and conniving actually do— I believe—pass through him and out into a sort of sidewalk-Baroque style of music. Unfortunately, the main thing about him may be those "Next Dylan" pronouncements already starting; computers this minute are scanning Blinded by the Light alongside Like a Rolling Stone for profundity comparison readouts.

The first side of this album is a giddily entertaining pop concept, some of whose lyrics might have pleased the late Sir Noel Coward. Where the honored second side of "Abby Road" was a medley of unfinished or pasted-together tunes, Rundgren's stuff seems to be carefully put together, and the jabbing, distracting, tickling instruments and sound collages are a deliberate part of the texture.

The first side sounds like a movie score without a movie: listening to the songs brings up visual images of characters and situations, which may have been part of Rundgren's intent. "Serengeti Pepper," the root of all ambitious rock albums, was an attempt at phonograph theater. It acted on the same principle which may have been part of Rundgren's in-

.. .

up, the second side of the album isn't as good. No, it's not, but it's not the same kind of thing either. This is mostly top-Forty material, although Sometimes I Don't Know How To Feel has an interesting construction and arrangement. But getting back to side one: the kid may just be a wizard, after all. J.V.

HURRICANE SMITH: Hurricane Smith (vocals); orchestra. Who Was It?; Take Suki Home; Auntie Vicky; Wonderful Lily; and six others. CAPITOL ST 11139 $5.98, © 8XT 11139 $6.98, © 4XT 11139 $6.98.

Performance: Hoke, hokum, hokiest Recording: Fair

I still can't quite believe this one. Said Hurricane Smith is, according to the liner notes, actually Norman Smith, an English producer-engineer. My friend Margo Lane, who is still dating that dummy, Lamont Cranston, says she knows a lot about secret identities and told me "strictly entre nous" (Margo uses a
then there are times when something that was handy and little else was grabbed for the interior rhyme scheme... and times when I, not being city-minded, find it—overwhelming. My God, say hicks like me, is that still going on? I fancy that, instead of "Don't lose your mittens," the Uptight Mommy must now be sending her kid out with "Don't let the excessive stimuli freak you out." No Next Dylan would affect me that way, not here in the laid-back Seventies. Bruce Springsteen is something else, read both ways, and seems to be already proving that street poeting still has a kick or two left in it, although—with the lure of Country Comfort being what it is now—his may be becoming a specialized line of work.

N.C.

STEALERS WHEEL. Stealers Wheel (vocals and instrumentals); various other musicians. Late Again; Stuck in the Middle with You; Another Meaning; I Get By; Outside Looking In: Johnny's Song; Next to Me; and three others. A & M SP 4377 $5.98, © 4377 $6.98. Performance: Promising
Recording: Very good
This is an inventive, promising rock group with a knack for finding just the instrumental wrinkle that fits in some neat, unexpected way that makes you back the needle up a few grooves. There are also problems. The vocals by Joe Egan and Gerry Rafferty (also the songwriters) are good, but, gosh, haven't we heard this before? Egan, if I have sorted him out properly, sounds like a combination of Jesse Colin Young and Paul McCartney. The differential in song quality is a bit unnerving, too; you could get the bends going from strong, simple Late Again down to You Put Something Better Inside of Me, which is Klee—Shay City. Still, it all averages out pretty well, thanks to those open but never empty arrangements. And where did they get that name, anyway?

N.C.

TRAFFIC: Shoot Out at the Fantasy Factory. Traffic (vocals and instrumentals). Shoot Out at the Fantasy Factory; Roll Right Stones; Evening Blue; Tragic Magic: (Sometimes I Feel So) Uninspired. ISLAND SW 9323 $5.98, © 8WX 9323 $6.98, © 4WX 9323 $6.98. Performance: Arid
Recording: Good
Traffic has a great reputation, much of it deserved. But something—nay, nearly everything—is missing from this album. Though skillfully performed, the material (except the instrumental Tragic Magic) is a collection of meandering doom-saying ditties, the lyrics of which are filled either with vague symbols or flat-out statements of chilling banality. Stevie Winwood seems to take both life and his vocals lying down. Much as I'd like to report otherwise, the record is an unexpected and woeful dud.

J.V.

URIAH HEEP: The Magician's Birthday. Uriah Heep (vocals and instrumentals). Sun- rise; Spider Woman; Blind Eye; Echoes in the Dark; and four others. MERCURY SRM 1 652 $5.98, © MCR 1652 $6.98, © MCR4 1652 $6.98. Performance: Fraught and flat
Recording: Good
Years ago they used to call Uriah Heep's kind of music "acid-rock." I don't know what

Minolta helps you discover the mysteries of women.

It takes a quick eye and a responsive camera to find the woman in every little girl.
You're comfortable with a Minolta SR-T from the moment you pick it up. This is the 35mm reflex camera that lets you concentrate on your subject. The viewfinder gives you all the information needed for correct exposure and focusing. Because you never have to look away from the finder to adjust a Minolta SR-T, you're ready to catch the one photograph that could never be taken again.

Next time you see a little girl playing a woman's game, have a Minolta SR-T camera in hand. It will help you look into her future. For more information, see your photo dealer or write Minolta Corporation, 200 Park Ave. So., N.Y., N.Y. 10003. In Canada: Anglophoto Ltd., P.Q.

Minolta SR-T 101/Minolta SR-T 102

When identified by a factory-sealed "M" tag, Minolta 35mm reflex cameras are warranted by Minolta Corp. against defects in workmanship and materials for two years from date of purchase, excluding user-inflicted damage. The camera will be serviced at no charge provided it is returned within the warranty period, postpaid, securely packaged, including $2.00 for mailing, handling and insurance.
RECEIVERS TUNERS AMPLIFIERS TAPE RECORDERS DECKS

LOW PRICES ON FAMOUS BRAND NATIONALLY ADVERTISED

STEREO COMPONENTS
FAST DELIVERY FACTORY SEALED CARTONS
WRITE TODAY FOR OUR QUOTE

A.D.R. AUDIO
6200 CHILLOM PLACE N.W. WASH., D.C. 20011
(202) 723-0600
SEND FOR OUR FREE CATALOG

SPEAKERS CARTRIDGES COMPACTS ALL STEREO SYSTEMS

CIRCLE NO. 1 ON READER SERVICE CARD

big discounts

STEREO COMPONENTS
Largest selection of top name brands... try us and see...

It's worth a call
(301) 488-9600

INTERNATIONAL HI-FI DISTRIBUTORS
6330 Frankford Ave. Baltimore, Md 21206
All mail answered within 24 hours
Phone Daily 9 AM to 9 PM Saturday 9 AM to 4 PM Phone (301) 488-9600

CIRCLE NO. 20 ON READER SERVICE CARD

the term for it is today, if there is one, but the music is no better now than it was then. Its characteristics are hammy vocals, puffy lyrics set to the barest of melodies, and a lot of dial-twisting on the guitar amplifier and the control board in the recording studio.

The title tune is the only one of the eight selections that comes close to being interesting. Unfortunately, it just comes close. The album reminds me of those amateur opera singers who rent Carnegie Recital Hall to give recitals for their tone-deaf friends and for those knowledgeable aficionados who need a good laugh. Uriah Heep, however, takes it all utterly seriously. Give these boys a Dutch rub and six months under house arrest. J.V.

WISHBONE GOOF
Apologies to our readers (and to MCA Records) for the confusion resulting from Joel Vance's review of "Live in Memphis" by Wishbone Ash (June). It seems that this was one of those "for your eyes only" promo efforts not intended for commercial release, and that there are now more than a few Wishbone Ash fans understandably miffed at the record's unavailability. In our defense, we can only say that the packaging was more than a trifle vague. Nevertheless, we goofed, so again, our sincere apologies for the inconvenience, disappointment, rage, disgust, and discombobulation. — S.S.

RECORDING OF SPECIAL MERIT

BILL WITHERS: Live at Carnegie Hall. Bill Withers (vocals and guitar); orchestra. Use Me, For My Friend; Better Off Dead; Let Us Love; and twelve others. Sussex SXBS 7025-2 two discs $11.98.

Performance: Interesting
Recording: Good

Bill Withers picks up so many vibes, all good, from a live audience that he should consider making more recordings like this one. He has always been a good enough singer, and a more than good guitarist, but the lack of nuance in performance—a monotony from song to song—on his previous albums resulted in an eventual draining of any real interest.

As a songwriter, Withers has usually been good-to-very-good. All the material here is his own, with the exception of I Can't Write Left Handed, and even that he performs persuasively. The best track is World Keeps Going Around, in which he communicates so simply and so affecting that the audience breathes along with him. His closing medley, Harlem Cold Baloney, is a true piece of talent and mass rapport.

This is Withers' most impressive album to date, for the reason that what is being given to him up front, on the other side of the footlights, jolts him into idiomatic and personally responsive performances that can't be generated in the recording studio. Encore. P.R.

COLLECTIONS

SOLID GOLD ROCK 'N' ROLL Volume One: Sh-Boom (Crew Cuts); The Stroll (Dion); Chantilly Lace (Big Bopper); One Summer Night (Danleers); My Boyfriend's Back (Angels); You Don't Have to Be a Baby to Cry (Caravelles); Running Bear (Johnny Preston); I Saw Linda Yesterday (Dicky Lee); Little Darlin' (Diamonds); Crazy 'bout Ya Baby (Crew Cuts); Gone of Love (Wayne Fontana and the Mindbenders); Come Along with Me (Del-Vikings); Walk Away Renee (Left Banke); Mendocono (Sir Douglas Quintet); Na Na Hey Hey Kiss Him Goodbye (Steam). Mercury SR 61371 $4.98. © MC8 61371 $6.98. © MCR4 61371 $6.98.

SOLID GOLD ROCK 'N' ROLL Volume Two: Earth Angel (Crew Cuts); Church Bells May Ring (Diamonds); Apples, Peaches, Pumpkin Pie (Jay and the Techniques); Hey Paula (Paul and Paula); Ko Ko Mo (Cuts); Sea of Love (Phil Phillips); Wooden Heart (Joe Dowell); A Groovy Kind of Love (Mindbenders); Great Pretender (Platters); Why Do Fools Fall in Love (Diamonds); Great Balls of Fire (Jerry Lee Lewis); A Sunday Kind of Love (Del-Vikings); Hey! Baby (Bruce Channel); Patches (Dicky Lee); It's My Party (Leslie Gore); Ahub, the Arab (Ray Stevens). Mercury SR 61372 $4.98. © MC8 61372 $6.98. © MCR4 61372 $6.98.

Performances: Variable
Recordings: Variable

Early rock depends on how you hear "it" if you go by pure nostalgia, then probably most of it sounds good. If you go by its abili ty—like any musical form's—to touch certain basic emotions, then early rock becomes a matter of personal taste. One gooey, sloppy, sentimental, hammy record can be great and another can be perfectly awful. One beaty, twang-twang rocker can still be thrilling and another can seem as ridiculous as it did when you first heard it fifteen years ago (provided you were a teenager during the 1950s; I was). Much of early rock—the songs as well as the live and recorded performances—was melodramatic and vaudevillian. Sentiments so corny that they had been laughed off the legitimate stage at the turn of the century were still viable for Fifties rock. It was, above all, a youngster's music. It did not attempt to be cosmic or to vend eternal truths about people or the world or the country, as rock today has attempted to do. It was meant as specialized entertainment for a specialized audience.
While others struggle to meet the demands of discrete four channel sound...

AUDIO-TECHNICA introduces its 2nd generation 4-channel phono cartridges.

Now you can play any kind of stereo or 4-channel record, including the most demanding discrete 4-channel discs. Audio-Technica Model AT14S, with Shibata stylus provides 5-45,000 Hz response. Unique Dual Magnet® design and ultra-precise fabrication sets new performance standards for others to copy. From Japan's most advanced phono cartridge manufacturer with a 10-year history of innovation and design leadership.

Write today for technical data on the entire line of Audio-Technica Dual Magnet cartridges for every high fidelity system.

*Patents pending.

JULY 1973
ELLA FITZGERALD: Ella Loves Cole. Ella Fitzgerald (vocals), orchestra, Nelson Riddle cond. I Get a Kick Out of You; Down in the Depths; At Last; Long Love; I've Got You Under My Skin; So Near and Yet So Far; All of You; Without Love; My Heart Belongs to Daddy; Love for Sale; Just One of Those Things; I Concentrate on You; Anything Goes: C'est Magnifique. ATLANTIC SD 1631 $5.98, © TP 1631 $6.98, © CS 1631 $6.98.

Performance: As we like it
Recording: Splendid

Our beloved Ella, now past the half-century mark, has done her full stint in the recording studios for the composers she "loves." I know of no other singer who might have held my attention as she did through five LPs of Gershwin songs (in the historic "Ella Fitzgerald Sings the George and Ira Gershwin Songbooks" on the Verve label). Over the years, she has done as much for the songs of Harold Arlen, Jerome Kern, Irving Berlin, and Richard Rodgers, according them two records each, also for Verve. More than fifteen years ago she also made a two-disc set for the same company in homage to Porter. Her approach to a song is usually easy-going, dreamy, and good-humored. She will bend any tune to her own style as it suits her. Sometimes she repeats familiar mannerisms and the relaxed beat she favors to the point of monotony, yet her way with the popular classics wears well, and is especially congenial to Porter. By now we may well be numb to the tunes from Anything Goes, and even the image of that typical spoiled Porter heroine "down in the depths on the ninetieth floor" may fail to provoke the requisite superior smile, but as people like Bobby Short rummage among the non-hits in that fabulous trunk for fresh material, Porter's urbanity and hand-in-glove matching of tune to lyric and sentiment continue to afford delight, especially to those of us who grew up humming his songs. They may never go completely out of style. After hearing both singers perhaps too many times, it may seem an academic question to most of us whether Ella or Bobby "loves" Porter's music more. But apparently Miss Fitzgerald replayed her old album and regretted having left some of her favorites out of it, so what we have here are new tapings mixed with the old in a single volume which is nothing if not pleasant to the ears, especially as Norman Granz was able to get Nelson Riddle back to his studio to play the accompaniments, as he did the first time around.

So well, indeed, has the new disc been mastered that I wasn't able to guess for sure which tunes are the new additions, but I was particularly pleased at the full-scale treatment of Love for Sale, the especially carefree handling of Just One of Those Things, and the contagion of C'est Magnifique, which winds up the concert. If you like. Ella Fitzgerald, "love" Cole Porter, and don't have the earlier collection already on your shelf, this new re-recorded edition is certainly highly recommended.

BILLIE HOLIDAY: Strange Fruit. Billie Holiday (vocals); various recording groups. I'll Get By; My Old Flame; Embraceable You; I Cover the Waterfront; On the Sunny Side of the Street; I'm Yours; and ten others. ATLANTIC TP 1614 $6.98, © CS 1614 $6.98.

Performance: Peak of perfection
Recording: Faithful mono

BILLIE HOLIDAY: 1957-58 Radio and TV Broadcasts. Billie Holiday (vocals); Count Basie Orchestra; other unidentified groups. God Bless the Child; I Cover the Waterfront; Lover Come Back to Me; My Man; Billie's Blues; and eight others. ESP-Disk' ESP 3003 $5.98.

Performance: Not for posterity
Recording: Unbalanced

Few artists have been as widely discussed, re-evaluated, and exploited in recent months as Billie Holiday. The fact that new generations are discovering the greatness of Lady Day somewhat lessens the pain of seeing her shamefully exploited in a ridiculous screen version of her "life" as Hollywood has chosen to portray it, but it is adding insult to injury when record companies ride the crest of the wave with further exploitation. The ESP album is a sad case in point.

Capturing more pathetic moments than good ones, these recordings of broadcasts from the mid-Fifties do Billie Holiday a great disservice, but even at her worst this incredible artist makes Diana Ross sound like a soul-forsaken robot. Billie's life so infiltrated her performances that one could read her personal joys and sorrows in her songs and delivery, like no other performer I have heard, she could express her own heartbreak in a joyful song. Phoniness was simply not in her.

The claim that these are "newly discovered and previously unreleased" recordings is not true. Most of the material has for years circulated on tape among collectors, and much of it has been available on European albums since the mid-Sixties. Not as disgraceful as ESP's release of pianist Bud Powell's last feeble attempt to capture his past brilliance, this Holiday disc is nevertheless a necessary one, especially when one considers the wealth of excellent recordings already available.

The packaging, too, is sloppy (though we are luckily spared another set of liner notes by Maylie Duffy, whose self-serving ramblings accompanied ESP's first Billie Holiday album). For instance, All of Me, which is listed on both album cover and label, does not appear on the disc. What do appear are three unfortunate versions of My Man. A note on the album announces two more volumes to come; let us hope ESP will be discouraged from further efforts along these lines.

The Atlantic album is in another league altogether. Here, for the first time under one cover, are the sixteen titles Billie recorded for the Commodore label in 1939 and 1944. This is Lady Day at her peak, singing the famous original version of Strange Fruit, two of her own blues, and thirteen pop songs which she characteristically reworked. The accompanying groups, led by trumpeter Frankie Newton and pianist Eddie Heywood, feature some of the finest black musicians of the Swing period.

The 1939 session (Billie was on loan from Columbia, which had found Strange Fruit's message "too inflammatory" to record) produced four classics: Strange Fruit, of course, here in its definitive performance; Yesterdays, a poignant minor-key tune which was to become increasingly relevant to Billie, and which features a Chu Berry-ish statement by tenor saxophonist Kenneth Hollon; Billie's own Love for Sale, and Mellow, one of a handful of blues in her repertoire. And I Got a Right to Sing the Blues, featuring Tab Smith's alto sax. These alone are worth the price of the album, but the 1944 crop was also outstanding.

Three of the tunes are heard in previously unreleased alternate takes: Billie's Blues, a less inspired version than the original; a faster version of He's Funny That Way; and Lover Come Back to Me. The latter two feature horns, which were not heard on the originally released takes, and I must confess a preference for the more familiar, trio-backed versions. Collectors will welcome these alternate takes, but, since collectors traditionally only account for a small fraction of jazz record sales, and since only Billie's Blues is an artistic improvement over the previously released version, I fail to understand the substitution. I would also like to have seen the recordings programmed chronologically. Those are my only real complaints, and they are minor ones. The album is superb, and I cannot recommend it strongly enough.

Overprinted, as they are, on a photograph of 52nd Street, Leonard Feather's liner notes are difficult to read, but they contribute greatly to the album's excellence. If you have not seen the album, The Billie Holiday Cookbook, the author is doing so, forget it. You will learn more about Billie Holiday from two and a half minutes of the Commodore recordings here than you
YUSEF LATEEF: Hush 'n' Thunder. Yusef Lateef (tenor saxophone, shenain, flute, pneumatic flute); Jimmy Owens (flugelhorn); Kenny Barron, Ray Bryant (piano); Kermit Moore (cello); Al White (organ); David Spinoza, Cornell Dupree, Keith Loving (guitar); Bob Cunningham, Gordine Edwards, Bill Salter (bass); Kuumba “Tootie” Heath (drums); Monroe “Bones” Constantino (vocals); the J. C. White Singers; Come Sunday; The Hump; Opus, Parts I and II; This Old Building; and four others. ATLANTIC SD 1635 $5.98, © TC 1635 $6.98.

Hubert Laws has recently emerged as one of the finest boatmen of the world’s most modern, efficient computer systems, and if you’re like 99% of our subscribers, you’ll never have any reason to complain about your subscription service.

We have found that when complaints do arise, the majority of them occur because people have written their names or addresses differently at different times. For example, if your subscription were listed under “William Jones, Cedar Lane, Middletown, Arizona,” and you were to renew it as “Bill Jones, Cedar Lane, Middletown, Arizona,” our computer would think that two separate subscriptions were involved, and it would start sending you two copies of Stereo Review each month. Other examples of combinations of names that would confuse the computer would include: John Henry Smith and Henry Smith, and Mrs. Joseph Jones and Mary Jones. Minor differences in addresses can also lead to difficulties. For example, to the computer, 100 Second St. is not the same as 100 2nd St.

So, please, when you write us about your subscription, be sure to enclose the mailing label from the cover of the magazine—or else copy your name and address exactly as they appear on the mailing label. This will greatly reduce any chance of error, and we will be able to service your request much more quickly.

Hubert Laws (flute, alto flute, piccolo); orchestra. Don Sebesky arr. and cond. Where Is the Love; Amazing Grace; No More; and three others. CTI RECORDS 6022 $5.98, © CT 6022 $5.98, © CT 6022 $6.98.

In my opinion, Yusef Lateef has far greater talent than this album indicates. If I seem unduly harsh, it is probably because I admire Lateef so much, and I feel he has let me down. His performance isn’t really all that bad here, but if you don’t have his previous albums already, pick up one of them instead of this one. C.A.

RECORDING OF SPECIAL MERIT

HUBERT LAWS: Morning Star. Hubert Laws (flute, alto flute, piccolo); orchestra. Don Sebesky arr. and cond. Where Is the Love; Amazing Grace; No More; and three others. CTI RECORDS 6022 $5.98, © CTI 6022 $6.98, © CT 6022 $6.98.

Performance: Smooth
Recording: Excellent

Hubert Laws has recently emerged as one of the finest (some say the finest) flute players in the nonclassical field today. CTI Records has established itself as a label of consistent high quality and good taste. Not surprisingly, the combination continues to yield some exquisite harvests.

With an impressive number of backers—including his two sisters, Eloise and Debra—Hubert Laws soars effortlessly around Morning Star, bringing out poetic beauty in his own compositions Let Her Go and What Do You Think of This World Now? and tells those Highladders to pack up their bagpipes with a rendition of Amazing Grace that truly befits the title.

Don Sebesky’s imaginative arrangements give the whole affair a lushness that guarantees wide appeal, and Laws’ performance (not to mention that of Ron Carter, Billy Cobham, Garnett Brown, and others) adds the spice that will attract those who might see nine violins, three cellos, and a harp as a threat to their enjoyment. C.A.

Lowest of the LOW!
Shamelessly Low Prices...

As one of America’s largest wholesale distributors, we’re guilt of shamelessly low prices. Our buying volume has made our prices the lowest. We seriously doubt you can find one lower.

Write for a lowest of the low quote...we’re not ashamed.

STereo Corporation of America
2122 Utica Avenue, Brooklyn, New York 11234 (212) 338-8565
CIRCLE NO. 19 ON READER SERVICE CARD

ABOUT YOUR SUBSCRIPTION

Your subscription to Stereo Review is currently on one of the world’s most modern, efficient computer systems, and if you’re like 99% of our subscribers, you’ll never have any reason to complain about your subscription service.

We have found that when complaints do arise, the majority of them occur because people have written their names or addresses differently at different times. For example, if your subscription were listed under “William Jones, Cedar Lane, Middletown, Arizona,” you were to renew it as “Bill Jones, Cedar Lane, Middletown, Arizona,” our computer would think that two separate subscriptions were involved, and it would start sending you two copies of Stereo Review each month. Other examples of combinations of names that would confuse the computer would include: John Henry Smith and Henry Smith, and Mrs. Joseph Jones and Mary Jones. Minor differences in addresses can also lead to difficulties. For example, to the computer, 100 Second St. is not the same as 100 2nd St.

So, please, when you write us about your subscription, be sure to enclose the mailing label from the cover of the magazine—or else copy your name and address exactly as they appear on the mailing label. This will greatly reduce any chance of error, and we will be able to service your request much more quickly.

Lowest of the LOW!

Shamelessly Low Prices...

As one of America’s largest wholesale distributors, we’re guilty of shamelessly low prices. Our buying volume has made our prices the lowest. We seriously doubt you can find one lower.

Write for a lowest of the low quote...we’re not ashamed.

STereo Corporation of America
2122 Utica Avenue, Brooklyn, New York 11234 (212) 338-8565
CIRCLE NO. 19 ON READER SERVICE CARD

ABOUT YOUR SUBSCRIPTION

Your subscription to Stereo Review is currently on one of the world’s most modern, efficient computer systems, and if you’re like 99% of our subscribers, you’ll never have any reason to complain about your subscription service.

We have found that when complaints do arise, the majority of them occur because people have written their names or addresses differently at different times. For example, if your subscription were listed under “William Jones, Cedar Lane, Middletown, Arizona,” you were to renew it as “Bill Jones, Cedar Lane, Middletown, Arizona,” our computer would think that two separate subscriptions were involved, and it would start sending you two copies of Stereo Review each month. Other examples of combinations of names that would confuse the computer would include: John Henry Smith and Henry Smith, and Mrs. Joseph Jones and Mary Jones. Minor differences in addresses can also lead to difficulties. For example, to the computer, 100 Second St. is not the same as 100 2nd St.

So, please, when you write us about your subscription, be sure to enclose the mailing label from the cover of the magazine—or else copy your name and address exactly as they appear on the mailing label. This will greatly reduce any chance of error, and we will be able to service your request much more quickly.
UTHENTIC genius is never recognized until the genius is dead, so the saying goes, but Stephen Sondheim is proving it a lie. At forty-three he has composed the music and/or lyrics for only (!) eight Broadway shows and one television special, yet practically everybody who knows or cares anything about the subject regards him as already the most important force in American theater music since Cole Porter. His songs are witty, sardonic, intelligent, brilliantly structured, and, above all, courageous. If there's a tired old rule to be broken, he breaks it. If there's a bright new idea kicking around, he has it. And since the whole rollicking history of Broadway musicals is seemingly at his talented fingertips, when a new chord must be struck, he strikes it. All of which explains why the opening of a new show by Stephen Sondheim automatically becomes an Event.

The event at hand, the composer's latest contribution to the great tradition, is a dazzling tour de force called A Little Night Music. It is his most ambitiously conceived and richly creative work to date, and it has just been recorded to a fare-thee-well by Columbia Records. Night Music is based on Ingmar Bergman's famous film Smiles of a Summer Night. It is adult, intelligently crafted writing, and it requires an equally intelligent commitment from the listener. Columbia's original-cast album, moreover, is one of the best-recorded discs I've ever heard in the musical-comedy genre. Nothing has been deleted or shortened for reasons of time or space, and a complete set of Sondheim's provocative lyrics is included in case you want to follow along when the listening gets tricky. I found this an enormous help, because the songs are anything but simple, many of them being written in a variety of quick-changing tempos involving what sounds like myriad voices singing different sets of lyrics at the same time. Much of the score is for me evocative of Strauss and Ravel (the setting is turn-of-century), and some of it might be said to border on contemporary opera—or is that still a dirty word? After two or three playings, however, the mysteries and the haunting dissonances resolve themselves, and you will probably then find yourself, as I did, open to the music's thrilling rhythmic pulse.

Like the arcane games and puzzles Sondheim reportedly collects as a hobby, his songs are not made up of mere surfaces, their inner workings as exposed as the contents of an open-faced sandwich. They are rather like fine watches, and just as functional. They often literally take the place of dramatic scenes, with the dialogue being sung instead of spoken. And, to serve the needs of drama, they need to take many forms. The score of Night Music, for example, contains patter songs, contrapuntal duets and trios, a quartet, and even a dramatic double quintet to puzzle through. All this has been gorgeously orchestrated by Jonathan Tunick; there is no rhythm section, only strings and woodwinds to carry the melodies and harmonies aloft. The total effect is consistently vocal, consistently dramatic. Even when the music is least hummable—hummability isn't everything—your attention is held, waiting to pounce on the clue that will lead you into the meaning of the next song. My own favorite is Send in the Clowns, a ripely over-the-hill sigh by Glynis Johns that throbs with worldly wisdom. And I have never heard a better set of lyrics than those for Liaisons, a lament croaked with sad regret by Hermione Gingold in the role of an old duenna who longs for the dear dead days when people had taste and style. "Where," asks Gingold ruefully, "is style? Where is skill? Where is forethought? Where's discretion of the heart, or passion in the art, where's craft?" Stephen Sondheim is of course answering all these questions before we've even had a chance to let them soak in. His is the style that is happening today in theater music: he is where the craft is. His work renews my faith that whatever temporarily ails that "fabulous invalid" called Broadway, it is not terminal, and the patient will move on not only to recovery, but to better health than ever. As a matter of fact, I feel a lot better myself. Sondheim has taken the musical and dramatic values of such great predecessors...
as Arlen, Berlin, and Porter and catapulted them into the turbulent Seventies. His music has enriched my life, and it's a tonic I fully endorse for anybody who is fed up as I am with the clutter and clutter that is passing itself off as music these days.

It was further demonstrated, on Sunday evening, March 11, at New York's Schubert Theater, that this particular musical cause is far from lost, for on that night 1,600 celebrities, journalists, socialites, and just people with good musical taste (and a little money) gathered at a $100-a-seat benefit (for the National Hemophilia Foundation) to honor the composer with a testimonial bouquet called "Sondheim: A Musical Tribute." The show presented more than forty Sondheim songs and lasted four hours. Warner Brothers has just issued a two-disc set of the event's highlights that might as well be labeled a collector's item right now.

At a time when cacophonous rock and anemic high camp from former eras threaten to overrun the culturally deprived wasteland of Broadway, such an evening must have seemed to many, as it did to me, a glorious oasis. One by one, the biggest talents in show music saluted Sondheim's achievement by performing to perfection his songs of complex sentiment, wry humor, and contemporary sophistication. The recorded version of the event—it is live, of course—is something less than a sonic triumph: microphones pop, the balances are sometimes disappear. But all such minor carping aside, it is an achievement by performing to perfection his songs of complex sentiment, wry humor, and contemporary sophistication. The recorded version of the event—it is live, of course—is something less than a sonic triumph: microphones pop, the balances are occasionally uneven, stereo emphasis wanders, and separation sometimes disappears. Laryngitis and other vocal problems plagued some of the performers (this probably accounts for the absence of some expected numbers), and legal complications made it impossible to include Leonard Bernstein's moving piano recollections of West Side Story (Sondheim's lyrics, remember?) as well as selections by Glynis Johns and Hermione Gingold from A Little Night Music. But all such minor carping aside, it is an album that gives us the brightness and beauty of Broadway show music at its spit-and-polish Sunday best. Skillful editing has shaped and blended the show-stopping numbers in with just enough of the ovations and cheers to give a rounded "you are there" feeling without turning it into another of those recorded applause meters so dear to the heart of Marlene Dietrich and so boring to the rest of us.

Some of the more familiar Sondheim items are included: Alice Playten, that mini-Munchkin with the steameroll voice, and Virginia Sandifur add new punch to If Mama Was Married from Gypsy; Chita Rivera and Pam Myers tell America into a rousing Puerto Rican street festival; and Angela Lansbury brings down the house with a selection from It's a Wonderful Life, riveting as Carolee. Larry Blyden, Len Cariou, Dorothy Collins, Glynis Johns, and Paul byrden (with an accent) closed the possibility of including much of the material from Gypsy and A Funny Thing Happened on the Way to the Forum, but I didn't miss them at all. Instead, the show presented some songs most of us haven't heard before, and eleven are included in the Warner Brothers album. Among them are Silly People, a rather Chekhovian love song for a louty servant, beautifully performed by George Lee Andrews. One More Kiss, a lighthearted take that is not quite all. Warner Brothers has spent what looks like a fortune packaging all this—amazing considering the fact that the record company is donating all royalties to the American Academy and the National Hemophilia Foundation. (The performers donated their talents as well, of course. Don't tell me philanthropy is dead.) The package includes a six-page insert containing photographs of the stars in actual performance, notes on the previously unrecorded songs, and two pages of production stills and vital statistics of every Sondheim show. There is also a capsule account of the entire Sondheim career. All of which constitutes something of a miracle sounds like. Taken together, I think these two Sondheim albums are very much the cream of everything that is going on in American theater music today and are therefore the record event of the year as well. It is genius recognized, and thanks to Warner Brothers, Sondheim is hopefully encouraged now. The rest of us can only look forward to many more years of benefit. Nothing posthumous about that.


Say it again, Stan—
We love the sound of your words!

As a matter of fact, Stanton has so many wonderful quotes on the warranty cards that purchasers send in, that we are letting them write this ad.

"The best sound I have ever heard from my sound system—fantastic!"
Jeff E. Bouker, 422 N. 156th St., Brookfield, Wis. 53005

"Very comfortable. Stylish. Excellent sound."
Gary A. Wonlin, 3266 Crepley Ave., San Jose, Calif. 95132

"Absolutely Great—especially by comparison."
John F. Robinson, 199 Middle Rd., Portland, Me.

"The headphone is the best I've heard."
Eddy Schreyer, 5701 Cahill Ave., Tustin, Calif. 92680

"Good sound, much better than other comparable brands. Excellent design."
Terry Ames, 2682 Calhoun St., Alameda, Calif.

"Excellent bass response. Comfortable headset."
Phil Leutchies, 15335 Stetson Rd., Los Gatos, Calif. 95030

"The most amazing, most natural sound I've ever heard."
Stephen Sandoz, 6815 S.W. 12th Ave., Portland, Oregon

"Excellent. Best I've listened to."
J. L. Hubbard, 3625 Pine, Long Beach, Calif.

"The best I have ever used or heard."
Howard J. Millbank, 2260 Addison St., San Marin, Calif. 91108

"Sound quality is vibrant and separation is excellent. Prefer Stanton over Fostex!"
Thomas J. Saunders, 2400 Phillips Dr., Alexandria, Va. 22306

"Excellent performance. Fantastic Power handling capability."
Todd Sadow, 20 Black Hawk Road, Scarsdale, N.Y. 10583

"The best I have ever heard."
Ronnie Lastic, 913 Perre Warner Blvd., Nashville, Tenn.

"Excellent, best I have ever heard."
Richard Simon, 508 S. Michigan, Plymouth, Ind.

"Excellent."
Florence A. Davis, 191 Congress Ave., Providence, R.I.

"Excellent."

"The headset is the most comfortable and best sounding I have seen."
Craig Blum, 285 Andesbury Ave., Alt. View, Calif. 94040

"The best of 20+ headsets tested."
Michael Fink, 17162 Erwin Lane, Huntington Beach, Calif. 92647

"FANTASTIC!"
Brian D. McCarty, 364 F, Vinton Ave., Palm, Calif. 90034

"FANTASTIC!"
James P. Schwinder, 5520 W. 100th St., 151, Torrance, Calif. 90501

And, that is only a sampling—
we have thousands more!

For complete information
write Stanton Magnetics, Inc.,
Terminal Drive, Plainview,
New York 11803.
BACH-SILOTI: Prelude in D Major, from Cantata No. 29; Siciliano in G Minor, from Flute Sonata in E-flat Major (BWV 1031); Organ Toccata and Fugue in D Minor (BWV 565); Little Organ Prelude in E Minor (BWV 555); Prelude in D Minor (Sinfonia, Pt. II), from Cantata No. 35; Chaconne, from Violin Partita No. 2, in D Minor (BWV 1004); Prelude in B Minor, from Clavierbiichlein fur W. F. Bach (BWV 855a); Organ Prelude in G Minor (BWV 535). Bernardo Segall (piano). Orion ORS 73113 $5.98.

Performance: Distinguished
Recording: Good

Alexander Siloti, who was born in Russia in 1863 and died in New York in 1945, studied with, among others, Tchaikovsky, Nicholas Rubinstein, and Liszt. He was one of the outstanding pianists of his generation. As a teacher in this country, he was a member of the Juilliard faculty, and he edited a considerable amount of music. Of his arrangements of the Juilliard faculty, and he edited a considerable amount of music. Of his arrangements of the Bach violin and cello sonatas and suites. Perhaps Orion can persuade him, and perhaps the company can also provide a slightly less close-up and more constricted (notably at the side ends) piano sound than one hears here.

All of these qualities may be heard to superior effect in the playing of the Brazilian-American pianist Bernardo Segall, who studied with Siloti for ten years and who planned this recital as an homage to him. Segall plays all of these transcriptions with such obvious sympathy and technical mastery that I am sorry he has not (to my knowledge) recorded very much recently, the last time being before 1958. He would be an ideal interpreter, say, for the Godowsky transcriptions of some of the Bach violin and cello sonatas and suites. Perhaps Orion can persuade him, and perhaps the company can also provide a slightly less close-up and less constricted (notably at the side ends) piano sound than one hears here.

BERNARDO SEGALL

Ideal interpreter of Bach piano transcriptions

Judging from the samples here, Siloti's way with Bach is well worth hearing, especially as a supplement to the kind of musical excavation that has been the result of the Romantic Revival. For, make no mistake, this sort of transcribing is just as much a part of that movement as original, non-arranged instrumental pieces of the period. I don't think that one ought to listen to such transcriptions for their faithfulness to Bach or as a substitute for the original thing, but rather as an important contribution of and insight into the Romantic ethos. In this sense, listening to Siloti's Bach can be a very pleasurable experience, provided the performance adheres to the Romantic stylistic tradition and includes lots of brilliance, tonal variety, rubato, and rhetorical flamboyance.

All of these qualities may be heard to superior effect in the playing of the Brazilian-American pianist Bernardo Segall, who studied with Siloti for ten years and who planned this recital as an homage to him. Segall plays all of these transcriptions with such obvious sympathy and technical mastery that I am sorry he has not (to my knowledge) recorded very much recently, the last time being before 1958. He would be an ideal interpreter, say, for the Godowsky transcriptions of some of the Bach violin and cello sonatas and suites. Perhaps Orion can persuade him, and perhaps the company can also provide a slightly less close-up and less constricted (notably at the side ends) piano sound than one hears here.

BERNARDO SEGALL

Ideal interpreter of Bach piano transcriptions

Judging from the samples here, Siloti's way with Bach is well worth hearing, especially as a supplement to the kind of musical excavation that has been the result of the Romantic Revival. For, make no mistake, this sort of transcribing is just as much a part of that movement as original, non-arranged instrumental pieces of the period. I don't think that one ought to listen to such transcriptions for their faithfulness to Bach or as a substitute for the original thing, but rather as an important contribution of and insight into the Romantic ethos. In this sense, listening to Siloti's Bach can be a very pleasurable experience, provided the performance adheres to the Romantic stylistic tradition and includes lots of brilliance, tonal variety, rubato, and rhetorical flamboyance.

All of these qualities may be heard to superior effect in the playing of the Brazilian-American pianist Bernardo Segall, who studied with Siloti for ten years and who planned this recital as an homage to him. Segall plays all of these transcriptions with such obvious sympathy and technical mastery that I am sorry he has not (to my knowledge) recorded very much recently, the last time being before 1958. He would be an ideal interpreter, say, for the Godowsky transcriptions of some of the Bach violin and cello sonatas and suites. Perhaps Orion can persuade him, and perhaps the company can also provide a slightly less close-up and less constricted (notably at the side ends) piano sound than one hears here.

BERNARDO SEGALL

Ideal interpreter of Bach piano transcriptions

Judging from the samples here, Siloti's way with Bach is well worth hearing, especially as a supplement to the kind of musical excavation that has been the result of the Romantic Revival. For, make no mistake, this sort of transcribing is just as much a part of that movement as original, non-arranged instrumental pieces of the period. I don't think that one ought to listen to such transcriptions for their faithfulness to Bach or as a substitute for the original thing, but rather as an important contribution of and insight into the Romantic ethos. In this sense, listening to Siloti's Bach can be a very pleasurable experience, provided the performance adheres to the Romantic stylistic tradition and includes lots of brilliance, tonal variety, rubato, and rhetorical flamboyance.

All of these qualities may be heard to superior effect in the playing of the Brazilian-American pianist Bernardo Segall, who studied with Siloti for ten years and who planned this recital as an homage to him. Segall plays all of these transcriptions with such obvious sympathy and technical mastery that I am sorry he has not (to my knowledge) recorded very much recently, the last time being before 1958. He would be an ideal interpreter, say, for the Godowsky transcriptions of some of the Bach violin and cello sonatas and suites. Perhaps Orion can persuade him, and perhaps the company can also provide a slightly less close-up and less constricted (notably at the side ends) piano sound than one hears here.

BERNARDO SEGALL

Ideal interpreter of Bach piano transcriptions

Judging from the samples here, Siloti's way with Bach is well worth hearing, especially as a supplement to the kind of musical excavation that has been the result of the Romantic Revival. For, make no mistake, this sort of transcribing is just as much a part of that movement as original, non-arranged instrumental pieces of the period. I don't think that one ought to listen to such transcriptions for their faithfulness to Bach or as a substitute for the original thing, but rather as an important contribution of and insight into the Romantic ethos. In this sense, listening to Siloti's Bach can be a very pleasurable experience, provided the performance adheres to the Romantic stylistic tradition and includes lots of brilliance, tonal variety, rubato, and rhetorical flamboyance.
Beethoven's youth and his slightly rebellious brand of pessimism are major ingredients of the First and Second Concertos, and Gulda brings these qualities to the fore with unfaliling elegance, knitting phrases and motives together with consummate faithfulness to the ideas themselves. Slow-movement melodies sing with unbroken eloquence and formoleodic balance. The orchestral playing achieves exactly the same technical and musical character. Where the one leaves off and the other takes up is purely a matter of instrumental change, not of phrasal or stylistic inflection.

In the later concertos, where the weight of Beethoven's increased maturity is evident. Gulda and Stein increase the emotional richness without losing the delicate edge of lyricism and refinement that makes all this music reveal itself most fully. Gulda's slow spinning out of the touching and frightening melodies of the Fourth Concerto's slow movement is an enchantment, and the orchestra's dramatic, rhythmic collaboration borders on true wizardry.

I do have two complaints to lodge against these otherwise remarkable recordings. The first has to do with the sound itself, which is heavy in the bass and sometimes murky down there as well. On some of the discs, turning down the bass control helps. In other cases it does no good. My second complaint is that the woodwinds are a bit blowsy from time to time. The oboes, especially, are wont to inject an unpolished detail into an otherwise lovely texture. On balance, though, I do not find either of these aspects weighing heavily. These are performances that I will be happy to keep in my library.

L.T.


**Performance/Recording**: Rather over-reverberant

How did Beethoven's piano sonatas sound to his contemporaries in Vienna? Didn't the pianos of that day, lacking the metal frames and solid construction of today's instruments, sound impossibly tinny for the ideas propounded in such sonatas as the Appassionata and the Hammerklavier?

An answer of sorts is given by this two-records set, issued in the U.S. by BASF, from tapes of the European Harmonia Mundi label. The piano used here is the last one Beethoven owned—an instrument presented to him around 1825 by the Viennese maker Conrad Graf. When it was placed in the Beethoven-haus in Bonn in 1891, the piano was in ruder order and in playable shape, but it was restored in 1964, and the present recordings were made in the Augustusburg Castle near Cologne—in 1972 if we go by the date on the record labels. I was distressed by the lack of detailed technical information in the album notes concerning the Graf piano, but from what I can see in the cover photograph, Beethoven's Graf appears to be a double-string, six and one-half octave instrument.

I played the works recorded by Mr. Demus in chronological order, beginning with the Rondo in G Major and concluding with the Op. 126 Bagatelles. Most disconcerting on first hearing is the sharp "break" between the upper and lower registers of the Graf—almost like that of a John Cage "prepared" piano. Running passages in the upper register were smooth and brilliant, while solemn slow episodes in the lower register were endowed with remarkable sonority and considerable dynamic power; certainly. I did not expect as much from the Prestissimo of Op. 109 or the B Minor piece from the Bagatelles as emerged here. On the other hand, when the continuity of line and phrase passed between the lower and upper keyboard registers, the result, to my Steinway-Baldwin-Boesendorfer-conditioned ears, at least, can only be described as disconcerting. On the plus side, a fascinating aspect of the Graf as a conveyer of Beethoven's musical thought was the effect produced by the "soft" pedal in the ethereal pp slow-movement episodes of the two late sonatas; it lends a truly veiled timbre to the music, which is what Beethoven himself must have had in mind.

In general, I found performance and piano most effective for intimate lyrical pieces and for those with swift right-hand running passages. But I do find it rather hard to accept the Graf as the vehicle for the late Beethoven sonatas, especially since the composer also had, at the time of writing these works, a more full-bodied-sounding English Broadwood piano, which he undoubtedly had in mind when he was composing the gigantic Hammerschmidt Sonatas. A comment from Beethoven's piano-virtuoso friend, Ignaz Moscheles, as quoted in Arthur Loesser's classic Men, Women and Pianos, is quite illuminating in this connection (Moscheles had borrowed Beethoven's Broadwood for a Vienna concert, where he played it alternately with his own Graf): "I tried in my Fantasy to show the value of the broad, full, though somewhat muffled tone of the Broadwood piano, but in vain. My Vienna public remained loyal to their own instrument—the clear, ringing tones of the Graf were more pleasing to their ears."

With all due respect to Demus' knowledge and sensitive performances, and despite the interest of the piano itself, I must mention yet another aspect of these discs, a factor which I feel plays both performer and piano (and Beethoven's faults, and that is the excessively hard and reverberant ambience of the recording locale. In all, then, this album is a brave but not wholly successful attempt to get us closer to the music as it was known in Beethoven's time.

D.H.

**BERLIOZ**: Reverie and Caprice (see GO-DARD)

**BERLIOZ**: Romeo and Juliet (see TCHAI-KOVSKY)

**BIZET**: Premier Nocturne; Variations Chromatiques (see GRIEG)

**BRAHMS**: Lieder. Wenn du nur zuweilen lächelst; Es träunte mir; Ach, wende diesen Blick; Unbehexte, lichte Luft; Das Madchen spricht; Madchenlied; Vergebliches Ständchen: An. Sonntag, Morgen. Während des Regens; O schöner Wald; Von ewiger Liebe; Es steht ein Lied in ihrem Tal; and five others. Elly Ameling (soprano); Norman Shetler (piano). BASF KHB 21021 $5.98.

**Performance**: Lacks dimension **Recording**: Good

Together with some familiar Brahms songs, this recital also offers a few rarely heard ones, among them four songs on texts by Georg Friedrich Daumer from the Op. 57 collection of 1871. Elly Ameling is an ingratiating artist who sings with a bright tone, secure musicianship, and fine intonation, though her diction is not uniformly clear. She is most effective in the folksongs; the more passionate or searching songs like Es träunte mir or Ach, wende diesen Blick call for more involvement, depth, and color variety. Her vocal sound, however, is consistently enjoyable, and she remains sympathetic accompanists. Voice and piano are well balanced, but my review copy had some noisy surfaces.

G.J.

**BRAHMS**: Piano Quintet in F Minor, Op. 34. **HAYDN**: String Quartet in D Major, Op. 64, No. 5 ("Lark"); SCHUMANN: Piano Quintet in E-flat Major, Op. 44. Flonzaley Quartet; Harold Bauer (piano in Brahms); Ossip Gabrilowitsch (piano, in Schumann). RCA VICTROLA © VCN 7103 two discs $6.98.

**Performance**: Brahms great, others good **Recording**: Decent, historical

**BRAHMS**: Piano Quintet in F Minor, Op. 34. André Previn (piano); Yale Quartet. ANGEL S 36928 $5.98.

**Performance**: Great **Recording**: Superb

A month has to be counted as exceptional if it brings not just one but two great performances of the Brahms Piano Quintet. But beware of regarding the phenomenon as indicative of a "trend" in our chamber-music life. One of the two performances under review here was recorded four years before the pianist in the other was born.

Curiously, the differences between the way Harold Bauer and the Flonzaley Quartet played this sublime work in 1925 and the way André Previn and the Yale Quartet play it today—relatively minor differences in any case—seem quite different from what one might expect from popular conceptions of "golden-age" and "contemporary" performing styles. The older version is characterized pre-eminently by directness and unflaging drive, whereas the newer one is more concerned with subtlety, sensibility, and finely affectionate phrase building.

(Continued on page 101)
The classics from KLH. Four bookshelf loudspeakers of such extraordinary quality that each has set the standard of excellence in its price range. Pictured to the far left, our popular little Thirty-Two ($55.00). Next, one of the best selling loudspeakers in the country, the Seventeen ($79.95). Up front, everybody's favorite, the Six ($139.95). And finally, our most spectacular bookshelf model, the Five ($199.95). If you really want to know what KLH is all about, we suggest you listen to any one or all of these fine loudspeakers. And when you do, we're sure you'll agree that KLH is about the best thing to happen to bookshelves since books.

For more information, visit your KLH dealer or write to KLH Research and Development Corp., 30 Cross Street, Cambridge, Mass. 02139.

What's a bookshelf without the classics?

KLH RESEARCH AND DEVELOPMENT CORP
30 Cross St., Cambridge, Mass. 02139

*Suggested retail prices—slightly higher in the South and West.

JULY 1973

CIRCLE NO. 22 ON READER SERVICE CARD

99
Deutsche Grammophon's new
CARMEN
"...vocally and musically
the finest Carmen I know"

Reviewed by Eric Salzman

Well, here it is at last: the Bernstein/Horne/Deutsche Grammophon quarter-of-a-million-dollar Carmen. This is not only the first big-scale American operatic production since the ill-fated Leinsdorf/Boston/Metropolitan Opera's production and the first recording by the Metropolitan Opera since the Macbeth of the Fifties, but the first European venture into American operatic waters and one of the most elaborate and expensive recordings ever made as well.

Was it worth it? Well, there's no purely objective way of measuring these things (one is always inclined to be subjectively dubious if not downright cynical about such super-productions). But it is an impressive recording and - now comes the heresy - much better, in my opinion, than the highly touted live production.

This Carmen was to have been general manager Goeran Gentele's first Met production, and he was to have directed it himself as the opening event of the 1972-1973 season. There was a great deal of talk about restoring the original version and creating a production based on dramatic and psychological values. Fate intervened in the form of an auto crash, and Gentele was gone. But under the direction of his assistant, Bodo Igesz, with an excellent cast headed by Marilyn Home, James McCracken, and Tom Krause, and with Leonard Bernstein at the helm, the production nonetheless turned out to be virtually the musical event of the year in New York.

I went to that production with every expectation; Lennie's downbeat and the orchestral introduction fairly cranked with excitement and tension. Then the curtain went up. Josef Svoboda's sets looked curiousl


dently dingy - not at all the sort of thing one remembered from his fabulous Prague designs. When the chorus arrived at its usual comfortable half-beat behind the conductor, a wave of nostalgia swept over me. Just like the good old days? True, the version was a little different, what with spoken dialogue and all. But perhaps it might have made a nicer effect if one could only have been sure what language they were using (it did seem odd to go to all the trouble of restoring the original edition for a performance in Middle-Low-Franglais). And while I'm perfectly willing to admit that Marilyn Horne and James McCracken can sing up a storm, I would not call their assignment to the roles of Carmen and Don José exactly ideal casting. Finally, whatever ideas the staging was intended to communicate, the actual results were more in the tradition of Varsity Camp than Moscow Art. Some things just never change; the "New" Met was indistinguishable from the Old.

But the recording of the new production is something else. Ironically, the dramatic values are enhanced - the recording is very well produced from this point of view, and one's own inner visualization is not spoiled by the sight of Marilyn Horne wriggling her ample hips, struggling to play the castanets, andamping it up with McCracken. And the musical values - some, such as Ms. Horne's singing, superb - are exceptionally well communicated.

Leonard Bernstein's all-too-infrequent ventures into the opera house are nearly always something special and, as might perhaps be expected, his Carmen is something extraordinary. He had never conducted Carmen before, and had expressed dissatisfaction with the usual way of doing business in this beautiful, powerful, but somewhat overdone bit of French musical cuisine. I doubt that he could have been completely happy with the Met production, but the path he chose is a valid one: he put the intensity and the drama into the music. Perhaps his biggest departure from routine is in the choice of slow tempos. The introduction is even a good bit slower on the recording than I remembered it from the theater. Occasionally her voice sounded pinched in its highest parts but, by and large, she sings with a really exquisite purity, just right for Micaëla. The smaller roles are well managed, and one or two of the comprimario singers manage a far better brand of French than the principals. Indeed, the agency of the spoken French is the one major defect here, and it could not be remedied short of bringing in a whole Comédie Française cast to read the dialogue.

I was about to add a compliment to the Metropolitan Opera chorus for the musical distance they seem to have traveled since the night I was in the theater; but once I discovered that the vocal parts are credited to some pick-up group was hired to step in. At any rate, they come off very well.

The production is fairly elaborate, although not overbearing. The only thing that comes close to criticism of some of the effects particularly all the ruckus that accompanies (and partially obscures) José's off-stage song in Act I. And some of the effects are unusual: the bull-ring chorus (which, in keeping with the Met production, should never end) has been electronically processed to suggest a distant, bloodthirsty crowd. I'm generally in favor of this kind of production in recordings, and the effect here is simple, telling, and well integrated with the excellent sound. The production has all the usual trimmings - elegant booklet with libretto and articles in various languages - but the part I like best is the quiet, quality vinyl.

BIZET: Carmen. Marilyn Horne (mezzo-soprano), Carmen; James McCracken (tenor), Don José; Tom Krause (baritone), Escamillo; Adriana Maliponte (soprano), Micaëla; Colette Boky (soprano), Frasquita; Marcia Baldwin (soprano), Mercedes; Donald Gramm (bass), Zuniga; Russell Christopher (tenor), Dancairo, I illas Pastia; Andrea Velis (baritone), Remendado; Raymond Gibbs (baritone), Morales. Metropolitan Opera Orchestra and Children's Chorus, Marcinkiewicz cond. Deutsche Grammophon DG 2709 043 three discs $20.94.
Stereo Review

the magazine of good music—and the equipment it's played on—is now yours at mere mono rates:

For only $3.50

You'll enjoy over 1,000 critical, no-cant reviews of the latest releases on discs, tapes, cartridges and cassettes, including every musical idiom: classical; pop; folk; rock; jazz; and even the spoken word.

...incisive, informative results of lab test-reports on all the new stereo components, conducted by Hirsch-Houck Labs.

...interviews with outstanding artists and composers, as well as full-length feature articles.

...One full year is yours for half price. And you can enjoy even greater savings by choosing a two year subscription. Just check the one you want, fill in the rest of the card, and mail it off to us.

PLEASE enter my subscription to STEREO REVIEW for the length of time and the rate checked below:

☐ 2 YEARS... only $7.00
   (You save $7.00 over the regular yearly rate.)

☐ 1 YEAR... only $3.50
   (You save $3.50 over the regular yearly rate.)
   (*Based on regular 1 year price of $7.00)

Please add $1.00 per year for postage outside the U.S.A., its possessions and Canada.

Payment Enclosed ☐  Bill Me Later ☐

Name ________________________

Address _______________________
City __________________________
State _______ Zip _______

FOR NEW SUBSCRIBERS ONLY

Stereo Subscriptions
at Mono Rates.
Stereo Review:
The magazine of good music...
Yours at a really good price.
A comparison of the two scherzos provides vivid justification for Felix Weingartner’s dictum that the apparent speed of a performance is more a matter of rhythmic tautness than of mere arithmetic tempo—the Bauer/Flonzaley performance is only three seconds shorter than the Previn/Yale (seven minutes, twelve seconds as against seven minutes, fifteen seconds), but it possesses such consuming impetus that the effect is much swifter and more exciting. In the other inner movement, the Andante, un poco adagio, Bauer/Flonzaley again have a slight edge, for Bauer’s unaffected way with the main theme clarifies the rhythmic structure of the movement better than Previn’s idea of “stretching” the initial sixteenth-note in each measure. and the Flonzaley’s ensemble sound has the classic combination of sweetness and solidity that even the finest modern quartets—and the Yale is certainly one of them—cannot quite emulate.

But if the second and third rounds go to the older group, in the first and fourth Previn/Yale’s artful approach yields corresponding satisfactions. Their first movement, helped by the inclusion of the repeat (which Bauer/Flonzaley omit), is a realization of extraordinary strength and cohesion, intensified by the sense of brooding quietude at the start of the development section, and in the finale they accomplish Brahms’ suggestion of a slightly faster tempo for the subsidiary theme with a subtlety worthy of a Furtwangler—the new pulse is quite different from the old, but the actual moment of change is imperceptible.

I have concentrated here on the differences between the two performances in order to illuminate the field of choice. But ultimately I don’t think it’s a matter of choice at all. One of the most rewarding aspects of these interpretations is the way they uphold, nearly half a century apart, the same enduring principles of creative music making.

Packaged with the Flonzaley version, which is adorned with a vulgar and unnecessary puff from RCA director of classical music Peter Munves, come two other Flonzaley performances: the Schumann Piano Quintet, with Olga Grinberg and the Helmuth Rilling conducted in 1927, and Haydn’s “Lark” Quartet, recorded in 1928 and now released for the first time. But I feel it is not unfair to regard them as a side issue. The Schumann, a picturesquely attractive piece but vastly inferior to the Brahms, receives a much more old-fashioned sort of performance, with consistently rushed tempos and moments, as in the transition to the Agitato section in the second movement, where the rhythm goes completely haywire. The Haydn, though played with seductive charm, is not always stylish, and is marred not only by the absence of the first-movement repeat but also by an eight-measure cut in the slow movement.

So it is the Bauer/Flonzaley performance of the Brahms that is the real point of the release. Sounding perfectly acceptable in this well-managed transfer from the original 78’s, it constitutes, together with the resplendently stereophonic Previn/Yale version and the monophonic Richter/Borodin Quartet version on Bruno, a trio of great interpretations. I would not like to be without any of them. B.J.

BRAHMS: The Complete String Quartets (see Best of the Month, page 75)
CHAUSSON: Poème (see GODARD)

(Continued overleaf)

Maxell announces a huge improvement in cassette tape. Magnified 10,000x so you can see it.
Chopin wrote his first Polonaise, a twenty-two-piece bar in G Minor with a sixteen-bar trio section, when he was seven. Between that time, in 1817, and the date he completed the Polonaise Fantaisie (1846, three years before his death), Chopin wrote the grand total of seventeen Polonaises. Of these, the first nine are formed works in the composer's own interpretation of his orchestral pieces. Of the remaining Polonaises, the first nine are not performed very often, partly because most of them are juvenilia, and most recordings start with the dramatic and virile C-sharp Minor Polonaise, Op. 26, No. 1, and proceed through the remaining pieces of Chopin's maturity. Such was the case with Antonio Barbosa's recording for Connoisseur Society, a splendid interpretation which I reviewed in June.

Now we have Garrick Ohlsson, the 1970 winner of the International Chopin Competition in Warsaw, providing the absolutely complete set, including all the earlier pieces as well as the piano solo version of the Op. 22 Grande Polonaise. Interestingly, he presents the Polonaises out of chronological order. His version arrangement has the merit of interspersing the better-known pieces with the rarities, but it also interferes with an appreciation of Chopin's growing mastery of the form. Ohlsson, whose previous Chopin on discs (for Connoisseur Society) stemmed from the prize-winning competition performances, begins this set with a slow, deliberate, majestic “Military” Polonaise: the pianist has an excellent grasp of Chopin's style and varies his moods accordingly. I found much to admire in his real display of temperament in Op. 26, No. 2, the lovely and poetic middle section of Op. 26, No. 1, the strength and virtuosity of the familiar “Heroic” Polonaise, the unfetichistic and tempered control manifested in the Fantaisie Polonaise, and the sensitivity and lack of surface brilliance in the Op. 22 Grande Polonaise. Though another pianist might have brought more aristocratic elegance to some of the earlier pieces, such as Op. 71, No. 3, over all I have nothing but praise for Ohlsson's interpretation of the rarest of the Polonaises. His versions easily stand with the best available. And the sound is very satisfactory.

GARRICK OHLSSON
An excellent grasp of Chopin's style

DONIZETTI: Anna Bolena (see Best of the Month, page 76)


Performance: First-class Recording: Very good

Here is an interesting experience to hear a composer's own interpretation of his orchestral music, and the present recording with Copland leading the London Symphony Orchestra in three of his less frequently performed works is no exception. Generally speaking, it has been my impression that Copland tends to keep his music at a cooler temperature than other conductors do, allowing its craggy qualities to hold the foreground and playing its jazzy, polyrhythmic passages not only to produce excitement but to bring out their intrinsic rhythmic quality well.

In these performances he seems to be following this pattern, and all three works exhibit similar attributes of eloquence, a kind of stately pondeousness in slow sections, and a great deal of what might be called "rational playfulness" in the fast parts. Since there is so little opportunity to hear any of these early and relatively early pieces, it is something to be thankful for that they are available. On the other hand, the London Symphony Orchestra does not do the kind of spectacular job with them I expected. Perhaps there was too little rehearsal. But I frequently had the feeling that Copland was dragging the players through the music by the tips of their noses. This is true even in slow sections where the problems could not have been technical, but rather interpretive. In fast portions, when polyrhythms get going, the players can sound pretty ragged. It's a pity. But don't let this scare you away from the record. Its virtues far outweigh its failings.

L.T.
THE LAFAYETTE LR-4000

Don't just take our words for it, take someone else's...

"...Lafayette's wave-matching logic circuit...represents the state of the SQ art..."
--Modern Hi-Fi & Stereo Guide, Feb. '73

"The LR-4000 epitomizes the art of matrixed 4-channel sound."
"Enough power there to give you all the decibels of hi-fi sound you could conceivably crave."
--MARTIN CLIFFORD, FM Guide, Nov. '72 & March '73

"...the decoding is essentially the ultimate that can be expected of a matrix system limited to a 20- to 20,000-Hz bandwidth...The listening effect is almost that of discrete surround-sound."
--HERBERT FRIEDMAN, Hi-Fi Stereo Buyers’ Guide, Spring '73

"It causes [SQ encoded] discs to sound as real four-channel should...This unit, in fact, takes the SQ system as far as it can go—and proves that it is capable of good four-channel."
--Stereo & Hi-Fi Times, Spring '73

"...It is evident that the designers of the LR-4000 have done a remarkable job of producing the "most" SQ receiver for the money we have yet seen...We were impressed also with its human-engineering aspects: the controls are laid out in a simple and functional manner, without sacrifice of flexibility. Its quadrophonic performance...was outstanding, as was its overall sound quality and general ease of operation. All in all, the LR-4000 is a most impressive achievement—especially so considering its price [499.95]."
--Stereo Review, April '73

"Featuring all modes 4-channel operation, this receiver delivered excellent performance. Amplifier distortion is unusually low."
"FM Tuner: The sensitivity measured 1.6 µV IHF."
--4-CHANNEL Quadrophonic Buyers Guide 1973

"A superb four-channel receiver..."
--ROBERT ANGUS, Modern Hi-Fi & Stereo Guide, June '73

CBS, the developer of the SQ system, uses the LR-4000 when monitoring 4-channel program material. As do thousands of people to whom sound really matters. But, listen to one for yourself. Then you won't have to take anybody's word for it!

Lafayette: If sound matters to you, listen to us.

Lafayette Radio Electronics  P.O. Box 10, Dept. 11073 , Syosset, N.Y. 11791

Send my FREE LAFAYETTE 1973 Catalog to:

Name ________________________________
Address ________________________________
City __________________ State ______ Zip ________

FREE The World's Largest Consumer Electronics Catalog
Your One Complete Buying Guide For "Everything In Electronics"

JULY 1973 CIRCLE NO. 26 ON READER SERVICE CARD
years after Harold in Italy, was unfamiliar to me, and this is apparently its first LP recording. I am, despite radio, to Berlioz. I can't find much of interest in this work except the historical fact that it exists.

Rosand gives first-rate performances of all four pieces. The two orchestras support him excellently, and the recorded sound is very good.

L.T.


Performance: Extraordinary
Recording: Very good

Bizet? The nineteenth century gives up its secrets surprisingly slowly. French piano tradition is almost as moribund as French opera, and there is, we have been assured, nothing but salon bonheur between Rameau and Debussy. Wrong again. Bizet's Variations Chromatiques are extraordinary music. In view of the composer's reputation and the "modern" temper of this work - chromaticism, one might guess - it presents something affecting and profound to us, especially when handled as skillfully and imaginatively as it here - its almost complete obscurity is hard to account for.

One can almost say the same for the only somewhat better-known Grieg sonata. How could a major work by a popular composer - and of the same period and appeal as his piano concerto - be so little known? Anyway, the Glenn Gould advocacy is a powerful one in favor of this music.

Mr. Gould, as part of his delightfully ingenious liner notes, attempts to forestall some of the obvious criticisms of his playing of the Grieg in particular. Be forewarned, he cautions us, Grieg was a cousin of my maternal great-grandfather. "Any intemperate critical discussion of the performance at hand," he continues, "would be tantamount to a suggestion that Clara Schumann was misinformed about the inner workings of the worthy Robert's 'A Minor' Concerto."

Well! Glenn Gould as the source for the authentic Nordic interpretive tradition! Who would have believed it? Why not also point out that the Canadian climate is similar to that of Norway and thus affords additional authority? Isnenseque gloom indeed!

As it happens, I also have a maternal tradition for this piece. My mother used to play it all the time, and my first concepts of the Romantic sonata came right out of the Grieg sonata. Now, my mother is definitely not related to Grieg and does not hail from the frozen far North, but she could evoke even more glorious and self-pity from this piece than Mr. Gould and without one single claim to authenticity. In several respects I think she had an even more authentic tradition than this recorded performance does. She believed that something marked fantasia ought to be played loudly, and that a dance measure, such as occurs from time to time in Grieg, ought to dance a bit. An Alla menueo lento ma poco più legato that turns out to be Alla marcia funebre ma molto più largo doesn't make it, with or without tradition. I will admit that, in other respects, Mr. Gould is a better traditionalist than my mother; at any rate, he plays the piece at least as well.

Amusingly enough, Mr. Gould suggests that his critics consider the unfamiliarity of the Bizet as grounds for appreciating in his performance "that freshness, innocence, and freedom from tradition that, as the late Artur Schnabel so deftly remarked, is but a "collection of bad habits." On the other hand, he would like to look forward to the critical appreciation of his bold attempt to preserve the authentic Grieg tradition. Can't have it both ways.

Maybe the Grieg tradition on his maternal side is just a "collection of bad habits" (after all, his mother was unlike Clara Schumann, wasn't the composer's wife). The Grieg work is bound just as much to my mother or to me, and I say Mr. Gould doesn't know how to dance and the hell with it. Alla menuetto, anyone?

But, really, I mustn't let Glenn Gould forestall the possibility of my liking this recording. Hurrah for the music! As for the performances, here's properly modified rapture.

E.S.

ARCHITECT'S drawing of background for the 1749 public fireworks (music by Mr. Handel)

RECORDING OF SPECIAL MERIT

HANDEL: Royal Fireworks Music; Water Music. Augmented Wind Ensemble of the English Chamber Orchestra, Johannes Somary cond. VANGUARD VSD 71176 $5.98

Performance: Super-spectacular
Recording: Likewise

Handel's Royal Fireworks Music and Water Music are so popular with the recording companies and the people who plan radio concerts that I sometimes fear we are in danger of going up in smoke with the one or drowning in the other. Annotators never tire of telling us about that night of April 27, 1749, when traffic was new and exciting, creating a minor panic in smoke that night, creating a minor panic in smoke that night, creating a minor panic in smoke that night, creating a minor panic in smoke that night, creating a minor panic in smoke that night, creating a minor panic in smoke that night, creating a minor panic in smoke that night, creating a minor panic in smoke that night, creating a minor panic in smoke that night, creating a minor panic in smoke that night, creating a minor panic in smoke that night, creating a minor panic in smoke that night.

Anyway, the score surely did right by the "peace of Aix-la-Chapelle" (a peace that didn't last long). The Water Music, scored for more conventional chamber orchestra, is not quite as hair-raising, and Mr. Somary perhaps tries to draw more drama out of the eleven selections he has chosen from the several suites than is really implicit in the score - however authentic the instrumentation. Still, it's graceful, exhilarating stuff, and the Duchess of Newcastle herself couldn't have heard it to better advantage from her barge on the Thames than the modern listener does from the grooves of this brilliant disc.

P.K.

HAYDN: Piano Trios (H. XVI): No. 29, in E-flat Major; No. 30, in E-flat Major; No. 31, in E-flat Major. BEAUX ARTS TRIO. PHILLIPS 6500 400 $6.98

Performance: Excellent
Recording: Recording

Probably no single eighteenth-century musical form comes as close to fulfilling the concept of Gebräuchsmusik as does the piano trio. It was at one point the absolute favorite of every musical amateur society, for it is light in texture and idea, relatively undemanding in performance technique, and composed for three readily available instruments. And there was a time when almost every member of the middle class in Germanic countries played either the piano or a stringed instrument, and subscribed to the notion of creating one's own home entertainment with the help of friends and neighbors. These three Haydn trios are notably gentle in their sentiments, and the customary smoothness and dignity of the Beaux Arts Trio's performance style emphasizes that fact. Haydn was not seeking here to startle the stormy succession, and to hear Mr. Handel's music is essentially to better advantage

E.S.

HAYDN: String Quartet in D Major, Op. 64, No. 5 (see BRAHMS)

HOY: Piano Sonata No. 2; Eight Preludes for Piano. Bonneé Hoy (piano). ENCORE EN 1002 5 (available by mail from Encore Records, P.O. Box 11211, Philadelphia, Pa. 19117)

Performance: Excellent
Recording: Excellent

This disc presents the music and performing of a young composer who is obviously full of talent in both the creative and re-creative as-

(Continued on page 106)

STEREO REVIEW
When the new PE 3000 series was introduced last September, a new concept was introduced at the same time: A fine precision turntable for well under $100.

Since then, thousands of price-conscious music lovers have experienced the enjoyment of playing their records on a well designed precision turntable: A turntable with the costly materials, fine engineering, and careful manufacturing you’ve come to expect only from the Black Forest craftsmen of West Germany.

And what’s even more satisfying is the fact the PE turntables are priced at only a little more than ordinary changers, yet have quality features associated only with much higher priced turntables.

For example, the $89.95 PE 3012 has: a variable speed control that lets you match record pitch to live instruments and compensate for off-pitch records; a cue control viscous-damped in both directions so the tonearm rises and descends with gentle smoothness; and a single-play spindle that rotates with the platter instead of sitting loosely in the shaft where it can bind and cause eccentric wear.

No other turntable at or near $89.95 has any of these features. And no other turntable, even those priced at well over $100, has PE’s exclusive fail-safe feature which protects the stylus by preventing the tonearm from descending to the platter unless there's a record on it.

For those who want further refinements and who are prepared to spend over $100 to get them, there are two other PE models to choose from. The $129.95 PE 3015 which has a rack-and-pinion counterbalance, anti-skating synchronized with tracking pressure and a dynamically balanced nonferrous platter. Or the $169.95 PE 3060 which has a gimbal-mounted tonearm, synchronous motor, two-scale anti-skating and vertical tracking angle adjustment.

Of course, we don’t know if the 3012 has everything you want, or if you would prefer the additional features and refinements of the 3015 or even the 3060. To help you decide, we’ll be pleased to send you our new brochure. Just circle the number at the bottom of this page.

The new PE
Precision for under $100

Impro Industries, Inc., 120 Hartford Ave., Mount Vernon, New York 10553
CIRCLE NO. 19 ON READER SERVICE CARD
Wien" series done with small groups for Vanguard, or the New Year's Concerts series with the august Vienna Philharmonic for London. Boskovsky has been a more than worthy successor to the greats of the past, and in this latest London disc, as in its predecessors, he has done a superb job of mixing the familiar favorites with delicious new (for me) discoveries. Here the Nordseebild and Mephistos Höllenritte waltzes reveal a highly entertaining aspect of Johann Strauss as tune-painter, and in Accelerationen and Freut Euch des Lebens Boskovsky pays handsome homage to the composer of the master waltz poems. The polkas, particularly Freitujetten with its percussion artillery and the impulsive Sturmisch in Lieb und Tanz, provide delightful and frothy contrast to the waltzes. Josef Strauss, younger architect brother dragooned into composition, is represented by the lovely Frauenherz polka-mazurka (in many respects he seems the most innately talented of all the Strausses).

Where Boskovsky brings a wonderful zestful freshness and froth to his Johann Strauss performances, Karl Böhm, an old hand in the Kleiber-Walter-Szell tradition, plays the dances like Mozart symphonies, and with detectable-to these ears-results. With all due respect to Boskovsky's performance of the liltning Annen polka, I think Böhm gets still more melodic nuance out of its four-minute span without ever becoming mannered. Again, the near-huckneyed Pizzicato polka takes on new life in Böhm's rendering, while the Perpetuum Mobile becomes a miniature concerto for orchestra. As for the master waltzes, Blue Danube, Emperor, and Roses from the South, Böhm treats them as unpretentious symphonic poems.

Both the spacious sonics of London and the more detailed pick-up of DG are ideally tailored for the character of the respective performances. Both of these discs are musts for the J. Strauss fancier. The Ampex-processed cassette of the Boskovsky performance reverses the side order of the disc and lacks the full dynamic and frequency range of the disc original. D.H.

TCHAIKOVSKY: 1812 Overture; Romeo and Juliet, Fantasy Overture; Marche Slave. London Symphony Orchestra. André Previn cond. ANGEL S 36890 $5.98, ℗ 8SX 36890 $6.98. Performance: Impassioned and eloquent. Recording: Superb

Just when you are ready to swear to yourself that you never again want any part of Tchaikovsky's Romeo and Juliet, their hard-breathing love theme, the noisy clatter of pseudo-dramatic musical swordplay, the banal Friar Lawrence "intervention" music, the sentimental melody of mourning, or the noisy, stagy ending, along comes somebody like Seiji Ozawa and you're sucked in once again. At least I was, for Mr. Ozawa has been taking some penetrating looks at the various musical treatments of the star-crossed lovers and comes back to the Tchaikovsky score and others with a breathtaking freshness and command. (When he was directing the Ravinia Festival early in his career he created a program called "Four Views of Romeo and Symphonic"; the fourth was the suite of Symphonic Dances from Bernstein's West Side Story, which he also recorded recently.) Ozawa's lovers are simply more beautiful, more impassioned, more musically believable than most of their recorded predecessors have been. Even Toscanini's crisp way with Tchaikovsky's music is surpassed in effectiveness by the bold, brilliant, ardent yet totally controlled recordings that he has left forth here by his ever-improving San Francisco Orchestra. The excerpts from Prokofiev's ballet are, alas, only excerpts: the clash of the Montagues and Capulets, a few of the more melodically scored dances, the scene at the tomb, and the death of Tybalt. But they are mounted here with uncommon clarity and grace, and the recorded sound is simply gorgeous. Even skimpier is the excerpt from Berlioz's "dramatic symphony" on the subject, of which we hear only the Love Scene. It is not quite as stirring nor as eloquent as in the complete recording by Colin Davis on the Philips label, but the lyricism is strikingly realized, and it rounds out a lovely exercise in Romantic programming.

After Ozawa, Previn's lovers sound reserved to the point of downright diffidence, but on his disc there is as claramous a Mutsche Slava as you could wish, complete to the last clanking chain. And this 1812 Overture, from opening clarinet to deafening cannons, should provide a thoroughly rewarding workout for anybody's audio equipment. Previn's method here is to provide the maximum in force with the minimum in emotionality, and he sacrifices something of the lyric quality of these pieces. Angel has recorded orchestras more excitingly than it did the London Symphony on this occasion. (If you must have these works in your collection, Karajan has probably done as much out of them as anybody ever will for Deutsche Grammophon, while maintaining a reasonable musical hold on himself and the Berlin Philharmonic.)

RECORDING OF SPECIAL MERIT


Just when you are ready to swear to yourself that you never again want any part of Tchaikovsky's Romeo and Juliet, their hard-breathing love theme, the noisy clatter of pseudo-dramatic musical swordplay, the banal Friar Lawrence "intervention" music, the sentimental melody of mourning, or the noisy, stagy ending, along comes somebody like Seiji Ozawa and you're sucked in once again. At least I was, for Mr. Ozawa has been taking some penetrating looks at the various musical treatments of the star-crossed lovers and comes back to the Tchaikovsky score and others with a breathtaking freshness and command. (When he was directing the Ravinia Festival early in his career he created a program called "Four Views of Romeo and Symphonic"; the fourth was the suite of Symphonic Dances from Bernstein's West Side Story, which he also recorded recently.) Ozawa's lovers are simply more beautiful, more impassioned, more musically believable than most of their recorded predecessors have been. Even Toscanini's crisp way with Tchaikovsky's music is surpassed in effectiveness by the bold, brilliant, ardent yet totally controlled recordings that he has left forth here by his ever-improving San Francisco Orchestra. The excerpts from Prokofiev's ballet are, alas, only excerpts: the clash of the Montagues and Capulets, a few of the more melodically scored dances, the scene at the tomb, and the death of Tybalt. But they are mounted here with uncommon clarity and grace, and the recorded sound is simply gorgeous. Even skimpier is the excerpt from Berlioz's "dramatic symphony" on the subject, of which we hear only the Love Scene. It is not quite as stirring nor as eloquent as in the complete recording by Colin Davis on the Philips label, but the lyricism is strikingly realized, and it rounds out a lovely exercise in Romantic programming.

After Ozawa, Previn's lovers sound reserved to the point of downright diffidence, but on his disc there is as claramous a Mutsche Slava as you could wish, complete to the last clanking chain. And this 1812 Overture, from opening clarinet to deafening cannons, should provide a thoroughly rewarding workout for anybody's audio equipment. Previn's method here is to provide the maximum in force with the minimum in emotionality, and he sacrifices something of the lyric quality of these pieces. Angel has recorded orchestras more excitingly than it did the London Symphony on this occasion. (If you must have these works in your collection, Karajan has probably done as much out of them as anybody ever will for Deutsche Grammophon, while maintaining a reasonable musical hold on himself and the Berlin Philharmonic.)

VIOTTI: Violin Concerto No. 16, in E Minor, Violin Concerto No. 24, in B Minor. Andreas Röhn (violin); English Chamber Orchestra, Charles Mackerras cond. DEUTSCHE GRAMMOPHON ARCHIV 2533 (22) $6.98. Performance: Excellent. Recording: Ditto.

Giovanni Battista Viotti, born in 1755 in northern Italy, was the leading violinist in Europe in the Classical period and is considered the founder of "modern" violin playing. He already had a European reputation when he went to Paris in 1782 and created a sensation. After only a year and a half—he was all of twenty-eight—he retired from playing in public to devote his time to composing, conducting, teaching, and organizing musical life. He was a great favorite at court and, when the Revolution came, had to flee the country. In 1792 he took up residence in London, where he resumed his public performances and success. But in 1798 he was, for obscure reasons, forced to leave that country, too, and became an exile in Germany. Viotti was allowed to come back to England, but musical life had changed and he was not able to regain his previous popularity. In 1819 he was asked back to France to take over the direction of the Paris Opera, but this time there was no success and in 1823 he was back in London, where he died a year later.

In spite of the sad chronicle of the later part of his life, Viotti and his violin concertos have never been entirely forgotten. One or two of the concertos still figure in the violin student's repertoire: the A Minor, No. 22, is still occasionally performed and there are two recordings of it currently in the catalog. But, by and large, Viotti has not benefited from the revival of early music—and this in spite of the obvious shortage of good violin concertos.

Viotti's concertos are excellent examples of the High Classical style. The composer belonged to a fascinating group of Italian composers who drifted north in the late eighteenth century: Cherubini, Spontini, Clementi, and others whose music represents a last flowering of the High Classical style. Viotti's concertos are, in many respects, almost austere forms that correspond quite closely to the neo-Classical and "Empire" trends in the other arts. This kind of art stands between the earlier, lighter style of the eighteenth century and the heavier form that is characteristic of the nineteenth century.

All these connections are particularly emphasized by the dramatic, cantabile, and minor-key character of most of Viotti's music. The E Minor Concerto, No. 16, dates from his first French period and reflects the vague integration of Italian melodic style and fluidity, Italian-Austrian symphonic form, and French taste (Gluckian Classicism, discreet virtuosity, and a rigidly controlled sentimentality). It has several unusual features, including an intensely dramatic slow introduction that returns just before the recap, as well as a set of trumpet and drum parts added by Johann Wolfgang Amadeus Mozart for the Viennese premiere of the work and used in this recording.

The B Minor Concerto, No. 24, dates from London days and is, if anything, a still more expressive, sophisticated, and highly elaborate work. Perhaps showing the influence of Haydn, who was making such a great success of his own in London at this time. The orchestra—particularly the winds—comes into special prominence here, perhaps in response to
the excellent quality of English wind playing. That that quality has not diminished over the years is happily revealed in this fine recording under the very excellent direction of Charles Mackerras. The violinist, Andreas Röhn, does not—presumably in keeping with the austerity and scholarly approach of Archiv recordings—receive much exterior play here, but he is nothing short of outstanding, with purity of tone, gracefulness, expressive grandeur, and virtuoso ease to recommend his interpretation of this music. Additionally, he has produced fine cadenzas that are musically and stylistically appropriate. In short, this is a very attractive recording of two really grand and beautiful works, well worth a place in your music museum without walls.

E.S.

WEBER: Overtures: Der Freischiitz; Ruler of the Spirits; Oberon; Euryanthe; Abu Hassan; Peter Schmoll. Berlin Philharmonic Orchestra, Herbert von Karajan cond. Deutsche Grammophon DG 2530315 $6.98.

Performance: Echt Karajan Recording: Bright and spacious

Karajan's reading of the Freischiitz overture is spacious and poetic in the Furtwangler tradition, with ample brilliance in the molto vivace sections as appropriate. The familiar Oberon and Euryanthe overtures are treated in essentially straightforward and intensely lyrical fashion. Contrast is provided with the earlier and lighter overtures, Ruler of the Spirits, Abu Hassan, and Peter Schmoll, all brilliantly played except for a decided overbalance of timpani in Ruler of the Spirits. It was instructive to compare this disc with earlier DG Karajan recordings of orchestral textures not dissimilar to Weber's. The comparison bore out my impression of a greater mid-range pre-emphasis here than heretofore. Why not leave well enough alone?

D.H.

COLLECTIONS

RECORDING OF SPECIAL MERIT

BALINESE GAMELAN MUSIC FROM SEBA-TU. Galan Kungin; Giluk; Surja Kanta, Munik Angatji. Gong kebyar Orchestra of Sebatu. Deutsche Grammophon Archive 2533 130 $6.98.

Performance: Superb Balinese orchestra Recording: Excellent on-location

DG Archive, which has until now specialized in the documentation of early Western music, is now turning its attention to the classical musicas of Asia. The gamelan orchestras of Java and Bali probably represent the most highly developed instrumental ensemble music outside of (and maybe including) the West. These largely percussion orchestras (they can also include flutes and occasionally other instruments) employ twenty or thirty players working together in the most intricate and interlocking ensemble patterns. Indonesian musicians can execute not only complex rhythmic counterpoint but all kinds of changes in tempo, including gradual speed-ups and slow-downs, all with perfect unanimity. The basic melodic elements are simple but endlessly embellished, and there is even a kind of strange harmonic element derived from the practice of pairing slightly out-of-tune notes. The beat-tones that result from this plus the quality of the instruments, the music, and the ensemble performance itself

FREE McIntosh CATALOG and FM DIRECTORY

Get all the newest and latest information on the new McIntosh Solid State equipment in the McIntosh catalog. In addition you will receive an FM station directory that covers all of North America.

MX 113

FM/FM STEREO - AM TUNER AND PREAMPLIFIER

If you are in a hurry for your catalog please send the coupon to McIntosh. For non rush service send the Reader Service Card to the magazine.

CIRCLE NO. 42 ON READER SERVICE CARD

THE EVERYTHING LINE FROM ROTEL

ROTEL of America, Inc., 2642 Central Ave., Yonkers, N.Y. 10710

CIRCLE NO. 42 ON READER SERVICE CARD

JULY 1973
produce a music of indescribable shimmer and appeal.

Balinese music—quite distinct from the related music of Java, by the way—is a living art, and the music represented on this recording, although it has ancient roots, is in a relatively modern style. The old gamelan gong kebyar style has created a repertoire of rather grand religious music for the ceremony of the Hindu temple. The gong kebyar style, which appeared about fifty years ago, was a highly embellished and even syncopated version of the old religious style (as, one might say, organum was to Gregorian or as jazz was to the pop song). This is the Gong Kebyar Orchestra of the town of Sebali in central Bali. The recordings were made in the open air and are excellent examples of location work. They were originally issued in a three-volume set from which the Peterson album—complete by themselves—are drawn. This record offers an extraordinarily beautiful and satisfying experience...but it also whets my appetite for more.

Elsewhere I have quoted the remark of a Balinese woman who was asked for the Balinese word for art, replied: “In Bali we have no word for art, we just do the best we can.” Art is an essential part of the fabric of everyday life in that part of the world, and Balinese music, with its remarkable sense of ensemble, is the perfect expression of a very deeply rooted sense of community. As can be heard here, they do indeed do the best they can. Certainly we can listen and learn.

E.S.


Performance: Good
Recording: Good

French piano music of the nineteenth century was, for the most part, bogged down in an almost hopeless salon mediocrity until the appearance of the composers represented here—those quirky originals Chabrier and Satie, foli-


SAMUEL BARON: Exceptionally beautiful flute playing


PHILIPPE ENTREMONT: Exceptionally beautiful flute playing

The late Harold Schramm’s handsomely Song of Tayumanavar is sung by Adele Addi-

SPECIAL MERIT


Performance: Excellent
Recording: Excellent

This is a charming little excursion into march-time fun, so elegantly played by the Netherlands Wind Ensemble that even someone who hates marches could find some pleasure in it. This group of young virtuosi represent the worst in the German songs). The reproduc-

This recording is an interesting recording on several counts. With the flute acting as prima donna, it brings together many different kinds of music and instrumental combinations, including voice with flute, and the roster of performers and composers is a small Who’s Who of qual-

The late Harold Schramm’s handsomely Song of Tayumanavar is sung by Adele Addi-

This is an interesting recording on several counts. With the flute acting as prima donna, it brings together many different kinds of music and instrumental combinations, including voice with flute, and the roster of performers and composers is a small Who’s Who of qual-

I.T.

L.P.
Henry Purcell's
THE FAIRY QUEEN
Two new recordings reviewed by IGOR KIPNIS

Peter Pears: a soloist in both versions and the deviser of one.

For lack of anything better to call it, Henry Purcell's The Fairy Queen is generally classified as a "semi-opera." The closest thing to it today might be a very long musical comedy in which half the production would be the play, the other half such musical numbers as overtures, songs, ensembles, and dances. Purcell wrote The Fairy Queen as an extension of a 1692 adaptation of Shakespeare's A Midsummer Night's Dream, the extension being a series of masques (that peculiar seventeenth-century English stage entertainment that was an amalgam of vocal and instrumental music; dancing, and spectacle). Roles other than the principal ones of Shakespeare's play were added—in fact, the original characters of the play do not participate vocally in the masques at all. A glance at some of the extra characters (Phoebus, Hymen, a nymph and a shepherd, the four seasons, Night, Mystery, Secrecy, and Sleep) reveals that the masques contain fanciful allegorical scenes. And the scenic effects, to judge from the Act IV stage directions, must have been spectacular: "The view is terminated by a walk between Coridon and Mopsa, Winter's Song. The echo chorus, the comic dialogue between Coridon and Mopsa, Winter's Song, The Plaint ("O let me weep"), and such delightful instrumental sections as the Act IV trumpet symphony, dances for the haymakers, monkeys, fairies, and green men, and, not least, the grand chaconne at the end of Act V.

L'Oiseau-Lyre's recording of the complete Purcell score, made around 1957, has now been reissued in electronic stereo (the original was mono only), and the results are astonishingly good. There is no great feeling of spatial location of voices or instruments, but the ambiance is more spread out and the sound is very clean and unfalsified (as so often is not the case in fake stereo remakes). The chamber orchestra is intimate, the singers do commendable work, the late Thurston Dart's harpsichord continues to enchant, and Anthony Lewis directs in a manner that speaks always of his obvious affection for the composer. A text leaflet is enclosed.

In an effort to present the Purcell portion of The Fairy Queen in a more contained, less unwieldy form for the purpose of a concert production, Peter Pears (he also sang in the L'Oiseau-Lyre recording) has put the music in a different sequence, and his version is now available on a new two-disc London album (there are three records in the complete L'Oiseau-Lyre set). The whole has been reduced to four parts of between seventeen and twenty-nine minutes each: Oberon's Birthday (originally Purcell's Act IV, now the First Part); Night and Silence (mainly from Act II, with the Drunken Poet scene interpolated from Act I); The Sweet Passion (from Act III, with the Act V The Plaint interpolated), and Epithalamium (the wedding sequence of Act V). There is, of course, a good bit missing, such as Thrice happy lovers, the songs of the Chinese man and woman, Ye gentle spirits of the air, and some instrumental pieces, among others. A number of sections have been changed from the original sequence; for instance, the rondo from the Second Music before Act I is used as the close to Part Three, and in a couple of pieces, notably the Coridon and Mopsa dialogue, the voices have been transposed. The alterations, however, should not be particularly disturbing; the seventeenth and eighteenth centuries abound with even more liaises-fairer attitudes. And, after all, what about Nahum Tate and his adaptations of Shakespeare or even the 1692 revision of A Midsummer Night's Dream to which Purcell contributed the music? The main criteria are whether the performance is good and whether it adheres to the proper style. This it is and certainly does, Benjamin Britten and Iman Holst having even done some clever musical reconstruction in those places where Purcell's score was a little sketchy.

The singing is even better than on the old L'Oiseau-Lyre album (John Shirley-Quirk, for example, is better than his counterpart). The English Chamber Orchestra plays beautifully, though the sound of the orchestra is less intimate than on the older set; Philip Ledger's continuo harpsichord is splendid, and Benjamin Britten collector will surely want the new London concert adaptation as well (probably reusing the fact that Britten did not do the whole piece). And for the rest of us, the new London recording will undoubtedly bring much pleasure.

PURCELL: The Fairy Queen (Z. 629). Jennifer Vyvyan (soprano), First Fairy, Mystery, Second Woman; Elsie Morison (soprano), Second Fairy, Night, Chinese Woman, Spring; First Woman, Juno; John Whitworth (counter-tenor), Second Chinese Man, Secrecy, Summer; Peter Boggis (counter-tenor), Mopsa; Peter Pears (tenor), Phoebus, Autumn, First Chinese Man, Trevor Anthony (bass), Sleep, Winter; Thomas James (bass), Drunken Poet, Coridon, Hymen; Thurston Dart (harpsichord continuo); Granville Jones (violin obbligato); Harold Jackson (trumpet obbligato); St. Anthony Singers, Boyd Neel Orchestra, Anthony Lewis cond. L'OISEAU-LYRE OLS 121/3 three discs $17.94.

Cassettes: The Next Step Up

Today, as open-reel tape machines get larger and run faster, incorporating such professional features as large 10½-inch reels and operation at 15 ips (inches per second), the tape-recording public continues to show a tremendous enthusiasm for cassette recorders, with their tiny "reels" and tape speed of only 1⅞ ips—half what was once thought barely acceptable for high-fidelity recording. With Dolby (and other) noise-reduction circuits, better motors and transports, improved tape oxides, and more, no one can relegate cassettes to "for dictation only" status anymore. And although their distortion tends to run higher than that of open-reel units, their frequency response and signal-to-noise ratios (at least on the better models) are certainly "hi-fi." But they have consistently lacked one important feature: the ability to monitor off the tape.

Monitoring off the tape requires that the record and playback heads in the machine be entirely separate, so that while the recording operation is actually taking place, the independent playback facilities can let you hear the recording a moment after it goes on the tape. This way you can make a direct comparison between the source—the signal being fed to the tape—and the actual recorded result. But since the plastic shells of cassettes were originally designed to accommodate only two heads, the first of which must be used to erase any previously recorded material, cassettes have had to get along with a combination record/playback head, making simultaneous monitoring from the tape impossible. The same tape head can record or play back, but not, of course, at the same time.

Aside from this inconvenience, combination record/playback heads also have a technical disadvantage. A tape-head gap (the spacing between the two pole pieces) used for recording should be relatively wide to keep various distortions introduced by the recording process to a minimum. Playback heads, by contrast, should have as narrow a gap as possible in order to reproduce efficiently the shortest recorded wavelengths (the very high frequencies) on the tape. The slower the tape speed, the shorter the high-frequency wavelengths and, consequently, the greater the need for an ultra-narrow playback gap. But, up to now, the conflicting requirements of a dual-function head have forced cassette-machine designers to compromise somewhat.

Recently there have been signs that the cassette's predicament has come up for some fresh scrutiny. Late last year, for example, the use of separate record and playback heads was successfully demonstrated on the new Nakamichi "professional" cassette transport, and Panasonic has had a cassette unit with a monitor head for at least as long. These technical accomplishments did not come cheaply, but the fact that they were achieved at all is a hopeful sign for the next generation of consumer cassette decks. When—and if—separate heads for cassette decks become common, they should bring with them a significant step upward in performance, and the addition of operating features that have so far been confined to reel-to-reel machines.
Onkyo designed the TX-666 to be a genuinely fine, total quality audio instrument with unmatched features. Now the verdict is in. Two highly respected evaluating experts — Hirsch-Houk Laboratories for Stereo Review (March '73) and High Fidelity (in its May '73 issue) agree that the TX-666 is a winner!

Said Hirsch-Houk: "... A first-rate tuner and powerful, low distortion amplifier — a well-designed, well-constructed receiver... (with many) often overlooked details of design and operating 'feel'. Everything works smoothly and positively... FM Interstation muting is flawless, free from noise or 'thumps'. Dial Calibration is unusually accurate... FM Frequency Response and Stereo Separation are exceptionally uniform... Alternate Channel Selectivity is excellent... (and it's) as sensitive as any on the market... Amplifier ratings are quite conservative... at any output up to the rated 53W (RMS) per channel... Phono-overload capability is extraordinary... The TX-666 is an auspicious entry for Onkyo..."

High Fidelity Magazine's test experts made these comments; "The TX-666... is a solidly built, generally well-planned unit... distortion readings at frequency extremes are exceptionally good... excellent in terms of harmonic distortion... it stayed well under 0.2% (THD) to the test limit. The amplifier section proved a hard act to follow... (In FM) its thump-free behavior across the dial is an attractive plus... The TX-666 is a worthy introduction for Onkyo."

Prove it to yourself and audition this fine instrument. As for its "pretty face", you'll discover a smartly styled, walnut cabinet with a brushed black gold panel. The price for this superior receiver is only $469.95. The TX-555 with 43W (RMS) per channel is available at a lower price.

We're Not Just Another Pretty Face.
Onkyo TX-666.


EARN COLLEGE DEGREES at home. Many subjects. Details free. ASR Foundation, Box 7566 EG, Fort Lauderdale, Florida 33302.

EDUCATIONAL OPPORTUNITIES


EMPLOYMENT INFORMATION


EMPLOYMENT OPPORTUNITIES

EPICURE PRODUCTS, INC., is seeking quality applicants to meet expansion needs. Applicants must be willing to travel extensively or four to five days per week; be knowledgeable of, or willing to learn, all aspects of the hi-fi industry—products, policies, and future developments. Position requires a professional approach to sales, and a person interested in rapid advancement into a growing management team. Base salary and monthly incentive. Epicure Products, Inc., Newburyport, Mass. 01950. Call Robert Fuller, Personnel. (617) 462-8191.

BOOKS


GOVERNMENT SURPLUS

JEEPS Typically From $33.40. Trucks From $78.40. Boats, Typewriters, Knives, Airplanes, Clothing, Multimeters, Oscilloscopes, Transceivers, Photographic, Electronics Equipment. Wide Variety, Condition. 100,000 Big Bargains Direct From Government nationwide. Complete Sales Directory and Surplus Categories Catalog $1.00 (Deductible on Orders From Separate Included Catalog). Surplus Service, Box 820-L, Holland, Michigan 49423.

BUSINESS OPPORTUNITIES

I MADE $40,000 Year by Mailorder! Helped others Make Money! Start with 50.00—free proof. Torrey, Box 318-N, Ypsilanti, Michigan 48197.


MAILORDER MILLIONAIRE helps beginners make $500 weekly. Free report reveals secret plan! Executive (1K71, 333 North Michigan, Chicago 60601.

PERSONALS

MAKE FRIENDS WORLDWIDE through International correspondence. Illustrated brochure free. Hermes, Berlin 11, Germany.

RECORDS, HI FI & ELECTRONICS

SPECIAL interest records available, produced by the editors of the world’s leading special interest magazines. Send for free catalog. Record Catalog SR, Ziff-Davis Publishing Co., One Park Ave., New York, N.Y. 10016.

MISCELLANEOUS

WINEMAKERS. Free illustrated catalog of yeasts, equipment. Semplex, Box 122760, Minneapolis, Minn. 55412.

OLD RADIO PROGRAMS ON CASSETTES OR REELS. Thousands of your favorites live again. Low prices, high quality. Catalog 50 cents. Remember Radio, Box 2513-L, Norman, Oklahoma 73069.

MUSICAL INSTRUMENTS

30% DISCOUNT name brand musical instruments. Free catalog. Freeport Music, 455Q, Route 110, Melville, N.Y. 11746.

WANTED


HYPNOTISM

Free Hypnosis, "Self-Hypnosis, Sleep Learning Catalog! Drawer H400, Ruidoso, New Mexico 88345.

SLEEP LEARNING. Hypnotic Method 92% effective. Details free. ASR Foundation, Box 7566 EG, Fort Lauderdale, Florida 33304.

RUBBER STAMPS

RUBBER address stamps. Free catalog. 45 type styles. Jackson's, Box 443G, Franklin Park, Ill. 60131.

PLANNING to move?

Let us know 6 to 8 weeks in advance so that you won't miss a single issue of STEREO REVIEW. Attach old label where indicated and print new address in space provided. Also include your mailing label whenever you write concerning your subscription. It helps us serve you promptly.

Send to: P.O. Box 2771, Boulder, Colo. 80302, giving the following information.

□ Change address only.

□ Extend subscription. □ Enter new subscription.

(1) 5 years $26 □ 3 years $18 □ 1 year $7

□ Payment enclosed (1 extra issue per yr, as a BONUS) □ Bill me later.
first came the word...
And then there was music. And then came Sony tape recorders to capture the words and music with perfect fidelity. Right from the start, Sony has always been first with the best, the newest and the broadest selection of tape recording equipment in the world. Sony tape recorders, Sony accessories, Sony microphones, Sony recording tape. We could go on and on and on. We are. **SONY. Ask anyone.**

A Product from SUPERSCOPE.

©1973 Superscope Inc., 8146 Vineland Ave., Sun Valley, Calif. 91352. Prices and models subject to change without notice. Consult the Yellow Pages for your nearest Superscope dealer. Send for free catalog.
Flip the switch to 4-channel.

The newest thing in sound is the newest Sound of Koss. And it’s right at your fingertips.

The switch is on to 4-channel. And only Koss gives you 4 ways to make it. With the big four from Koss. Four exciting Koss Quadrafoners that do for 4-channel what Koss Stereophones have done for 2-channel listening.

Four separate Driver Elements. On the left cup of each Koss Quadrafone is a 2-channel to 4-channel switch. Flip it to 4-channel and four separate Koss dynamic driver elements (two in each cup) surround you with breathtaking, full-dimensional quadraphonic sound from either your matrix or discrete system. If you thought the Sound of Koss was superb in 2-channel, wait until you hear it in 4-channel.

So you haven’t made the switch. There are two plugs on Koss Quadrafoners. If you haven’t made the switch to 4-channel, you only use one of them. The black one. Which you insert into your present stereophone jack on your 2-channel system. That automatically connects the two drivers in each ear cup in parallel. So what you’ll have is nearly double the bass radiating area and an unbelievable increase in efficiency over the full range. Which should make the switch to Koss Quadrafoners worth it even if you haven’t made the switch to 4-channel.

Volume-Balance Controls.
Slip on a Koss Quadrafone and you’ll slip into any seat in the concert hall. Because Koss Quadrafoners feature volume-balance controls on each ear cup. That puts any seat in the concert hall at your fingertips. From the middle of the concert hall one minute, to front row center the next. And you don’t even have to leave the comfort of your own living room.

Hearing is believing.
With all that at your fingertips, it’s hard to believe that you can buy Koss Quadrafoners from $39.95 to $85. But it’s true. And while you’re on your way to hear them at your Hi-Fi Dealer or favorite Department Store, mail us a request for our full-color catalog, c/o Virginia Lamm, Dept. SR-472. You’ll find a lot more from Koss that’ll switch you on.

KOSS CORPORATION, 4129 N. Port Washington Ave., Milwaukee, Wisconsin 53212. Koss S.r.l., Via dei Valtorta, 21 20127, Milan, Italy

CIRCLE NO. 25 ON READER SERVICE CARD