The high price.

For under $200*, you can now own the direct-drive PL-510.

*For informational purposes only. The actual resale prices will be set by the individual Pioneer dealer at his option.
The best way to judge the new Pioneer PL-510 turntable is to pretend it costs about $100 more. Then see for yourself if it’s worth that kind of money.

First, note the precision-machined look and feel of the PL-510. The massive, die-cast, aluminum-alloy platter gives an immediate impression of quality. The strobe marks on the rim tell you that you don’t have to worry about perfect accuracy of speed. The tone arm is made like a scientific instrument and seems to have practically no mass when you lift it off the arm rest. The controls are a sensuous delight to touch and are functionally grouped for one-handed operation.

But the most expensive feature of the PL-510 is hidden under the platter. Direct drive. With a brushless DC servo-controlled motor. The same as in the costliest turntables. That’s why the rumble level is down to -60 dB by the JIS standard. (This is considerably more stringent than the more commonly used DIN “B” standard, which would yield an even more impressive figure.) And that’s why the wow and flutter remain below 0.03%. You can’t get performance like that with idler drive or even belt drive. The PL-510 is truly the inaudible component a turntable should be.

Vibrations due to external causes, such as heavy footsteps, are completely damped out by the PL-510’s double-floating suspension. The base floats on rubber insulators inside the four feet. And the turntable chassis floats on springs suspended from the top panel of the base. Stylus hopping and tone arm skittering become virtually impossible. (Even the turntable mat is made of a special vibration-absorbing material.)

But if all this won’t persuade you to buy a high-priced turntable, even without the high price, Pioneer has three other new models for even less.

The PL-117D for under $175? The PL-115D for under $125? And the amazing PL-112D for under $100? None of these has a rumble level above -50 dB (JIS). None of them has more wow and flutter than 0.07%.

So it seems that Pioneer has also conquered the one big problem of low-priced turntables.

The low performance.

U.S. Pioneer Electronics Corp.,
75 Oxford Drive, Moonachie,
New Jersey 07074.

Turntable:
Direct drive
Brushless DC servo-controlled motor
33⅓ and 45 RPM speeds
Strobe light
Strobe-calibrated platter rim
±2% fine adjustment of speeds
Double-floating system of suspension
Turntable mat of high-internal-loss rubber
One-handed operation of controls

Tone arm:
Lightweight S-shaped tubular design
Static balance
Ball-bearing pivot with angular contact
Anti-skating device
Lateral balancer
Direct-readout counterweight
Viscous-damped cueing
Lightweight plug-in headshell
Pioneer has conquered the one big problem of high-priced turntables.
Two sources of perfection in stereo sound.

"The right Pickering Cartridge for your equipment is the best Cartridge money can buy."

We've been saying that for years; and tens of thousands of consumers have profited by applying this principle in assembling their playback systems.

If you have a fine manual turntable, the XSV/3000 is a perfect choice.

If you have a high quality automatic turntable, then installing an XV-15/625E in its tone arm is a perfect choice.

The summary advice of Stereo's Lab Test, in an unusual dual product review, we think brilliantly states our position: "The XV-15/625E offers performance per dollar, the XSV/3000, the higher absolute performance level." That makes both of these cartridges best buys!

Pickering's new XSV/3000 is a remarkable development. It possesses our trademarked Stereohedron Stylus Tip, designed to assure the least record wear and the longest stylus life achievable in these times with a stereo cartridge. Its frequency response is extraordinarily smooth and flat; its channel separation is exceptional; its transient response affords superb definition. It represents a whole new concept of excellence in stereo cartridges.

Read the whole evaluation report. Send for your free copy of the Stereo "Lab Test" reprint; write to Pickering & Co., Inc., 101 Sunny Side Blvd., Plainview, N.Y. 11803. Department HF

"for those who can hear the difference"

PICKERING & CO., INC., COPYRIGHT 1977

HIGH FIDELITY MAGAZINE
MUSIC AND MUSICIANS
14 The U.N. Day Concerts  John Culshaw
18 Music U.S.A.: Words into Music  Gene Lees
69 The Acoustic Era  painted by Jim Jonson
75 Rosa Ponselle Reminisces  James A. Drake
80 Boulez' IRCAM  Roy McMullen
86 Behind the Scenes
89 Sass and Price: Soprano Superstars  Dale Harris
90 Heroic Strauss from 1928  R. D. Darrell
123 Judy Collins in Transition  Susan Elliott

EQUIPMENT AND INSTRUMENTS
4 MCA vs. Sony  Leonard Marcus
22 Too Hot to Handle
28 News and Views
28 Equipment in the News
40 Pathfinder: Walter Stanton  Norman Eisenberg
45 Equipment Reports
  Pioneer Spec-2 power amplifier
  Empire 696 turntable
  Hitachi SR-903 receiver
  Aiwa AD-1250 cassette deck
  Crosswinds outboard subsonic filter
  Audio-Technica AT-605 Audio Insulators
60 Judging Record-Playing Equipment  Edward J. Foster
64 Buyer's Guide to Record-Playing Equipment
127 Tom Oberheim  Don Heckman
132 A&M Records  Todd Everett
135 Instruments and Accessories

REVIEWS
89 Essays
  Sass/Price recitals  Mengelberg's Ein Heldenleben
92 Classical Records
  Marriner's Messiah  Davis' Dvořák
93 Critics' Choice
119 Theater and Film
  To Kill a Mockingbird  Pink Panther
121 The Tape Dock  R. D. Darrell
136 Backbeat Records
  Lionel Hampton  Janis Ian  Leon Redbone
150 Folios
  Alice Cooper  The Allman Brothers  Carly Simon

ET CETERA
6 Letters
59 HiFi-Crostic  William Petersen
106 Advertising Index
107 Reader-Service Cards
BACKBEAT begins on page 123
MCA vs. Sony

I don't usually get involved in intercorporate struggles, but the outcome of a lawsuit in process may have such radical consequences in regard to the right to home entertainment that I think every one of our readers should be aware of the issues. MCA, partner of Philips in a well-publicized video disc system (I wrote about it extensively myself in our December 1973 issue), is suing Sony to prevent the latter from manufacturing and marketing its Betamax video tape system.

While I have no solid evidence from which to infer that any part of the impetus for the lawsuit is MCA/Philips' inability to get its product onto the market, whereas Sony's is already there, I cannot dismiss my suspicion that the video disc company merely wants to thwart the video tape company's capture of a potentially enormous home entertainment market. For all the advantages the MCA/Philips system has over the Sony—not the least of which is the lower cost of both its hardware and its software—the Betamax can claim at least one. It can record. You can watch one television show while taping another for later viewing; you can set a timer to record a show while you are out.

You can, but whether you may is an open question. MCA (and its partner in the suit, Walt Disney Productions) has claimed copyright infringement; the entertainment conglomerate counts among its properties the movies of its subsidiary Universal City Studios. In its symbiotic partnership with Philips, MCA supplies the program material while Philips makes the players. (As we reported last November, Sony has now teamed up with Paramount.) Movie companies, of course, have a stake in discouraging you from taping their films from The Late Show for your personal library. What would happen to the annual broadcast of The Wizard of Oz if enough people made their own copies? What would be the future of those intermittent re-releases of Gone with the Wind if enough viewers had taped its recent telecasts? If Betamaxes proliferate, would MCA have to turn a deaf ear and reject any multimillion-dollar offers the networks make to televise its Jaws? Clearly, the traditional distribution patterns for making films available to the public would have to be rethought.

It is, to be sure, generally illegal to make an unauthorized copy of somebody else's copyrighted material. (The 1972 Sound Recording Act specifically exempts the home audio tapist who records anything for his own use. Thus, strangely, you can tape the soundtrack of a TV program—but don't get caught recording what's on the screen.) Since MCA cannot hope to sue every homebody with a video recorder, company executives have decided to attack the subversive technology.

There is a basic difference between the recording of visual material and the recording of sound. If you have a few dollars, you can walk into a neighborhood store and buy the music from Godspell; you cannot do the same for the movie. With the one, you buy the product; with the other, you (or the network) buy a single showing. These are the conditions the economics of the two industries have dictated.

But now a new industry is developing, an industry whose economics are conflicting with those of a long-established one. And in the process the older industry, rather than planning for changes in its distribution patterns to meet the development of technology, is trying to limit our ability to do what we want within the confines of our homes. When it does appear, an MCA disc should be cheaper than even the blank tape necessary to record the same length of program material via Betamax, if you plan to keep the program rather than re-use the tape.

Which only goes to reinforce my suspicion that the entertainment giant, not yet able to market its own wares, is trying to quash the competition, and the public interest be damned.

If MCA wins the suit, watch out, Xerox!
They make the waiting bearable.

A lot of people buy Bose 501 speakers because they're the next best thing to the speakers they dream about having some day—the Bose 901® Series III. So it's easy to overlook just how well the 501's succeed in providing, at significantly less cost, many of the advances made in the 901's toward creating, in your living room, the experience of a live performance.

**Reflected and direct sound.**
The 501, like the 901 Series III, is a Direct/Reflecting® speaker. Its woofer aims low frequencies directly into the room, while the tweeters reflect high frequencies off back and side walls. The listener is surrounded by a balance of reflected and direct sound, as he is in a live performance. The sound is spacious and realistic, with none of the shrillness of even the best direct radiating speakers.

**Flat power response.**
And, like the 901 Series III, the 501 is designed to achieve flat total power radiation, rather than flat frequency response on-axis. The 501 radiates the same total energy, encompassing all directions, at every frequency. This means accurate frequency balance almost everywhere in the listening room.

**Highs, lows and middles.**
We also gave the 501 features all its own. Its specially designed and very potent 10-inch woofer has a long-excitation, 1-inch voice coil for exceptionally clear bass at high volume. The two 3-inch tweeters were also specially designed so their response increases with frequency, to maintain flat total power radiation. And an unusually complex crossover network adjusts response and phase of woofer and tweeters through the crossover region for smooth midrange response.

So enjoy your 501's while you wait for the day you have 901's. After a while, you may forget what it was you were waiting for.

The 501 creates, in a living room, the same kind of balance of reflected and direct sound experienced in a live performance.

Cabinets are walnut-grain vinyl.

The big 10-inch woofer points straight ahead, while the tweeters are angled back to reflect sound off room walls.
COMING NEXT MONTH

Along with May's flowers our next issue will bring you An Early Look at Next Season's New Equipment as gleaned by our audio editors during the Winter 1977 Consumer Electronics Show in Chicago. For those who love the great outdoors but don't want to leave music behind, we offer Stephen Traiman's survey of Portable Components for Camping. Arthur Jacobs' revealing account of The Real Sir Arthur Sullivan, based on his unpublished diaries, shows that, among other things, the motto of this upright Victorian gentleman's amorous life was decidedly not "Well, hardly ever." And we'll have the first of two parts of Richard Dyer's comprehensive Gilbert and Sullivan Discography. Plus equipment test reports, Gene Lees, John Culshaw, Backbeat, our regular classical-release coverage, and more.

SOLUTION TO HIFI-CROSTIC NO. 22

HENRI TEMIANKA: Facing the Music

Recipe for a chamber symphony: Take thirty-five musicians, add board members to taste, mix not too vigorously. Keep at even temperature and drop in one medium-sized manager. Keep well supplied with lettuce. Baste frequently until done.

RECORD QUALITY; ANOTHER SLANT

In response to John M. Dobson ['Letters,' January], I am compelled to put in a word on behalf of Deutsche Grammophon. Living in nearby Lexington, Kentucky, Mr. Dobson probably receives records from the same distributor as I do in Cincinnati, and I must say my most recent DG purchases have been worthy of the company's fine reputation. In the last month I bought Karajan's Bruckner Eighth Symphony and Jochum's Die Meistersinger, and the pressings were uniformly marvelous. This is not to suggest that Mr. Dobson is incorrect, but merely to suggest that perhaps DG has restored quality to its product.

It occurred to me that this phenomenon in recording quality in general has gone on for longer than a year. I'm referring not to pressings, but to musical sound. After having purchased London's new Solti Die Meistersinger as well as DG's version, I pulled out my Friedrich Schorr excerpts album on Seraphim to hear this music truly sung and was thunderstruck to find the sound on this antediluvian marvel superior in all essential ways to both contemporary products. The Wahnhnolog in Schorr's recording is beautifully balanced, the voice incredibly true, and the orchestra—if not so resonant and refulgent as in the stereo records—is certainly more revealing of detail. Instruments and voices have a reality of timbre lost on today's products. It is the difference between a faithful but faded photograph and a brilliant but distorted cartoon.

It is with reluctance that I observe (and must accept) that as far as records are concerned, advancement has been strictly to the rear.

Alan Klein
Cincinnati, Ohio

Paradox

There is before me a copy of the recording of Pierre Boulez conducting the Beethoven Symphony No. 5, which features in the interpretation of the third movement a repeat of the opening scherzo and trio. The notes on the back cover explain by quoting Mr. Boulez as stating, "I have a pupil who has... proved conclusively to me that it was just carelesslessness on Beethoven's part that the repeat marks got left out. I think the balance of the work is improved too, in practice."

These same notes begin by declaring that "Boulez has been called 'a marvelous bundle of paradoxes.' " The paradox here consists in the fact that Boulez tries to "improve" the balance of the work by inserting a repeat in the third movement that Beethoven, through carelessness or otherwise, supposedly neglected to specify, and then neglects to observe a repeat in the last movement that Beethoven was careful to specify, thereby destroying the very balance he claims to be trying to improve.

Samuel Schulze
Pickering, Ont.

Isle of the Dead

With regard to Abram Chipman's review [January], it is interesting to note the extent to which Rachmaninoff was "inspired" by Bocklin's The Isle of the Dead in composing his great symphonic poem. In fact he never saw the oil painting until after he had finished the score. He had seen only a small black-and-white sketch made afterward and did not like the big oil. "If I had seen the original first, I might not have composed my Isle of the Dead, I like the picture best in black and white," he remarked.

Also, in Rachmaninoff's account of the composing of this work, given to a Dutch journalist, there is no mention of Bocklin's picture at all: "And they come: all voices at once. Not a bit here, a bit there. All. The whole grows. So Toteninsel. It was all done in April and May. When it came, how it began—how can I say? It came up within me, was entertained, written down."

Noel Farrant
Canonton, N.M.

Judy Holliday

Gene Lees's exquisite article about Judy Holliday [January] was much appreciated. He expressed, much better than I could ever have, the sense of loss experienced by all of us who miss her.

Richard Smith

Computerized Caruso

James Drake's article [October] and David Hamilton's review [November] concerning computerized Caruso were quite informative. In fact, I placed them inside the jacket of the recording along with the accompanying booklet.

My first impression on hearing the disc was that the sense of strain often noted in Caruso records—and in Madame Favart-Arnaud's book—was gone. Besides, the almost living presence of the voice sounded like some of the best Edissons of the period, which caught some great voices quite well. In fact, Caruso sounds like a human being rather than a "singing god."
Meant for each other.

From the beginning it was a love match, each bringing out the best in the other. The AIWA AD-6500 cassette deck and the powerful AIWA AX-7500 receiver.

The AD-6500 cassette deck with its exclusive automatic front loading has been the belle of the ball since coming out. The separate transport system automatically loads the cassette into place. Added to this exclusive feature are those famous AIWA specs that impress even the most discriminating audiophile. The built-in Dolby* N.R. allows the S/N ratio of 62dB (Fe-Cr tape); the wow and flutter is kept to 0.07% (WRMS); the frequency response from 30 to 17,000Hz; the 2 step peak level indicator (+3dB, +7dB); the quick cue and review; the Ferrite-guard head and the 3 step bias and equalizer tape selector insures that the AD-6500 will always be out front.

The AX-7500 is a high powered, low distortion AM/FM stereo receiver that can hold its own with the best. Even the toughest engineers have nodded their approval. It boasts 30 watts per channel minimum RMS at 8 ohms from 20 to 20,000Hz with no more than 0.2% total harmonic distortion. The advanced 3-stage direct coupled OCL and differential amplifier circuitry equalizer assures stability and excellent transient response.

The AIWA AD-6500 and the AIWA AX-7500. The perfect sound relationship.

*Dolby is a Trademark of Dolby Laboratories, Inc.
Sansui's new 9090DB top-of-the-line receiver adds Dolby to its other luxury credentials — big power, an extremely fine tuner section and great versatility. The Dolby circuitry will not only decode Dolby FM broadcasts: it can also encode and decode tape recordings for reduced noise and hiss. And, of course, with the Sansui 9090DB you can creatively determine just how you like your music. In addition to bass and treble controls, with turnover selectors for 150 Hz/300 Hz and 1.5 kHz/3 kHz respectively.

**The Sansui 9090DB.**

**AUDIO SECTION**

**POWER OUTPUT**
125 watts per channel, min RMS, both channels driven into 8 ohms from 20 Hz to 20,000 Hz, with no more than 0.1% total harmonic distortion.

**FM SECTION**

**FM SENSITIVITY**
9.5 dBf (1.7 µV).

**SELECTIVITY**
better than 85 dB

**SIGNAL TO NOISE RATIO**
better than 70 dB

**SPURIOUS RESPONSE REJECTION**
better than 85 dB

* Dolby is a trademark of Dolby Laboratories Inc.
Simulated woodgrain cabinet!

A whole new world of beautiful sound.

SANSUI ELECTRONICS CORP.
Woodsdale, New York 11377 • Gardena, California 90247
SANSUI ELECTRIC CO., LTD., Tokyo, Japan • SANSUI AUDIO EUROPE S.A., Antwerp, Belgium • In Canada: Electronic Distributors
there is also a midrange control. High and low filters. A tone defeat for bass and treble. A loudness switch and 20 dB audio muting switch. For added creative freedom, two tape monitors and a mic mixing circuit with separate level control. Two tuning meters, as well as twin power meters that also serve for Dolby tone calibration.

Listen to the 9090DB. Handle its superbly smooth controls. See how they respond to your slightest command. We know you will fall in love with Sansui.
The process of Soundstream, Inc., is bound to revolutionize the reissue business, especially for the Golden Age collector.

Luis Alvarado
Rio Piedras, P.R.

Sound Debate

I was chagrined to see ["Letters," November] that someone as eminent as John Culshaw would repeat a misapprehension that had, I thought, been buried some time during the New Deal. I refer to his astounding statement that "the words 'natural,' 'realistic,' and 'faithful' are meaningless" to high fidelity reproduction. Or should I just call it sound?

It does not take a golden ear to hear what a limiter, or equalization, or multiple microphones can do to a recording. If Mr. Culshaw's ears are in such a sorry state that he can't hear the poor stereo image and flatness of a multi-miked recording, perhaps he should refer to the Journal of the Audio Engineering Society, where more than one study has indicated that recordings made with various two-microphone techniques are almost universally preferred in every respect to those made with multiple pickups.

As to Mr. Culshaw's belief in the ascendance of the artist during the mix, I have often heard singers overwhelming symphony orchestras, or woodwinds slowly climbing in level, and must sorrowfully conclude that Mr. Culshaw's statement is patent nonsense. These things don't occur at the concerts I attend.

Please, Mr. Culshaw, and all you other engineers—listen to what a pair of cardiods and a two-track can do, and then be glad that expensive consoles can be retired to pop. We will all benefit.

Joshua Hill
New York, N.Y.

Blitzstein Recording

It seems that it took quite a while for Columbia to get its recording of Blitzstein's The Airborne Symphony [January] off the ground. Although reviewer Irving Lowens refers to it as "newly recorded," I have before me a copy of the Metropolitan Opera Guild's Opera News, dated January 21, 1967, in which it is stated: "Andrea Velis has recorded Marc Blitzstein's symphony The Airborne with the N.Y. Philharmonic under the direction of Leonard Bernstein for Columbia, a result of the success of their performance of the work last October."

Wilfred J. Healey
Los Angeles, Calif.

Though the music portion of the album was indeed recorded in 1967, Orson Welles's narration was just recently recorded and the complete album released. It seems that it took nine years to find a time in Mr. Welles's busy schedule when he could do the narration.

Iris

Why don't your reviewers start urging a recording of Pietro Mascagni's Iris? The music has to be heard to be believed—gusty, vividly colored and exciting, with magnificent choruses and thoroughly effective arias. Admittedly, the plot's a little static, but this wouldn't matter on records and the music would amply compensate for it.

As the lead, let's have Magda Olivero, who has sung the role in Italy. If she isn't available, Josella Ligi would do it with precisely the verismo qualities needed. Considering how rapaciously hungry both the public and the recording companies are for exciting rediscoveries, a well-presented version of Iris couldn't help but sell like the proverbial hotcakes.

Jordan G. Lee
San Francisco, Calif.

Early Music Quartet

In her November review, Susan T. Sommer states that she is a fan of Thomas Binkley's Early Music Quartet. If so, she should have checked her record collection before writing the review of the EMQ's latest release, which was not "assembled in house from bits and pieces of old European releases." Rather, the material under discussion was taken completely from two single discs that have been available in the U.S. for at least five years. The recordings were originally issued by Telefunken as SAWT 9432-B and SAWT 9466-B, and are currently in the domestic catalogs as 6.41053 and 6.41068, respectively.

Robert W. Schirmer
Stow, Ohio

Ms. Sommer replies: Available or not (and these particular discs have not come to my

Both of these are made in Elkhart, Indiana

The one on the right provides permanent relief from the pain of headache caused by poor room response

The good sound that comes out of your speakers can be different by the time it gets to wherever your ears are. Air, walls, rugs, drapes, furniture—can all affect frequency response.

The new Crown EQ-2 Equalization System is designed to correct that particular headache. The system includes the Crown EQ-2 eleven-band, octave-center, stereo equalizer; plus the Crown equalization record, room response chart paper, and a manual which tells you how to make it happen.

Write today for full-color brochure. The information could be very good for your system.

Box 1000, Elkhart, IN 46514

CIRCLE 11 ON READER-SERVICE CARD

CIRCLE 54 ON READER-SERVICE CARD
Yamaha's new two-way beryllium dome NS-500.
A very responsive speaker with a rich, luscious sound. Highly defined, finely detailed. A deeply involving sound.
In a word, sensual.
With the NS-500, you get all of beryllium's advantages (transparency, detail, and lack of distortion that go beyond the best electrostatic speakers), but at a price roughly half that of the NS-1000. Only $500 the pair, suggested retail price.

The joy of beryllium.
The ideal dome material for a high frequency driver must respond instantly to changes in amplitude and frequency of the input signal. So the ideal dome material must be virtually weightless as well as extremely rigid.
Beryllium is the lightest and most rigid metal known. Its density is less than two-thirds that of commonly used aluminum and its rigidity is almost four times as great—thus preventing dome deformation and consequent distortion. What's more, beryllium's sound propagation velocity is twice that of aluminum.
The beryllium dome found on the NS-50C's high frequency driver is the world's lightest—about half the weight of one petal of a small sweetheart rose. Which is one of the reasons for this speaker's exceptional sensitivity and response. And for its sensual sound.

A closer look.
To be able to offer the sophistication of beryllium at a more affordable price, without sacrificing quality of performance, Yamaha designed the NS-500 as a two-way bass reflex system.
This gives the NS-500 a trace more motion at the low end than the recently objective NS-1000. But it also gives the NS-500 more efficiency (90dB SPL at one meter with one watt RMS input). Which means you don't have to invest in the highest powered amplifiers or receivers in order to drive the NS-500 to its full rated output.
For an optimum match with the beryllium tweeter, Yamaha developed a very light, very rigid "shell" woofer. And a special hermetically sealed air core LC crossover with a carefully selected 1.8kHz crossover point.
As a result of these design parameters, the NS-500 boasts an insignificant 0.03% THD below 50dB SPL, from 40Hz to 20kHz, making it the perfect complement to Yamaha's state-of-the-art low distortion electronics.
Underneath the sleek monolithic styling of its solidly crafted enclosures, the NS-500 is full of many exclusive Yamaha features and distinctive Yamaha touches of craftsmanship.
But to fully appreciate the beauty of the NS-500, you really should visit your Yamaha Audio Specialty Dealer.
And if you're not familiar with the name of your local Yamaha Audio Specialty Dealer, drop us a line. In turn, we'll also send you a free preprint of the Audio Engineering Society paper on Yamaha beryllium technology mentioned above.
Everything built into the Miida 3140 stereo receiver is there for a reason...and that reason is performance.

For the discriminating audio enthusiast AM, FM and FM Stereo with Phase Locked Loop Multiplex with outstanding reception and positive separation. Dual inputs with monitor and crossdubbing. Superb amplifier for dramatic, full depth performance with power to spare. Did we say power? 43 watts per channel, minimum RMS into 8 ohms from 20 Hz to 30K Hz with less than 1.4% Total Harmonic Distortion; no more than 0.4% IM Distortion and a 70 dB S/N Ratio.

Every convenience is there... from fully detented tone controls to individually metered channels for signal strength and tuning and complete overload protection for receiver and speakers with a LED speaker malfunction indicator.

All this is just the tip of the iceberg and there's a lot left to turn you on. In fact, just listening to its sound should convince you as your nearest Miida dealer will be pleased to prove. If you can't find him, call Ron Fare at (201) 933-9300. For information on our complete audio components line, write Miida Electronics, Inc., 205 Chubb Avenue, Lyndhurst, New Jersey 07071 or 12958 Midway Place, Cerritos, California 90701 (213) 526-3333

Miida T3115 Direct Drive Turntable. Stroboscope allows you to adjust speed with pin-point accuracy, 2-speed adjustments, 1½" turntable, 6 pole electronic motor, S-shaped tone arm with anti-skate.

Miida SP3150 4-Way Speaker System. Overall frequency response: 25Hz to 22kHz ±5dB. Impedance: 750Hz-1800Hz, 7.5k Hz 12kΩ. Power handling capability: 55 watts maximum music power.

attention), the point that Telefunken's latest collection is a hodgepodge still holds. Binkley himself has complained that companies release selections without acknowledging it and that the final arrangement is not necessarily the program envisioned by the original artists.

More on Dohnanyi

Bravo to Alex Hassan for his appeal for more Dohnanyi recordings [Letters, December]. With the advent of Vox Boxes and the marathon race to get so many composers' complete oeuvre on disc, Dohnanyi has been overlooked in preference to some composers of lesser stature.

For some months I have been aware of the approaching Dohnanyi centennial and, like Mr. Hassan, was appalled that there was only one recording of his works listed in this year's forecast. I immediately wrote Columbia and asked if it might not include in its many Odyssey reissues one disc of the several historical performances in its vaults. I doubted that my single letter is enough to persuade Columbia, but more letters from interested readers might do the trick.

George J. Mintz
Gainesville, Ga.

... and Havergal Brian

H. Jack Adams is doing Havergal Brian a disservice by recommending the Gothic Symphony on Ariens [Letters, December]. This is a pirate issue of Sir Adrian Boult's 1968 performance, the recording sounds as if it were made on a $19.95 cassette recorder in the top balcony of the Albert Hall. Some of the sense of the music comes through, but not very much; the huge orchestra and chorus in the Te Deum finale are lost in the mush.

There are three recommendable English releases: amateur but surprisingly good performances of the excellent Tenth Symphony and less interesting Twenty-First (Unicorn RHS 313); of the short Twenty-second, an early Psalm setting, and the late English Suite, No. 5 (CBS Classics 61612); and, best yet, superb readings of the Sixth (Sinfonia Tragedia) and Sixteenth Symphonies, two of Brian's finest works, on Lyrita SRGS 67, by the London Philharmonic under Myer Fredman. I hope that MHS will release the Lyrita; it is the best introduction available to Brian's exasperating but powerful symphonies.

Michael Steinberg
Ontario, Canada

Benson's engineer

Somewhere between the typewriter and the printed page, both the name and the special significance of engineer Al Schmitt were omitted from my story about George Benson (BACKBEAT, February). I'd like to make amends by quoting producer Tommy Li-Puma on Schmitt's role in the creation of Benson's enormously successful albums for Warner Bros.: "Without Al it just would never have happened."

Don Heckman
Encino, Calif.
Our concept: the cassette is a component of your sound system, not an accessory. Because a cassette, unlike its open-reel counterpart, actually becomes an integral part of your system the instant you put it in your cassette deck.

This philosophy was one of the underlying principles behind the development of TDK SA cassettes. TDK SA was the first non-chrome tape compatible with chrome bias and equalization. It gives you better high-end performance than ferric-oxide-based tape, and unlike chrome tapes, it gives you greater dynamic range at low and mid-range frequencies, with far less distortion.

But our engineers put as much emphasis on the design and construction of the SA cassette housing as they did on the SA tape inside. Our cassette shell and tape carriage system are made to the same high standards as the tape they carry. So you get the kind of jam-proof, friction-free reliability you want in every cassette we make.

TDK SA cassettes offer both superior tape and precision mechanics. That's why quality tape deck manufacturers either use SA as their reference cassettes, or recommend it for their machines.* And why you'll get the best from your system by using our machine in your machine.

TDK Electronics Corp. 755 Eastgate Boulevard, Garden City, New York 11530.
In Canada, contact Superior Electronics Industries, Ltd.

* Questions about specific decks will be answered upon request.
The U.N. Day Concerts

by John Culshaw

New York—For the past three years, on October 24, I have had the honor of directing the televising of the United Nations Day concert. It is an exhilarating and exceedingly frightening experience, never to be contemplated by those who are frail of heart or weak of knee. For one thing, it is live, which means that any mistake you make will be displayed to the world; and it is "live-deferred," which is a way of getting rid of the awkward thirty-minute intermission.

The 1976 concert began precisely at 3:00 on that Sunday afternoon, but transmission did not begin until 3:30, a process that involves the hitching up and respooling of several video machines. The effect in real time is unpredictable, because at 3:32 there I was directing the cameras for Marian Anderson in Copland's Lincoln Portrait while on the transmission monitor Antal Dorati was just starting Beethoven's Egmont Overture, which had taken place exactly thirty-one minutes earlier. The result of this deliberate time lag is that by the time you reach the second half of the concert—in this case, Lazar Berman playing the Tchaikovsky B flat minor Concerto—you have caught up with the clock and have become genuinely, irrevocably live. It can all be very confusing.

There are other confusions, too, at least for someone who works for the U.N. only once a year, and the first is finding your way about the building. The trouble is that it is not one building as it appears on a postcard, but hundreds if not thousands of buildings, all connected by elevators and escalators designed to take you where you do not want to go. You have also to learn never to take as much as a step without carrying your pass because, although it is easy to go from a restricted to an unrestricted area, it is almost impossible to get back again without that vital piece of paper.

In 1974, when the concert was given by the New Japan Philharmonic with Seiji Ozawa, the second half of the program nearly went on the air without a director because I had unwittingly gone to a restroom in an unrestricted area during intermission and had left my pass in the control room. The guards correctly and politely stopped me. Their apprehensions about a jacketless Englishman trying to gain entry were doubtless doubled when I explained that within
We made the first Ortofon cartridge for us.

As far back as 1945, Ortofon was making the cutterheads used throughout the world to cut the grooves in master phonograph records. But the phono playback cartridges then available could not put our cutterheads to the test for sensitivity and capacity. So we made our first phono cartridge. For us.

Since then our cutterheads have moved ahead—with a quality we couldn't even imagine in 1945. So have our phono cartridges.

The new MC20 moving coil phono cartridge is the best we've ever made. We believe it is the finest available for professional or home use. The MC20 has the lowest stylus tip mass ever attained on a phono cartridge. A flawless, fine line diamond stylus is fixed directly (without the usual sleeve) to a stepped, low mass cantilever. Beryllium filling enables the cantilever to attain rigidity despite its minute dimensions. The moving coils are wound with wire one-fifth the thickness of a human hair.

The moving coil principle, with its low inertial mass, wider frequency response, low distortion as well as low tracking force, has clearly established its sonic superiority over any other phono cartridge system. Our new pre-amplifier, the MCA-76, is also available to process the signal of the MC20 or any other moving coil cartridge. The MCA-76 features low-noise circuitry, a subsonic filter and a by-pass switch which accommodates all magnetic cartridges.

We'll be pleased to forward data on the entire Ortofon line. We suggest that you write to us directly. Ortofon, Dept. B, 122 Dupont Street, Plainview, New York 11803.

ortofon
Introducing an evolutionary idea.  
The New Empire 698 Turntable

Great ideas never change radically. Instead, they are constantly being refined to become more relevant with time. So it has been with Empire turntables. Our latest model, 698, is no exception. Basically, it's still the uncomplicated, belt-driven turntable we've been making for 15 years. A classic.

What we're introducing is improved performance. The lower mass tone arm, electronic cueing, quieting circuitry and automatic arm lift are all very new.

The rest is history.

The Tonearm

The new 698 arm moves effortlessly on 32 jeweled, sapphire bearings. Vertical and horizontal bearing friction is a mere 0.001 gram, 4 times less than it would be on conventional steel bearings. It is impervious to drag. Only the calibrated anti-skating and tracking force you select control its movement.

The new aluminum tubular arm, dramatically reduced in mass, responds instantly to the slightest variation of a record's movement. Even the abrupt changes of a warped disc are quickly absorbed.

The Motor

A self-cooling, hysteresis synchronous motor drives the platter with enough torque to reach full speed in one third of a revolution. It contributes to the almost unmeasurable 0.04% average wow and flutter value in our specifications. More important, it's built to last.

The Drive Belt

Every turntable is approved only when zero error is achieved in its speed accuracy. To prevent any variations of speed we grind each belt to within one ten thousandth of an inch thickness.

The Platter

Every two piece, 7 lb., 3 inch thick, die cast aluminum platter is dynamically balanced. Once in motion, it acts as a massive flywheel to assure specified wow and flutter value even with the voltage varied from 105 to 127 volts AC.

The Main Bearing

The stainless steel shaft extending from the platter is aged, by alternate exposures to extreme high and low temperatures preventing it from ever warping. The tip is then precision ground and polished before lapping it into two oilite, self-lubricating bearings, reducing friction and reducing rumble to one of the lowest figures ever measured in a professional turntable: -68 dB CBS ARIA.

The Controls

Electronic cueing has been added to the 698 to raise and lower the tone arm at your slightest touch. Simple plug-in integrated circuitry raises the tone arm automatically when power is turned off.

A see-through anti-skating adjustment provides the necessary force for the horizontal plane. It is micrometer calibrated to eliminate channel imbalance and unnecessary record wear.

Stylus force is dialed using a see-through calibrated clock mainspring sensor, more accurate than any commercially available stylus pressure gauge. A new silicon photocell sensor has been added to automatically lift the arm at the end of a record. New quieting circuitry has also been added. Now, even with the amplifier volume turned up, you can switch the 698 on or off without a "pop" sound to blow out your woofers.

At Empire we make only one model turntable, the 698. With proper maintenance and care the chances are very good it will be the only one you'll ever need.

The Empire 698 Turntable

Suggested retail price $400.00

For more information write:
EMPIRE SCIENTIFIC CORP.  
Garden City, New York 11530.
four minutes I was going to "shoot" Secretary-General Kurt Waldheim, whose speech was about to begin. But instead of locking me up or putting me on another escalator to nowhere, they kindly guided me back to the control room and stayed to listen to the speech.

Such problems are minor indeed compared with the situation that arose while we were preparing for the 1975 concert to be performed by the Vienna Symphony under Carlo Maria Giulini. The main work was a new cantata by Gottfried von Einem called An die Nachgeborenen (To Posterity), and it involved Julia Hamari, Dietrich Fischer-Dieskau, and the Temple University Choirs. A journalist noticed that in the last movement of the cantata—a setting of Psalm 121—Einem had omitted a line that reads: "Behold, He that keepeth watch over Israel shall neither slumber nor sleep." Now I don't know about those who keep watch over Israel, but from that moment onward there was not much slumber or sleep for any of us.

It is not hard to imagine the various sensitivities aroused by the omission, and Einem did not help matters by claiming, during an interview with The New York Times, that he had worked from an ancient, authenticated text that excluded the line. This brought down upon his head a veritable deluge of theological denials, at which point he refused to give any more interviews.

By that time various factions for various reasons were threatening to boycott the concert. Giulini tried without success to persuade Einem to set the line. Then someone suggested a fermata during which Fischer-Dieskau might speak the line—a seemingly ingenious solution until it was pointed out that it would provide an even greater emphasis than the omission. In the event it was left out, and I don't think anybody missed it, but I'm told that in the DG recording made shortly afterward in Vienna, which I have not heard, it has mysteriously appeared. Perhaps Einem wrote music for it during the long flight home.

There were no such incidents in 1976, but I have just been told in confidence what may await me in 1977. It's very exciting, and I wish I could disclose it, but I can't. Yet, being a journalist rather than a diplomat, I can't resist revealing one closely kept international secret: The bartender in the U.N. Delegates Lounge makes the best Bloody Mary in the world.
3. Words into Music

by Gene Lees

The language of a people, and sometimes even differing dialects, act as a powerful force in shaping a nation's music, even its instrumental music. The German language is full of regular stresses and emphases; so is much of German music. Mexican Spanish has the pattering sound of triplets about it; so does a good deal of Mexico's music. Consider how the rhythmic feeling of "The Mexican Hat Dance" accords with the way Mexicans speak Spanish.

The influence of language on music was brought home to me in the 1960s when I began translating the Brazilian Portuguese lyrics of Antonio Carlos Jobim. I found that English lyrics would fit comfortably into the music of a ballad (the samba concão, to use the Brazilian term) because there is a stressed-unstressed structure in Brazilian speech—which is quite different, by the way, in rhythm and even tonal character from that of Portuguese. At more rapid tempos, English usually becomes awkward in conjunction with Brazilian melodies. Take Sergio Mendes' recording of "Chauve Chuva". The English line "constant is the rain" comes clumsily from the mouth, tripping over the rhythm of the music. "The Girl from Ipanema" utterly lost her swing in Norman Gimbel's English translation, partly because the triple-syllable phrase "tall and tan" was forced onto a melodic phrase that originally had five syllables. The more idiomatically Brazilian a song is in speech character—and therefore in musical character—the more difficult it is to fit English lyrics to it.

In 1963, I began a working collaboration and friendship with the French songwriter, singer, and film actor Charles Aznavour. Helping him prepare for his first Broadway appearance, I translated about a dozen of his songs. Some of them were easy to render into English, like "J'aime Paris ou mois de Mai." Its structure is rather like that of an American song, with a markedly stressed but uneven rhythmic character to the words. In English the title became "Paris Is at Her Best in May" (partly to poke fun at one of the loveliest of American songs, "April in Paris," since anyone who has lived there knows that April in Paris is usually soggy and dismal). The English title contains the same number of syllables as the French; but more importantly, the weak and strong syllables conform to those of the original line.

Others of Aznavour's songs were difficult, however, particularly "Que c'est triste Venise"—which became "Venice Blue." I was always unhappy with my English lyric for the song. Last year when Aznavour said he intended to re-record it, I totally rewrote it as "How Sad Venice Can Be." The new lyric is a considerable improvement, but I still am not content.

The problem is not a matter of meaning; true translation is ultimately impossible, and all that one can do is to understand the emotional components of a song and then reconstruct them with the images, symbols, and rhymes of the adopted language. Many of his songs were written in alexandrines, the meter of classical French poetry and the verse dramas of Racine and Corneille. An alexandrine is a line of iambic hexameter—six iambic feet, each containing a weak beat followed by a strong one. Thus each line contains twelve syllables.

The music of "Que c'est triste Venise" conforms to that structure of iambic hexameter, so the English lyric must be in alexandrines as well. The first two lines of the more recent translated version read: "How sad Venice can be when you return alone and find a memory in ev'ry paving stone."

One sees that these lines seem very long and "wordy" in English, a language in which iambic pentameter has usually been considered the longest practicable graceful line. It is the rhythm of Shakespeare and, incidentally, of American blues.

Repeated experiments by poets, including Pope and Dryden, have established that alexandrines are awkward in English. They work quite felicitously in Latin languages, however, and especially in French. One reason for this is that French utilizes certain devices of articulation that make it possible to speak smoothly at higher speeds than are natural to English. For example, the French leave terminal letters such as s, t, and d silent when the following word begins with a consonant. But when the following word begins with a vowel, the terminal consonant is sounded, in the device called "liaison." This prevents the collision of consonants—the bane of an English or American lyricist's professional life.

In the song "All the Way," Sammy Cahn wrote the clumsy phrase "tallest tree," which presents a singer with the unhappy alternative of singing "talles' tree" or "tallest (short and artificial pause) tree." (Frank Sinatra, whose sensitivity to problems of articulation..."
The first speakers with the brains to run your system.

As the photograph above so eloquently expresses, these are not plain-vanilla loudspeakers. They're the new BIC VENTURI Formula 5 and Formula 7 Monitor Series speakers. And they embody the most innovative thinking, and the most advanced technology, in speakers today.

Beyond delivering exceptional clarity, bass response and dynamic range, these speakers perform a series of monitor functions that improve the rest of your system. Amplifier ‘Clipping’! Until now, there's been no way for the user to accurately identify amplifier distortion (clipping), or the precise point at which it takes place. But these new speakers come with a test record that lets you pinpoint the output level where your amplifier begins to clip the peaks of the waveform. (Its maximum 'clean' output.)

The CLIPPING INDICATOR (center-right, above) is then set to that threshold. Once matched to your particular amplifier, the indicator lights when clipping occurs.

And by observing that signal to lower amplifier volume, you eliminate a major source of distortion.

Speaker Overload. Where an amplifier has the power to overload speakers before clipping, this same circuit can be set to serve as an early warning device. However, if overload persists, both the Formula 5 and 7 automatically shut off the power to the stressed speaker component.

Individual OVERLOAD INDICATORS will identify the component affected, and help you trace the problem to its source.

Tonal Balance. Scientists have demonstrated that the ear is not a perfect musical instrument. As sound levels are lowered, the ear rapidly loses bass and treble tones.

So BIC developed the DYNAMIC TONAL BALANCE COMPENSATION circuit (patent pending). It automatically adjusts speaker frequency response, as volume changes, to compensate for what the ear can't normally hear.

Musical balance is thus preserved.

Sound Pressure. The Formula 7 can even let you see what you're hearing.

That bank of indicators (left-center) displays SOUND PRESSURE LEVEL. As speaker output increases, they light in sequence. The chart interprets the readings, and relates them to the size of room and the listening distance.

The indicators can also be used to correct for channel imbalance in phono cartridges, amplifiers, tuners, tape decks.

System Monitors. What we have here, as you may have sensed, is a long-overdue role reversal.

Until now, a speaker had to take whatever the system dished out, and make the best of it. Now we have speakers with the brains to control the system.

The Formula 5 and Formula 7 elevate the loudspeaker to a new and larger role in the stereo system. That of a system monitor, with the ability to make your entire system perform better.
WITH BSR,
YOU DON'T HAVE TO PAY EXTRA FOR THE EXTRAS.

Only BSR gives you much more without making you pay more.

With the 200 BAX you get the base, dust cover, three different spindles and a stylus wear indicator at no extra charge.

We also include an ADC induced magnet cartridge; so unique it's patented.

That's more than you get from Dual, Garrard or BIC.

And that's just the beginning. The BSR belt drives have built-in features that make records sound better and last longer: like a viscous damped cueing lever, calibrated force adjustment and anti-skate control.

The prices are much lower than you'd expect. Under $140 for the 200 BAX, under $110 for the 100 BAX, and under $100 for the 20 BPX.*

Sure, you could spend more for a turntable. But even then, you might not get as much as you get from BSR.

For full details, see your dealer or write: Consumer Products Group, BSR (USA) Ltd., Blauvelt, N.Y. 10913.

YOU COULD PAY MUCH MORE, BUT NOT GET AS MUCH.

*Dusted manufacturer's retail price.

French is a comparatively unstressed language, the syllables emerging (when well spoken) in a smooth, even flow. It has a balanced and somewhat detached quality that is oddly parallel to the educated Frenchman's Cartesian way of thinking. Whether the structure of a given language underlies the way its people think or whether, conversely, in the course of a country's evolution, the way its people think determines the nature and form of its language, I do not know. No doubt a reciprocal process occurs. I am convinced that the language, and the songs growing out of it, that a composer hears as a child will deeply influence the way he later writes instrumental music. Of course, although a child hears far more popular and folk than classical music, he may later submit to strong foreign influences, as in the cases of Berlioz, Franck, and Delius.

Debussy's opposition to German influences in French music may have had more to do with an aesthetic ultimately shaped by the character of his language than even he knew. (We do know how strong the effect of a few French poets, including Mallarmé, was in his thinking.) Whatever the forces working throughout his lifetime to form his personality, his music is remarkably similar to the French language in its evenness, balance, and subtlety. Bartók's music, to cite an opposite extreme, favors a disjointed rhythm in which a stressed short note often precedes an unstressed long one, a characteristic of the Hungarian language, consequently of its folksongs, and eventually of Bartók's (not to mention Kodaly's) style.

Perhaps the failure of this country's "melting pot" goal of integration of many peoples stems from the mistaken assumption that there are no inherent differences between the thought processes of various ethnic groups. The achievement of that national goal is more likely to grow out of learning to value what is different in the cultural experience of others than in denying the existence of these differences. We have made small steps in this direction when a white audience appreciates John Coltrane or Benny Carter and a young black drummer is lovingly immersed in the music of Debussy or Ravel.

If even classical music, deliberate and planned in conception and execution, lends insight into a nation, popular music offers a much more immediate access to this understanding. I will begin to examine this point in the next issue.
Two new electronic products from Nakamichi may be just what you've been waiting for: The 410 Preamplifier and 420 Power Amplifier are incredibly compact, beautifully styled, and decidedly affordable. Measuring less than 9" x 10" and barely 3 3/4" thick, both are timeless design expressions...pure Nakamichi in quality and performance.

The 410 approaches the theoretical limits of error-free amplification. A superb phono section, inherited from Nakamichi's amazing 610 Control Preamplifier, utilizes unique circuitry to minimize noise and distortion while maximizing dynamic range. Three phono input sensitivities accommodate a wide variety of cartridges. There is even a switchable active subsonic filter that keeps rumble and tonearm resonances from degrading sound quality. Additional features include fully defeatable tone control circuits, variable contour compensation, high-output headphone jack, and a 2 dB-stepped precision volume attenuator.

The 420 Power Amplifier is a neat, efficient unit for perfectionists with moderate power requirements. The unique output circuitry originally developed for the Nakamichi 620 virtually eliminates crossover and switching distortions without high idling current. The resulting low operating temperatures ensure long-term reliability. And, like the 620, the 420 employs a super-efficient toroidal power transformer, low negative feedback and foolproof protection circuitry—all of which add up to exemplary performance specifications and an effortless sound quality that belies its conservative power rating.

Let the 410 and 420 add new dimensions to your listening pleasure. See and hear them at a Nakamichi dealer soon. Your ears will thank you. For further information, write Nakamichi Research (U.S.A.), Inc., 220 Westbury Avenue, Carle Place, New York 11514.

**410 Preamplifier:**
- Phono S/N (IHF-A): Better than 80 dB at 1 µW
- Total Harmonic Distortion: Less than 0.003%
- Frequency Response: 20-20,000 Hz ± 0.25 dB

**420 Power Amplifier:**
- Power Output: 50 watts per channel at 8 ohms, 80 at 4 ohms
- Frequency Response: 20-20,000 Hz ± 0.25 dB
- Total Harmonic Distortion: Less than 0.00001% at any power level below clipping.
I am looking for a stereo system for use at first in the U.S. and later on overseas, where the AC frequency is different. What is involved in using a stereo system with both 50 and 60 Hz? Are there any components on the market suitable for both? If not, is the conversion of turntable and receiver to a new frequency a difficult procedure?

Also, I like to listen to classical music at medium to low levels and wonder whether the loudness compensation networks built into some of the BIC speakers are more effective than the standard controls provided in receivers.—P. R. Belden, Westmont, Ill.

For electronics there is usually little difference between a 50- and 60-Hz AC supply except that the power transformer may run a little hotter at the lower frequency. The situation should be similar for direct-drive turntables and DC-drive tape decks, since these do not use the power-line frequency as a speed reference and many turntables come with strobe markings for both frequencies. Units using synchronous or induction motors normally require that pulleys or gears be substituted when the power-line frequency is changed. Voltage is another matter, however. Unless the equipment you buy has provision for alternate connection of the power transformer, you could be in trouble. The best thing to do is tell your dealer of the problem when shopping.

Since proper loudness compensation depends on sound pressure levels and not electrical power levels, the efficiency of the speaker is a crucial consideration. Since BIC knows the efficiency of its speaker and can design accordingly, its compensation network should have the inside track—unless the level at which your amplifier's loudness control takes effect is adjustable. (Sherwood and Yamaha appear to be the only companies still offering this option.) Then it's a standoff.

When I attempt to make a cassette tape recording on my Sony TC-152SD of an FM broadcast from my McIntosh MAC-1900 receiver, there is an instant hiss in the loudspeakers, even when the recorder is set to record but is still being held in the pause stage. The hiss is also audible in playback. This happens only in stereo. The hiss is not apparent in mono or when I'm recording discs. Neither Sony nor audio technicians have been able to locate the source of the trouble. Do you have any suggestions?—C. Stanley Mahan, Vista, Calif.

Sorry, our crystal ball is out of order. Presumably those you have consulted have ruled out the obvious explanations: the inherently higher hiss levels of stereo (as opposed to mono) FM reception at moderate signal strengths, or intermodulation between the stereo subcarrier (38 kHz) or pilot (19 kHz) with the TC-152's bias-oscillator frequency.

Your reports have frequently noted the danger of using two pairs of 4-ohm speakers at the same time. My amplifier (Pioneer SA-9900) instructions say this too.

I have two AR-3 4-ohm speakers. If I get two speakers that are rated at 8 ohms, will it be safe to use the four at the same time? I figure that, if I used the speaker pairs in different rooms and did not have all four on at once, it would be safe. But there is always the chance that someone would, by mistake, switch on all four. If that happens, is the damage instant and terrible?—T. M. Williams, Gettysburg, S.D.

Most amplifiers are safe with loads down to 4 ohms or slightly below and can therefore handle two pairs of 8-ohm speakers or one of 4-ohm speakers without trouble. Connecting an 8- and a 4-ohm speaker in parallel, as you suggest, brings the total load to 2.7 ohms; this is a definite no-no with most amps. The usual response of an amplifier to an excessive current demand (the result of too low a load impedance) is to activate its protection circuits and shut down, but if these circuits do not act quickly enough, damage to the amplifier may ensue. It seems to us that the best solution would be speaker switching via an external (double-pole, double-throw) switch that prevents driving both pairs at once.

My present setup consists of a Pioneer SX-838 receiver, a BIC 960 turntable with a Shure M-95ED cartridge, a Teac 2300 tape deck, a Teac outboard Dolby unit, a Soundcraftsmen equalizer, a Pioneer RG-1 Dynamic Range Enhancer, and a pair of Utah floorstanding speakers. I am considering the addition of an Audio Pulse Model One time-delay device. How many add-on units can I use without increasing the distortion level of my system or reducing the sound quality?—Rudolph Johnson, Kendall Park, N.J.

You should see some of our systems! There is no reason why you cannot continue to be an insatiable gadget freak and still have clean sound; if you buy good quality gadgets and use them intelligently, your sound should continually improve. It's true that noise and distortion are cumulative for all units in the
You only hear what's on top of the platter. Not what's beneath it.

You can always distinguish the excellence of a turntable by its capability to rotate a platter precisely, at a given speed, without adding rumble, wow and flutter to the performance.

Because JVC's new JL-F45 turntable platter is directly driven by a specially designed DC servo motor, any rumble-producing effect is virtually nonexistent. The result is outstanding measurements that defy audibility. Rumble is better than 70dB (DIN B) and wow and flutter is less than 0.03% (WRMS). Even some of the most expensive turntables don't measure up to the excellence of these specifications.

In addition to the precision of direct-drive, the JL-F45 offers dual options for operation. Manual. And completely automatic. Auto Lead in. Auto Return. Auto Stop. You can even repeat play a record automatically up to six times—or infinitely.

The JL-F45's exclusively designed Tracing-Hold tonearm assures the highest degree of groove tracking with unusually low tracking error.

This is absolutely essential for today's ultra low tracking cartridges, including CD-4. The new unipoint gimbal suspension system reduces unwanted friction and overcomes unexpected jolts to the arm.

Every feature you're likely to want in a quality turntable contributes to this 2-speed unit's high level of performance: 2-way viscous-damped cueing. A 12-inch aluminum die cast platter with illuminated strobe. Anti-skating control. Direct-reading tracking force dial. And lots more.

While the JL-F45 is JVC's top of the line at $250* there are two other more modestly priced models. The fully automatic belt-driven JL-F35 at $160* And the semi-automatic JL-A15 at $130*.

Whichever you choose, you can be sure you're getting the most turntable precision, reliability and value JVC has ever offered.


*Approximate retail value, including base and dust cover.
If your cartridge is more than three years old, don’t replace your stylus!

Don’t get us wrong. There is no hing worse than playing your records with a worn stylus. And no better way to restore your old unit to its original glory than a new diamond.

But frankly, there have been significant strides made recently in the phono cartridge field. And the new cartridges of today stand head and shoulders above even the finest of a few short years ago.

Here’s the choice: Get fresh—but outdated—performance with a replacement stylus or enjoy all the benefits of modern cartridge research and development for just a few dollars more. You’ll find that you can update your system for far less than you might imagine. It’s probably the most dramatic single improvement you can make.

For instance, Audio-Technica offers Universal cartridges equipped with a genuine Shisata stylus and our uniquely effective Dual Magnet™ system beginning at just $75.00 list. Or you can replace your present cartridge with a fresh new Audio-Technica cartridge with highly-polished elliptical tip for as little as $45.00 list.


Some $5 blank cassettes have the nerve to tinker with Beethoven. We think it's outrageous.

B eethoven, even when he was deaf, knew exactly how a piccolo sounded in relation to the rest of the orchestra. Some cassette manufacturers would just as soon forget. Their cassettes give the piccolo and other high frequency sounds a distorted prominence. They appear to do this deliberately, regarding absolutely natural sound as raw material to be improved upon.

At BASF, we think this is an abomination. We're purists; we stake everything on total accuracy of sound reproduction. You will never encounter artificially enhanced high frequencies in our cassettes. We believe that if you care enough to buy an expensive audio system, the last thing you need is a cassette that imposes its own dubious tastes upon your sensitive ears.

Faithful reproduction entails more than miracle ingredients and fanciful initials on a cassette label. At BASF, we begin with the best quality ferric oxide. We mill it by a patented process to achieve maximum packing density and uniformity of coating. We use an exclusive chemically cross-linked polymer binding which will never deteriorate and cause head-related frictional noise or wow and flutter.

We use a unique multi-stage polishing process, and our slitting technique results in an edge that's clean even when viewed under a microscope. Even our cassette case is different, incorporating our patented Special Mechanism, designed to assure smooth tape feed for years of dependable performance.

Is completely natural sound worth that kind of effort? To people who know the difference, it is.

At BASF, we're purists. We've been obsessed with total accuracy since we invented magnetic tape back in 1932. There are no shortcuts to perfection. But you knew that when you planned your own audio system. We'll give you no reason to compromise when you buy our cassettes.

BASF The Purist

Our Promise: the purest, most accurate sound that tape can reproduce.
After people learn what we’ve done, no one will heckle our speakers.

We’re as close to the impossible as possible.

Our new speaker's color sound. Anybody's speakers do. Should someone tell you otherwise, they speak with forked frequency response.

We at Sony approached the development of our new speaker line with this grim reality in mind. Thus our goal was to create speakers with a minimum of coloration. With a frequency response flat and wide. With low distortion. And with repeatability. Which is critical. Which means that each speaker we turn out will sound like the one before and the one after.

Searching and researching.

Our basic dilemma was that speaker specs don't specify much. You can build two speakers with identical specs, and find they'll sound non-identical. That's because your sophisticated ear can pick up differences our clumsy measurements can't.

Some examples:

You can hear how pure water is. The purity of the water in which the pulp for the speaker cone is pressed will influence the sound. (Spring water is the best.)

But water purity would hardly change the frequency response—or any other measurable characteristic.

Nor would the dye used to color the cone—or the glue used in gluing the cabinet.

But you'd hear the dye and the glue. And there are dozens and dozens of elements that interact this way.

So our job was mammoth. To correlate these factors in order to reach the goal we outlined earlier. Changing one changes the other and almost changed our minds about going into the speaker business.

But we stuck it out. And found the answer to the juggling of these variables thanks to a major technological innovation. Trial and error. That's why we labored for three years to bring you our speakers. While other manufacturers rushed frantically to market with theirs.

We keep the whole world in our hands.

Once we understood how to control the sound of our speakers, we realized we had to control what went into our speakers.

So we did the only logical thing. We built a plant.

And pursuing that logic, we built it at a place called Kofu. Which is at the base of Mt. Fuji. Where we can get all the spring water we want.

This factory does nothing but produce—under outrageously close control—the components for our speakers. Whatever we do buy, we specify so carefully that our vendors have nightmares about us. (It's unfortunate that we can't make everything ourselves, but only God can make a tree, and only wood can make a fine cabinet.)

Few companies make this effort. So it's safe to say that when it comes to exercising this kind of control, our speakers are a voice in the dark.

Don't judge a bookshelf speaker by its cover.

As you can see, there's a lot that goes into producing a speaker that's not easily seen. (One beautiful exception—the handsome finish on our cabinets.) That includes the carbon fiber that we mix into the speaker cone paper. Carbon fiber is light and strong. (Why they don't use it in girdles we'll never know.)

Light, so our speaker is more efficient. Meaning you need less power to operate it. Meaning you are closer to the ideal of converting electrical energy to mechanical energy without a loss of power.

Light, so our speaker cone reacts quickly to stops and starts in the signal. The result: improved transient response.

Strong, to prevent the cone from bending out of shape in the high frequency range.

Moreover, carbon fiber doesn't resonate much. It has what's called a low Q, and it took someone with a high IQ to realize it would absorb the unwanted vibration rather than transmit it down the cone.

We also cut down on unwanted vibration (as opposed to the wanted vibration, which is music), by using a cast aluminum basket rather than a stamped, shoddy cheap metal one.

We could go on, but at this point the best thing would be for you to move on to your nearest Sony dealer. And listen. Because the results of our three years of labor will be clear after three minutes of listening.

At which point, far from heckling our speakers, you'll be tempted to give them a standing ovation.

Suggested retail prices: SSU-3000, $300 each; SSU-4000, $400 each.

© 1977 Sony Corp. of America, Sony, 9 W 57 St., N.Y., N.Y. 10019
SONY is a trademark of Sony Corp.
The SSU-3000 and SSU-4000.
Great speakers like these deserve an audience.
RCA Cassettes Go Dolby

RCA Records has announced that all cassettes it has released since January have been encoded for the Dolby B noise-reduction system. RCA had been a notable holdout in this respect, to the disgruntlement of tapeophiles seeking quality sound on cassettes. Welcome aboard!

Audio-Technica Awards to Prod Record Industry

Hoping to encourage improvement in the current standards for disc production, engineering, and manufacture, Audio-Technica U.S. has instituted the Audio Excellence Record Awards, which are meant to recognize accomplishments in the technical areas. According to Jon R. Kelly, vice president and general manager of the company, "Phono cartridges are better than they were five years ago, so are electronics, and so are loudspeakers. All now offer greater performance per dollar than ever. The main area of standstill is records: Most have not improved at all, and some are worse. Without records of superior quality, why should someone buy state-of-the-art equipment?"

Selections for the award are made by a broad group including music critics, audio editors, radio programmers, recording engineers, and retailers. Records distributed by Audio-Technica are not eligible.

Super SQ from Deltek

In our travels through the Winter Consumer Electronics Show we encountered a new SQ decoder, designed by quadriphonic pioneer Peter Scheiber and manufactured by Deltek, Inc., of Bloomington, Indiana. The Deltek Model One operates on the "parametric" principles that CBS has used in past prototype models and incorporates techniques whereby unwanted crosstalk between channels is canceled out. In addition to the obvious function of decoding SQ discs, the unit is capable of synthesizing quadraphonic sound from nonencoded stereo discs. This is done either by extracting ambience and routing it to the back channels or by "bending" the normal stereo "line" between the left and right channels into a 270-degree "horseshoe" that surrounds the listener on three sides.

When we heard the Deltek demonstrated, its performance was most impressive. For the first time in our experience the wind instruments in the Boulez "surround" performance of Bartók's Concerto for Orchestra (Columbia M 32132) actually stayed put while playing. We suspect that its price ($2,150) will limit its appeal, but the decoder audibly demonstrates that matrixed quad need give up virtually nothing to discrete quad—even to four-channel tapes. And if the technology's there, can the price be far behind?

Some Audio Reading

- A career in audio? The Audio Engineering Society has published "A Guide to Careers in Audio Engineering," which describes various occupations for audio professionals and offers advice about how to become one. For a copy send $1.00 to the Audio Engineering Society, 60 E. 42nd St., New York, N.Y. 10017.

- Available from JVC is a new sixteen-page booklet, "Join the Four-Channel Family," which explains quadraphonic sound, its achievement, and its enjoyment—with the emphasis on CD 4. The booklet describes various cartridges, stylus, and electronics for four-channel applications. Of particular interest, in our opinion, is the section on loudspeaker arrangements. For a copy write to Gene Yamamoto, JVC Cutting Center, 5875 Queens Midtown Expwy., Maspeth, N.Y. 11378, or see your JVC dealer.

Koss launches Auditor Series

The ESP-10 headset is one of the first models in Koss Corporation's Auditor Series of stereo products. Designed for a wide and psychoacoustically correct frequency response, the headphones plug into the E-10 electrostatic energizer unit, which accommodates two sets of phones and has semi-peak reading level meters for each channel. Koss says the E-10 can be run on as little as 25 watts (14 dBW). The circuitry includes a device that automatically shuts off the unit if audio input levels become excessive. The ESP-10 has a headband of soft vinyl and Koss Pneumalite ear cushions. The cost is $300.

CIRCLE 136 ON READER-SERVICE CARD
Anyone who tells you that a single play turntable is better than one of these has never checked out one of these.

These are the five belt-drive turntables from B·I·C (pronounced "bee eye cee"). All feature low speed 300 rpm motor, program system, and superior tone arm that give them the high performance of comparable manual turntables plus multiple-play capability. For details pick up our "5 Turntables" folder at high-fidelity dealers or write to British Industries Co., Westbury, N.Y. 11590.
Thorens Isotrack line of turntables features a sectional tone arm that joins near the pivot rather than at the headshell, reducing effective mass to improve tracking with high-compliance cartridges, particularly with warped discs. The top Isotrack model is the TD-126C, which is belt-driven and has a 16-pole synchronous motor. It offers three speeds, an illuminated strobe, and a fine speed adjustment of ±5%. A floating chassis supports the turntable platter and tone arm. Also included are antiskating, illuminated pushbuttons for speed selection, cueing, and an electronic lift/shutoff system. The price of the TD-126C is $625.

Parametric equalizers from SAE

The Model 2800 parametric equalizer from SAE offers control over center frequency and bandwidth, as well as an equalization range rated at ±16 dB, in each of four bands: low (10 to 320 Hz), low-mid (40 Hz to 1.2 kHz), mid-high (240 Hz to 7.6 kHz), and high (1.2 to 15 kHz). (Model 1800 has only the low-mid and high bands.) Bandwidth within each is said to be continuously variable over a range of from 0.3 to about 3.6 octaves. The narrowest bandwidth settings are intended to compensate for room resonances; broader settings permit alteration of program balances. Line attenuation controls allow adjustment of stereo balance, and dual LED peak indicators warn of overload. Distortion—both THD and IM—is specified as less than 0.02%, with signal-to-noise ratio greater than 100 dB. The Model 2800 costs $550; the 1800 retails for $300.

Pioneer tuner represents new generation

The Model TX-9500II tuner is one of a series of Pioneer products that boast better specs at lower prices than their predecessors. This model incorporates a switch that allows a choice of narrow or wide IF bandwidth. Adjacent-station interference can be avoided with a narrow setting; the wide setting is used, where possible, for lower distortion. Another switch presets levels for recording off the air. An integrated-circuit multiplex section that phase-cancel the FM pilot obviates the conventional low-pass filter. Favorite stations can be tuned quickly with the aid of sliding memory markers. The price of the TX-9500II is $400.

Technics markets stroboscopic open-reel deck

The Model RS-1500US from Technics by Panasonic offers user-adjustable pitch controls with a ±6% range and a built-in strobe. The direct-drive transport of this open-reel deck features an isolated loop that starts and finishes on the same capstan. Differential pinch-roller pressures provide the tape tension for good head contact. The RS-1500US has a quarter-track playback head plus half-track erase, record, and playback heads. Separate three-way recording bias and equalization adjustments are provided, as well as a separate amplifier for mike mixing. Playback and recording levels are indicated by the switchable-range VU (average-reading) meters. Speeds are 15, 7 ½, and 3 ⅞ ips; maximum reel size is 10½ inches. The price of the RS-1500US is $1,500.
The Sherwood Model HP 2000: It adds a new high to performance.

If power and versatility are the essential elements of high performance, the HP 2000 is unquestionably the high performance amplifier you've been waiting for.

This new top-of-the-line Sherwood amplifier puts you in full command of your sound system.

Consider the credentials:

**Power:** 120 watts per channel (minimum RMS at 8 ohms from 20-20,000 Hz) with no more than 0.06% Total Harmonic Distortion. This rating is ensured by massive 16,000 µF filter capacitors, backed by a zener regulated dual secondary power supply. The full complement of direct-coupled OCL output transistors, output transistors with the largest S.C.A. Safe Operating Area of any consumer device currently available. Dual power meters (which feature selectable sensitivity: normal, or –10dB) and LED power limiting indicators precisely monitor power output at all times. And rear-panel switching permits the independent operation of the pre-amp and power amplifier sections.

**Precision:** The film resistor step Loudness [Volume] control features 22 accurately calibrated positions (both channels matched within 0.5dB in all steps). Eleven position Variable Loudness Contour. Bass, Treble and Midrange controls have 11 detented positions each. Reseting to your exact acoustic preferences is never a matter of guesswork.

Master Tone Defeat, High and Low filters, and –20dB Audio Muting are controlled by convenient front panel switches.

**Operational Flexibility:** The HP 2000 can accommodate two turntables (Phono inputs are selected with 13 analog switching, and feature a front panel level control), two tape decks (tape-to-tape duplication is accomplished with the Tape-1 Tape-2 Monitor circuits), and a pair of professional caliber microphones (mixing level determined by a separate front panel control). Additional source capabilities include a Tuner, two Auxiliary components, and a 4-Channel Adapator (which also serves as a third Tape Monitor if needed).

**All Sources and Functions are activated by front panel push switches. ["On" position is indicated by color change.]**

The highest quality componentry: The HP 2000 has been meticulously engineered for durability, consistent performance standards, and ease of servicing. The mark of Sherwood design for over 20 years. All componentry has been selected to meet or exceed posted specifications. The P.C. boards and inter-board ribbon cable connectors plug into a "mother-board," for reliable operation.

The HP 2000 is the first in a new, highly sophisticated line of tuners and amplifiers from Sherwood Electronics. Other units in this new High Performance Series will be available soon.

See the HP 2000 soon. And treat yourself to performance that's as high as your expectations have always been.

Sherwood Electronic Laboratories, Inc.
4300 N. California Ave.
Chicago, IL 60625
New electret microphone from Electro-Voice

The Electro-Voice Model 1776 cardioid electret condenser microphone is powered by a 4.5-volt battery, internally mounted in a compartment at the back of the mike housing. The 1776, with a 150-ohm balanced output, integral blast filter, and a rugged die-cast zinc case, is said to be suitable for professional applications. The specification sheet points out that low-frequency response is boosted at working distances of less than 24 inches with maximum bass response attained when the mike is within ¼ of an inch of the sound source. This characteristic may be used to give a voice a more robust character or to control bass response by varying the mike-to-source distance. Model 1776 sells for $99.

Elac's first belt-driven turntable

Elac, whose turntables formerly were marketed here by Benjamin under the Miracord name, now offers its first belt-driven turntable, the Elac PC-830, through Accomp of New York. The PC-830 has an asynchronous motor and can be operated in either single or multiplay modes. The idler wheel provided for startup drive disengages as soon as the stylus touches the record, and the belt-drive system takes over. Additional features are an illuminated strobe and a low-mass tone arm with cue control and antiskating adjustment. The PC-830 comes with automatic and manual spindles, base, and dust cover and costs $190.

A bookshelf Sony speaker

The SSU-1250, recently added to Sony's speaker line, is a two-way bookshelf model. It uses a 2¼-inch tweeter and 8-inch woofer plus an 8-inch passive bass radiator, which is said to give more efficient bass response with less distortion. Smooth response and well-defined transients are attributed in part to the use of Carbacon graphite fibers in the cones. Minimum recommended amplifier power is 10 watts (10 dBW) and maximum is 60 watts (18 dBW). The SSU-1250, which can be placed either vertically or horizontally, costs $100.

Super Stack package from Spectro Acoustics

Spectro Acoustics is marketing Super Stack, a package consisting of its Model 217R preamp, Model 210R graphic equalizer, and Model 202C power amplifier in a rack-mount cabinet. The preamp has inputs for two phono pickups, tuner, aux, and two tape decks. Its frequency response is rated at 10 Hz to 100 kHz, ±¼ dB, with less than 0.05% total harmonic distortion. Model 210R offers ten octave bands of equalization per channel with ±15 dB of boost or cut in each. Dynamic range is said to be better than 100 dB at full output. Model 202C, a Class AB amplifier with modular construction, has a rated frequency response of 20 Hz to 20 kHz into 8 ohms with no more than 0.25 THD. Super Stack costs $1,100.
A new concept in speaker comparison. Instead of speaker vs speaker...
If you were satisfied with conventional speaker sound, Technics would have made a conventional speaker. Then you could have compared our speaker to their speaker.

Instead, we developed Technics Linear Phase Speaker Systems and compared them to music. Live music. Look at the waveforms. On the left are oscilloscope readings (the fingerprints) of representative musical instruments. On the right, these instruments as reproduced by Technics Linear Phase SB-7000A. Waveform fidelity that could only be achieved by a drastic departure from conventional speaker design.

How did we do it?

Our engineers realized there were three conditions to be satisfied. First, the crossover network should be designed to provide an overall linear phase characteristic for the whole speaker system, while simultaneously compensating for the different acoustic pressures of the individual drivers. Second, each driver unit must be precisely located in the optimum acoustic position. Third, the driver units must be designed and manufactured with flat amplitude and a wide frequency response.

By using our unique new phase-controlled crossover network, which incorporates 6 dB and 18 dB/octave cut-off slopes...
and special phase-correcting circuits for each driver, Technics engineers have been able to achieve an overall phase response, linear between 0° and ±45° between 100 Hz and 15 kHz. An incredible figure in a multi-range speaker system! The special phase-correcting circuits have also eliminated "audible dip" at crossover frequencies. These circuits assure excellent directional localization of the original sound source within the acoustic field.

To align the acoustic centers of the speaker units in precisely the same vertical plane, Technics engineers had to develop a new time-delay system using BBD (Bucket Brigade Device). After alignment, each unit was fine-tuned to assure precise linearity. Additionally, each unit was positioned vertically for the best horizontal dispersion and then spaced as closely as possible for the best vertical dispersion of all sound frequencies.

Each of the wide frequency response/low distortion driver units was designed and manufactured by Technics after exhaustive amplitude and phase studies in anechoic chambers. It is this ability to both design and manufacture that has helped us become the world's largest speaker company. Supplying many of Europe's and America's finest speaker system designers with high-quality speaker units.
The result:
Waveform Fidelity

The diagrams show the phase and amplitude characteristics of Technics Linear Phase and three other leading speaker systems.

The other speaker systems, including those promoted with “phase linearity,” show severe phase shifts at different frequencies. But, as you can see, Technics Linear Phase Speaker Systems show an unprecedented flat and linear phase response. This results in more precise positioning of instruments in the stereo sound field.

What does all this mean to you?

Waveform fidelity you can hear... and see. For the first time in audio history there is a speaker system with not only wide frequency response, but complete linearity: Flat amplitude/frequency response and linear phase/frequency response.

Technics SB-7000A, SB-6000A and SB-5000A. The world's most linear phase speaker systems. No more wandering stereo imagery, no more bass loss at high volumes; just music, pure and simple, as it was originally played. Live.

And if specifications are music to your ears. Listen to these:

SB-7000A: 3-way speaker system with 13 3/4” woofer, 4 3/4” mid-range and 1 1/4” dome tweeter. Output level (1M) of 90.5 dB/watt.

SB-6000A: 2-way speaker system with 12” woofer and 1 1/4” dome tweeter. Output level (1M) of 91.0 dB/watt.

SB-5000A: 2-way speaker system with 10” woofer and 2 3/8” tweeter. Output level (1M) of 92.0 dB/watt.

The SB-7000A cone-type units are made from a new triple layer TC/aramid fiber. This combines lightness with high Young’s modulus (strength) for smooth piston motion and low distortion.

The high-efficiency dome-type tweeters in the SB-7000A and SB-6000A use a diaphragm of heat molded expanded polyurethane on a silk cloth base.

Sounds great, doesn’t it. But there’s really only one way to be truly convinced. Listen to Technics Linear Phase Speaker Systems. Now available for demonstration at selected audio dealers for very selective ears.

*Test data and methodology available upon written request. Write Mr. James Parks, Technics Dept., One Panasonic Way, Secaucus, New Jersey 07094.
Otari's Son of MX-5050

Otari's Mark II open-reel tape deck, the latest generation of its MX-5050, comes in a half-track two-channel version using 1/4-inch tape and a four-channel 1/2-inch version. Mounting versatility is provided by separate transport and electronics. The DC servo drive includes a ±7% pitch adjustment at 15 and 7 1/2 ips. Frequency response (at 15 ips) is rated as 35 Hz to 25 kHz, ±3 dB. The two-channel version has an extra quarter-track playback head and a splicing block on the head cover. Low-impedance microphone transformers, balanced-line input and output transformers, remote control, and floor console are available. The basic two-channel model of the Mark II costs $2,195; the four-channel version is $3,195.

CIRCLE 145 ON READER-SERVICE CARD

Lightweight headphones from Superex

The TRL-77 is an open-design stereo headset in which Superex has combined its wide-range Mylar diaphragm and Translinear principle to give a specified frequency response of 25 Hz to 20 kHz with 5 dB of boost at about 60 Hz. Total distortion at 100 dB SPL is rated at 0.65%, sensitivity at 5 milliwatts. The lightweight headphones—11.5 ounces without the cable—have a stainless steel headband and replaceable foam cushions. The 7-foot cord has strain reliefs at all critical points. The TRL-77 sells for $30.

CIRCLE 148 ON READER-SERVICE CARD

Test cassettes from TDK

TDK's AC series of prerecorded test tapes are designed to help the serious recordist verify the performance specifications of his cassette recorder. There are tapes to test level calibration at 333 Hz and 1 kHz (AC-311, 312), Dolby level (AC-313), azimuth alignment at 6.3 and 8 kHz (AC-321, 322), frequency-response at eleven, three, or four frequencies (AC-331, 332, 333), wow and flutter (AC-341), and crosstalk measurements (AC-351). Prices for the test tapes range from $10 to $35.

CIRCLE 149 ON READER-SERVICE CARD

Speaker volume control from Amtech

American Technological Products, Inc., is introducing its loudspeaker attenuator, a bridged-T network device used to control the power to a speaker. The attenuator can be used for remote-speaker control or to equalize loudness of speakers with different efficiencies in the same room. According to the manufacturer, an important application is in headphone listening, allowing the amplifier to be driven at its optimum for distortion and dynamic range while listening levels are adjusted at the Amtech. Output is calibrated in 3-dB steps. The attenuator, available either as a 100-watt (20-dBW) mono unit or a 50-watt (17-dBW) stereo unit, is housed in a black anodized case with walnut trim. The single-channel type sells for $54.95, the two-channel for $69.95.

CIRCLE 146 ON READER-SERVICE CARD
Onkyo - A step ahead

State-of-the-Art is for everyone else. Onkyo design and construction is for tomorrow. Today.

We don't just claim innovation, quality and value. We prove it when independent test laboratories publish their unbiased reports in your favorite audio magazines.

Of our TX-4500, one test report said, "...one of the finest receivers available today at any price."

Of our TX-2500, another said, "...sounds a good deal better than the data suggest — and better than one has a right to expect at $300."

If the data don’t suggest the total quality, it may be we’re too cautious in our claims. But, we have other equipment too new to have been reported on as yet. All are built to the same exacting standards, featuring exclusive Onkyo advances. We’ll try to be a bit less modest as we tell about:

Quartz-Locked Tuning — This is the tuning system of which the most famous testing lab said, "...a new system that completely eliminates tuning errors in FM reception." This is done by using a quartz crystal oscillator which takes advantage of the unique capability of precisely ground quartz to maintain a fixed frequency.

The Quartz-Locked circuitry compares the tuner’s IF frequency with the frequency generated in the Quartz-Locked oscillator, continually compensating for frequency differences that would cause distortion or poor reception, and additionally compensating the FM tuning meter at the same time.

Servo-Locked Tuning — An economy version of the Quartz-Locked system with similar characteristics in a different configuration. While essentially an automatic frequency control circuit, Servo-Lock is more sophisticated in design and performance and in actual lab tests has held stations for at least 24 hours without perceptible drift.

Quartz-Locked AM/FM Stereo Receiver

**TX-8500** — Power output 110 watts per channel, minimum RMS at 8 ohms, both channels driven from 20 Hz to 20 kHz with no more than 0.1% Total Harmonic Distortion.

Direct coupled differential pure complementary main amplifier with ultra wide frequency response, 2 Hz to 60 kHz — 1 dB at main amp. Total Harmonic Distortion less than 0.1% at rated output; 0.08% at 1 watt output. Rated FM sensitivity 1.7 μV (mono), 4 μV (stereo). 50 dB quieting sensitivity 3 μV (mono), 35 μV (stereo). Image rejection ratio 82 dB, alternate channel selectivity 70 dB; IF rejection ratio 100 dB. S/N ratio 70 dB (mono), 65 dB (stereo).

**TX-4500** — Power output 55 watts per channel, minimum RMS at 8 ohms, both channels driven from 20 Hz to 20 kHz with no more than 0.1% Total Harmonic Distortion.

Direct coupled differential complementary main amplifier with ultra wide frequency response, 2 Hz to 80 kHz — 1.5 dB at main amp. Rated FM sensitivity 1.8 μV (stereo). Image rejection and alternate channel selectivity 70 dB. IM distortion 0.5% at rated power, 0.1% at 1 watt output.

Servo-Locked AM/FM Stereo Receivers

**TX-2500** — Power output 27 watts per channel, minimum RMS at 8 ohms, both channels driven from 40 Hz to 20 kHz with no more than 0.5% Total Harmonic Distortion.

Direct coupled differential main amplifier with frequency response of 2 Hz to 20 kHz — 0.2% at rated output, 0.5% at 1 watt output. IM distortion 0.5% at rated power, 0.3% at 1 watt output. Usable sensitivity in FM, 2 μV (mono), 5 μV (stereo). Image rejection 45 dB, alternate channel attenuation 60 dB; S/N 65 dB (mono), 60 dB (stereo). IF rejection 80 dB.

**TX-1500** — Power output 15 watts per channel, minimum RMS at 8 ohms, both channels driven from 20 Hz to 20 kHz with no more than 0.5% Total Harmonic Distortion.

Direct coupled differential amplifier with overall frequency response 20 Hz to 20 kHz — 1 dB Total Harmonic Distortion no more than 0.5% at rated power, no more than 0.3% at 1 watt output. Usable FM sensitivity 2.3 μV (mono), 5 μV (stereo). 50 dB quieting sensitivity 4.5 μV (mono), 50 μV (stereo). S/N ratio 65 dB (mono), 60 dB (stereo). IF rejection 80 dB. Alternate channel attenuation 60 dB.

All of Onkyo’s receivers feature multiple speaker outputs as well as multiple tape inputs and outputs including tape to tape dubbing. All are built to specification which often exceed their price ranges with special features, including Phase Locked Loop Multiplex.
of State-of-the-Art.

Quartz-Locked AM/FM Stereo Tuner

For those who are satisfied with their present amplifier but want the distinct benefits of Quartz-Locked tuning, Onkyo offers the T-9, the only component tuner in the world that has Quartz-lock.

In addition to the precision tuning capability of the T-9, it features a dual gate MOSFET 4 gang-variable capacitor front end with usable sensitivity 1.7 mV, 50 dB quieting sensitivity of 3 µV, 82 dB Image rejection and 72 dB S/N in stereo.

The T-9 uses Phase Locked Loop Multiplex for low distortion, high separation stereo reception. At 1 kHz, stereo separation is 40 dB, at 100-10,000 Hz separation is 35 dB.

Assuring continuous drift-free tuning, the FM oscillator circuitry is hermetically sealed to prevent environmental influence on the components.

Other specifications include an IF rejection ratio of 100 dB and AM suppression ratio of 30 dB. In addition to Quartz-Locked tuning and exceptional performance characteristics, the Onkyo T-9 provides a special feature for tape recording directly from the tuner.

Known as the Tape Recording Level Check Switch, activation injects a 440 Hz tone to set recording level through the tape deck. Modulation of the incoming FM signal is reduced to 50%, preventing overloading and distortion. Onkyo’s T-9 provides some of the cleanest tape recording possible.

Solid State Integrated Amplifiers

Having the only Quartz-Locked Tuner in captivity, Onkyo felt the need to provide amplifiers capable of delivering the same quality. There are, at present, two amplifiers in this series...A-5 and A-7. Both have been designed for their power handling capacity, featuring reserve power for optimum sound reproduction with absolutely minimum distortion.

Because of this basic, very low distortion design, these amplifiers require exceptionally muscular and stable power supplies with more power than needed for normal operation and a lot more needed for peak demands. These needs are met through massive transformers and oversized electrolytic capacitors. Thus, an extremely stable power supply is assured for hours of continuous operation. Further, specially selected power transistors are mounted in oversized heat sinks and the entire unit is enclosed in a more than ample cabinet which allows for the flow of cooling air.

A final Onkyo touch for clear, clean highs and deep-down lows is design approach and construction that approaches the theoretical zero point in equivalent series resistance (ESR). Through circuitry which uses copper plates instead of wires called the bus feeder ground system, and unusually heavy gauge wiring to the power transformer, the overall frequency response is greatly enhanced. Because of these and other considerations the following ratings are established conservatively:

A-5 - Power output of 4 5 watts per channel, minimum RMS into 8 ohms, both channels driven, from 50 Hz to 20 kHz with no more than 0.1% Total Harmonic Distortion.

A-7 - Power output of 65 watts per channel, minimum RMS at 8 ohms, both channels driven, from 20 Hz to 20 kHz with no more than 0.1% Total Harmonic Distortion.

Onkyo’s A-7 integrated amplifier also uses a Class A driver stage differential direct-coupled pure complementary circuitry. The A-5 delivers exceptional frequency response of 2 Hz to 70 kHz ± 1.3 dB with square wave response showing less than 5% tilt at 50 Hz, S/N ratio is extraordinary at 110 dB (IHF A Network).

Features include two Phono inputs and two tape monitors and dubbing, as well as tone controls and defeat, muting and a subsonic filter plus transient killer circuitry.

What does it all mean?

You’ve read a lot of our claims—understated though they may be—and some of the claims made for us. But the best test is still your own ears. And the only way to use them is at your local Onkyo dealer. If you want more information, including reprints of independent test reports...or the name of your nearest Onkyo dealer...drop us a line. After all, a thirteen cent stamp is a lot better than guesswork.

Artistry in Sound

Onkyo®

WALTER STANTON started his technical and business career as a teenager in Detroit, running his own radio-repair service after school hours. Later, at Wayne University, from which he received a degree in electrical engineering in 1939, he set up the college’s first broadcast station. Scarcely a decade after graduation, capitalizing on his career in electronics, he became head of Pickering & Company, and eventually he founded its sister company, Stanton Magnetics.

Though Stanton was involved in the technical side of sound reproduction from an early age, the influence of music also was strong, principally through an aunt who lived with the family and who was head of the music department at a local private school. He gave up trying to master an instrument, but he has what one friend called “a great ear, a great memory, and an acute sense of pitch.”

After college, Stanton specialized in the application of electronics to industrial automation. At Detroit Universal Duplicator Company—where he rose to vice president and chief field engineer—he developed and patented an electronic servo system that enabled a standard machine tool to produce complex contoured parts automatically. From there he went to Control Instrument Company, Inc., now a division of the Burroughs Corporation, as assistant vice president in charge of engineering.

But the lure of high fidelity finally claimed him: In 1948 he joined Pickering, which was then three years old and primarily engaged in making products for the broadcast and recording industries. A year later the company announced a new version of its magnetic pickup—one for playing the new 33-rpm microgroove discs. As high fidelity gathered steam, Stanton’s career flourished with it, and in 1950 he became president of Pickering.

Soon after, the company put on the market the Model 410 Audio Input System—said to be the first self-powered system that combined a preamp for magnetic pickups with switching for tape, TV, and radio inputs as well as phonograph, plus separate bass, treble, and volume controls. There were those who maintain that this product was responsible for crystallizing the concept of the “separate component” for high quality audio systems. Also introduced during this period was a sophisticated tone arm with a “floating” low-mass cartridge carrier, again designed especially for microgroove disc playback. Pickering experimented with corner columnar speaker systems, using drivers made by other relatively new companies—notably Bozak and James B. Lansing. In fact, Stanton recalls, “we were among their very first customers.”

In these early years of his stewardship, those within the organization still thought of it as a supplier to professional sound men. But it quickly became apparent to Stanton that the high fidelity field was changing. One night he took all of Pickering’s standing orders and sorted them out on his office floor. He was struck by the fact that upwards of 60% were not from studio personnel, but from lay enthusiasts. Stanton began to shape things accordingly, developing a broader distribution pattern and lining up appropriate retail outlets. By the mid-1950s the company had diversified its pickup production to meet the growing consumer market. A notable product of that period was the Fluxvalve pickup featuring an easily replaceable T-Guard stylus.

In 1957 Pickering introduced the Isophase speaker, the first wide-range electrostatic to be manufactured in the U.S. A costly and somewhat esoteric item for its time, the Isophase was not successful in the marketplace, although it received wide attention in technical journals. That year, too, Stanton was elected president of the Audio Engineering Society.) In 1958 the company followed with what it claimed was the first U.S.-made mag-
THE COST/PERFORMANCE EQUATION: HOW MUCH TAPE RECORDER IS ENOUGH?

Essentially, a tape recorder is a machine you can use to capture your talent and faithfully reproduce it. Practically, the more you make demands on a tape recorder, the more demands it can make on you.

Put another way, a tape recorder can be your wings or an anchor. It can work for you or it can work against you.

At $1,299.95 the investment you make in the Dokorder 1140 gets you a partner instead of a handicap. Compare what it does to what it costs and you won't find a better tape recorder anywhere.

The 1140 lets you concentrate on your music as art. Much of the concern you have about your music as signal is handled for you automatically.

The 1140 has logic circuitry that takes care of getting you in and out of Sync and in and out of Source automatically. It makes knowing where you are in multi-track recording a whole lot easier.

The 1140 also has an automatic cue-up function, called Program Memory. Once it's set up, the Program Memory automatically brings you back to the beginning of material and either stops or plays it again, depending on what you tell it.

The transport controls on the 1140 are digital logic-operated so you can go from one mode to another directly except in Record and there is a motion sensing system which lets you go into play from fast forward or rewind when the reels stop.

Bias controls are up-front on the transport and there is a built-in pink noise generator which supplies a test signal to each channel. This unusual device makes biasing simple but extremely accurate.

There is a lot more hardware to the 1140: peak level indicators, discrete playback and record amplifiers, 62-Volt record drive circuit, wide band sync response, etc.

All to make it easier to put music on tape.

DOKORDER 1140
5430 Rosecrans Avenue Lawndale, CA 90260
What you don’t know about effective tip mass won’t hurt you, just your records.

You can find out what you don’t know by contacting us for our comprehensive cartridge brochure.

Bang & Olufsen
Bang & Olufsen of America, Inc., Dept. 11G
515 Busse Road, Elk Grove Village 60007

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

McIntosh Laboratory, Inc.
East Side Station P.O. Box 96
Binghamton, N.Y. 13904

NAME
ADDRESS
CITY STATE ZIP

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.

When, by the mid-1960s, Pickering had become totally identified with consumer equipment, it was decided to form a sister company to supply the professional market. Indeed, Stanton Magnetics’ first customers were broadcast and recording studios and the growing number of disco establishments. But the Pickering story repeated itself: Consumers wanted in, and it wasn’t long before Stanton Magnetics also found itself manufacturing for that market and distributing to regular high fidelity dealers. Among the consumer products offered were the Stanton Gyropoise turntable and the Unipoise tone arm; the turntable line now includes four versions of one basic model. The line between Pickering and Stanton has become fuzzy—especially to an outsider—but, as an insider puts it, Pickering products are “application-engineered for a wide variety of turntables” and Stanton products are still “primarily aimed at the professional user.” Today, at sixty-two, Walter Stanton heads both companies.

Long deeply involved with industry affairs, Stanton holds definite views on the subject of equipment standards, views that seem to have become the prevailing philosophy behind the efforts of the Institute of High Fidelity (of which he was president from 1963 to 1966) in this delicate area. A standard, according to Stanton, should not “legislate” (FTC style) performance criteria: minimum acceptable power, maximum acceptable distortion, and so on. Rather, a standard should define methods of measurement and perhaps a few basic concepts (such as the watt) by which a product is evaluated. Performance capabilities must remain a matter of choice by the individual manufacturer lest the spirit of innovation and improvement be lost in a “me too” acceptance of minimal performance levels—as has often happened under Germany’s DIN standards. (Only products meeting those standards may be advertised as “high fidelity” in Germany.) As for the IHF itself, Stanton sees its role changing from that of an agency for promoting the concept of high fidelity sound to that of a trade organization representing the industry in dealing with its problems.
Remember the plug-in-shell?

Thorens Isotrack Series
Turntables proudly introduce the Plug-In Arm.

Thorens introduces an exciting new tonearm design to complement its highly sophisticated, new manual turntable series. Thorens has eliminated the headshell and its collar connection by incorporating the headshell and tonearm rod in a straight tubular design only 7.5 grams in effective tonearm mass. This reduction in mass (up to 50% that of other tonearms) reduces the inertial forces that affect stylus pressure. Tracking is improved, distortion lowered and stylus and record life are extended. Thorens Isotrack tonearm assures optimum performance with the newest, light weight, high-compliance pick-up cartridges.

The accent is on quality
— The high-speed stability and silent operation of the belt-driven 16-pole synchronous motor is a tribute to Thorens traditionally advanced engineering. The natural elasticity of the belt filters motor vibrations from reaching the platter, and therefore, the pick-up stylus. In more than twenty years of continuous development, and the manufacture of nearly one-million Thorens turntables, Thorens has brought its belt-drive design to a level of technical perfection not approached by any other drive system known today.

Thorens Isotrack turntables featuring the "mini-mass" tonearm—now at your Authorized Thorens Dealer, or for further details write:

ELPA MARKETING
INDUSTRIES, INC.
East: Thorens Bldg.,
New Hyde Park, N.Y. 11040
West: 7301 East Evans Road,
Scottsdale, Ariz. 85260
Empire’s Blueprint for Better Listening...

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

The advantages of Empire are threefold.

One, your records will last longer. Unlike other magnetic cartridges, Empire’s moving iron design allows our diamond stylus to load free of its magnets and rails. This imposes much less weight on the record surface and insures longer record life.

Two, you get better separation. The small, hollow iron armature we use allows for a lighter fit in its positioning among the poles. So, even the most minute movement is accurately reproduced to give you the space and depth of the original recording.

Three, Empire uses 4 poles, 4 coils, and 3 magnets (more than any other cartridge) for better balance and hum rejection.

The end result is great listening. Audition one for yourself or write for our free brochure, “How To Get The Most Out Of Your Records.” After you compare our performance specifications with Empire Scientific Corp., Garden City, New York 11530, you'll agree that, for the money, you can't do better than Empire.

---

### Empire Phono Cartridges

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>FREQUENCY RESPONSE</td>
<td>10Hz-50KHz</td>
<td>15Hz-50KHz</td>
<td>15Hz-45KHz</td>
<td>20Hz-20KHz</td>
<td>20Hz-20KHz</td>
<td>20Hz-20KHz</td>
<td>20Hz-20KHz</td>
<td>20Hz-20KHz</td>
<td>20Hz-20KHz</td>
</tr>
<tr>
<td>TRACKING FORCE RANGE</td>
<td>3½-1¼ gm</td>
<td>3½-1¼ gm</td>
<td>1-1¼ gm</td>
<td>3½-1¼ gm</td>
<td>3½-1¼ gm</td>
<td>3½-1¼ gm</td>
<td>1-1¼ gm</td>
<td>1½-2½ gm</td>
<td>1½-2½ gm</td>
</tr>
<tr>
<td>SEPARATION</td>
<td>15Hz to 1KHz</td>
<td>1KHz to 2KHz</td>
<td>2KHz to 20KHz</td>
<td>2KHz to 20KHz</td>
<td>2KHz to 20KHz</td>
<td>2KHz to 20KHz</td>
<td>2KHz to 20KHz</td>
<td>2KHz to 20KHz</td>
<td>2KHz to 20KHz</td>
</tr>
<tr>
<td>M. DISTORTION @ 3.54 cm/sec</td>
<td>2% 2KHz-20KHz</td>
<td>2% 2KHz-20KHz</td>
<td>2% 2KHz-20KHz</td>
<td>2% 2KHz-20KHz</td>
<td>2% 2KHz-20KHz</td>
<td>2% 2KHz-20KHz</td>
<td>2% 2KHz-20KHz</td>
<td>2% 2KHz-20KHz</td>
<td>2% 2KHz-20KHz</td>
</tr>
<tr>
<td>STYLUS</td>
<td>2 mil bi-radial</td>
<td>2 mil bi-radial</td>
<td>2 mil bi-radial</td>
<td>2 x 7 mil elliptical</td>
<td>2 x 7 mil elliptical</td>
<td>2 x 7 mil elliptical</td>
<td>2 x 7 mil elliptical</td>
<td>7 mil radius spherical</td>
<td></td>
</tr>
<tr>
<td>EFFECTIVE TIP MASS</td>
<td>4 miligram</td>
<td>4 miligram</td>
<td>4 miligram</td>
<td>2 milgram</td>
<td>6 miligram</td>
<td>6 miligram</td>
<td>6 miligram</td>
<td>9 miligram</td>
<td>1 miligram</td>
</tr>
<tr>
<td>COMPLIANCE</td>
<td>30x10⁴ cm²/dyne</td>
<td>30x10⁴ cm²/dyne</td>
<td>30x10⁴ cm²/dyne</td>
<td>30x10⁴ cm²/dyne</td>
<td>30x10⁴ cm²/dyne</td>
<td>30x10⁴ cm²/dyne</td>
<td>30x10⁴ cm²/dyne</td>
<td>30x10⁴ cm²/dyne</td>
<td>30x10⁴ cm²/dyne</td>
</tr>
<tr>
<td>TRACKING ABILITY</td>
<td>32 cm/sec @ 1KHz</td>
<td>32 cm/sec @ 1KHz</td>
<td>32 cm/sec @ 1KHz</td>
<td>36 cm/sec @ 1KHz</td>
<td>36 cm/sec @ 1KHz</td>
<td>38 cm/sec @ 1KHz</td>
<td>28 cm/sec @ 1KHz</td>
<td>28 cm/sec @ 1KHz</td>
<td>32 cm/sec @ 1KHz</td>
</tr>
<tr>
<td>CHANNEL BALANCE</td>
<td>within 1 db @ 1KHz</td>
<td>within 1 db @ 1KHz</td>
<td>within 1 db @ 1KHz</td>
<td>within 1½ db @ 1KHz</td>
<td>within 1½ db @ 1KHz</td>
<td>within 1½ db @ 1KHz</td>
<td>within 1½ db @ 1KHz</td>
<td>within 1½ db @ 1KHz</td>
<td>within 1½ db @ 1KHz</td>
</tr>
<tr>
<td>INPUT LOAD</td>
<td>100K ohms/channel</td>
<td>106K ohms/channel</td>
<td>180K ohms/channel</td>
<td>47K ohms/channel</td>
<td>47K ohms/channel</td>
<td>47K ohms/channel</td>
<td>47K ohms/channel</td>
<td>47K ohms/channel</td>
<td>47K ohms/channel</td>
</tr>
<tr>
<td>TOTAL CAPACITANCE</td>
<td>under 100 pf/channel</td>
<td>under 100 pf/channel</td>
<td>under 100 pf/channel</td>
<td>300 pf/channel</td>
<td>400-500 pf/channel</td>
<td>400-500 pf/channel</td>
<td>7 pf/channel</td>
<td>7 pf/channel</td>
<td>7 pf/channel</td>
</tr>
<tr>
<td>OUTPUT @ 3.54 cm/sec</td>
<td>3 mv/channel</td>
<td>3 mv/channel</td>
<td>3 mv/channel</td>
<td>4.5 mv/channel</td>
<td>4.5 mv/channel</td>
<td>4.5 mv/channel</td>
<td>7 mv/channel</td>
<td>7 mv/channel</td>
<td>7 mv/channel</td>
</tr>
</tbody>
</table>

---

Table data source: Empire Scientific Corp., Garden City, New York 11530.

Comment: There is something about testing a superamp that leaves us slightly frustrated, as though the amp were laughing up its sleeve at us. Consider the Pioneer Spec-2. CBS labs puts it through very thorough testing, and the amp just breezes along doing what it is supposed to do, often with a good deal to spare. Then we connect it to some loudspeakers, feed a music signal to it, and listen at a level that would drive most people from the room. Nothing untoward happens. Next we connect a second pair of speakers in parallel, bringing the total load to 4 ohms (and sometimes less)—and neglecting, we might add, to reset the back-panel switch that lowers the supply voltage to ensure safe operation with such a load—and feed a signal in again. Still no misbehavior. The front panel meters show that we are approaching half power on peaks, and this monster (which has no fan) doesn’t even get warm.

Outflanked on the high-power front, we make a tactical retreat to the opposite end of the power spectrum and play music (with loudness compensation) at levels at which the peaks are all less than 0 dBW (1 watt). The amp remains as clean as a whistle. And when the volume is turned down completely, not a trace of noise is audible until we bring an ear to within an inch or so of the tweeter.

The lab data are in accordance with the excellent performance in the listening test. Worst-case total harmonic distortion at the rated 24-dBW (250-watt) per channel output is 0.087% at 20 kHz. IM distortion at full power is less than 0.051%. Both forms of distortion decrease as output diminishes toward 23 dBW (200 watts), remaining at a plateau down to levels well below 0 dBW. That CBS’s measurement of the damping factor does not precisely confirm Pioneer’s specification is probably attributable to the rigor of CBS’s testing method and is of no practical importance in performance. More to the point, Pioneer’s modest design value suggests that the amp is clean in open-loop operation and that negative feedback has been used simply to make a good thing better. We would not expect the Spec-2 to have transient distortion problems and in fact heard nothing we can attribute to this phenomenon.

Signal-to-noise ratio, at 108⅔ dB (equivalent to a noise level of -84½ dBW) is excellent. In practice, since the gain of the amp (1.6 volts in for full output) is so high, its level controls can be cut back and the noise lowered further still. Frequency response can be drawn with a ruler through the audible region and is down only 3/4 dB at 10 Hz and 100 kHz. Robust in its construction and appearance as well as in performance, the Spec-2 can be rack-mounted at the user’s option. Unlike some rack-mount amps, it has regu-
lar pin-jack inputs; the speaker terminals are hefty three-way (for bared wires, large spade lugs, or banana plugs) binding posts.

Quite a mystique has grown up around superamps, and some people claim to be able to hear substantial differences in sound from one model to another. We do not doubt that differences exist, but in our experience they are extremely subtle and show up only in rigorous A/B testing. This alone (ignoring listening tastes and applications) would militate against our trying to pick a "best" superamp. What we can say, however, is that the sound of the Spec-2 is right there with the best of the contenders we have heard. It will not surprise us if you conclude that it is the best.

CIRCLE 131 ON READER-SERVICE CARD

About the dBW...

We express output power and noise in terms of dBW—meaning power in dB with a reference (0 dBW) of 1 watt. We repeat herewith the conversion table so that you can use the advantages of dBW in comparing current products with those we have reported on in the past. You can, of course, use the figures in watts that accompany the new dBW figures for these comparisons, but then you lose the ability to compare noise levels for outputs other than rated power and the ability to figure easily the levels to which specific amplifiers will drive specific speakers—as explained in the June 1976 issue. If you do not have that issue and would like a reprint of the full exposition, send 25¢ (U.S.) to: dBW, c/o High Fidelity Magazine, The Publishing House, Great Barrington, Mass. 01230.
Empire 698: A Classic Revisited


Comment: The Empire 698 manual turntable candidly displays its filial relation to the earlier 598, retaining essentially the same cosmetics and drive system. The principal difference between the two models is that the 698 includes a newly designed, lightweight tone arm equipped with electronic cueing and a photocell-controlled automatic lift at the end of a record. The arm also has such niceties as a headshell designed for minimum mass, antiskating bias that varies (as, ideally, it should) as the arm moves across the disc, and a decoupled counterweight that minimizes resonant effects and improves tracking of warped records.

Empire's belt-drive system, which was signal ahead of its time when introduced in the 598, performs very well by today's standards too. CBS Technology Center measured peak flutter (ANSI/IEEE weighting) at 0.08% maximum and 0.04% average, figures that fall in the good-to-excellent range. Rumble, which measures -61 dB with ARLL weighting, is likewise very good. (Empire, using ARRL weighting but a less stringent measurement technique, specifies -68 dB—a figure the lab was able to duplicate substantially when it copied the manufacturer's technique.) Speed (33 or 45 rpm) remains exact at all test power-line voltages.

The retention of the familiar Empire drive scheme implies some restrictions in convenience. Fine speed control is quite limited in range (significantly less than a semitone at either speed) and is accomplished by means of a vernier screw that changes the axis of the motor and drive pulley. To switch the speed it is necessary to remove a metal cover (which also conceals the fine speed adjustment) and guide the belt by hand from one drive-pulley step to the other, taking care to have the belt move into proper alignment around the platter and not pop back to the wrong part of the pulley. This system is easier to use than to describe and does have the virtue of simplicity, but it may seem, to some users, somewhat incongruous with electronic arm cueing.

Taking resonant frequency as a general measure of tone arm mass, we find the Empire's entirely competitive with other late-model arms. With the extremely compliant Shure V-15 Type III pickup it resonates at 7.5 Hz but shows very good damping in holding the rise to just 2 dB. Pivot friction in the arm mount is negligible for both vertical and horizontal movement, and there is no perceptible side drift in cueing. The cueing lifter does not support the arm once it is well clear of the platter, so you must be careful to lift and not push the arm when returning it to its rest.

Vertical tracking force is applied by means of a spring (calibrated in half-gram increments) so that the accuracy of this force is not dependent on having the turntable perfectly level. In the range from 1 to 4 grams the measured tracking force is 0.2 gram lighter than indicated at all settings. Antiskating bias, on the other hand, is exactly as set (again in half-grams of VTF) throughout the range; a table is provided in the instruction sheet to show how the bias should be adjusted for various stylus shapes.

In its construction the Empire is robust, not to say massive. The dust cover is of the friction-hinged rather than lift-off variety, but its mass is sufficient and the suspension of the working parts compliant enough that we would expect no problem with acoustic feedback—and, in fact, found none. Setting up the unit is not the simplest of tasks, but the instructions make it comparatively easy.

In auditioning the 698, we found its sonic performance just fine. Tracking is good, even on warped records, and there is no trace of audible misbehavior. We would conclude that Empire has done a clever job of refining an existing "classic" design.
Hitachi's Unique (Series E) Receiver


Comment: The first clue that there is something unusual about the Hitachi SR-903 receiver comes when you pick it up. Can this, one wonders, be an 18%/dBW (or 75-watt) receiver? Well, it is, and the reason it weighs so little is that it contains a novel output circuit (called Class G by Hitachi, though the components incorporating it are called Series E) that is a good deal more efficient than a standard Class B stage and thus requires less heat sinking. In addition, the new circuit has an unusually large amount of short-term headroom: It can produce a little more than 3 dB above rated power—that is, twice its continuous wattage rating—on transient peaks without clipping, rivaling in this

Class G Amplification: What Is It?

To understand the operation of a Class G amplifier, it is advantageous to compare it with the two “standard” circuit configurations for audio amplifiers: Class A and Class B (described in detail in "How to Translate Amplifier Jargon," HF, March 1975). Class A output devices conduct current at all times. This means that the stage dissipates power continuously; moreover, the highest dissipation is under no-signal conditions. Consequently, while a Class A amp is capable of very linear (distortion-free) performance it is inherently inefficient, particularly when it idles for a large part of the time. This is not a drawback for low-level amplification stages, where output power is low in any case. But in a power amp’s output stage it makes severe demands on the power supply and in particular on the heat sinking.

In a Class B stage both output devices of the push-pull pair are cut off when there is no signal, and no power at all is dissipated. When signal is applied, one output device of the pair handles the positive swings of the waveform, the other the negative swings. In practice, since solid-state devices are markedly nonlinear at very low current levels, a small current flows at times of zero signal (technically, a Class AB configuration) to prevent crossover distortion. The efficiency of a Class B stage approaches 67%, but only when it operates near full output. (The maximum efficiency of a Class A stage is 50% under the same conditions.)

In a Class G stage, there are four output devices: two to handle the positive swings, two for the negative swings. The circuit is arranged so that one pair of devices is fed from a low-voltage power supply and the second pair from a higher voltage. When a positive signal is applied, the low-voltage transistor on that side begins to conduct while the high-voltage transistor remains cut off. When the input voltage exceeds the supply to the low-voltage device, it cuts off and the high-voltage section takes over, remaining on until the voltage falls into the range of the low-voltage section once again. The action is exactly symmetrical in the negative portion of the waveform.

In effect, the low-voltage pair acts as a Class B stage, but since it is designed for relatively low power, its efficiency is of small concern. Moreover, in practice it is driven fairly close to its limits most of the time and is thus near its maximum efficiency. The high-voltage pair is also essentially of Class B, but since it acts only to "rescue" the low-voltage stage from clipping, it never works at low levels. In this way it is spared operation in the inefficient part of its range. The key to the optimization of a Class G stage is the choice of the ratio between the two supply voltages.
and crispness. The standard set by the amplifier outpaces generous headroom contributes to a sense of ease, clarity, amplifier section. Performance far exceeds what can be rightfully expected of a conventional 75-watt amp. The equalizer, a Dolby adapter (for FM), etc. The high and low filters have break points of 4.5 kHz and 120 Hz, respectively, and their gentle slopes (nominally 6 dB per octave) prevent them from being more than moderately effective. In our listening test we operated the Hitachi with two pairs of 8-ohm loudspeakers connected to its spring-loaded terminals and were surprised at how cool the back panel (which acts as heat sink for the output transistors) remained. It is possible with this nominal 4-ohm load to make the protection circuitry intervene, but that requires turning the volume to levels that are uncomfortably loud, in our listening room at least. The protection system, incidentally, acts cleanly and decisively, keeping the amplifier section off long enough to allow due contemplation of the misdeed that caused the shutdown.

The FM section contributes solidly to over-all performance as well. Stereo reception is automatically suppressed until the available signal-to-noise ratio exceeds 38 dB, and 50 dB of quieting is achieved with an RF input just below 38 dB, which is a healthy par for the course. The ultimate stereo S/N ratio is reached at 65 dB and is, at 66 1/2 dB, substantially in agreement with the manufacturer’s spec. Capture ratio, frequency response, and stereo separation are very good, and distortion is properly minimal under all test conditions. The alternate-channel selectivity graph in Hitachi’s spec sheet agrees reasonably well with the 60 dB measured by CBS, representing good selectivity—though not as good as is suggested by the 80 dB that Hitachi (using a different measuring level) specifies for the SR-903.

One nice feature is the Autolock tuning system. Automatic control is disabled when you touch the tuning knob and select a station; when you let go, the system locks to the center of the channel once again. The Autolock can be switched out via a control that disables muting (which is nonadjustable and very effective) as well. The tuning dial is highly legible and offers more than adequate resolution.

A midrange tone control, which is not a common feature in this class of receiver, is included. Although its scale is identical to those of the bass and treble controls—which offer, respectively, ±15 and ±10 dB of boost and cut—its range is limited (perhaps wisely) to ±6 dB.

Provisions are made for two tape recorders. You can dub from one to the other while you listen to a different program source. The ADAPTER connections can be used for a third deck (you can dub to this deck, but not while listening to another source) or for signal-processing equipment—an equalizer, a Dolby adapter (for FM), etc. The high and low filters have break points of 4.5 kHz and 120 Hz, respectively, and their gentle slopes (nominally 6 dB per octave) prevent them from being more than moderately effective. The phono stage has adequate gain and overload and, like the high-level stages, a very good S/N ratio. Its sound seems accurate, and it interfaces well with pickups, even ones that we would consider “difficult.”

Clearly, the principal strong point of the Hitachi is its amplifier section. Performance far exceeds what can be rightfully expected of a conventional 75-watt amp. The generous headroom contributes to a sense of ease, clarity, and crispness. The standard set by the amplifier outpaces
A Fascinating Budget Cassette Deck from Aiwa


Comment: A little over a decade ago, when the cassette was no more than a promising newcomer, some of us discovered that a company called Aiwa was building some attractive equipment at astonishingly low prices. Then the brand disappeared from the U.S. market—because, it would seem, of some inept handling on the part of its American importers. When Meriton announced that it would take over U.S. distribution, therefore, we were eager to try an Aiwa deck. Well, folks, the cassette format has changed a lot in the intervening years, but Aiwa's admirable attitude apparently has not.

CIRCLE 133 ON READER-SERVICE CARD

A Fascinating Budget Cassette Deck from Aiwa


Comment: A little over a decade ago, when the cassette was no more than a promising newcomer, some of us discovered that a company called Aiwa was building some attractive equipment at astonishingly low prices. Then the brand disappeared from the U.S. market—because, it would seem, of some inept handling on the part of its American importers. When Meriton announced that it would take over U.S. distribution, therefore, we were eager to try an Aiwa deck. Well, folks, the cassette format has changed a lot in the intervening years, but Aiwa's admirable attitude apparently has not.

CIRCLE 133 ON READER-SERVICE CARD

A Fascinating Budget Cassette Deck from Aiwa


Comment: A little over a decade ago, when the cassette was no more than a promising newcomer, some of us discovered that a company called Aiwa was building some attractive equipment at astonishingly low prices. Then the brand disappeared from the U.S. market—because, it would seem, of some inept handling on the part of its American importers. When Meriton announced that it would take over U.S. distribution, therefore, we were eager to try an Aiwa deck. Well, folks, the cassette format has changed a lot in the intervening years, but Aiwa's admirable attitude apparently has not.

CIRCLE 133 ON READER-SERVICE CARD

A Fascinating Budget Cassette Deck from Aiwa


Comment: A little over a decade ago, when the cassette was no more than a promising newcomer, some of us discovered that a company called Aiwa was building some attractive equipment at astonishingly low prices. Then the brand disappeared from the U.S. market—because, it would seem, of some inept handling on the part of its American importers. When Meriton announced that it would take over U.S. distribution, therefore, we were eager to try an Aiwa deck. Well, folks, the cassette format has changed a lot in the intervening years, but Aiwa's admirable attitude apparently has not.

CIRCLE 133 ON READER-SERVICE CARD

A Fascinating Budget Cassette Deck from Aiwa


Comment: A little over a decade ago, when the cassette was no more than a promising newcomer, some of us discovered that a company called Aiwa was building some attractive equipment at astonishingly low prices. Then the brand disappeared from the U.S. market—because, it would seem, of some inept handling on the part of its American importers. When Meriton announced that it would take over U.S. distribution, therefore, we were eager to try an Aiwa deck. Well, folks, the cassette format has changed a lot in the intervening years, but Aiwa's admirable attitude apparently has not.

CIRCLE 133 ON READER-SERVICE CARD

A Fascinating Budget Cassette Deck from Aiwa


Comment: A little over a decade ago, when the cassette was no more than a promising newcomer, some of us discovered that a company called Aiwa was building some attractive equipment at astonishingly low prices. Then the brand disappeared from the U.S. market—because, it would seem, of some inept handling on the part of its American importers. When Meriton announced that it would take over U.S. distribution, therefore, we were eager to try an Aiwa deck. Well, folks, the cassette format has changed a lot in the intervening years, but Aiwa's admirable attitude apparently has not.

CIRCLE 133 ON READER-SERVICE CARD

A Fascinating Budget Cassette Deck from Aiwa


Comment: A little over a decade ago, when the cassette was no more than a promising newcomer, some of us discovered that a company called Aiwa was building some attractive equipment at astonishingly low prices. Then the brand disappeared from the U.S. market—because, it would seem, of some inept handling on the part of its American importers. When Meriton announced that it would take over U.S. distribution, therefore, we were eager to try an Aiwa deck. Well, folks, the cassette format has changed a lot in the intervening years, but Aiwa's admirable attitude apparently has not.

CIRCLE 133 ON READER-SERVICE CARD
There are other under $300 Dolby decks on the cassette market, but few of those in the current crop that we have looked at before were very encouraging. Sometimes they failed to meet what we would consider minimum high fidelity standards, and sometimes their features or mechanical design simply cut too many corners. Whether the Aiwa cuts corners is a moot point; its “omissions” strike us as cannily chosen to keep costs down and, therefore, as virtues rather than sins.

Take the input section, for example. There are microphone inputs (¼-inch phone jacks at the front edge of the deck) and line inputs (pin-jacks, underneath at the back—where there also are pin-jack inputs and a DIN input/output socket), but only one left/right pair of recording-level sliders. Therefore, no mixing. Similarly, the FM-pilot filter is built into the Dolby switch: no noise suppression without the response cut at the extreme high end. But instead of niceties like full-band Dolby or mixing inputs or, perhaps, Dolby FM decoding, you get a DC-servo-drive motor that is virtually unaffected by line voltage and a cue/review feature (actuated by pressing either of the fast-wind levers with the deck in PLAY) that gives you some output from the tape at high speeds so you can find your place. And still at less than $250. If those are tradeoffs, we're all for them.

Not that performance is consistently spot-on when compared with, say, a $400 deck. In many respects it is excellent but, in that company, the response curves look a little less flat than we would consider par (though they are not really substandard); the action of the averaging meters, which seems at once sluggish and underdamped, is saved only by the peak indicator; the crosstalk is a little high, though better than you're likely to have in most program material. And the owner's manual is almost a travesty. Not only do we defy novices to interpret correctly some of the opaque English, but the tape table is misleading because it is based on brands available in Japan, rather than those familiar to U.S. recordists. (Manuals can affect performance.)

This is a great pity. Otherwise the tape-matching scheme is among the best we've seen in any cassette deck at any price. It has separate switches for bias and equalization, each with three positions: CR0, FE0, and LH. These three positions are further identified on the faceplate in terms of actual equalization (70 microseconds for the first two eq. positions, 120 microseconds for the third) and percentage of bias with respect to that for LH (low-noise, high-output ferric tapes): 150, 110, and 100, respectively. At last—a really rational approach! CBS's lab tests were run with Sony tapes: UHF ferric, Duad ferrichrome, and chromium dioxide.

That assumed “100%” bias point wants some discussion. Since Aiwa designates it for LH tape, we would tend to assume that it is a little on the high side for the bottom formulations in quality tape lines. Since the CBS lab data show flatter response in the right channel than the left for ferric and ferrichrome tapes, we used that channel to run some quick tests with a variety of tapes to see which matched which bias points best. “Hotter” ferric tapes like Maxell UDXL-1 seemed a hair overbiased at the 110 setting, a hair underbiased at 100; Ampex 20/20+, which prefers a lower bias, seemed an excellent match to the 100% setting; Fuji FL, as an example of a moderate-priced formulation, still did well at the 100% setting, though evidence of overbiasing was starting to show. So these differences, while they will be of interest only to the really fussy recordist (perhaps one too fuzzy to consider an under-$300 deck), indicate that the 100% bias position is best suited to ferric tapes in the medium-high price bracket and that no option is given for getting the best from the cheapies. Perhaps that is as it should be.

The angling of the front panel makes the deck a joy to work with. There are two dust covers: The large, hinged
Crosswinds' Rumble Filter

**The Equipment:** Crosswinds Sound Systems stereo high-pass filter, an outboard subsonic filter in metal case. Dimensions: 9½ by 2½ inches (front panel), 5 inches deep plus clearance for connections. Price: $100. Warranty: "limited," five years parts and labor. Manufacturer: Crosswinds Sound Systems, 5307 Harvest Lane, Austin, Tex. 78745.

**Comment:** Warped records, recorded rumble, and turntable rumble are perennial problems that plague the home music listener and, equally undesirably, subject his equipment to unnecessary stress. Subsonic noise wastes amplifier power and uses that power to drive woofer cones through long excursions at frequencies at which they are poorly loaded and thus easily overdriven and damaged. And because of the low-frequency boost inherent in the RIAA playback curve, phono feedback at these frequencies can be particularly pesky. The solution to this problem is, of course, a rumble filter, an amenity that is not always incorporated in receivers and preamps. But even in components that do have such filters, often the slope and break-

**Aiwa AD-1250 Additional Data**

<table>
<thead>
<tr>
<th>Metric</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Speed accuracy (fast at 105 VAC)</td>
<td>0.33%</td>
</tr>
<tr>
<td>Speed accuracy (fast at 120 VAC)</td>
<td>0.26%</td>
</tr>
<tr>
<td>Speed accuracy (fast at 127 VAC)</td>
<td>0.20%</td>
</tr>
<tr>
<td>Wow and flutter (playback)</td>
<td>0.04%</td>
</tr>
<tr>
<td>Wow and flutter (record/play)</td>
<td>0.07%</td>
</tr>
<tr>
<td>Rewind time (C-60 cassette)</td>
<td>77 sec.</td>
</tr>
<tr>
<td>Fast-forward time (same cassette)</td>
<td>77 sec.</td>
</tr>
<tr>
<td>S/N ratio (re 0 VU, Dolby off, CBS weighted)</td>
<td>L ch: 57½ dBr, ch: 57½ dB</td>
</tr>
<tr>
<td>S/N ratio (re 0 VU, Dolby off, unweighted)</td>
<td>L ch: 56 dB, R ch: 55½ dB</td>
</tr>
<tr>
<td>S/N ratio (re 0 VU, Dolby on)</td>
<td>L ch: 55½ dBr, ch: 55½ dB</td>
</tr>
<tr>
<td>S/N ratio (re 0 VU, Dolby on)</td>
<td>L ch: 54 dB, R ch: 53½ dB</td>
</tr>
<tr>
<td>Erasure (333 Hz at normal level)</td>
<td>70 dB</td>
</tr>
<tr>
<td>Crosstalk (at 333 Hz)</td>
<td>Left: 31 dB, Right: 32½ dB</td>
</tr>
<tr>
<td>Sensitivity (re DIN 0 VU)</td>
<td>Line input: L ch: 100 mV, R ch: 105 mV</td>
</tr>
<tr>
<td>Sensitivity (re DIN 0 VU)</td>
<td>Mike input: L ch: 0.6 mV, R ch: 0.7 mV</td>
</tr>
<tr>
<td>Meter action (re DIN 0 VU)</td>
<td>Left: 4 dB high, Right: 4½ dB high</td>
</tr>
<tr>
<td>IM distortion (record/play, -10 VU)</td>
<td>L ch: 4.0%</td>
</tr>
<tr>
<td>Maximum output (re DIN 0 VU)</td>
<td>L ch: 1.30 V, R ch: 1.35 V</td>
</tr>
</tbody>
</table>

Cover that protects the entire working surface can be slipped off and laid aside if you choose; in addition, there is a sliding, smoked plastic cover over the cassette well that automatically pops out of the way when you press EJECT. Like the deck as a whole, this feature is well thought-out: efficient, attractive, practical. The AD-1250 really is an excellent value.

CIRCLE 147 ON READER-SERVICE CARD

**Crosswinds' Rumble Filter**
point make the device much less than ideally effective. The Crosswinds high-pass filter is a simple “black box” with a power cord and one pair each of input and output terminals. The box isn’t really black, but since the final cosmetics had not been chosen when we tested it, we are not sure what it will look like. Practically, we would not expect the appearance to be critical, as the device is easily concealed and need not be touched once installed. It is meant to be connected in a tape-monitor or adapter loop or between a preamp and power amp. In the latter position, it cannot be switched out.

The circuit (which we did test in its final form) is an active filter whose response is -3 dB at 30 Hz with a rolloff of 18 dB per octave below that. We find the break point and slope very effective in suppressing rumble with virtually no effect on program material. But if you want a different break point, Crosswinds will make it up for you at extra cost. According to the manufacturer’s claim, total harmonic distortion is less than 0.08%. While we did not verify this with test equipment, we can find no logical or audible reason for skepticism concerning it—nor concerning IM distortion, which is not specified. Hum and noise are rated at better than 65 dB below 1 volt. Capable of supplying 8 volts across a 10,000-ohm load, the filter will drive just about any power amp we know of.

So far as we can tell, this is a unique product, at least in the consumer audio marketplace. And, record warps being as common as they are, it fills a genuine need. Crosswinds has been using the circuit for some time in commercial installations and says it is satisfied with the track record. To our ears, the filter does its job well and does not degrade the signal audibly. If you have a preamp or receiver that you love dearly—for its rumble filter (or the lack of one)—this could be just the thing to give it a new lease on life. The unit is currently available by mail only (Texas residents are advised to include 5% sales tax) although Crosswinds is looking for dealers.

CIRCLE 134 ON READER-SERVICE CARD

Audio-Technica
Acoustic Insulators


Comment: Few things are as annoying as a tone arm that skips a groove at the slightest provocation, forcing even the cat to tiptoe across the room. Or a music system that is given to moaning whenever the volume is turned past the whisper level. These forms of undesirable behavior, vibration sensitivity and acoustic feedback, are what the AT-605 is designed to combat.

The system consists of four damped feet that are meant to be placed under a turntable in such a way that its own feet, which are not doing the job, remain free of contact with the supporting surface. The AT-605 feet are adjustable in height, and a spirit level is included to aid in setting the turntable level. The effectiveness of the insulator set depends in part on the turntable with which it is used. That is, it may not improve the isolation of the most sophisticated turntables on the market, but it does seem likely to help a great many whose feet are just adequate.

We tested the system by setting a turntable (with a better-than-average suspension) next to a loudspeaker that had been placed woofer-down on a table. The speaker was driven with a sweep tone essentially from 0 to 100 Hz, and the signal from the turntable pickup (which was placed on a record) measured with and without the AT-605. The actual data depend, of course, more on the other equipment than on the Audio Insulators, but the difference between the two curves is impressive. One peak slightly below 20 Hz was attenuated by nearly 6 dB, and another near 60 Hz by about 3 dB. Further, the system gave 1 dB or so of extra attenuation at all frequencies above about 5 Hz, the lowest frequency at which we could get useful data with this setup. We also noticed, but did not measure, decreased susceptibility to shocks. The device is not a panacea, but can help materially where a problem exists.

There is no reason why the Audio Insulators should be used only on turntables. If acoustic feedback is the difficulty, the speakers can be isolated as well, which should suppress structure-borne vibration by about another 3 dB. Or, if your tape deck’s drive feeds rumble to the turntable, either or both could be isolated from the supporting surface. According to the manufacturer, each of the feet can support up to 9 pounds—or a maximum of 36 pounds for a set—and still retain its damping characteristics. One other nice thing about the AT-605 is that it will not detract from the appearance of your sound system.
THE GAP BETWEEN OTHER TAPES HAS

INTRODUCING UD-XL I AND UD-XL II.

Maxell tapes have always been considered by many people to be the highest quality tapes in the world. But instead of sitting back and resting on our laurels, we've spent the last few years looking for ways to move even further ahead.

The results of our efforts are Maxell UD-XL I and UD-XL II. Two tapes which are not only better than anything we've ever made, they're better than anything anyone's ever made.

To begin with, UD-XL I is an improved version of our own UD-XL.

More specifically, it's a ferric oxide tape designed for use with the tape selector switch in the normal position (120 microsecond equalization and standard bias).

Its performance characteristics include the lowest harmonic distortion level of any premium cassette on the market today.

An extremely flat frequency
response from the lowest to the highest frequencies. And an exceptionally high resistance to saturation even at the highest recording levels.

UD-XL II, on the other hand, is a ferric oxide tape specially formulated for use with the tape selector switch in the chrome position (70 microsecond equalization and high-level bias). It offers the low noise advantage of "chrome" without the disadvantages. Its performance characteristics include extremely low modulation noise and a 5 dB signal-to-noise ratio improvement over ordinary premium tapes.

If you'd like to know more about UD-XL I and UD-XL II, stop into your local dealer and ask some questions. Not just about our tapes, but about our competitors' as well.

We think you'll soon discover something that we've always known. The best just keeps getting better.

MAXELL. THE TAPE THAT'S TOO GOOD FOR MOST EQUIPMENT.

Maxell Corporation of America, 150 West Commercial Ave. Moonachie, N.J. 07074
CIRCLE 22 ON READER-SERVICE CARD
"If I just wanted to listen to music, I'd go to a concert."

"I want to lead the band. I want to build my own albums."
"I want to get my hands on the music."

You're talking TEAC open reel. From the time you decide to edit, resequence and build your own albums until you finish your home studio, you're talking TEAC open reel.

Why TEAC?
Better specs. Not more bells and whistles and gingerbread. Performance you can hear. Specs we can prove:
- We can print a signal at plus six and still meet spec. (A cheapy will lose definition and distort.)
- We hold and define a piano and violin with a sustained Middle C. (On Brand X, Y and Z, the tone will wander away.)
- When the tape transport moves or shifts or reverses, TEAC has a nice, clean, solid "thunk" that tells you the tape transport is there to stay. (Some TEAC look-alikes give off a hollow, plastic complaint when they're asked to do anything.)
- And we'll perform to specs a year or two from now. Not just pull tape. Perform to specs.

Do you know who buys one out of every three new TEAC systems? People who own old TEAC systems. We've been making tape systems for twenty five years, and we really know how. It's just a matter of time. The more you know about tape, the more you'll know about TEAC.

You're talking TEAC open reel. From the time you decide to edit, resequence and build your own albums until you finish your home studio, you're talking TEAC open reel.

Why TEAC?
Better specs. Not more bells and whistles and gingerbread. Performance you can hear. Specs we can prove:
- We can print a signal at plus six and still meet spec. (A cheapy will lose definition and distort.)
- We hold and define a piano and violin with a sustained Middle C. (On Brand X, Y and Z, the tone will wander away.)
- When the tape transport moves or shifts or reverses, TEAC has a nice, clean, solid "thunk" that tells you the tape transport is there to stay. (Some TEAC look-alikes give off a hollow, plastic complaint when they're asked to do anything.)
- And we'll perform to specs a year or two from now. Not just pull tape. Perform to specs.

Do you know who buys one out of every three new TEAC systems? People who own old TEAC systems. We've been making tape systems for twenty five years, and we really know how. It's just a matter of time. The more you know about tape, the more you'll know about TEAC.

The Extra Mile.
Buy any TEAC open reel recorder between now and June 7, 1977, and you'll be able to get 30% off on twelve 7" reels of Maxell U.D. 35-90 tape or twelve 1/2" reels of Maxell U.D. 35-180 tape. The way we figure it, you get at least five miles of tape for the price of four. Any way you figure it, it's a nice way to start a tape library.

*Actual resale prices are determined individually and at the sole discretion of authorized TEAC dealers.
Introducing Accutrac.
The only turntable in the world that lets you tell an LP which selections you want to hear, the order you want to hear them in, even how many times you want to hear each one.

Sounds like something out of the 21st century, doesn't it? Well, as a result of Accutrac's electro-optics, computer programming and direct drive capabilities, you can have it today.

Just imagine you want to hear cuts 5, 3 and 7 in that order. Maybe you even want to hear cut 3 twice, because it's an old favorite. Simply press buttons 5, 3, 3 again, then 7. Accutrac's unique infra-red beam, located in the tonearm head, scans the record surface. Over the recorded portion the beam scatters but over the smooth surface between selections the infra-red light is reflected back to the tonearm, directing it to follow your instructions.

What's more, it can do this by cordless remote control, even from across the room.

The arm your fingers never have to touch.

Since Accutrac's tonearm is electronically directed to the record, you never risk dropping the tonearm accidentally and scratching a record, or damaging a stylus.

And, since it cues electronically, too, you can interrupt your listening and then pick it up again in the same groove, within a fraction of a revolution. Even the best damped cue lever can't provide such accuracy. Or safety.

What you hear is as incredible as what you see.

Because the Accutrac servo-motor which drives the tonearm is decoupled the instant the stylus goes into play, both horizontal and vertical friction are virtually eliminated. That means you get the most accurate tracking possible and the most faithful reproduction.

You also get wow and flutter at a completely inaudible 0.03% WRMS. Rumble at −70 dB (DIN B). A tracking force of a mere 3/4 gram. And tonearm resonance at the ideal 8-10 Hz.

The Accutrac 4000 system. When you see and hear what it can do, you'll never be satisfied owning anything else.

Its father was a turntable.
Its mother was a computer.

The Accutrac 4000
HiFi-Crostic No. 23 (Easter)

by William Petersen

To solve these puzzles—and they aren’t as tough as they first seem—supply as many of the Output words as you can in the numbered dashes following the Input. Unless otherwise specified in the Input, the Output consists of one English word. Compounds, or hyphenated words, may be required. Transfer each letter to the square in the diagram that bears the corresponding number. After only a few correct guesses you should begin to see words and phrases emerging in the diagram, which when filled in will contain a quotation related to music recordings, or audio.

The words in the quotation are separated by the periods and do not necessarily end at the end of a row. Try to guess at these words and transfer each newly decoded letter back to its appropriate dash in the Output. This will supply you with further clues.

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

The answer to HiFi-Crostic No. 23 will appear in next month’s issue of High Fidelity.

Solution to last month’s HiFi-Crostic appears on page 6.
How to Judge Record-Playing Equipment

A guide for prospective buyers based on our test reports

by Edward J. Foster

Test reports in High Fidelity are intended to give a basic idea of the characteristics and peculiarities of a product. They are based upon both laboratory measurements—technical data that are considered to reflect a product’s strong and weak points—and listening tests. The correlation between the data and actual performance is not always direct; therefore the audio editors must interpret the figures. But to get the most out of a report the reader should understand why the various measurements are made and something of their relative importance.

Details of the test procedures need not concern us here, though in some tests they may differ markedly from the procedures used by at least some manufacturers in determining product specifications. We’ll take up the more significant divergencies as we go. The point to keep in mind is that, while HF takes pains to be consistent in its approach to competing models both on the test bench and in practical use, other sources of information about components may well represent different viewpoints or different measurement techniques—even where a measurement standard exists in the interest of uniformity of data.

Edward J. Foster runs his own audio-testing and technical service, Diversified Science Laboratories, and is a frequent contributor to these pages on audio-related subjects.

Turntables and Tone Arms

Record-playing equipment usually consists of the turntable/arm combination and the pickup or phono cartridge. Generally HF reviews each separately, but sometimes a record player comes with its own cartridge, in which case the reviews are combined. A few turntables are marketed without arms—and, naturally enough, arms without turntables.

The lab tests on the turntable and arm are of two types: those that indicate the “convenience” features and, more important, in our view, those that measure basic performance. Since the primary purpose of the turntable is to rotate the record at a constant speed and introduce no noises of its own, HF considers the flutter and rumble measurements paramount. Flutter (or wow and flutter) is a measure of the short-term speed stability of the turntable. If the drive system were perfect, the turntable would spin at its nominal speed (say 33 rpm) without variation. But imperfect bearings and jerky delivery of power by the motor (“cogging,” as it is called) create minor wavers in speed from instant to instant. The change in speed, divided by the average speed and expressed as a percentage, represents flutter.

The currently accepted standard (the so-called
IEEE/ANSI standard) specifies a weighted peak measurement. Weighting is used because listeners are most annoyed by speed variations that occur at a rate of about 4 Hz; thus variations that occur at this rate count more heavily in the measurement than those occurring at less irritating rates. Flutter, by its very nature, is not constant. For this reason HF generally reports two figures: an "average" value (an interpretation of what the flutter meter reads) and a "maximum" (the highest level reached on the meter). The latter corresponds to the above standard.

What flutter "sounds" like depends upon the rate at which it occurs. Slow speed variations—individual "wobbles" lasting from one-sixth of a second to two seconds and therefore said to have a frequency of from 0.5 to 6 Hz—cause instability in the pitch of reproduced tones, a sort of "wowing" sound. (These slow variations used to be measured separately as "wow.") They are most annoying on sustained tones, such as those produced by piano or woodwinds. Faster speed variations ("flutter" in its more limited sense) from 6 to 200 Hz cause a roughening of the sound rather than pitch variations. Equipment of high quality will generally have average peak weighted flutter figures of ±0.1% or less.

Rumble, sometimes called the turntable's signal-to-noise ratio (or simply S/N), is the measure of the noise introduced into the music by vibrations in the drive system. The phono cartridge responds to the wigglings of the record groove, but it also is sensitive to vertical and lateral vibrations induced into the turntable platter by the motor or drive train. Since these vibrations are generally very low in pitch, they produce a rumbling sound. Again, weighting is used to make the measurement reflect the amount of annoyance caused by the rumble. HF employs the ARLL (audible rumble loudness level) weighting, which is in widespread use in this country, although the DIN B and DIN A (German), the JIS (Japanese), and the NAB (another American standard) standards are used elsewhere. (There are no direct conversion factors relating these systems.) The ARLL curve counts rumble most heavily at 500 Hz. Rumble low enough to produce an ARLL measurement of -60 dB or better (e.g., -61 dB, etc.) is a prerequisite of high performance.

Lateral and vertical friction in the arm pivot is an important consideration. Excessive friction (more than, say, one-tenth of the tracking force needed for the cartridge used) will necessitate raised tracking forces, which can result in excessive record wear. Fortunately, in equipment reviewed today in HF, bearing friction usually is so low as to almost vanish.

The frequency of tone-arm resonance is an important parameter in that it relates to the playing of warped records. At the resonant frequency, the sensitivity of the system—both in terms of the output voltage from the cartridge and of susceptibility to mistracking—increases. The tone-arm resonance actually involves the total effective mass of the tone arm and cartridge and the cartridge's stylus compliance. But in measuring a turntable/arm combination, HF must use some cartridge, and measurements are therefore valid only for that cartridge (or for others with the same mass and compliance). For convenience, HF has standardized with the Shure V-15 Type III for testing all high-quality arms—unless, of course, the turntable system comes with its own cartridge, in which case HF measures the combination and the results are then valid for the system.

The ideal range for arm resonance is 10 to 15 kHz. This is sufficiently below the music band so that the increased output from the cartridge at resonance will have a negligible effect on the tonal balance, and sufficiently above the frequency band at which record warps are most prevalent and severe (about 1 to 6 Hz) to minimize the chances of mistracking on a warped disc. The less boost at resonance (reported as a rise of so many dB) the better, but since the tolerable boost depends in a fairly complex way on the resonant frequency, the reviewer normally assesses the importance of this data.

It may seem odd that HF rates absolute speed accuracy as less important than, say, tone-arm resonance. Speed accuracy is important, because it affects the over-all pitch of the music, but very few listeners can tell the precise pitch of what they hear without a reference for comparison. An entire piece could be as much as a quarter-tone sharp or flat without bothering most people. The exceptions are people with perfect pitch or those who wish to play the piano along with the record. Absolute speed accuracy within, say, 0.5% (one-twelfth of a semitone in pitch) is sufficient for any musical need.

Variation in speed with changes in line voltage can cause perceptible shifts in musical pitch, as when the switching of an air conditioner causes a short-term low-voltage condition. HF measures the speed at line voltages of 105, 120, and 127 volts and reports the discrepancy, if any. In practice "120-volt" AC lines may fall anywhere within this range and tend to vary; typical home power lines average 110 to 115 volts.

Many modern high-quality turntables include a speed control. In such cases, HF reports the range of the control. A variation of 8% (say, ±3%) is equivalent to a semitone and should be more than adequate.

Most pivoted tone arms now include an anti-skating control that compensates for the tendency of a conventional pivoted arm to move toward the
center of the rotating record. Without antiskating "bias" compensation, the stylus force on the two groove walls is unbalanced by the skating force, producing a tendency toward mistracking of the outer (right-channel) wall. (Straight-line-tracking arms do not develop this unbalanced force.) Since the skating force develops from friction between the stylus tip and record groove, the amount of compensation required depends on the stylus shape. Frequently, several scales are included on the antiskating control to indicate the proper setting for various styli. HF checks to see that the antiskating forces are reasonably close to the empirically "correct" values. We also verify that the minimum tracking force required to activate the arm-cycling mechanism on automatic and semi-automatic turntables is well below the smallest value that would ever be used.

Some matters on which we report are of varying significance to different users. A cueing control that skips ahead or back by more than one or two grooves when you use it as a temporary "pause" can be very annoying—if you use it that way. Similarly, a slow cueing cycle in an automatic (more than 12 seconds or so) can be galling to some users, unimportant to others. And while accuracy of the stylus-force setting is worth measuring, we wouldn't turn down a player because the gauge was a bit off or because calibrations are no finer than quarters of a gram. For a few dollars you can buy a gauge and set the vertical tracking force as accurately as you want.

**Pickup Cartridges**

When it comes to pickups, frequency response and channel separation are cardinal factors. Frequency response that is flat from 20 Hz to 20 kHz is necessary for the cartridge to reproduce the entire audible spectrum without coloration. This ideal is seldom realized. Typical anomalies are a trough between 5 and 10 kHz, followed by a peak between 10 and 20 kHz. The peak (which occurs at a higher frequency in CD-4 pickups) is caused by a resonance between the stylus tip and the groove and can vary according to the record used. A response curve that is flat within ±2 dB from 30 Hz to 15 kHz is typical of cartridges with very good performance. Responses are plotted for both channels. They should be identical for best performance, but a match within 1 dB is considered very good.

The channel separation curves are plotted on the same graph with the frequency response curves. Again, the separation is plotted for both channels. The degree of separation (in dB) can be read directly from the scale on the left; typically, it will be best in the midrange and at its minimum at the resonant frequency. You will never see a "flat" separation curve—desirable as that might be—nor are the curves likely to be identical for the two channels. Generally, a separation of 20 dB from about 100 Hz to 15 kHz in the worse of the two channels would be considered adequate; other things being equal, the greater the separation and the greater the frequency band across which it extends, the better.

When testing CD-4 cartridges, HF extends its upper limit of response and separation measurements from 20 to 50 kHz and plots the results on a separate graph. The response is not usually as smooth, nor the separation as great, in this region. Fortunately, depending on the design of the particular CD-4 demodulator, anomalies in this, the CD-4 carrier region, are relatively tolerable. Smoother response and wide separation are still the ideals, however.

Coequal with frequency response and separation is the "maximum tracking level" test. For this test, the tracking force is adjusted to the center of the manufacturer's recommended range, and measurements are made to determine the highest recording levels that can be traced without significant distortion of the signal. Different signals are used to check the tracking performance at different points in the band: sine waves for the lower frequencies and a one-octave noise signal for the top band. The measurements are carried out to a level of +12 dB above the RIAA 0 VU at 300 Hz, to +18 dB at 1 kHz, and to -5 dB in the 10- to 20-kHz band. These levels correspond to the highest levels normally encountered on modern discs. Preferably the cartridge should track the highest level on each test (indicated by > +12 dB, > +18 dB, and > -5 dB, respectively, in the data). A cartridge that can come within 3 dB of these levels is still acceptable. HF also measures the minimum forced required to track a series of certain low-frequency glide tones. This force is usually less than that recommended by the manufacturer and can be taken as an indication of the precision with which the recommended value need be maintained.

Second-harmonic distortion (at various frequencies from 1 to 10 kHz) and intermodulation distortion (400 Hz and 4 kHz) are measured. Distortion, of course, is a very important criterion, for it is related to the "cleaness" or clarity of the reproduced signal. The correlation, unfortunately, is not direct, so the significance of particular distortion measurements is assessed by the reviewer after auditioning the cartridge.

The importance of the low-frequency resonance point of the cartridge/arm system was mentioned when we discussed the turntable/arm tests. HF is faced with the same problem here—having to mount the cartridge in a particular arm. We've standardized with the SME 3009 arm, but the performance in another arm is likely to be different.

Keeping in mind that increasing either stylus compliance or effective arm mass (which, of
Ten Aids in Choosing Record-Playing Equipment

Selected Guideposts to the Highest Quality

### Turntable and Arm

1. Average peak weighted flutter of no more than ±0.1%.
2. Rumble low enough to produce an ARLL-weighted measurement of -60 dB or lower.
3. No variation in speed when line voltage changes.
4. A cueing control that sets arm back down within a groove or two of where you lifted it.
5. In an automatic turntable or changer, a cueing cycle or change cycle not so slow as to bother you.
6. Arm resonance to cause a boost of no more than 1-2 dB in the 5- to 10-Hz range, and 3-4 dB in the 10- to 15-Hz range.

### Cartridge

7. A response curve flat ±2 dB from 30 to 15,000 Hz and with the channels matching within 1 dB.
8. Separation of channels no less than 20 dB between 100 and 15,000 Hz.
9. Trackability of +12 dB (above RIAA 0 VU) at 300 Hz, +18 dB at 1,000 Hz, and -5 dB through the 10,000- to 20,000-Hz band, all within a 3-dB tolerance.
10. Second-harmonic and intermodulation distortion as low as possible.

---

course, includes the weight of the pickup cartridge itself) will lower resonant frequency, while decreasing either will raise it, and that the optimum resonance-frequency range is about 10 to 15 Hz, you can draw some conclusions from our reports. The Shure V-15 Type III, with which we test tone arms, happens to produce a 6.5-Hz resonance in the SME arm, with which we test pickups. (Resonance is, of course, higher in the most recent SME, which Shure says the Type III was designed to complement.) This means that pickups for which we show a higher resonance frequency in the SME arm will also deliver a higher resonance than the Shure in other arms; those that measure lower in the SME will be lower in other arms too. This information can help you avoid poor pickup/arm matches.

Let's say, for example, that you're considering a pickup that we report produces a 10-Hz resonance in the SME arm and want to use it in an arm that checks out at 8 Hz with the Shure. Since this pickup produces a somewhat higher resonance than the Shure, it should be just about in the "ideal" range with this arm.

The output voltage measurement, given in millivolts per centimeter per second (of groove velocity) at 1 kHz, indicates the compatibility of the cartridge with your preamp. Rarely do problems arise in this area, and when they do they are normally discussed in the report. This figure gives a clue to channel balance: HF would look for a match within 1 dB (10%) between the two sensitivity measurements.

The 1-kHz square-wave photo provides some indication of the degree of damping of the stylus assembly. Ideal reproduction of the square wave would imply a flat top, a vertical rise and fall, and no overshoot, although this is only approached in practice. Some would claim that good performance is indicated by a rapid rise and fall time, no more than a 30% overshoot, and less than two cycles of ringing, though by that standard some very good-sounding cartridges do not reproduce square waves well.

The ideal vertical tracking angle for a cartridge is the same angle as that at which the record was cut. When the two match, distortion is minimized. Over the years, record companies have adopted a number of different "standards." The current RIAA recommendation calls for a 15-degree angle. In practice, any tracking angle between 10 and 20 degrees is acceptable.

Every stylus is examined microscopically to determine its geometry, size, orientation, and polish. HF reports these results as a general indication of the quality of the stylus.

The amount of lab data measured for an HF review is quite exhaustive, and rarely does any one device turn up spectacular figures in all of the tests. Moreover, the data represent necessary rather than sufficient conditions for good performance on the part of the product. To put it another way, while a product can flunk by coming up with a very bad number in any one of the tests, passing all of the lab tests we know of will not guarantee that it sounds good when used to reproduce music. And for HF, that is what matters most—making music. So in the final analysis the lab data collectively represent a guide: useful, to be sure, but only a guide. The final judge is the ear.
Directory of Turntables,

THIS BUYER'S GUIDE is unusual in several respects. First, we have omitted all numerical data constituting manufacturers' claims about product performance—rumble, flutter, frequency response, channel separation, and the like. The variety of measurement techniques and weighting systems used makes the comparability of such specs suspect at best. But we have noted under "comments" when any product was given an HF test report, since our data are comparable.

Second, since space requirements make it impractical for us to include all record-playing equipment, we have narrowed the range on the basis of price and availability. Turntables whose nominal retail price is below $99.50 and phono cartridges below $49.50 are not listed. Prices shown are based on suggested retail values, rounded to the nearest $5.00 point.

The turntable section is divided into manual turntables, automatic single-play turntables, and changers. A listing in the "automatic" section implies at least that the tone arm of the unit in ques-

MANUAL SINGLE-PLAY TURNTABLES

<table>
<thead>
<tr>
<th>Brand (Distributor)</th>
<th>Model</th>
<th>Price</th>
<th>Drive system</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acoustic Research</td>
<td>AR XB</td>
<td>$145</td>
<td>Permanent magnet synchronous/belt</td>
<td>Available as AR X891 with Share M-400X cartridge for $200</td>
</tr>
<tr>
<td>Audio Retroflex (Fidelitone)</td>
<td>LT-76</td>
<td>275</td>
<td>Synchronous/belt</td>
<td>Automatic liftoff</td>
</tr>
<tr>
<td>Connoisseur (Herwit)</td>
<td>BD 2</td>
<td>130</td>
<td>Synchronous/belt</td>
<td>HF test report, 3/77; automatic shutoff</td>
</tr>
<tr>
<td></td>
<td>BD 2A</td>
<td>145</td>
<td>Synchronous/belt</td>
<td>Automatic shutoff</td>
</tr>
<tr>
<td>Dual (United Audio)</td>
<td>CS-704</td>
<td>310</td>
<td>DC/servo/direct</td>
<td>Automatic shutoff</td>
</tr>
<tr>
<td></td>
<td>502</td>
<td>160</td>
<td>8-pole synchronous/belt</td>
<td>Automatic shutoff</td>
</tr>
<tr>
<td></td>
<td>510</td>
<td>200</td>
<td>8-pole synchronous/belt</td>
<td>Automatic shutoff</td>
</tr>
<tr>
<td>Empire</td>
<td>698</td>
<td>400</td>
<td>Hysteresis synchronous/belt</td>
<td>Automatic liftoff</td>
</tr>
<tr>
<td></td>
<td>510</td>
<td>200</td>
<td>8-pole synchronous/belt</td>
<td>Automatic shutoff</td>
</tr>
<tr>
<td>Fisher</td>
<td>MT-630</td>
<td>200</td>
<td>DC/servo/direct</td>
<td>Automatic liftoff</td>
</tr>
<tr>
<td></td>
<td>MT-6010</td>
<td>120</td>
<td>AC synchronous/belt</td>
<td>Automatic shutoff</td>
</tr>
<tr>
<td>Fons</td>
<td>CQ-30</td>
<td>250</td>
<td>DC/servo/belt</td>
<td>Continuous variable, 10-99 rpm; preatt, 33</td>
</tr>
<tr>
<td></td>
<td>Mk II</td>
<td></td>
<td></td>
<td>Automatic shutoff</td>
</tr>
<tr>
<td>Gallé</td>
<td>GT-2101</td>
<td>1,985</td>
<td>DC/servo/direct</td>
<td>Tangent-tracking arm</td>
</tr>
<tr>
<td>Garrard (Plessey)</td>
<td>DD-75</td>
<td>230</td>
<td>DC/servo/direct</td>
<td>Continuous variable, 10-99 rpm, preatt, 33</td>
</tr>
<tr>
<td>Herman-Kardon</td>
<td>ST-6</td>
<td>325</td>
<td>Synchronous/belt</td>
<td>Automatic shutoff</td>
</tr>
</tbody>
</table>

SECOND PLAYS

<table>
<thead>
<tr>
<th>Brand (Distributor)</th>
<th>Model</th>
<th>Price</th>
<th>Drive system</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hitachi</td>
<td>PS/38</td>
<td>200</td>
<td>DC/servo/direct</td>
<td></td>
</tr>
<tr>
<td></td>
<td>PS/48</td>
<td>240</td>
<td>DC/servo/direct</td>
<td></td>
</tr>
<tr>
<td>JVC</td>
<td>QL 8</td>
<td>800</td>
<td>DC/servo/direct</td>
<td></td>
</tr>
<tr>
<td>Kenwood</td>
<td>KD-500</td>
<td>200</td>
<td>DC/servo/direct</td>
<td></td>
</tr>
<tr>
<td>Lafayette</td>
<td>T-2000</td>
<td>130</td>
<td>Synchronous/belt</td>
<td></td>
</tr>
<tr>
<td></td>
<td>T-4000</td>
<td>180</td>
<td>DC/servo/belt</td>
<td></td>
</tr>
<tr>
<td></td>
<td>T-6000</td>
<td>230</td>
<td>DC/servo/direct</td>
<td></td>
</tr>
<tr>
<td>Lexco (Ultra)</td>
<td>L-75/S</td>
<td>165</td>
<td>AC/roller</td>
<td></td>
</tr>
<tr>
<td></td>
<td>L-80</td>
<td>140</td>
<td>Synchronous/belt</td>
<td></td>
</tr>
<tr>
<td></td>
<td>L-82</td>
<td>160</td>
<td>Synchronous/belt</td>
<td></td>
</tr>
<tr>
<td></td>
<td>L-84</td>
<td>195</td>
<td>Synchronous/belt</td>
<td></td>
</tr>
<tr>
<td></td>
<td>L-90</td>
<td>300</td>
<td>Synchronous/belt</td>
<td></td>
</tr>
<tr>
<td>Linn Sondek (Audiophile Systems)</td>
<td>LP-12</td>
<td>400</td>
<td>Synchronous/belt</td>
<td></td>
</tr>
</tbody>
</table>
Tone Arms, and Cartridges

Track starts from rest, positions itself over the lead-in groove, descends and plays the disc, lifts off, and returns to rest without human intervention. Less automated models are listed as "manual," with notes of any salient automatic features in the "comments" column. All models that sequence two or more discs are listed under "changers." Turntable speeds are listed as: 1 for 33 rpm, 2 for 33 rpm and 45 rpm, 3 for 33, 45, and 78 rpm.

Stylus shapes of phono cartridges are cataloged as spherical, elliptical, or special. The last category includes all the configurations designed originally for CD-4 (Shibata, Pramanik, parabolic, hyperbolic, etc.) and spinoffs of them designed for two-channel material. It should be noted that a number of cartridges that have stylus shape and bandwidth suitable for use in CD-4 reproduction are sold primarily as two-channel devices and that the success of any of these pickups in reproducing CD-4 material will depend in part on the demodulator. The distinction between the two applications is not, therefore, a hard line.

<table>
<thead>
<tr>
<th>Brand (Distributor)</th>
<th>Model</th>
<th>Price</th>
<th>Motor type/Drive system</th>
<th>Taper arm</th>
<th>Taper angle</th>
<th>Shunt</th>
<th>Single-plane</th>
<th>Dual-plane</th>
<th>Cartridge</th>
<th>Manual-or-electrostatic</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Luxman</td>
<td>PD 121</td>
<td>495</td>
<td>DC servo/direct</td>
<td>± 1% 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Marantz</td>
<td>6100</td>
<td>130</td>
<td>Synchronous/belt</td>
<td>± 2% 2</td>
<td>± 3% 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>J. A. Michell</td>
<td>Prisma</td>
<td>700</td>
<td>DC servo/belt</td>
<td>± 10% 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reference Hydraulic</td>
<td></td>
<td>550</td>
<td>Hysteresis synchronous/belt</td>
<td>± 2% 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Micro Seiki (Seiki)</td>
<td>MB-10</td>
<td>100</td>
<td>4-pole synchronous/belt</td>
<td></td>
<td>± 6% 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>MB-15</td>
<td>150</td>
<td>4-pole synchronous/belt</td>
<td></td>
<td>± 6% 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>DD-20</td>
<td>200</td>
<td>DC servo/direct</td>
<td></td>
<td>± 6% 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>DD-30</td>
<td>300</td>
<td>DC servo/direct</td>
<td></td>
<td>± 6% 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>DD-40</td>
<td>400</td>
<td>DC servo/direct</td>
<td></td>
<td>± 6% 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>DDX-100</td>
<td>600</td>
<td>DC servo/direct</td>
<td>± 6% 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mida</td>
<td>T-3112</td>
<td>120</td>
<td>4-pole synchronous/belt</td>
<td></td>
<td>± 6% 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>T-3115</td>
<td>200</td>
<td>4-pole synchronous/direct</td>
<td></td>
<td>± 6% 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Comments:
- Supplied with SME and uncut bayonet arm mounts; precut mounts available for other arms.
- Automatic shut-off.
- Automatic shut-off, also without arm, as Model 6320.
- Contains integral disc cleaning arm; price without arm, $600.
- Contains integral disc cleaning arm and stylus brush; price without arm, $450.
- Automatic shut-off.
- Automatic shut-off.
- MA-505 arm allows VTF adjustment during play; provision for outboard mounting of second arm.
- NF test report, 3/77; up to 3 arms can be mounted on adapter brackets.
<table>
<thead>
<tr>
<th>Brand (Distributor)</th>
<th>Model</th>
<th>Price</th>
<th>Motor type/ Drive system</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Netronics</strong> (Kit)</td>
<td>350D</td>
<td>90</td>
<td>DC servo/direct</td>
<td>±3% 2</td>
</tr>
<tr>
<td></td>
<td>350F</td>
<td>120</td>
<td>DC digital servo loop/direct</td>
<td>±5% 3</td>
</tr>
<tr>
<td><strong>Optonica (Sharp)</strong></td>
<td>RP-3636</td>
<td>300</td>
<td>AC servo/direct</td>
<td>±4% 2</td>
</tr>
<tr>
<td></td>
<td>RP-1414</td>
<td>140</td>
<td>4-pole synchronous/belt</td>
<td>±2% 2</td>
</tr>
<tr>
<td><strong>Philips</strong></td>
<td>GA-212</td>
<td>170</td>
<td>DC servo/belt</td>
<td>±3% 2</td>
</tr>
<tr>
<td></td>
<td>GA-427</td>
<td>100</td>
<td>Synchronous/belt</td>
<td>±3% 2</td>
</tr>
<tr>
<td><strong>Pioneer</strong> (U.S. Pioneer)</td>
<td>PL-1120</td>
<td>100</td>
<td>Synchronous/belt</td>
<td>±2% 2</td>
</tr>
<tr>
<td></td>
<td>PL-1150</td>
<td>125</td>
<td>4-pole synchronous/belt</td>
<td>±2% 2</td>
</tr>
<tr>
<td><strong>Realistic</strong> (Radio Shack)</td>
<td>Lab 100</td>
<td>100</td>
<td>Synchronous/belt</td>
<td>±2% 2</td>
</tr>
<tr>
<td></td>
<td>Lab 300</td>
<td>160</td>
<td>6-pole synchronous/belt</td>
<td>±2% 2</td>
</tr>
<tr>
<td><strong>Rotel</strong></td>
<td>RP-1100Q</td>
<td>130</td>
<td>4-pole synchronous/belt</td>
<td>±2% 2</td>
</tr>
<tr>
<td></td>
<td>RP-2500</td>
<td>180</td>
<td>DC servo/belt</td>
<td>±5% 2</td>
</tr>
<tr>
<td></td>
<td>RP-3000</td>
<td>220</td>
<td>AC servo/direct</td>
<td>±5% 2</td>
</tr>
<tr>
<td><strong>Sansui</strong></td>
<td>SR-222</td>
<td>115</td>
<td>synchronous/belt</td>
<td>±2% 2</td>
</tr>
<tr>
<td></td>
<td>SR-929</td>
<td>430</td>
<td>DC/direct</td>
<td>±3.5% 2</td>
</tr>
<tr>
<td></td>
<td>SR-525</td>
<td>200</td>
<td>DC/direct</td>
<td>±3.5% 2</td>
</tr>
<tr>
<td></td>
<td>FK-1080</td>
<td>125</td>
<td>4-pole, 16-pole synchronous/belt</td>
<td>±2% 2</td>
</tr>
<tr>
<td><strong>Scott</strong></td>
<td>PS-16</td>
<td>130</td>
<td>6-pole synchronous/belt</td>
<td>±2% 2</td>
</tr>
<tr>
<td></td>
<td>PS-76</td>
<td>220</td>
<td>DC servo/direct</td>
<td>±3% 2</td>
</tr>
<tr>
<td><strong>Sirey</strong></td>
<td>PS-1100</td>
<td>100</td>
<td>AC induction/driver</td>
<td>±2% 2</td>
</tr>
<tr>
<td></td>
<td>PS-1700</td>
<td>140</td>
<td>Synchronous/belt</td>
<td>±2% 2</td>
</tr>
<tr>
<td></td>
<td>PS-3300</td>
<td>200</td>
<td>DC servo/direct</td>
<td>±4% 2</td>
</tr>
<tr>
<td></td>
<td>PS-3750</td>
<td>220</td>
<td>DC servo/direct</td>
<td>±4% 2</td>
</tr>
<tr>
<td></td>
<td>PS-4750</td>
<td>300</td>
<td>DC servo/direct</td>
<td>±4% 2</td>
</tr>
<tr>
<td></td>
<td>PS-8350</td>
<td>900</td>
<td>AC torque servo/direct</td>
<td>±4% 2</td>
</tr>
<tr>
<td><strong>Stanton Magnetics</strong></td>
<td>8004-II</td>
<td>200</td>
<td>24-pole synchronous/belt</td>
<td>±2% 2</td>
</tr>
<tr>
<td></td>
<td>8004-IIB</td>
<td>175</td>
<td>24-pole synchronous/belt</td>
<td>±2% 2</td>
</tr>
<tr>
<td></td>
<td>8004-IA</td>
<td>180</td>
<td>24-pole synchronous/belt</td>
<td>±2% 2</td>
</tr>
<tr>
<td></td>
<td>8004-IV</td>
<td>225</td>
<td>24-pole synchronous/belt</td>
<td>±2% 2</td>
</tr>
<tr>
<td><strong>Technics</strong> (Panasonic)</td>
<td>SL-20</td>
<td>100</td>
<td>DC servo/belt</td>
<td>±6% 2</td>
</tr>
<tr>
<td></td>
<td>SL-20A</td>
<td>110</td>
<td>DC servo/belt</td>
<td>±6% 2</td>
</tr>
<tr>
<td></td>
<td>SL-20B</td>
<td>115</td>
<td>DC servo/belt</td>
<td>±6% 2</td>
</tr>
<tr>
<td></td>
<td>SL-20C</td>
<td>120</td>
<td>DC servo/belt</td>
<td>±6% 2</td>
</tr>
<tr>
<td></td>
<td>SL-20D</td>
<td>125</td>
<td>DC servo/belt</td>
<td>±6% 2</td>
</tr>
<tr>
<td></td>
<td>SL-20E</td>
<td>130</td>
<td>DC servo/belt</td>
<td>±6% 2</td>
</tr>
<tr>
<td></td>
<td>SL-20F</td>
<td>135</td>
<td>DC servo/belt</td>
<td>±6% 2</td>
</tr>
<tr>
<td></td>
<td>SL-20G</td>
<td>140</td>
<td>DC servo/belt</td>
<td>±6% 2</td>
</tr>
<tr>
<td></td>
<td>SL-20H</td>
<td>145</td>
<td>DC servo/belt</td>
<td>±6% 2</td>
</tr>
<tr>
<td></td>
<td>SL-20I</td>
<td>150</td>
<td>DC servo/belt</td>
<td>±6% 2</td>
</tr>
<tr>
<td></td>
<td>SL-20J</td>
<td>155</td>
<td>DC servo/belt</td>
<td>±6% 2</td>
</tr>
<tr>
<td></td>
<td>SL-20K</td>
<td>160</td>
<td>DC servo/belt</td>
<td>±6% 2</td>
</tr>
<tr>
<td></td>
<td>SL-20L</td>
<td>165</td>
<td>DC servo/belt</td>
<td>±6% 2</td>
</tr>
<tr>
<td></td>
<td>SL-20M</td>
<td>170</td>
<td>DC servo/belt</td>
<td>±6% 2</td>
</tr>
<tr>
<td></td>
<td>SL-20N</td>
<td>175</td>
<td>DC servo/belt</td>
<td>±6% 2</td>
</tr>
<tr>
<td></td>
<td>SL-20O</td>
<td>180</td>
<td>DC servo/belt</td>
<td>±6% 2</td>
</tr>
<tr>
<td></td>
<td>SL-20P</td>
<td>185</td>
<td>DC servo/belt</td>
<td>±6% 2</td>
</tr>
<tr>
<td></td>
<td>SL-20Q</td>
<td>190</td>
<td>DC servo/belt</td>
<td>±6% 2</td>
</tr>
<tr>
<td></td>
<td>SL-20R</td>
<td>195</td>
<td>DC servo/belt</td>
<td>±6% 2</td>
</tr>
<tr>
<td></td>
<td>SL-20S</td>
<td>200</td>
<td>DC servo/belt</td>
<td>±6% 2</td>
</tr>
<tr>
<td></td>
<td>SL-20T</td>
<td>205</td>
<td>DC servo/belt</td>
<td>±6% 2</td>
</tr>
<tr>
<td></td>
<td>SL-20U</td>
<td>210</td>
<td>DC servo/belt</td>
<td>±6% 2</td>
</tr>
<tr>
<td></td>
<td>SL-20V</td>
<td>215</td>
<td>DC servo/belt</td>
<td>±6% 2</td>
</tr>
<tr>
<td></td>
<td>SL-20W</td>
<td>220</td>
<td>DC servo/belt</td>
<td>±6% 2</td>
</tr>
<tr>
<td></td>
<td>SL-20X</td>
<td>225</td>
<td>DC servo/belt</td>
<td>±6% 2</td>
</tr>
<tr>
<td></td>
<td>SL-20Y</td>
<td>230</td>
<td>DC servo/belt</td>
<td>±6% 2</td>
</tr>
<tr>
<td></td>
<td>SL-20Z</td>
<td>235</td>
<td>DC servo/belt</td>
<td>±6% 2</td>
</tr>
</tbody>
</table>
**CHANGERS**

<table>
<thead>
<tr>
<th>Brand (Distributor)</th>
<th>Model</th>
<th>Price</th>
<th>Motor type / Drive system</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>BIC</strong></td>
<td>940</td>
<td>$110</td>
<td>6 * 2</td>
</tr>
<tr>
<td></td>
<td>960</td>
<td>160</td>
<td>24 pole synchronous/belt</td>
</tr>
<tr>
<td></td>
<td>980</td>
<td>200</td>
<td>24 pole synchronous/belt</td>
</tr>
<tr>
<td></td>
<td>1000</td>
<td>280</td>
<td>24 pole synchronous/belt</td>
</tr>
<tr>
<td><strong>BSR</strong></td>
<td>100 WAX</td>
<td>110</td>
<td>5 * 2</td>
</tr>
<tr>
<td></td>
<td>200 BAX</td>
<td>140</td>
<td>6 * 2</td>
</tr>
<tr>
<td></td>
<td>2630W</td>
<td>100</td>
<td>6 * 2</td>
</tr>
<tr>
<td><strong>Dual (United Audio)</strong></td>
<td>1249</td>
<td>280</td>
<td>6 * 2</td>
</tr>
<tr>
<td></td>
<td>1228</td>
<td>200</td>
<td>6 * 2</td>
</tr>
<tr>
<td></td>
<td>775M</td>
<td>120</td>
<td>6 * 2</td>
</tr>
<tr>
<td></td>
<td>990B</td>
<td>170</td>
<td>6 * 2</td>
</tr>
<tr>
<td><strong>Elac (Adcom)</strong></td>
<td>PC-830</td>
<td>190</td>
<td>8 * 3</td>
</tr>
<tr>
<td></td>
<td>JL-835</td>
<td>160</td>
<td>6 * 3</td>
</tr>
<tr>
<td></td>
<td>JL-845</td>
<td>250</td>
<td>10 * 2</td>
</tr>
<tr>
<td><strong>Philips</strong></td>
<td>GA-406</td>
<td>160</td>
<td>5 * 3</td>
</tr>
<tr>
<td><strong>Realistic (Radio Shack)</strong></td>
<td>Miracord 45</td>
<td>150</td>
<td>2 * 2</td>
</tr>
<tr>
<td></td>
<td>Miracord 46</td>
<td>200</td>
<td>6 * 3</td>
</tr>
<tr>
<td><strong>Technics (Panasonic)</strong></td>
<td>SL 1350</td>
<td>350</td>
<td>6 * 10% 2 * 2</td>
</tr>
</tbody>
</table>

**Comments**

- Same as 940 plus removable headshell and record support
- Same as 980 plus optional remote; 2 motor drive system; antiskate mat
- Includes ADC K66E cartridge
- Includes ADC VLM MK II cartridge
- Includes ADC K66E cartridge
- Same as 940 plus removable headshell and record support
- HF test report, 1/75; tangential tracking arm; automatic disc diameter sensing and speed selection

**TURNTABLES**

<table>
<thead>
<tr>
<th>Brand (Distributor)</th>
<th>Model</th>
<th>Price</th>
<th>Motor type / Drive system</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pioneer</strong> (U.S. Pioneer)</td>
<td>PL-170</td>
<td>175</td>
<td>4-pole synchronous/belt</td>
</tr>
<tr>
<td></td>
<td>PL-530</td>
<td>250</td>
<td>DC servo/direct</td>
</tr>
<tr>
<td></td>
<td>PL-570</td>
<td>400</td>
<td>Servo/direct</td>
</tr>
<tr>
<td><strong>Sansui</strong></td>
<td>FR-3080</td>
<td>200</td>
<td>4-pole synchronous/belt</td>
</tr>
<tr>
<td></td>
<td>FR-5080S</td>
<td>260</td>
<td>DC/direct</td>
</tr>
<tr>
<td><strong>Scott</strong></td>
<td>PS-36</td>
<td>170</td>
<td>16-pole synchronous/belt</td>
</tr>
<tr>
<td><strong>Sony</strong></td>
<td>PS-7200</td>
<td>165</td>
<td>Synchronous/belt</td>
</tr>
<tr>
<td></td>
<td>PS-4300</td>
<td>270</td>
<td>DC servo/direct</td>
</tr>
<tr>
<td><strong>Technics (Panasonic)</strong></td>
<td>SL 1300</td>
<td>300</td>
<td>DC servo/direct</td>
</tr>
</tbody>
</table>

**Comments**

- Separate tone arm motor for auto functions
- Includes ADC K66E cartridge
- Includes ADC VLM MK II cartridge
- Includes ADC K66E cartridge
- Includes ADC K66E cartridge
- Separate motor for tone arm, automatic disc diameter sensing and speed selection
- Optional dust cover, $13.00

**Brand**

- Pioneer
- Sansui
- Scott
- Sony
- Technics

**Motor type**

- 4-pole synchronous/belt
- 6-pole synchronous/belt
- 16-pole synchronous/belt
- DC servo/direct
- Servo/direct
- DC/direct
- 16-pole synchronous/belt

**Drive system**

- Belt drive
- Synchronous/belt
- Synchronous/direct
- Servo/direct
- DC/direct
- DC servo/direct
- 4-pole synchronous/belt
- 12 pole synchronous/belt

**Price**

- $110
- $140
- $160
- $170
- $190
- $200
- $250
- $270
- $300
- $350
- $380
- $400
- $420
- $460
- $500
- $530
- $570
- $600
- $630
- $680
- $700
- $720
- $750
- $770
- $800
- $850
- $900
- $950
- $1000

**Motor type**

- 4-pole synchronous/belt
- 6-pole synchronous/belt
- 16-pole synchronous/belt
- DC servo/direct
- Servo/direct
- DC/direct
- 16-pole synchronous/belt

**Drive system**

- Belt drive
- Synchronous/belt
- Synchronous/direct
- Servo/direct
- DC/direct
- DC servo/direct
- 4-pole synchronous/belt
- 12 pole synchronous/belt
CARTRIDGES

<table>
<thead>
<tr>
<th>Brand/Distributor</th>
<th>Model</th>
<th>Price</th>
<th>Stylist</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADC</td>
<td>L1M 36 MA II</td>
<td>55</td>
<td>Elliptical</td>
<td></td>
</tr>
<tr>
<td></td>
<td>VLM MA II</td>
<td>75</td>
<td>Elliptical</td>
<td></td>
</tr>
<tr>
<td></td>
<td>XLM MA II</td>
<td>100</td>
<td>Elliptical</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Super XLM II</td>
<td>145</td>
<td>Special</td>
<td>HF test report, 10/75</td>
</tr>
<tr>
<td>AKG</td>
<td>P6E</td>
<td>50</td>
<td>Elliptical</td>
<td></td>
</tr>
<tr>
<td></td>
<td>P7E</td>
<td>70</td>
<td>Elliptical</td>
<td></td>
</tr>
<tr>
<td></td>
<td>P8E</td>
<td>100</td>
<td>Elliptical</td>
<td></td>
</tr>
<tr>
<td></td>
<td>P8ES</td>
<td>135</td>
<td>Elliptical</td>
<td></td>
</tr>
<tr>
<td>Audio-Technica</td>
<td>AT-12E</td>
<td>55</td>
<td>Elliptical</td>
<td></td>
</tr>
<tr>
<td></td>
<td>AT-12E</td>
<td>65</td>
<td>Elliptical</td>
<td></td>
</tr>
<tr>
<td></td>
<td>AT-13</td>
<td>75</td>
<td>Special</td>
<td>Tapered cantilever</td>
</tr>
<tr>
<td></td>
<td>AT-13X</td>
<td>65</td>
<td>Elliptical</td>
<td></td>
</tr>
<tr>
<td></td>
<td>AT-14E</td>
<td>85</td>
<td>Special</td>
<td>Tapered cantilever</td>
</tr>
<tr>
<td></td>
<td>AT-15E</td>
<td>100</td>
<td>Special</td>
<td>Tapered cantilever</td>
</tr>
<tr>
<td></td>
<td>AT-15SA</td>
<td>125</td>
<td>Special</td>
<td>HF test report, 12/74; tapered cantilever</td>
</tr>
<tr>
<td></td>
<td>AT-205X</td>
<td>175</td>
<td>Special</td>
<td>Tapered cantilever</td>
</tr>
<tr>
<td>B&amp;O</td>
<td>MMC-2000</td>
<td>50</td>
<td>Spherical</td>
<td></td>
</tr>
<tr>
<td></td>
<td>MMC-4000</td>
<td>75</td>
<td>Elliptical</td>
<td></td>
</tr>
<tr>
<td></td>
<td>MMC-5000</td>
<td>100</td>
<td>Special</td>
<td></td>
</tr>
<tr>
<td></td>
<td>MMC-6000</td>
<td>125</td>
<td>Special</td>
<td>HF test report, 12/74</td>
</tr>
<tr>
<td>Decca</td>
<td>London</td>
<td>150</td>
<td>Elliptical</td>
<td></td>
</tr>
<tr>
<td>(Racal)</td>
<td>London</td>
<td>130</td>
<td>Spherical</td>
<td></td>
</tr>
<tr>
<td>Dynavector</td>
<td>20A</td>
<td>150</td>
<td>Special</td>
<td>High-output moving coil</td>
</tr>
<tr>
<td>(Audionalyist)</td>
<td>20B</td>
<td>190</td>
<td>Special</td>
<td>Same as 20A with beryllium cantilever</td>
</tr>
<tr>
<td>Empire</td>
<td>2000E/II</td>
<td>55</td>
<td>Elliptical</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2000E/III</td>
<td>70</td>
<td>Elliptical</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2000E</td>
<td>100</td>
<td>Elliptical</td>
<td></td>
</tr>
<tr>
<td></td>
<td>4000D/I</td>
<td>85</td>
<td>Special</td>
<td></td>
</tr>
<tr>
<td></td>
<td>4000D/II</td>
<td>125</td>
<td>Special</td>
<td>HF test report, 12/74</td>
</tr>
<tr>
<td></td>
<td>4000D/III</td>
<td>150</td>
<td>Special</td>
<td>HF test report, 12/74</td>
</tr>
<tr>
<td>Goldring</td>
<td>G-205E</td>
<td>55</td>
<td>Elliptical</td>
<td></td>
</tr>
<tr>
<td>(Hervic)</td>
<td>G-405E</td>
<td>58</td>
<td>Elliptical</td>
<td></td>
</tr>
<tr>
<td></td>
<td>G-305E</td>
<td>70</td>
<td>Elliptical</td>
<td></td>
</tr>
<tr>
<td></td>
<td>G-905E</td>
<td>120</td>
<td>Elliptical</td>
<td></td>
</tr>
<tr>
<td>Grace</td>
<td>F3/L</td>
<td>120</td>
<td>Elliptical</td>
<td></td>
</tr>
<tr>
<td>(Sumiko)</td>
<td>SD-901/E</td>
<td>155</td>
<td>Elliptical</td>
<td></td>
</tr>
<tr>
<td>J. A. Mitchell</td>
<td>FL-704</td>
<td>225</td>
<td>Elliptical</td>
<td></td>
</tr>
<tr>
<td>(Dick Wagner)</td>
<td>G-707</td>
<td>130</td>
<td>Elliptical</td>
<td></td>
</tr>
<tr>
<td>Micro</td>
<td>MA-505</td>
<td>150</td>
<td>Elliptical</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>&quot;Luminal trace&quot; stylus construction</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>High-output moving coil</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(no transformer or pre-amp required)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Brand/Distributor</th>
<th>Model</th>
<th>Price</th>
<th>Stylist</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grado</td>
<td>F-1+</td>
<td>75</td>
<td>Special</td>
<td>Super flux-bridge</td>
</tr>
<tr>
<td></td>
<td>F-2+</td>
<td>50</td>
<td>Elliptical</td>
<td>Super flux-bridge</td>
</tr>
<tr>
<td></td>
<td>F-3E+</td>
<td>50</td>
<td>Elliptical</td>
<td>Super flux-bridge</td>
</tr>
<tr>
<td></td>
<td>G-1+</td>
<td>150</td>
<td>Special</td>
<td>Super flux-bridge</td>
</tr>
<tr>
<td>Joseph Grado</td>
<td>Signature</td>
<td>275</td>
<td>Special</td>
<td>Super flux-bridge</td>
</tr>
<tr>
<td>MicroAcoustics</td>
<td>282-e</td>
<td>90</td>
<td>Elliptical</td>
<td>Direct-coupled electrod</td>
</tr>
<tr>
<td></td>
<td>2000E</td>
<td>120</td>
<td>Elliptical</td>
<td>Direct-coupled electrod</td>
</tr>
<tr>
<td></td>
<td>MC-20</td>
<td>120</td>
<td>Special</td>
<td>Moving coil, requires transformer or pre-amp</td>
</tr>
<tr>
<td></td>
<td>SL-900</td>
<td>100</td>
<td>Special</td>
<td>Moving coil, requires transformer or pre-amp</td>
</tr>
<tr>
<td></td>
<td>VMS-20E</td>
<td>60</td>
<td>Elliptical</td>
<td>HF test report, 9/75; variable magnetic shunt</td>
</tr>
<tr>
<td>Pickering</td>
<td>XV-15/400E</td>
<td>55</td>
<td>Elliptical</td>
<td></td>
</tr>
<tr>
<td></td>
<td>XV-15/504</td>
<td>60</td>
<td>Elliptical</td>
<td></td>
</tr>
<tr>
<td></td>
<td>XV-15/780E</td>
<td>65</td>
<td>Elliptical</td>
<td></td>
</tr>
<tr>
<td></td>
<td>XV-15/2000E</td>
<td>80</td>
<td>Elliptical</td>
<td></td>
</tr>
<tr>
<td></td>
<td>UV-15/2000Q</td>
<td>70</td>
<td>Special</td>
<td></td>
</tr>
<tr>
<td></td>
<td>XV-4500Q</td>
<td>140</td>
<td>Special</td>
<td></td>
</tr>
<tr>
<td>Satin</td>
<td>117G</td>
<td>155</td>
<td>Elliptical</td>
<td>Moving-coil, high-output, user-replaceable styli</td>
</tr>
<tr>
<td>(Giauwa)</td>
<td>1X4</td>
<td>195</td>
<td>Elliptical</td>
<td>Moving-coil, high-output, user-replaceable styli</td>
</tr>
<tr>
<td></td>
<td>1X4</td>
<td>240</td>
<td>Special</td>
<td>Moving-coil, high-output, user-replaceable styli</td>
</tr>
<tr>
<td></td>
<td>1X4E</td>
<td>325</td>
<td>Special</td>
<td>Beryllium cantilever, moving coil, high-output, user-replaceable styli</td>
</tr>
<tr>
<td>Shure</td>
<td>M-2A</td>
<td>75</td>
<td>Special</td>
<td>HF test report, 11/76</td>
</tr>
<tr>
<td></td>
<td>M-91ED</td>
<td>10</td>
<td>Elliptical</td>
<td>HF test report, 10/72</td>
</tr>
<tr>
<td></td>
<td>M-92ED</td>
<td>65</td>
<td>Elliptical</td>
<td>HF test report, 10/72</td>
</tr>
<tr>
<td></td>
<td>V15 Type III</td>
<td>85</td>
<td>Special</td>
<td>HF test report, 7/73</td>
</tr>
<tr>
<td>Sonus</td>
<td>Blue Label</td>
<td>125</td>
<td>Special</td>
<td>HF test report, 9/76</td>
</tr>
<tr>
<td>(Sonic Research)</td>
<td>Red Label</td>
<td>105</td>
<td>Elliptical</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Green Label</td>
<td>90</td>
<td>Spherical</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Silver Label E</td>
<td>60</td>
<td>Elliptical</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Silver Label F</td>
<td>70</td>
<td>Special</td>
<td></td>
</tr>
<tr>
<td>Supex</td>
<td>SD-900E</td>
<td>150</td>
<td>Elliptical</td>
<td>Moving-coil, transformer or pre-amp recommended</td>
</tr>
<tr>
<td>(Shure)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Technics (Pansonic)</td>
<td>EP-450</td>
<td>65</td>
<td>Special</td>
<td></td>
</tr>
</tbody>
</table>
THE DISCWASHER GROUP OF COMPANIES
which produce and distribute quality audio products

present

HIGH FIDELITY's

100 Years of Recording

A series of four original acrylic paintings by Jim Jonson

Inspired by the centennial of the phonograph and planned and commissioned by HIGH FIDELITY's editors, the series depicts the development of recording through its leading figures in music and the recording business, its dominant means of sound reproduction, and its principal innovations in audio technology. The first of the four, "The Cylinder Era," appeared in February; the remaining two will be published later this year.

Jim Jonson, a Connecticut resident, has produced paintings for Saturday Evening Post, Sports Illustrated, Fortune, Reader's Digest, Boys' Life, and other journals and has fulfilled commissions for corporations ranging from Capitol Records to American Airlines and the Ford Motor Company. His work has been exhibited in the Denver Art Museum, Art Museum of Sport, and the Los Angeles County Art Museum, among others, and his one-man shows have been seen in many major galleries. A portfolio of Mr. Jonson's drawings and paintings was recently published by Prentice-Hall.

The Discwasher Group is proud to present the second of this distinguished artist's portrayals of "100 Years of Recordings."

Part II: The Acoustic Era
The Acoustic Era  March 18, 1902, is a seminal date for the disc phonograph—or gramophone as Emile Berliner called it and as it still is called in most of the world. On that day the up-and-coming tenor Enrico Caruso, who with the gramophone dominates Jim Jonson’s painting of the era (roughly the first quarter of this century), made his first recordings in Milan. A year later he was a major international opera star; a decade later virtually every major musical star had made discs and the cylinder record was in rapid decline. Caruso, costumed here as Meyerbeer’s Vasco da Gama, was to record exclusively for Victor Red Seal (its “Nipper” logo appears behind him) from 1903 to his death in 1921.

While the acoustic recording technique favored the human voice—and Caruso in a sense “made” the phonograph because of his exceptionally phonogenic voice—not all the Red Seal stars were singers. Ignace Jan Paderewski (continuing clockwise from Caruso’s hat) was overshadowed in sheer technique by a number of other recording pianists, but his reputation as Polish patriot, statesman, and man of letters made him, perhaps, the most famous. Similarly, Fritz Kreisler overshadows other violinists partly because of his long career and his many popular compositions—some of which created something of a scandal when it was learned that they were not by the “old masters” in whose style Kreisler had written them.

Conductor Landon Ronald, later knighted for his services to music, was an important early acquisition of the Gramophone Company, primarily because his wide acquaintance in musical circles was critical in persuading many stars to record. The orchestra, however, posed severe problems to the recording horn, which responded adequately only to nearby sounds. The stringed instruments in particular could not be picked up realistically in large groups. Some companies substituted brasses; others adopted the Stroh violin, whose small, solid sounding board replaced the body of the instrument while metal horns focused and directed the sound.

Beside the Stroh violin is a particularly elegant variant of the Queen Anne Victrola, which—with its totally enclosed reproducing horn—made the phonograph unequivocally at home in the best-appointed parlors. The Queen Anne models and the Red Seal discs together led in establishing the social acceptability of recorded music.

While most of the prestige-label artists were European, a few were native products. Among the most eminent was alto Louise Homer (bottom right, as Amneris). In popular music, however, indigenous artists like Ted Lewis (in top hat) were the rule and imported entertainers like Sir Harry Lauder (in kilt) the exception. A few, like John McCormack (next to Lauder), cut across all national and musical boundaries.

McCormack—young, unknown, and poor in 1904—was delighted to step before the recording horn. Established artists often were not. The “legendary” soprano Adelina Patti (continuing to the left of McCormack), already in her sixties and retired, was persuaded to entertain the equipment and its operators in her Welsh castle in 1905. Lilli Lehmann was almost as old (she had sung in the first Bayreuth season in 1876) and as legendary, and even more versatile; her Odeon discs of the period range from the bel canto to the heroic.

Until adequate symphonic recordings could be managed, the brass band offered the most stirring sounds to be had on Berliner’s discs, as it had on Edison’s cylinders. But though John Philip Sousa’s band recorded extensively for both, he openly attacked both (see HF, November 1973) as spoilers of musical amateurism and appreciation; the juxtaposition of Sousa’s face with Berliner’s gramophone may be taken equally as confrontation and partnership.

The small full-length figure (he was, in fact, tiny) is Fred Gaisberg, who pioneered as producer, recordist, and a&r man. He first recorded Caruso, Patti, Chaliapin, and many others. Looming beside him are the faces of Emile Berliner himself and Eldridge Johnson, originally Berliner’s supplier (from the Camden, N.J., plant in the background) of spring-wind motors but ultimately the man who developed the Victor empire from Berliner’s gramophone.

But, as Johnson understood, it was the stars—particularly the opera stars—who made the Victrola the Kodak of American phonography. Soprano Geraldine Farrar (shown at upper left) was the first American operatic superstar; in the Twenties her fans were known as Gerryflappers. Tenor Fernando de Lucia (some of whose European recordings were pressed here by Victor) not only was famous as a bel canto singer, but was director of the Phonotype Company, for whom he recorded both Il Barbiere di Siviglia and Rigoletto complete. Feodor Chaliapin (shown as Don Basilio in Barbiere) was probably the most celebrated bass of the era.
The Perfect Combination:

Safety and Function

Discwasher Group

Discwasher® System. Patented uni-directional fibers act to "pick up" not "line up" dirt. Capillary absorbency removes all traces of fluid and contaminants. Simply the best, most convenient record care system.

D3 Fluid. Significantly better in contaminant suspension -- yet safe for delicate vinyl compounds and secretly anti-static. Only from Discwasher research.

SC-1. The only stylus cleaner with a special density brush, a magnifying mirror and a walnut case. A full year of research for $6.00. Unmatched in convenience and performance.

Pro-Disc, Environment. A freon-free system -- not a spray -- which perfectly distributes a micro-deposition of dry film protection on valuable recordings. Pro-Disc lowers playback distortion and vastly extends record life.


Zerostat. True electrostatic neutralization without cartridges to replace, cords to plug in or radioactivity. Better function at a lower price -- $24.95.

discwasher inc. 1407 N PROVIDENCE COLUMBIA, MO 65201
The diva, now eighty, talks about her career and her recordings.

**Rosa Ponselle Reminisces**

by James A. Drake

Forty years after Rosa Ponselle last appeared on stage, the legend of her career—beginning with her emergence from the vaudeville circuit onto the stage of the Metropolitan Opera in November 1918—remains firmly ingrained in the minds of most opera enthusiasts. On a recent visit to her villa outside Baltimore, I invited the great diva, now eighty years of age, to sort out the "facts" of her legendary career.

"It's true that I started out as a silent-movie pianist, but like everything else in my career I didn't seek it out myself. My sister Carmela, who had all the drive and ambition I lacked, took me to the manager of the Bristol movie house in Meriden [Connecticut] because she was convinced that I was old enough to start earning my keep. Before long the manager of the rival theater in town made me a better offer, and I took it. This same fellow had a second movie house near Wallingford, not far from Meriden, and he paid me extra to play there on weekends. From there I got a very good position as a soloist in a fashionable New Haven restaurant, and so that part is also true.

"As for my vaudeville career, that too was something that I merely happened to fall into. By 1915 my sister was a huge success in vaudeville, and at the time 'sister acts' were being booked by all the big managers. Gene Hughes, Carmela's manager at the time, asked her out of curiosity whether she knew of someone who could sing and who would be willing to pose as her sister. She told him that she had a real-life sister who could sing well, and so he told her to bring me to New York for an audition.

"The audition itself took place in Carmela's apartment, and I was my own accompanist. Before Hughes heard me sing he took one look at my waistline, which was far too big in those days, and then gestured to Carmela that I was too plump for the stage. Then he heard me, and all he said was, 'I don't give a good damn how fat she is, when can she open with you?'

"We made our vaudeville debut in the Bronx, and made our way to Brighton Beach and finally to the Riverside Theater; eventually, we played the Palace, which was the high point of any vaudeville career in those days. In terms of my getting to the Metropolitan, though, it was the Riverside Theater that proved important, because it was there that Romano Romani, who later became my coach.

James A. Drake is working on a biography of Rosa Ponselle.
heard Carmela and me and was very impressed with both of us.

"It was really Romani, rather than Caruso, who discovered us; Caruso entered the picture after Romani and our manager, William Thorner, had arranged for an initial audition before the Met's general manager, Giulio Gatti-Casazza. I first met Caruso during that audition. He had come to hear these singing sisters that Romani and Thorner had been filling his ears about. When he entered the room where the audition was held, he walked diagonally across the room and spoke to me as if I were one of his own. We took to each other from the moment we met, and as he was kidding me I could see him sizing me up, thinking to himself, 'Now here's a brash, outspoken little urchin whom I might want to sing with, if she's as good as she's cracked up to be.' I could just sense that this was what was going through his mind.

"After he heard me he told me confidently that I had everything I needed in the throat and in the heart, and that what remained was for me to get what I needed musically in my head. Then he told me flatly, 'You'll sing with me.' That next fall I made my debut opposite him in Forza del destino, and it seemed just that—the force of destiny.

"As for my debut, it is true that I had never sung on an operatic stage before I was engaged by the Metropolitan. But I want to point out that I was already a vaudeville headliner by the time I auditioned for the Met, and so I was accustomed to singing to very large audiences. Then too, as sometimes forgotten, Carmela's and my act was an operatic act. We sang arias from Les Contes d'Hoffmann, from such light classics as Victor Herbert's Mademoiselle Modiste—for our finale we even sang a duet version of the Prison Scene from Faust. You must remember that vaudeville and grand opera were no strangers to each other then. A great many established singers made vaudeville appearances in those days. I heard Alessandro Bonci during a vaudeville run he did.

"Still, even though I was used to singing fairly demanding music as a vaudevillian, I wasn't totally ready for the pressures of the Met. I knew very little about opera performing—I had only been in the opera house twice, once to see Caruso and Farrar in Madama Butterfly and then to see Caruso sing opposite Claudia Muzio in The Love of Three Kings.

"Even though it makes for a good story, I suppose, I didn't faint at any rehearsals. The truth is that I was extremely confident, right through the general rehearsal on the Wednesday of the week I made my debut. In fact, everyone at the Met, including Mr. Gatti, was impressed by how well I was handling the pressures they knew I was facing."

Ponselle later found out that Gatti had carried on a continuous argument with Caruso over the wisdom of letting her debut in a new production without trying her elsewhere. "If she succeeds," Gatti confessed to Caruso, "American singers will have the doors opened to them. If she fails, I will be on the first boat back to Italy and New York will never see my face again." And she did succeed, though not without scars. Between the general rehearsal and the day of her debut, the Italian tenor Giulio Crimi made his Met debut and received negative reviews from the New York critics.

"Unfortunately for me, my secretary happened to give me copies of the papers, and when I read what the critics did to an already well-established singer, I panicked. I was in such bad shape by the time I got to the opera house that I couldn't even manage my own makeup—I'd been given all kinds of sedatives and hardly knew where I was.

"To make matters worse, Thorner insisted that I vocalize in my dressing room just to make sure the voice was all right. That's when I really panicked—my voice sounded horrid, and I was sure I'd lost it. Later on I realized that I'd been vocalizing in a room that had massive drapes, heavy carpeting, and every other kind of sound-absorbing thing you could imagine.

"In any case, I managed to live through the first act in spite of myself, and then, wonder of wonders, I realized that I'd made it through the second act. From then on I was fairly stable, even though the soprano role in Forza lies very high. By the last act I was totally calm, but afterward I spent several days in the hospital recuperating from the emotional drainage I experienced.

Though she lived through her debut, it colored every other opening night in her career. "I was always nervous, no matter how many times I sang a role and how thoroughly I knew it. I took some comfort in knowing that Caruso, even though he was world famous, became nervous before every performance. Although I hardly knew him as a person, I could empathize with his nervousness."

"Hardly knew him as a person? What about all the legends in the Caruso biographies? That story about my being admitted to his hotel suite when he was thought to be dying is totally untrue. For some reason, and I can't explain why, the story first appeared in Dorothy Caruso's biography of her husband. She flattered me by giving me such an important place among Caruso's close friends."

"In fact, the only time I can ever remember talking with him in any personal way was during a train trip to Atlanta in the spring of 1919. Perhaps out of nervousness, he would sometimes walk through the cars' hallways on the train, and one time he saw that my door was open and asked if I minded if he came in. We must have passed an hour or so talking about whatever came to our minds, and in the course of it he told me about the many disappointments he had had in his life. Beyond that one conversation, I never spoke with him in any personal kind of way, nor did I ever get to know him well."
Ponselle provided accompaniment for an impromptu concert by a recent guest in her home, the Italian tenor Luciano Pavarotti. The photo on the piano is of Mamie Eisenhower.

But what of Caruso the professional colleague? And of the other legendary singers of her day? "Among tenors, there are two classes. In the first, there is but one: Caruso. He had the most beautiful, the most awesome tenor voice in my recollection. All the tenors who succeeded him are in the second category, and I wouldn't presume to try to rank them. Giovanni Martinelli, with whom I sang most, inherited most of Caruso's dramatic repertoire, and, though he was a great actor in his own right, his singing was always a well-studied effect, whereas Caruso's was totally natural. Beniamino Gigli's voice was as beautiful as any I've heard, and, while he was not in Caruso's league as an actor, there were certain roles in which he was almost peerless. Giacomo Lauri-Volpi, with whom I also sang frequently, had a fine voice and was a good actor, although most of his fame stemmed from his high notes; one didn't always remember the middle and bottom parts of his voice."

The mention of Lauri-Volpi, who sang Pollione to her Norma when the Met revived the opera for her in 1927, reminded Ponselle of one of her deepest fears. "People often ask me why I sang so little in Italy and instead concentrated most of my performing in this country. The answer is simple: I was terrified of Italy. All through my early career I'd keep hearing stories about the kind of treatment a singer might get from an Italian audience, especially in Florence. I finally consented to sing La Vestale there in a moment of weakness, and all the way over I cursed myself for ever agreeing to it."

Those worries proved needless. The audience could tear a singer apart like that." (Lauri-Volpi displayed his own brand of vitriol after the performance, smashing props, furniture, and anything else he found backstage.)

Ponselle is gratified by her recognition among the operatic greats but speaks warmly of many other sopranos she has heard. "I saw Emmy Destinn's Aida, and I can tell you that she was one of the greatest sopranos I ever heard. The same holds for Rosa Raisa, whom I saw in The Jewels of the Madonna and in Norma. Her Norma, while different from my own, was uniquely her own role, and every performance she gave was almost breathtaking.

"So, while it's fashionable to make comparative lists of the so-called 'greats,' I'm not convinced that it's a very productive thing to do. It's far better to focus upon what makes each of us unique. Outstanding voices, plus an incredible ability in pianissimo singing, made Elisabeth Rethberg and Zinka Milanov unique. Montserrat Caballé and Leontyne Price have unique voices that would stand out in any age—and the same with Joan Sutherland, whose repertoire is genuinely impressive. Maria Callas, whom I consider a great artist, had a dramatic uniqueness and was always a definitive actress in the many roles she undertook.

"The same with other vocal ranges, too. In my day there were singers whose interpretations of certain roles put them in a class by themselves—Antonio Scotti's Scarpia, Giuseppe de Luca's Rigoletto, Titta Ruffo's Don Carlo in Ernani, or Ezio Pinza's Don Giovanni, for instance. Just as they were definitive singers, so today we have brilliant vocalists like Luciano Pavarotti, Placido Domingo, Sherrill Milnes, and James Morris, all of whom breathe life into the roles they sing." Morris, incidentally, is among the more recent of Met singers who got his professional start under Ponselle at the Baltimore Civic Opera Company, her longtime pet project.

In nineteen Met seasons, Ponselle sang a strikingly varied repertoire: Aida, the Trovatore and Forza Leonorlas, Violetta, Elvira (Ernani), Luisa Miller, Norma, Giulia (La Vestale), Maddalena, Gioconda, Donna Anna. Santuzza, Carmen, Selika (L'Africaine), Rachel (La Juive), Rezia (Oberon). Was there a favorite? "It's like asking a mother which child is her favorite. Each role, like each child, is different and has its own set of characteristics. I will say that some roles that were rather easy for other sopranos were more difficult for me. The reverse was true too. Carmen and Santuzza were problematic for some singers, but both roles lay perfectly for my voice and I loved singing them. Still other roles will be difficult, no matter who you are or what era you happen to be singing in. Giulia and, of course, Norma make incredible vocal and dramatic demands."
One question about Ponselle’s Met career remains open: her abrupt retirement in 1937. Even today, she will only say, “People who know me will tell you that I am a victim of the emotions, and when I left it was for emotional rather than vocal reasons.”

There are no apparent regrets, and indeed her few professional regrets center around her commercial recordings. “I should have been born a generation later,” she says wistfully. “I was born too early for the long-playing record.”

Whatever their technical limitations, her records are in a class of their own. Yet, curiously, in an era dominated by the famous Victor Red Seal disc, she recorded first for Columbia. “I signed a Columbia contract in 1918. Thorner, my manager, argued that I would be better off there, since the competition would be far less than at Victor. “During my brief stay at Columbia, I recorded several duets, most of them with Carmela, although I did make operatic recordings with the baritone Riccardo Stracciari and with Charles Hackett, the American tenor. Then, too, I recorded several arias, including ‘Pace, pace, mio Dio’ from Forza, ‘Voi lo sapete’ from Cavalleria rusticana, and ‘Casta diva’ from Norma.”

When Columbia commemorated her seventy-fifth birthday in 1972 with an all-Verdi LP (Odyssey Y 31150), Ponselle carefully endorsed the effort by saying on the opening band of the record “Each season he would send Zirato or another emissary to approach me about singing under him, and I’d admit that I was too terrified to work under him. He knew how uneasy I was, and, while he paid me compliments that I wouldn’t trade for anything, he never pressed me by asking me directly.”

Between 1926 and 1930 Ponselle graced Victor with her most famous ensemble recordings, beginning with a full Aida Tomb Scene with Martinelli (also on VIC 1507), a marvelous “La Vergine degli angeli” from Forza with Pinza, and “Mira, o Norma” (again, on VIC 1507) with Marion Telva. “The Tomb Scene records with Martinelli were probably our most famous discs, though neither of us was totally satisfied with them. We first recorded together in Aida in the winter of 1924, and on that occasion we did the Tomb Scene and parts of the Nile Scene. They were recorded by the old acoustical process, and we wouldn’t approve them for public release. Two years later Victor brought us together again to record an electrical version of the Tomb Scene, and, though it was an improvement over the earlier one, we still didn’t particularly like it.”

“Finally, Victor set up a conference call so that Martinelli and I might reconsider. My main concern was that our voices didn’t sound balanced enough, and Martinelli agreed. During the phone conversation, Giovanni said to me, ‘Look, Rosa, it’s great singing, and the musical public will accept the balance problem.’ Needless to say, he was right.”

And what of her other Victor issues? “I like the ‘Pace, pace’ and ‘Ernani, involami,’ as well as the two discs I recorded from La Vestale in 1926. I’m not at all happy with the ‘Casta diva,’ since I could sing only the first verse, which kept me from showing the dramatic contrast in the second verse. Nor am I happy with the ‘Vergine degli angeli’ with Pinza, because an engineer boosted the volume of my voice, making it a more forte performance than I would ever have given in an opera house.”

“But I do like the ‘Mira, o Norma.’ Telva and I spent a whole summer at Lake Placid before we did Norma on-stage, and we worked out a way of squeezing each other’s hand to make sure that our voices were always synchronized, measure after measure. Happily, all that was captured in the recording we made of it.”
Critics were most generous in their praise when the Shure V-15 Type III phono cartridge was first introduced. The ultimate test, however, has been time. The engineering innovations, the uniform quality and superb performance of the V-15 Type III have made it the audiophile's choice as the source of sound for the finest music systems both here and abroad.

Consider making the relatively modest investment of a new cartridge to upgrade the performance of your entire hi-fi system. It will make a difference you can hear!

The original manuscript by J. S. Bach shown is reproduced by kind permission of The British Library.

Shure Brothers Inc.
222 Hartrey Ave.
Evanston, IL 60204
In Canada:
A. C. Simmonds & Sons Limited

MANUFACTURERS OF HIGH FIDELITY COMPONENTS, MICROPHONES, SOUND SYSTEMS AND RELATED CIRCUITRY.
Though unfinished, the underground quarters of the new musical-scientific institute in Paris already has the welcome mat out for the future-minded.

by Roy McMullen

If you're bored by antimodern Calamity Janes, weary of modish jeremiads against science and technology, and in general fed up with pessimism, you should visit Paris this summer. Specifically, you should head for the Right Bank and Pierre Boulez' new Institut de Recherche et Coordination Acoustique/Musique—IRCAM in the lingua franca of initials. Here you will find a most stimulating symbol of faith in our cultural future.

You will also find evidence that Boulez has ended his Thirty Years' War with the French musical Establishment. He is obviously determined to develop IRCAM into one of the principal achievements of his career. When his contract with the New York Philharmonic runs out with the current season, he will be free of major conducting engagements except for the one with Bayreuth and will be a Paris resident. In fact, although he intends to keep his house in Baden-Baden, he has already taken an apartment on the thirtieth floor of one of the controversial skyscrapers near the Eiffel Tower, and he has begun to refer to himself, rather emphatically, as an inhabitant of the Fifteenth Arrondissement.

Naturally, IRCAM has its detractors. Since it is attempting an alliance of art with science and technology, it has been criticized as a musical revival of the Bauhaus. Since it will be installed (by June, if the present building tempo is maintained) in a labyrinth below street level, it has provoked derisive allusions to Nibelheim, to Orpheus in Hades, and to an underground ivory tower. More seriously, it has been called a misuse of public money by an elitist minority. Boulez, however, is accepting all the disapproval with the serenity of a man who has at last obtained the tool he has always wanted, and who knows exactly what he is going to do with it.

"The creator," he explains, "working with just his intuition, is powerless to provide a complete translation of musical invention. He must collaborate with the scientific research worker in order to envisage the distant future, to imagine less personal, broader solutions. As for the scientist, we are of course not asking him to compose, but to conceive with precision what the composer or instrumentalist expects of him, to understand the

Roy McMullen, an American resident in Paris for years, is the author of Mona Lisa: The Picture and the Myth.
direction contemporary music has taken, and to orient his imagination along these lines. In this way we hope to forge a kind of common language that scarcely exists at present, while training a staff that will be basically oriented towards musical creation."

Extending, ramifying, and marvelously complicating the interdisciplinary aspects is the fact that IRCAM is one of the four components of the huge Centre National d'Art et de Culture Georges Pompidou, which was inaugurated in January. (It is usually referred to as the Centre Beaubourg, because of the name of the square on which it stands.) The other parts of the Beaubourg complex are a public library, the National Museum of Modern Art, and a center for industrial design, architecture, town planning, and visual communications.

While waiting for the completion of its underground quarters, the institute is open for business in an old building next door. Here the computers are already humming and the major departments organized and functioning. Boulez, as director, keeps an eye of everything. But he is being helped by a remarkable international staff, which will have fifty-four permanent members when the budget limit is reached, of composers, performers, researchers, technicians, and far out thinkers. Although many of these people have other commitments to fulfill, from now on they will all be spending a lot of their time in Paris.

The Instruments and Voice Department is headed by Vinko Globokar, whose frequently facile clowning with his trombone has perhaps obscured his merits as an amusing, knowing composer, a fantastically capable of drawing on nearly anything from the folk music of his native Yugoslavia to some of John Cage's drolleries. The mission of the department is to discover, invent, and disseminate innovations in traditional Western instrumental and vocal techniques; study Asian and other non-Western techniques without condescending and without "colonizing" them; develop new instruments or devices that radically transform old instruments; and investigate the psychology, the physiology, and the role of the performing musician in contemporary society. Globokar hopes to encourage an outburst of "physical and psychic energy" and, finally, a sort of sonic humanism. He believes that conventional musical sounds have become "grayer and grayer" and therefore "no longer capable of communicating a message."

The Electroacoustic Department is being run by Luciano Berio, who is thus updating an early phase of his career, when he was a founder, with Bruno Maderna, of the Studio di Fonologia Musicale in Milan. He is charged "with studying the means of processing electronic sound production in real time and introducing digital techniques for generating and processing signals (particularly intermodulation and voltage control techniques)." That may not suggest much in the way of orphic pleasure. But Berio has promised, in less bristling language, that his department "will be as flexible and as open as possible in order that each composer or research worker can invent, create his ideal studio." And he adds that IRCAM, although interested in analysis, is not "a hospital for sick music."

A French information expert and composer, Jean-Claude Risset, is in charge of the Computer Department. His assignment is to do research on sound and the synthesis of sonic material with computers; study the man-machine relationship in the field of music; improve methods for computerized composition, and probe the many psychoacoustic phenomena that affect our enjoyment of music. His equipment also takes care of IRCAM's general need for scientific calculations, data processing, circuit simulations, trial runs, and automatic controls.

The American composer Gerald Bennett, formerly director of the conservatory of Basel, heads what is called the Diagonal Department. This, as its odd label implies, slants across the organization chart, coordinates the various branches of research, and instigates the transplanting of techniques from one department to another. In short, it needles Globokar, Berio, and Risset into remaining aware of each other. It also does some investigating on its own, notably into the links between music theory and other areas of inquiry.

Two years from now, when the IRCAM research has borne usable results, the Pedagogic Department will start to function. It will study ways to train people for a new music and will provide advanced students with the technical facilities they need for becoming familiar with new instrumental techniques and new methods of composition. Boulez hopes that what emerges will have a beneficial effect outside the avant-garde and will eventually help to make all sorts of music—ancient and modern, Western and non-Western—more accessible. The head of the department will be the French composer/conductor Michel Decost, who has a brilliant record as the innovating director of a conservatory at Pantin, on the outskirts of Paris.

IRCAM staff members know perfectly well, partly because of unfriendly reminders, that what they are attempting is by no means an earthshaking novelty. After all, people have been inventing electromechanical and electronic musical instruments since the beginning of the twentieth century. Synthesizers will soon be almost as common as pianos. Popular musicians who may never have heard of sine and sawtooth waves are turning out, with the help of record-company engineers, some fascinating new sounds. Similar operations have long been under way in the well-equipped music...
departments of American universities, in the studios supported by European radio networks, in the research divisions of computer manufacturers, in the laboratories of individual scientists, and so on.

Moreover, in this context Paris was not exactly a backwater when Boulez decided to come home. Here, in 1948, Pierre Schaeffer and Pierre Henry dreamed up the whole concept of tape music. Schaeffer’s Groupe de Recherches Musicales is still active, financed by Radio France and under the direction of the imaginative François Bayle. Pierre Barbaud has been quietly working at computerized composition for some twenty years. So, of course, has Iannis Xenakis, who since the early 1960s has been doing a good deal of fundamental musical research with a team of mathematicians and scientists.

In view of all this, isn’t IRCAM largely redundant? Isn’t it, like the rest of the Centre Beaubourg in many minds, too big and too concentrated? Perhaps a manifestation of what has been called, by conservative French critics, l’impérialisme boulezien? Wouldn’t the French government have been wiser, and at any rate fairer, if it had distributed its largesse?

Boulez has answered such questions over the past year in Paris press conferences and interviews. Other research centers, he argues, are in general too small and too dependent; they are cells grafted onto large organisms with different priorities. For example, the electronic studios attached to radio networks are subject, so far as diffusion is concerned, to program policies that mostly ignore electronic music; and the studios in American universities are subject to the curricular imperatives of standard music departments. Also, he says, these smaller centers tend to isolate disciplines, to be staffed either by musicians or by scientists and technicians. IRCAM, by contrast, is large enough and independent enough to have its own priorities.
and to assemble musicians, scientists, and technicians under one roof.

Boulez drily denies that he has Napoleonic ambitions. IRCAM, he points out, is getting only 10% of the Centre Beaubourg's budget this year, and there is no plot to annex or destroy other French musical-research efforts. He insists, however, on the need to keep his institute reasonably big. "Sprinkling government subsidies," he says, "is a technique loved by politicians, for it supposedly keeps everyone happy. But it produces very small results. I'm persuaded that one must concentrate the means available."

He insists, too, on the international character of IRCAM. Risset has been able to get his computers going in a useful, musical way largely because of programming material from Stanford University, sent over without payment. Other generous help has come from Michigan State and Columbia. Nicholas Snowman, cofounder of the London Sinfonietta, has been working with Boulez on concert programs and on the knotty general problem of coordinating the manifold activities of IRCAM. Particularly valuable on-the-spot assistance in scientific and technological matters has arrived from Max Mathews, research director in acoustics and psychology at Bell Telephone Laboratories, and from acoustics expert Manfred Schroeder, director of the Physikalische Institut of Göttingen and also a Bell Labs man.

More and more foreign musicians and scientists will undoubtedly discover the peculiar, exhilarating charm of IRCAM. Boulez is planning a system of short-term contracts for research that should attract thesis writers and professors on sabbatical leave.

Another major attraction is bound to be the building itself. Designed by the Italian Renzo Piano and the Englishman Richard Rogers, who were the architects for the Centre Beaubourg as a whole, it will be the fanciest, most functional, structure of its kind. In fact, it is already close enough to existing to permit the present tense. It occupies an area below a piazza between the main Beaubourg building and the Gothic church of Saint-Merri. Its flat dimensions are about those of a football field, and its deepest point is more than fifty feet. The whole structure floats in thick insulating materials that augment the sonic isolation provided by being underground. There are studios, laboratories, offices, and study rooms. A glassed-over zone is supposed to preventclaustrophobia.

The most interesting part is an auditorium called the Espace de Projection that has room for about four hundred people. This, in Boulez' words, is a "unique tool, spectacular in every sense of the term." It's a combination of concert hall, experimental theater, recording studio, and scientific laboratory, as flexible as an accordion and as gadgety as the Concorde. The ceiling goes up and down in three separate sections, metal room dividers roll and unroll, and nearly two hundred pivoting, prismatic elements reflect or absorb sounds as desired. These devices are controlled by an electronic console that eventually will be coupled to a computer, so that the resulting spatial and acoustical configurations can be programmed. Mobile ladders and bridges for performers, batteries of colored lights, and a wide variety of speakers, tape machines, and whatnots add to the protean potential.

The activities of IRCAM will not be limited, however, to what goes on in its headquarters. A mobile unit, carrying experimental equipment, will have the mission of spreading the good avant-garde word, and new music, in the French provinces and soon in other European countries. Its work will be supplemented by a documentation service that will send out specialized publications, tapes, and audio-visual material to anyone who is interested. (Everything will not be free. For details write to IRCAM, Documentation Service, 31 Rue Saint-Merri, F-75004 Paris. Some good papers should emerge from an IRCAM-sponsored symposium on musical psychoacoustics scheduled for July 11-13.)

The institute is also functioning, in a surprisingly ambitious way, as an impresario of modern music. With the opening of the Centre Beaubourg in January, it launched a gigantic year-long festival, Passage of the Twentieth Century. In a preface to the program, Boulez explains the purpose of the festival:

Before devoting itself completely and exclusively to research, IRCAM wants to focus, in public, on what exists as an immediate or distant reality and also on what ought to exist in the perspective of the future.... Let us together consider the passage of this century, with the certitudes it has abundantly produced, and the uncertainties it has also produced in profusion.... What we have as our constant aim is the transition from works that have become models to experiments that are courageous and adventurous.

To be performed throughout the year are works of ninety-one composers, ranging in time from Debussy, Mahler, and Schoenberg to the present, and in style from impressionism and expressionism to computerism. Some of the evenings are "ateliers" in which a composer rehearses and explains one of his compositions.

The concerts are being given in a half-dozen Paris halls by fifty-six soloists, eight French orchestras or chamber groups, and eleven foreign formations. Among the soloists are Cathy Berberian, Yvonne Minton, Aurèle Nicolet, Heinz Holliger, Daniel Barenboim, Maurizio Pollini, Itzhak Perlman, Pinchas Zukerman, and Mstislav Rostropovich. The foreign ensembles include the...
A cutaway view of IRCAM. Note the hoists for the Espace de Projection ceiling, adjustable in three independent sections. The Instruments and Voice rooms include recording studios, depicted here during a session. Above the recording console area are vent pipes. The artist has included ideas for decorating the barren walls that will enclose the IRCAM plaza.

BBC Symphony Orchestra, the Alban Berg Quartet of Vienna, the Composers Quartet of New York, and the Schola Cantorum of Stuttgart.

Of particular interest are the concerts presented by the Ensemble InterContemporain, the new twenty-nine-man orchestra created by the French ministry of culture for the performance of contemporary music. Although Michael Tabachnik is its regular conductor, Boulez is its director. And although it has no official role in IRCAM, Boulez clearly regards it as another essential tool for his Parisian operations.

A striking aspect of these operations is their consistency with what was going on in Paris about twenty years ago, when the animator of IRCAM was heroically animating his first organization for new music, the Domaine Musical. Except for size, the IRCAM festival is a replica of the series of concerts presented by the Domaine, which also mixed contemporary experiments with twentieth-century works regarded as "models," as points of historical reference. The Ensemble InterContemporain resembles the old ensemble and has the same aim of helping young composers to be heard.

Plainly, Boulez has come home to pick up, with more massive means, where he left off. At fifty-two he is a bit mellower, and much more polite, than he used to be; he is no longer what Jean-Louis Barrault once (affectionately) called him: "a cat with all its claws out." Even so, he has not lost his old convictions. One could have expected a weakening of modernist combativeness in a middle-aged man who had spent years as a highly successful conductor of mostly traditional music in London, New York, and Bayreuth. But nothing of the sort has happened.

On the contrary, the combativeness has become stronger, in the sense of taking in more territory. The Boulez of the old days in Paris was noticeably unenthusiastic about electronic music and about attempts by composers to make use of modern science and technology. In the perspective offered by IRCAM, he was in many ways a conservative musician. Why is he so markedly less conservative now? So interested in what he might have dismissed as naive gadgetism and scientism when he was running the Domaine Musical?

A simple explanation is that the gadgets have been improved to the point of providing a previously unsuspected opportunity for a musical imagination. Another explanation is that Boulez has evolved in a predictable way. He was educated, it should be remembered, partly as a mathematician and an engineer. He has always been an uncompromisingly intellectual musician, a believer in structure and precision. And while an analogy between serialism and computerized composition will not hold much water, one can see how a sensibility that was once fiercely responsive to Schoenberg's method could finally become interested in electronic equipment.

And there is a deeper consideration. Boulez has long been preoccupied by the problem of historicism in modern music. Six years ago, in a strangely passionate article on the subject for the French magazine Musique en Jeu, he announced his intention to "praise amnesia." He grants, of course, that composers cannot really forget the past of European music and traditional instruments. But he obviously feels that they can benefit from trying to do so. They can take a fresh, scientific—hence historical—look at the fundamentals of their art. They can do what IRCAM is doing.
ARE YOU BLAMING YOUR TAPE RECORDER FOR PROBLEMS CAUSED BY YOUR TAPES?

Every day people all over the country go into hi fi dealers with complaints about their tape recorders.

When in reality what they should be complaining about is their tapes.

Because the fact is, a lot of the problems that plague tape recorders can be attributed to bad tape.

HEAD WEAR IS CAUSED BY YOUR RECORDER. OR IS IT?

If you have to clean your tape heads more than usual, for example, it could be your tape doesn't have a special nonabrasive head cleaner.

Maxell is the only tape that has one.

If your recorder jams, it can be any number of things. Maxell does something to prevent all of them.

We make our cassette shells of high impact polystyrene. And then so they won't crack.

JAMMING IS CAUSED BY YOUR RECORDER. OR IS IT?

Even after years of use, we finish them to tolerances as much as 60% higher than industry standards.

Inside, we use free rolling Delrin rollers so the tape doesn't stick.

And finally, we screw instead of weld everything together because screws make for stronger cassettes.

If your recorder frequently suffers lapses in sound, it could be the tape is of inferior quality. And nobody's bothered testing the tape for dropouts before it leaves the factory.

DROPOUTS ARE CAUSED BY YOUR RECORDER. OR ARE THEY?

Maxell tape is made of only the finest polyesters. And every inch of it is checked for even the slightest inconsistencies.

So if you're having problems with your recorder, try a Maxell cassette, 8-track or reel-to-reel tape.

POOR TRACKING IS CAUSED BY YOUR RECORDER. OR IS IT?

You might find there's really nothing wrong with your tape recorder, just with your tape.

MAXELL. THE TAPE THAT'S TOO GOOD FOR MOST EQUIPMENT.

Maxell Corporation of America, 130 West Commercial Ave, Moonachie, N.J. 07074

CIRCLE 27 ON READER SERVICE CARD
Levine in Philadelphia. When James Levine taped the Mahler Fifth Symphony (the fourth installment in his Mahler cycle) and the Schumann Second for RCA in January, he became only the fourth conductor other than music director Eugene Ormandy to record with the Philadelphia Orchestra since the war. (A smattering of recordings were made by Leopold Stokowski in 1960, Charles Munch in 1963, and William Smith in 1968.) The sessions were held in Philadelphia's Scottish Rite Cathedral.

Maazel (and Columbia) in Cleveland. Andre Previn took up his new post as music director of the Pittsburgh Symphony in style: In addition to beginning the taping of eight television concerts for PBS, in January the orchestra made its first recordings in eight years, for EMI. Two records will result—the Goldmark violin concerto and Sarasate's Zigeunersonaten with Itzhak Perlman, and the Sibelius Second Symphony. (Perlman's regular producer, Suvi Raj Grubb, supervised the sessions, the orchestra's first in its current home, Heinz Hall.) After Pittsburgh, Previn guest-conducted in Chicago, where he also recorded the Shostakovich Fourth and Fifth Symphonies with his regular producer, Christopher Bishop.

By a rather neat turnaround, Previn's earlier Shostakovich Fifth, for RCA in 1965, was his first recording with the London Symphony (of which he would become principal conductor within three years) and helped launch his spectacular British career. Despite an abortive attempt to force him out in 1975, Previn's ties to the LSO remain firm, and recent recordings include Mendelssohn's Symphony (really complete, that is) Midsummer Night's Dream incidental music.

Davis in Boston and Amsterdam. Colin Davis has been pursuing symphony cycles in two of his current favorite recording locales: With the Boston Symphony, he has added the Sibelius Third and Fourth Symphonies (and The Swan of Tuonela) to the previously recorded First, Fifth, and Seventh; with Amsterdam's Concertgebouw Orchestra, he has recorded the Dvořák Seventh and Eighth Symphonies.

Maazel (and Columbia) in Cleveland. As previously reported, Lorin Maazel, no longer under exclusive contract to Decca/London, looms large in CBS's plans, but until recently he had been unable to use his own orchestra, which remained contractually tied to Decca/London. In January, however, Columbia took advantage of that contract's expiration (while a new one was being negotiated) to record Maazel and the Cleveland in Berlioz' Symphonie fantastique and Strauss's Ein Heldenleben... and on direct-cut discs. After the Columbia sessions, Maazel and the Cleveland Orchestra proceeded to a more unusual project: a direct-cut disc recording of orchestral chestnuts—Berlioz' Corsaire overture and "Rákóczi March," the "Farandole" from Bizet's L'Arlesienne, the final dance from Falda's Three-Cornered Hat, and the Polonaise from Tchaikovsky's Yevgeny Onegin—produced by Robert Woods of Cleveland's Advent Recording Corporation (not to be confused with the audio manufacturer). The resulting LP, to be distributed by Discwasher, Inc., will be manufactured in a new American pressing plant that, according to Woods, "will use special equipment, production techniques, and quality-control procedures which have heretofore been utilized only by the best European manufacturers." Glen Glancy of Phonopress, Inc., of Burbank, California, will supervise disc mastering and ultimate manufacture. Advent's discs will sell for $15 each on a new label, Telarc (from the Latin tel and the company acronym).

Elsewhere on the direct-disk front, Crystal Clear Records (225 Kearney St., San Francisco, Calif. 94108), which released "Direct Disco" last year, has announced two new discs (issued at 45 rpm): "San Francisco Ltd.," a pop collection with lead vocals by Terry Garthwaite, and a part-jazz, part-classical program by guitarist Laurindo Almeida.

Porgy and Bess in New York. RCA has recorded the production of Gershwin's Porgy and Bess that moved last fall. Spanning twenty-five discs will be the recording cost at Broadway. Musical rates would have been prohibitive.) The title roles are taken by Donnie Ray Albert and Glamma Dale with Andrew Smith as Crown, Larry Marshall as Sportin' Life, Wilma Shakesnider as Serena, Carol Bryce as Maria, and Betty Lane as Clara. The conductor is John DeMain.

Berman in London. Lazar Berman has made two new records for CBS in London. With Claudio Abbado and the London Symphony he taped the Rachmaninoff Third Piano Concerto (produced by Steven Epstein, from New York), while three overlapping sessions produced an encore-type recital of works by Rachmaninoff, Scriabin, Khachaturian, Liszt, and others.

Vanguard's veterans. Vanguard has pressed two distinguished musical senior citizens into the studios for major recording projects. Pianist Mieczyslaw Horszowski, now in his eighties, has recorded Book 1 of Bach's Well-Tempered Clavier, while violinist Alexander Schneider is participating in a promised chamber music series begun with the Brahms Third Piano Quartet, also featuring pianist Stephanie Brown, violinist Walter Trampler, and cellist Leslie Parnas.

For P.D.Q. Bach fans, Prof. Peter Schickele and his cohorts have yet another record in the works—made with an invited audience shortly after the professor's annual New York Christmas extravaganza.

King's Bach. Philip Ledger has made his first large-scale recording as choirmaster of Cambridge's all-male King's College Choir, conducting the Academy of St. Martin-in-the-Fields in Bach's Christmas Oratorio for EMI. Under Ledger's predecessor, David Willcocks, chorus and orchestra had recorded Handel's Messiah and Haydn's Creation, neither released domestically. Unlike Creation, done in English translation, the Christmas Oratorio is in German, and unlike Messiah, whose soprano solos were sung by the chorals trebles in unison, the new recording uses female soloists. The solo quartet comprises Elly Ameling (her third Christmas Oratorio), Dietrich Fischer-Dieskau (his second), Janet Baker, and Robert Tear.

Bernstein postscript. Further to last month's report on Leonard Bernstein's new free-lance activities: Two ambitious Deutsche Grammophon projects are scheduled to begin this fall. Spanning twenty-one discs will be a Beethoven series, mostly with the Vienna Philharmonic. With the Israel Philharmonic, Bernstein will record eight discs' worth of his own works.
If you can see a difference, imagine what you’ll hear.

Magnified, you can see record vinyl wearing away. With the same magnification, record vinyl shows no wear.

You’re looking at the solution to one of the oldest problems in audio—how to protect records from wear, while at the same time preserving full fidelity.

It’s called Sound Guard*, and it’s remarkable.

Independent tests show that discs treated with Sound Guard preservative played 100 times display the same full amplitude at all frequencies and the same absence of surface noise and harmonic distortion as “mint condition” discs played once.

A by-product of dry lubricants developed for aerospace applications, Sound Guard preservative is so smooth it reduces friction, yet so thin (less than 0.000003") it leaves even the most fragile groove modulations unaffected.

Len Feldman in Radio Electronics reports “At last! The long awaited record-care product has arrived. It preserves frequency response while reducing distortion and surface noise. It’s effective and safe for all discs, from precious old 78’s to the newest LP’s.

Sound Guard preservative, in a kit complete with a non-aerosol pump sprayer and velvet buffing pad, is available in audio and record outlets.

Sound Guard keeps your good sounds sounding good.

*Sound Guard is Ball Corporation’s registered trademark for its record preservative. Copyright ©Ball Corporation, 1976.
THE PERFECT GIFT BOOK
FOR ANY MUSIC LOVER

...INCLUDING YOURSELF!

Share with your friends this fascinating anthology drawn from America's leading journal of music and sound ... and don't forget to order a copy for your own library.

To celebrate the 25th anniversary of HIGH FIDELITY, its editors have selected fifty of the best articles from the magazine's quarter century. More than 300 pages of authoritative, brilliant, often controversial, always intriguing insight — featuring such outstanding writers as:

- Aaron Copland on Mozart
- Ashley Montagu on women composers
- Roland Gelatt on Verdi's Italy
- Gunther Schuller on Duke Ellington
- Wieland Wagner on Richard Wagner
- Gene Lees on Johnny Mercer
- Milton Babbitt on the credo of avant-garde composition
- Colin Davis on Berlioz
- Leonard Marcus on Bach
- Conrad Osborne and John Culshaw locking horns over Culshaw's stereo recording techniques ... and much, much more!

Clearly it's one of the outstanding books about music and recording published in this century. Use the coupon to get copies for you and your friends promptly.

Sorry—we cannot invoice. Payment must accompany order. Allow 60 days for shipping.

Wyeth Press
Great Barrington, MA 01230

To: Wyeth Press
Great Barrington, MA 01230

I enclose $______ for ____ copies (@ $9.95 each) of High Fidelity's SILVER ANNIVERSARY TREASURY.

Send my books (postage prepaid by publisher) to:

Name

Address

______ Zip

HF477

High Fidelity Magazine
The Perilous Path to Soprano Superstardom

Mozart recitals by Silvia Sass and Margaret Price document the promise and problems of two of our fastest-rising sopranos.

by Dale Harris

A great deal of Mozart's vocal music, especially that designed to display the skills of specific artists, presents real problems for contemporary singers. Nearly everything in the pair of recently released Mozart recitals by Silvia Sass (Hungaroton) and Margaret Price (RCA Gold Seal) calls for a combination of line, weight, and agility—not to mention style—that is only rarely encountered these days.

The number of times one has heard a Donna Anna who could sing with genuine facility the concluding florid measures of "Non mi dir" is small indeed. A technically proficient Idomeneo Elettra is even rarer. And if in the last generation there have been several Constanzes who could negotiate the technical difficulties of "Machtn alle Arten," the reason is that, as with the Queen of the Night, the role is almost invariably entrusted to a piping soprano leggiero rather than to a singer with the amplitude of tone implied by the music and the dramatic situation.

Price and Sass, however, are exceptional in that
both have sizable voices—the former is a Desdemona, the latter a Tosca—and yet can handle with ease all the finery demanded of them by this music. Price simply sails through the allegretto section of “Non mi dir” and dispatches Constanze’s aria without turning a hair, while Sass makes Elektra’s bravura vengeance aria seem like child’s play. (Each of them, incidentally, can lay claim to that increasingly rare accomplishment, a recognizable trill.) No wonder that they are among the most highly touted young singers of today.

Nevertheless, I fear that my admiration for them as artists falls somewhat short of my appreciation of their nimbleness. In the case of Price there are insurmountable barriers to my enjoyment of her skills, chief among them being the whiteness and hootiness of her tone. However, in light of her worldwide renown I realize that mine is a personal reaction, and for those who do not find such straight, fluty tone objectionably unsensuous this recital may, of course, prove rewarding.

Even so, the breathiness of Price’s vocal production (listen, for example, to the sound of air escaping as she attacks the top A on “Pein” in the Entführung aria) might be adjudged a drawback by others besides myself. The same could be said for her frequent recourse—discreet but damagingly evident—to the intrusive aspirate as a means of getting from note to note in slow music. Another problem is the blandness of her interpretations, though I would say this is the concomitant of her vocal method, which, admitting of little coloristic variety, has the consequence of making the Countess, Susanna, and Cherubino (or, if you like, Donnas Anna and Elvira) all sound much the same.

Whence the reason, Price’s lack of vocal personality becomes all the more evident as soon as one turns to the Sass recital, where one immediately hears a more distinctive and interesting voice, though I would not call it a particularly attractive one. Sass, however, will be twenty-six this year and is therefore about a decade younger than Price. Thus she is in the early stages of what could be a highly successful career and is still, I suppose, capable of developing.

Her gifts right now are considerable. She has a good stage presence, great physical attractiveness, and a voice not merely engaging and flexible, but also powerful. I have no idea when this Mozart recital was recorded. (How I wish record manufacturers would offer such information!) But the voice is very much fresher and more malleable than the one I heard—with, I must confess, a certain amount of misgiving—last summer at Aix-en-Provence in Traviata. Here Sass sounds fluent and poised. Apart from the noteworthiness of her agility, she is also impressive when it comes to legato singing, an especially fine example of which may be heard in “Chi o mi scordi di te” at the words “manco da vo,” where she binds all the notes of a long descending phrase into a seamless whole.

None of the latter skill was evident at the live performance I attended, and even in the present recital there are obtrusive weaknesses in Sass’s technique that give one pause. Above all, her tone is excessively covered and she shows, possibly as a result of this, a disturbing lack of ease in the top register. (Like Price, she is weak at the lower end of the staff.) Despite her youth she already seems to have difficulty in producing high tones unless these are either very loud or very soft. Her soft high notes, moreover, are not really securely supported and lack color. Whether this is eradicable (or even whether Sass is aware of the problem) I don’t know, but I find it disconcerting to think of so young and technically vulnerable a voice embarking on roles like Tosca (her Met debut) with Norma and Elisabeth de Valois to come next season (at Covent Garden and Hamburg, respectively).

In both recitals the often elaborate accompaniments are well played. Hungaroton offers texts, though only in Italian, and helpful notes. RCA Gold Seal offers no texts and deplorably thin notes.

MOZART: Operatic and Concert Arias. Silvia Sass, soprano; Hungarian State Opera Orchestra, Ervin Lukacs, cond. [Janos Matyas, prod.] HUNGAROTON SLPX 11812, $5.98.

MOZART: Operatic Arias. Margaret Price, soprano; English Chamber Orchestra, James Lockhart, cond. RCA GOLD SEAL AGL 1-1532, $4.98.


Heroic Voices from Pioneer Days

Willem Mengelberg’s incomparable 1928 recording of Strauss’s Ein Heldenleben is vividly restored (or improved?) on Victrola.

by R. D. Darrell

ONE OF THE TRANSCENDENTAL MUSICAL EXPERIENCES OF MY YOUTH was hearing Mengelberg lead the New York Philharmonic in Richard Strauss’s Ein Heldenleben, a score dedicated by the composer to “Willem Mengelberg and the Concertgebouw Orchestra of Amsterdam.” And it was only a few years later that I had the opportunity of reviewing the Mengelberg/Philharmonic recording in its original Victor 78-rpm edition.

That review—in the March 1929 Phonograph Monthly Review—was so enthusiastic, and the imprint of Mengelberg’s eloquence so deeply embedded
in my mind, that I'm undoubtedly still biased in evaluating the new RCA Victrola reissue. The reading enthralled me all over again with a dramatic conviction and continuity unmatched for me by any later recording, even in such deservedly admired versions as those by Krauss (1952 mono, just reissued in London's Treasury series as R 23209), Reiner (1954), and Beecham and Ormandy (both 1961). And I must doubt that any of the accounts I haven't yet heard—by Haitink (1971), Kempe (1974, as yet available only abroad), Karajan (1975, the first in quadraphony), and Solti (just announced)—are likely to change my mind, at least as far as interpretations are concerned.

Yet the real point is not Mengelberg's reading as such, but how well his original recording has been transferred to LP—a question clouded and complicated by annotator Irving Kolodin's jacket-note statement that, through "new methods of computerized recovery of . . . latent values, [the] veritable sound of the Philharmonic-Symphony has been recreated as it did not exist in this recording's first issue: Victor album M 44." Does this mean that the digital processing system invented by Thomas G. Stockham Jr.—which I had assumed was devised primarily, if not exclusively, for acoustical rather than electrical recordings—has been used as it was in the recent reissues of Caruso and Gershwin acoustical recordings?

Regrettably, I have never heard the 1957 Camden LP reissue, but I have been provided with an even better means of comparison: the recent British RCA reissue, SMA 2001 (which bears a 1972 publication date, although it was not actually released until the fall of 1975). Insofar as my impressions of original sound are dependable—and I rely more on my printed words than on aural memory—the British edition strikes me as a shade truer to the original qualities, especially in string-tone warmth and overall dynamic range, both of which were considered exceptional by 1929 standards and remain impressive even today. However, despite my purist skepticism about computerized re-creations of anything not in the original recording, the American reissue does indeed suggest at least some closer approximation to what Mengelberg's Heldenleben must have sounded like in the December 1928 Carnegie Hall recording sessions.

Relative to the British LP, there is slightly but definitely more brazen bite and impact to the fortissimos, a slightly wider dynamic range, more weight to the very low frequencies, and occasionally some increase in resonance. Perhaps such qualitative differences may seem unnaturally spectacular to some listeners. But I can't honestly say that I can muster any serious objection to their enhancements of the dramatic force of both the music and the Mengelberg performance.

Whether you accept the Victrola reissue on its own merits (or for its budget price) or search out the British version, you'll be mightily impressed by the minimization of the original noise elements (now evident mainly behind the unaccompanied solo violin passages), the authentic Carnegie Hall acoustical ambience, the lucidity of score details (surprising only to youngsters unfamiliar with the technological achievements of 1928 engineers at their best), and—beyond the incomparable Mengelbergian magic itself—the caliber of the orchestra in its first year as the combined Philharmonic-Symphony.

You may not be surprised by the earlier excellence of such familiar first-chair men as timpanist Saul Goodman (in his rookie year), trumpeter Harry Clantz, clarinetist Simeon Bellison, and bassoonist Benjamin Kohon. But who remembers the legendary concertmaster Scipione Guidi and hornist Bruno Jannick? There were giants—players, conductors, engineers—in those days! If this reissued Heldenleben can't convince today's young listeners of that, nothing can.


In his emulation of Membrin's breadth of musical interests, Pinchas Zukerman is exceptional among today's young superstar fiddlers both for his repertorial catholicity and for his readiness to shift roles from violinist to violist, from soloist to conductor, from virtuoso soloist to chamber ensemble. No doubt his relish for shared cocertering and recording has been strengthened by the ability of his flutist wife to join him—as she already has in three earlier Columbia releases. Eugenia Zukerman is versatile, doubling as jacket annotator for many of her husband's or their joint programs. Indeed she does so again for the present batch of Carl Philipp Emanuel Bach's trio sonatas, none of which is otherwise listed in Schwann, although W. 143 and 147 can be had on Supraphon 1 11 0640 (with two more trio sonatas, W. 145 and 148), W. 161 on MHS 971.

Since the two early works, W. 143 and 147, are merely pleasant, superficial examples of routine rococo music-making in which the flute and violin parts dominate, the relative reticence of the continuo players is not unjustified. But they are only slightly more outspoken in the W. 161, which approaches more closely the spirit of routine rococo music-making in 147, are merely pleasant, superficial examples of virtuoso soloist to chamber ensemble. No doubt his relish for shared cocertering and recording has been strengthened by the ability of his flutist wife to join him—as she already has in three earlier Columbia releases. Eugenia Zukerman is versatile, doubling as jacket annotator for many of her husband's or their joint programs. Indeed she does so again for the present batch of Carl Philipp Emanuel Bach's trio sonatas, none of which is otherwise listed in Schwann, although W. 143 and 147 can be had on Supraphon 1 11 0640 (with two more trio sonatas, W. 145 and 148), W. 161 on MHS 971.

Since the two early works, W. 143 and 147, are merely pleasant, superficial examples of routine rococo music-making in which the flute and violin parts dominate, the relative reticence of the continuo players is not unjustified. But they are only slightly more outspoken in the W. 161, which approaches more closely the nature of the classical-era trio. And in all three works the ensemble is further unbalanced both by the violinist's excessively polite deference to the flutist and by the lack of meld between his elegantly finespun string tone and her cooler, less polished wind tonal qualities. In the bright and clean, if lightweight, recording of these generally spirited performances, an occasional overintense high-register flute note stands out jarriingly.

Bach: Cantatas. Edith Mathis, soprano; Anna Reynolds, mezzo; Peter Schreier, tenor; Dietrich Fischer-Dieskau, baritone; Theo Adam, bass-baritone; Munich Bach Choir and Orchestra, Karl Richter, cond. [Gerd Pielesch, prod.] Archiv 2533 313, 312, and 306, $7.98 each. 2533 313: No. 23, Du wahr'ster Gott und Davids Sohn; No. 87, Bisher habt ihr nichts gebeten in meinem Namen. 2533 312: No. 92, Ich hab' in Gottes Herz und Sinn; No. 175, Er ruft seinem Ar denten mit Namen. 2533 306: No. 34, O ewiges Feuer; No. 88, Also hat Gott die Welt gebannt. The recording of the first two discs listed above was begun in May 1973 and completed in June and October 1973 and January and February 1974 sessions. The third disc was begun in February 1974 and completed in January 1975; its contents have already appeared in Vol. 2 of Archiv's Bach jumbo packs (2722 019, not yet released in this country; it collects nineteen cantatas on eleven discs, plus a bonus record of Kirkpatrick playing harpsichord works). The recording dates, punctiously noted in usual Archiv style, make it clear that the cantatas were not done as integral performances but were built up by number by number in a manner presumably determined by the artists' availability in Munich. The unevenness of the result however cannot be ascribed to this, since the best of the three records (2533 312) and the dullest of them (2533 313) date from the same period. The reason must be Karl Richter's oft-noted unpredictability as a Bach interpreter. Sometimes he is lively and imaginative; sometimes he plods along like the most leaden of Kapellmeisters. Nos. 92 and 176 are a stunning pair of cantatas and they are performed in exciting fashion. No. 92 Ich hab' in Gottes Herz und Sinn contains a storm at sea—a chorale breaking off after each phrase into accompanied recitative—which Dietrich Fischer-Dieskau sings in arresting, even hair-raising fashion. The storm continues in the subsequent tenor aria ("See, see, how every thing is torn off, breaks, falls"), which is done with a fine energy by Peter Schreier. The next bass aria tells of the "raging of the hoar frosen wind," in the kind of blazing musical imagery that Fischer-Dieskau at times seems to relish though I'm not sure how much I enjoy his braving along the collective lines. The return in another chorale and recitative and the soprano aria of lies. Shepherd it pastoral piping of an oboe d'amore No. 92 is an extended cantate spreading to the second side. Although the orchestra is only two obbligato strings, it spans a big range of mood and colors.

---

**Explanation of symbols**

**Classical:**

- **B** Budget
- **H** Historical
- **P** Press

**Recorded tape:**

- **O** Open Reel
- **R** 8-Track Cartridge
- **C** Cassette

---

**Herk Furlong, Magazine**
The album essays by Reinhard Gerlach are detailed notes on the changes, in the cause of directness, that the composer introduced into the texts by Marianne von Zieler, the poetess of Nos. 68, 87, and 175. A.P.

**BERLIOZ: Requiem, Op. 5.**

**BERLIOZ: Requiem, Op. 5.**
Robert Tear, tenor; City of Birmingham Symphony Orchestra and Chorus, Louis Fremaux, cond. [David Mottley, prod.] Angel SB 3814, $13.98 (two SO-encoded discs, automatic sequence).

**Comparison:**
Davis/London Sym. Phn: 670019

The Berlioz Requiem is among the classic challenges for the recording-engineers—so much so that the musical challenge it presents may easily be relegated to second place. In the long run, though, it's the performance that counts. I can still listen with pleasure and excitement to the wartime French recording conducted by Jean Nourrit, for example, since it strongly conveys the thrust of the work, if hardly all of its breadth and depth. Of course the Requiem is, among other things, about sounds in space, about the contrast between immense sounds and small ones—but unless these sounds are shaped with purpose and intensity the most splendid reproduction will deliver to us only a hollow shell.

Another important postulate: For all that its instrumental extravagance—the brass hands and kettledrums, the trombone-and-flute chords—has garnered most of the headlines over the years, the Requiem is a choral work. The tenor soloist appears only briefly, in a single movement; no matter how good, he can hardly carry the work or at least make it tolerable (as, for example, his superior soloists in the Verdi Requiem can to a significant degree counterbalance the inadequate choral work). And even when the orchestra is crucially involved, as in the main section of the "Lacrymosa," the primary line is conveyed, unblemished by instruments, in the choral; weakness here can vitiate the entire effect.

That is what happens. I am afraid, in the Fremaux performance, so that this rather central tableau in Berlioz' epic polyptych falls. Elsewhere, the citizens of Birmingham don't do badly. Their sound is, in fact, more homogeneous than that of Bernstein's stronger-voiced Parisians, and somewhat more smoothly registered (although this ad-
Not that the two new recordings are really very much alike. As intimated, Bernstein has the stronger forces to work with, and he rouses them to considerable excitement in the big moments. Elsewhere, there are some relatively inert passages, the emergence of a kind of under-the-first-horn entry ("Requiem aeternum") is obscure, and the movement never really gets under way. Complementarily, Freamus is rather good here, with a nice swing that often serves him in good stead. Bernstein has his demonstrative moments, too—big sections of tempo at the climaxes in the Overtone, for example, that far exceed (and perhaps slightly slacken at bar 51) for the sake of a largely irrelevant, kittenish clarinet solo. And while the recording balance admirably makes the clarinet a team member, rather than a soloist, Brahms' crucial part writing is compromised by the players' failure to form a genuine ensemble. As a result, the movement's stark energy and rhythmic urgency are sapped.

The remaining movements, however, are quite wonderful. In the Adagio the gently dreamy tempo (hardly an allegro) is perfectly slackened at bar 51 for the sake of a largerly irrelevant, kittenish clarinet solo. And while the recording balance admirably makes the clarinet a team member, rather than a soloist, Brahms' crucial part writing is compromised by the players' failure to form a genuine ensemble. As a result, the movement's stark energy and rhythmic urgency are sapped.

Arthur Grumiaux
Distinguished Brahms performances

Distinguished Brahms performances

so, or whether it is a matter of recording technique, but these discs represent a severe test for a matrix decoder. One full-logic unit that we tried produced anomalies such as a thunderous roll of the timpani (in the "Tuba Mirum" on Columbia) that parted like the Red Sea. To allow free passage of the choral basses. A replay using a less ambitious but more accurate decoder gave a more credible sonic image.

H.A.R.


Richard Stoltzman is a clarinetist with real personality, a limpid sound, and a memorably wide dynamic range. But in the first movement of the Brahms clarinet quintet both he and the Cleveland Quartet members tend toward a self-indulgence at odds with the music. Thus the already too dreamy tempo (hardly an allegro) is perceptibly slackened at bar 51 for the sake of a largely irrelevant, kittenish clarinet solo. And while the recording balance admirably makes the clarinet a team member, rather than a soloist, Brahms' crucial part writing is compromised by the players' failure to form a genuine ensemble. As a result, the movement's stark energy and rhythmic urgency are sapped.

The remaining movements, however, are quite wonderful. In the Adagio the gently dreamy tempo (hardly an allegro) is perfectly slackened at bar 51 for the sake of a largely irrelevant, kittenish clarinet solo. And while the recording balance admirably makes the clarinet a team member, rather than a soloist, Brahms' crucial part writing is compromised by the players' failure to form a genuine ensemble. As a result, the movement's stark energy and rhythmic urgency are sapped.

The Brahms recording, Ronald Dowd is certainly too loud, but his tone is consistently firm and the lines are very cleanly shaped.

All three of these recordings give us the shorter version of the "Quaerens me," as published in the orchestral score—something that the editor of Columbia's liner notes evidently does not know, for the excised words ("culpa rubet vultus meus") are printed in the liner. But then Columbia's annotator seems to be unaware of the repeat of the "Hosanna," let alone the fact that the entire final movement is recapitulatory. At that, his work is preferable to the grossly ill-judged and patronizing musical annotations that Angel offers. Here again, Philips gains the palm, with a literate and knowledgeable essay by David Cairns.

Technical and quad note: Columbia informs us that the Bernstein recording is to be replaced by a restamped, two-channel-only version, which will be indicated by a "Z" series number. As no date is given for its appearance, this review is based on the version that has been in circulation for several months.

If your cartridge can track the loudest passages of the recording (and some top-of-the-line models can't), it has unusually good dynamic range. It could, in fact, be achieved through phrasing and dynamic subtlety rather than conspicuous distortion of the basic rhythmic ostinato.

Whatever my reservations, this is a serious, if controversial, presentation of one of Brahms's most sublime works. By comparison, I now find the admirably robust and straightforward Etlinger/Tel Aviv version (Orfeo-Lyre SOL 146, September 1973) somewhat extravertered and lacking in nuance.

H.G.
Special $1 Offer

Recordings of World’s Great Artists from Musical Heritage Society

Any 3 Recordings of Your Choice—only $1 Each

PLUS ALL THESE ADDED BENEFITS:

1. FREE CATALOG
   of over 2,000 records and cassettes spanning our entire musical heritage: Medieval, Gothic, Renaissance, Baroque, Rococo, Classical, Romantic, Modern!

2. FREE SUBSCRIPTION to the Society’s NEW RELEASE ANNOUNCEMENTS, describing the 12 to 20 new recordings issued per month, all made to the highest standards.

3. CHARGE ACCOUNT
   This permits you the convenience of paying for your recordings after you have received and tried them.

AND NO PURCHASE OBLIGATION—EVER!
You’ll enjoy these and many other benefits if you accept Complimentary Membership in Musical Heritage Society.

World Renowned Composers, World’s Greatest Artists Are On The Society’s Recordings

You can enjoy the superb artistry of such musical luminaries as Maurice Andre, Jean-Pierre Rampal, Lily Laskine, Jean Martinon, Pierre Monteux, Alicia De Larrocha, Franco Gulli, Helmuth Rilling, Marc-Flaire Alain, Jorg Demus, Nicolas Harnoncourt and many others. All recording the works of the world’s great composers.

And the Society offers you not only the more popular works of the best-known composers, but perhaps more important to many music lovers (and to schools, colleges and libraries) it also offers a large selection of works not available elsewhere.

Some composers, notably Telemann, Pachelbel, Fasch, Gilles and many others have become noteworthy in today’s music world due almost solely to the Society’s efforts!

144 PAGE CATALOG...
SENT TO YOU FREE

The complete catalog of the Society’s recordings is thus a treasure-list for musicians and music lovers.

Its offerings include every serious musical form: Operas, Symphonies, Concertos, Cantatas, Chamber Music, Folk Music, Oratorios, Masses, Requiem, Gregorian Chants, etc.

This complete catalog will be sent to you at once when you mail the Complimentary Membership Request Form.

And once you receive your Special Offer recordings and listen to their superb quality, you may select at your leisure other recordings as you wish to buy and enjoy them. Always at the Society’s low price to members.

HOW THE SOCIETY OPERATES

The Society’s recordings are not sold in stores. They are offered directly to members through new release announcements mailed at three-week intervals. Records and cassettes are sold at price acceptable to members.

When the Society receives your request, it sets up an account in your name, sends you its latest catalog and includes a certificate entitling you to buy up to three records of your choice for $1.00 each plus shipping. (Or you may buy up to three cassettes for $2.00 each.)

The Society will begin sending you new release announcements. There is no purchase obligation and you may cancel your subscription at any time. As a subscriber two outstanding selections will be scheduled for shipment to you from each release. You may accept the scheduled selections by returning the advice form always provided; you may order only the recordings you want or you may advise us to ship no recordings at all.

A Complimentary membership is yours on request. Why not accept it today—and benefit from our initial Special Offer? Simply mail the handy coupon below. It involves no obligation on your part. It will bring you years of musical pleasure and satisfaction.

Complimentary Membership Request Form

MUSICAL HERITAGE SOCIETY, Dept. DCM
Musical Heritage Society Building, Oakhurst, New Jersey 07755

Ladies and Gentlemen of the Society,

Please enter my complimentary membership in the Society.

I am interested in: ( ) 12” Stereo Records
( ) Dolbyized Stereo Cassettes
( ) Both

Also please:
( ) Set up an account in my name.
( ) Send me your catalog of over 2,000 classical records and cassettes.
( ) Send me a certificate entitling me to buy three records for only $1.00 each plus shipping (or three cassettes for $2.00 each).

Enter my subscription to your new release announcements. It is understood that no fees or purchase obligation is involved and that I may cancel at any time. I understand that, as a subscriber, two outstanding selections from each release announcement will be scheduled for shipment to me. I further understand that I may accept these selections by returning the advice form, order only what I want or decline everything by returning the advice form.

NAME
ADDRESS
CITY STATE ZIP

CIRCLE 31 ON READER-SERVICE CARD

APRIL 1977

OFFER OPEN TO NEW MEMBERS ONLY
OFFER VALID IN U.S.A. ONLY

95
create a lofty mood, fully seconded by György Sebok’s knowing, sensitive chamber-style playing.

That is the merit—and, to some extent, the limitation—of these interpretations. The more passionate, solistic elements of the stormy D minor Sonata, for example, are played down and consequently less dramatic than in the Szeryng/Rubinstein and Zukerman/Barenboim performances. While the G major and, to an even greater degree, A major Sonatas are admirably served by the Grumiaux/Sebok approach, the D minor Sonata and the horn trio, for all three instrumentalists are in just ratio without any loss of impact or inner-voice clarity.

The more I hear the Zukerman/Barenboim DG set, the more I like it (the violin sonatas, at least; the coupled viola sonatas are a different story). The touch of gypsy violin in Zukerman’s tone raises the music’s emotional temperature, and Barenboim is more willing than Sebok to assert himself solistically. As a result, Zukerman and Barenboim tend to complement Grumiaux and Sebok, succeeding best in the D minor Sonata. Neither Sebok nor Barenboim, however, can challenge the keyboard work of Rubinstein, who manages to create remarkably sophisticated ensemble effects without in any way lessening his normal individualistic and, since Szeryng can rival Grumiaux for, every note in place and aristocratic musicianship and, on this occasion, to have been sparked by Rubinstein’s greatness. The RCA performances hold a slight edge over the Philips and DG. Add to these the excellent individual acoustics of these pieces by Oistrakh, Szegedi-Milanova, and others, and you realize that few works have been as lucky on disc. H.G.

TRIPHONIC

the professional signature

No more speakers required with 3A's Triphonic

A complete revolution in sound reproduction

The Triphonic® System is a completely integrated system: whatever the size of the room one will be able to listen to live level reproduction without seeing any "speakers".

The system will use 3A’s exclusive A.P.F. (acoustic pressure feedback) all around. That means deep tight bass, clean, accurate, open sound and absence of coloration.

The only electronics required will be a 15 to 30 watt RMS amplifier that will send the information to an electronical contribution not that will be divided, the three “sources” the three sources.

Frequency response chart.

The Triphonic® System is a completely integrated system: whatever the size of the room one will be able to listen to live level reproduction without seeing any "speakers".

The system will use 3A’s exclusive A.P.F. (acoustic pressure feedback) all around. That means deep tight bass, clean, accurate, open sound and absence of coloration.

The only electronics required will be a 15 to 30 watt RMS amplifier that will send the information to an electronical contribution not that will be divided, the three “sources” the three sources.

Frequency response chart.

The Triphonic® System is a completely integrated system: whatever the size of the room one will be able to listen to live level reproduction without seeing any "speakers".

The system will use 3A’s exclusive A.P.F. (acoustic pressure feedback) all around. That means deep tight bass, clean, accurate, open sound and absence of coloration.

The only electronics required will be a 15 to 30 watt RMS amplifier that will send the information to an electronical contribution not that will be divided, the three “sources” the three sources.

Frequency response chart.
even sure which sleight of hand is being performed. I think the finale is one of the steadier ones around, and the scherzo has plenty of martial energy.

I'll go out on one limb: You can't get a better Brahms Fourth at the price. A.C.


Folksong Arrangements: Can ye sew cushions? There's none to soothe; O waly, waly; The Ash Grove; Sally Gardens; The trees they grow so high; Come you not from Newcastle?; Sweet Polly Oliver; Bonny Earl o' Moray; Oliver Cromwell.

*A Charm of Lullabies* was composed in 1947 to five texts by various poets. The moods and characters of the lullabies are as contrasted as one could imagine; Britten's settings fit the words succinctly; and the piano is a creative partner. But for me the ultimate art-song portrayal of childhood's wide-eyed wonderment remains Musorgsky's *Nursery cycle*—Britten always strikes me as the cleverly stylized producer of chic repertoire, even when he is trying to speak directly to the heart.

The accompaniments to the ten Britten-arranged English folksongs provide ample opportunities for flights of the composer's fancy. "The Ash Grove," for example, features evocative use of pedal point.

Bernadette Greevy gives performances of Peter Pearsian vividness, and the 1970 recording (not previously issued here) is discreet—though my copy had somewhat noisy surfaces. Full texts are provided. A.C.

**BUXTEHDEDE: Cantatas.** Wachet auf, ruft uns die Stimme, Jesu, meine Freude; Herzlich lieblich Dich, o Herr. Herrad Wehrung and Gundula Bernat-Klein, sopranos; Frauke Haasemann, mezzo; Friedrich Melzer, countertenor; Johannes Hoeflin, tenor; Wilhelm Pommerien, bass; Westphalian Choral Ensemble, Southwest German Chamber Orchestra, Wilhelm Ehmann, cond. NONESUCH H 71332, $3.96.

The works on this disc are called "cantatas," a designation as vague as "concerto"—the two being interchangeable when applied to this genre in the seventeenth century. (Bach still called most of his cantatas concertos.) We might say that the entire century was under the auspices of the concerto principle, whether the music was instrumental or vocal. The aim was to loosen the uniform texture of a composition by creating contrasts: chorus vs. chorus, chorus vs. solo. solo vs. instruments, and so forth.

The cantatas recorded here are "spiritual concertos"—they are not church music like most of Bach's cantatas but early examples of public concert music of an elevated sort. Such cantatas were performed in Lubeck cathedral at "evening musicals" (Abendmusiken) for the enjoyment and edification of the well-to-do business patrons of the Hanseatic city. They are fine works, rich in ideas, color, and mood.

The performances, while decent enough, bring out these qualities only in spots. Conducto
playing. (Pollini’s pianism, for all its coloristic sensitivity, veers more toward the linear than toward the massive or ripely sensual.) But the ear is quickly reconciled, and only in the Polonaise-Fantaisie was my enjoyment diminished by the actual tone quality. Pollini’s account has purity of feeling, a distinguished sense for rubato effects, and a welcome structural grasp. Yet I found it too inhibited emotionally, lacking in color and magical atmosphere.

In a more overtly linear piece like the C sharp minor Polonaise, however, Pollini’s rare sensibility is just what is needed. His rhythmic is full of both snap and lilting, subtly nuanced flexibility. In the companion E minor Polonaise, he avoids thick textures and gives the music brooding poignance: I have heard more explosive readings but few that rival this one for eloquence and detail. The popular A major is haut, symmetrical, and rather Mozartian in feeling. (Mozart was, after all, a spiritual forebear of Chopin, even if one is surprised to be reminded of it in this particular piece!) Pollini’s exquisite voicing again pays dividends in the opening section of the C minor, which can so easily sound square and ponderous (compare Frankl and Oﬀersen). The new account of the big F sharp minor is surprisingly similar to the one the eighteen-year-old Pollini made directly after winning first prize in the 1960 Warsaw Chopin competition, a tribute to his early maturity. There has been a heightening of perception, most conspicuously in the complex central section. I have heard only Horowitz (and not on record) give an unarguably greater account.

The biggest surprise is Pollini’s Op. 53, which recalls Arthur Rubinstein’s proprietorial way with the score. Their performances have the same sense of expansion and rhetorical inflection. Perhaps this will put to rest once and for all the notion that Pollini is a dry, metro- nomic literalist.


For sheer elegance the music on this handsomely produced set would be hard to beat. Couperin may plumb greater depths of rhetorical pathos in the Leçons de ténèbres and reveal a still more individual vein of fantasy in his later harpsichord pieces, but these instrumental consorts (for that, not concerts, is the correct English translation here) show him as the supreme master of the social music of his time and place. A highly civilized time and place, it goes without saying: Versailles and Paris in the decade between 1714 and 1724. The four Concerts royaux, the composer tells us, were originally written for the aged Louis XIV’s Sunday chamber concerts at Versailles in 1714 and 1715. The last years of his life, though Couperin did not publish them until 1722, as an appendix to his third book of harpsichord pieces. The remaining ten consorts, more diverse in style and character, came out two years later and reflect a wider spectrum of taste. Among them we find not only the more or less standard sequence of idealized dance movements, but also a full-scale suite. “Dans le goût théâtral,” consisting of airs each with its own clearly marked choreographic character, and another called Il tratto dell’amore, in which the individual titles (“Le Je-ne-sqay-quoy,” “La Nobile fiera”) evoke the whimsical world of the harpsichord suites.

The Italian name for this consort reminds us, incidentally, that the whole set of ten bears the subtitle Les Goûts-réunis, referring to the supposed union in these pieces of the current French and Italian styles of instrumental music. Couperin was too complete a professional not to have achieved what he set out consciously to do, but for us it is certainly the French style that predominates, with its finely chiseled but always lyrical melodies and its subtle refinements of harmony and rhythm. And these are the qualities that this group of players (who are augmented in the “theatrical” consort by an additional flute, oboe, and violin) seems consistently to relish. Following Couperin’s own hint, when he tells us in his preface to the Concerts royaux that they were originally played by a violinist, two oboists/bassoonists, and a viol player, with Couperin himself at the harpsichord, the present recording shares the music sensibly between these instruments, throwing in a flute for good and entirely ap-
The recorded sound is beautifully balanced, and the pressings beyond reproach. One can cavil, though on behalf of the jockeys and cataloguers: Why adopt separate numerations for the two sets of consorts on the record labels, and a continuous one in the album notes, so that the same work appears variously as No. 10 and No. 14? 

**Crumb: Mokrolkosmos II. Robert Miller, piano. [Thomas Frost, prod.] Odyssy Y 34135, $3.98.**

This is the second of three works entitled Mokrolkosmos written between 1972 and 1974 (the first and third have already been recorded by Nonesuch on H 71299, June 1974, and H 71317, October 1975, respectively.) Like Vol. 1, Vol. 2 is scored for solo piano amplified by means of a conventional microphone, and consists of twelve pieces divided into three groups of four each, with each piece bearing a descriptive title as well as the name of one of the twelve signs of the Zodiac. (Vol. 3, *Music for a Summer Evening*, scored for two amplified pianos and two percussionists, has a different formal layout.)

This score contains many of the features that have come to be identified with Crumb's style: the piano sound is altered by the use of such external props as paper, glass tumblers, and a wire brush; strings are played pizzicato; harmonics are employed; the pianist sings, chants, and whistles as well as plays his instrument.

Yet for all these sonic innovations, the piano writing is closely bound to the nineteenth-century virtuoso tradition; the kind of figurations and textures used, even such special effects as the sudden opposition of chords in No. 8 ("A Prophecy of Nostradamus") and through a more general evocation of its character, as with the ominous minor chords in No. 8 ("A Prophecy of Nostradamus")

The performance by Miller is very fine, though his whistling is somewhat shaky in No. 10 ("Voices from 'Corona Borealis'")—a real tour de force for the whistler, who must not only play as he whistles, but also, in one section, apply "Monteverdi trills" (produced by a rapid series of staccato ejections of breath). The recorded sound is excellent, and in addition to Miller's helpful notes, the names of the movements are listed as well as the composer's suggested markings for the character of the individual pieces (e.g., "Exuberantly, with primitive energy" for No. 1). 

**For 14 Years We've Filled Mail Orders The Way Customers Like**

Ordering records, tapes, cassettes, blank tapes by mail can be a great convenience. And can save you loads of money. Of course, you have to deal with a company like NATIONAL RECORD PLAN that's established, successful, and that believes pleasing the customer is the only way to keep the customer. That's the way we do business. We are not a club—we are the leading independent record and tape order firm in the U.S. We send fresh, perfect records or tapes, packed so that damage seldom occurs, we double-check to prevent errors. We send CASH refund if (on rare occasions) we can't deliver. So order up. all you want. at these really fantastic discounts.

**SALE ENDS APRIL 30, 1977.**

**RECORDS**

Up to 50% OFF LIST!

For list prices, see Schwann catalog.

<table>
<thead>
<tr>
<th>LIST PER LP</th>
<th>SALE PRICE</th>
</tr>
</thead>
<tbody>
<tr>
<td>$3.98</td>
<td>$2.19</td>
</tr>
<tr>
<td>4.98</td>
<td>2.49</td>
</tr>
<tr>
<td>5.98</td>
<td>2.99</td>
</tr>
<tr>
<td>6.98</td>
<td>3.89</td>
</tr>
<tr>
<td>7.98</td>
<td>4.49</td>
</tr>
</tbody>
</table>

**TAPES**

**AMEX BLANK 7**

Reel-to-Reel Riot! Excellent SHAMROCK 1860 ft.

Incredible $1.25 to $2.25

All perfect $1.25 to $1.11

20/20 + 1800 ft. $1.10 $1.04

373 ft. $3.49 $2.49

364 C90 CASSETTE RIOT!

Buy 3 get 1 FREE plus FREE STACKETTE 4 Cassette rag 32 39 ea or holder ALL for $2.99

**OUR GUARANTEE**

Cash refund if we can't deliver. Record or tape replaced at no charge after one play, if defective.

**ORDER NOW**

SALE ENDS APRIL 30, 1977. List items wanted on any sheet of paper. Give:

- ARTIST, TITLE (LABEL and NUMBER, if known), PRICE
- State whether LP, 8-TRACK or CASSETTE
- Type or print YOUR NAME, ADDRESS, ZIP CODE

If not sure of price send enough to cover—We will immediately refund any overpayment. 

**HANDLING CHARGE—85¢ for first LP or tape—20¢ for each additional LP or tape, plus the cost of mailing. This is the order in which the order is filled, not the order in which the items are received. Add applicable sales tax.**

**STATE whether LP, 8-TRACK, or CASSETTE**

Do not sole of price. Send enough to cover—we will immediately refund any overpayment.

**NATIONAL RECORD PLAN, Dept. HF4, 44 West 18th St., New York, N.Y. 10011**

**CIRCLE 55 ON READER-SERVICE CARD**

Comparisons:
Szell / Cleveland Orch. in Col. D 3S 814
Rowicki / London Sym. Philips 5500 287
Kubelik / Berlin Phil. DG 2530 127
Monteux / London Sym. St. Tr. TRS 15157
Neumann / Czech Phil. Van. SU 7

The most somber, and perhaps greatest, of Dvořák's symphonies has always fared well on disc (to the admirable recordings listed above I could add half a dozen or more not currently available domestically), and this newest version, the beginning of a Davis/Concertgebouw Dvořák cycle, continues the tradition.

Davis' interpretation generally belongs to the taut school exemplified by Szell and Rowicki. Tempos throughout, while never rushed, veer toward militancy, with great heed paid to rhythmic energy and regularity of phrasing. In the third movement, Davis clarifies the subordinate theme more explicitly than anyone I have heard, and in the finale's second theme he will have none of the rhapsodic heaving and hauling often encountered (which admittedly can be done to good advantage, as Kubelik shows in his Berlin recording).

Yet unlike Szell—and, to a lesser degree, Rowicki—Davis manages to secure this knife-edged precision and refinement of tone and balance without sacrificing the heft of Dvořák's scoring, thanks no doubt to the superlively vigorous, dark-toned playing of the Concertgebouw. Similarly, he captures something of Monteux's robustness, yet, with the necessary ensemble lapses and textural crudities. Some may still prefer the more lyrical approach of Neu-mann or the more rhapsodic one of Kubelik/Berlin, but I am tempted to award Davis and the Concertgebouw pride of place. Philips' moderately distant, yet exquisitely defined recording captures the bite and dynamic range to perfection.

H.G.

Elgar: Enigma Variations—See Schoen-
berg, Variations for Orchestra.

Foster: Songs, Vol. 2. Jan DeGae-
tani, mezzo-soprano; Leslie Guinn, baritone; Camerata Chorus of Washington; Gilbert Kalish, piano and meleodn; Douglas Koeppe, flute and piccolo; Howard Bass, guita-
tar; James Weaver, piano [Marc A. Aubort and Joanna Nickrenz, pro] Nonesuch H 71333, $3.96.

The Voice of Dyogenic Days: Better Times Are Coming; Longer in Bluffmas Repose; There Are Plenty of Fish in the Sea; My Old Kentucky Home, S cement Polly; Lurity's Good Bye: Come Where My Love Lies Dreaming: We Are Com-
ing. Father Abraham: 300,000 More; Come with Thy Sweet Voice Again; Katy Bell; Hard Times; Come Again No More; Village Belt: Polly; The Hour for Those and Me; Summertime/Lonliness.

When Jan DeGaetani and Leslie Guinn brought out their first volume of songs by Stephen Foster (Noncuch H 71266), I was absolutely ecstatic about their work. This was the way Foster should be sung; the record was living proof that he was a really great composer. All you had to do was to sing what he had written, and the man's genius shone through.

The sequel is a profound disappointment, for the producers have gone fancy-

Francaix: Concerto for Piano and Or-
chestra; Suite for Violin and Or-
chestra; Rhapso for Viola and Small Or-
chestra. Claude Paillard-Francaix, piano; Susanne Lautenbacher, violin; Ulrich Koch, viola, Luxemburg Radio Orchestra, Jean Francaix. cond. Turnabout TV-S 34552, $3.98.

Francaix: Divertimento for Flute and Chamber Orchestra®; Suite for Solo Flute, Quinlet for Winds®. Ransom Wilson, flute, Orpheus Chamber Ensemble®; Musical Her-

Unlike Poulenc, whom he superficially re-
sembles here and there, Francaix does not usually use contrasting material to provide relief from his sometimes jaunty, some-
times warmly flowing, but always super-
suave musical ideas, which instead often

Entertainment
Assurance
A Hallmark of Angel Records

SB-3837 (2 LPs)
The culmination of Early Baroque music! A performance as authentic
as it is beautiful.

S-37256
Rostropovich is 50—and Bernstein joins
him to make the celebration one of the
unforgettable occasions on record.

S-37246
The joyful Gloria: the lyrical Concer-
to. A disc of superlatives; an enter-
prise as it is beautiful.

S-37280/S-37279
Two performance and sonic spectac-
Hist—The caliber of which all Berg-
lund/Bournemouth recordings have
come to be identified.
are repeated to the point of puerility. His music may be "completely, unabashedly, and irrevocably French," as Ransom Wilson points out in his liner notes for the Musical Heritage disc: but it is so only in accordance with a cliché, belied by countless Gallic endeavors, that would have all French artists concerned primarily with stylistic hedonism.

The concertante idiom is the one in which Franck is perhaps the most successful, for the tensions created between soloists and orchestra help compensate for the sameness that tends to water down his style. In the four concertante works on these two recordings—the piano concerto (1886), the suite for violin and orchestra (1914), the rhapsody for viola and small orchestra (1946), and the divertimento for flute and orchestra (arranged in 1974 from an earlier flute/piano piece)—the composer uses the almost constantly moving solo parts as a latticework around which myriad melodic and instrumental patterns weave their attractive ways. None of it is very "deep," even in the sense that Satie and Poulenc are deep. And those enamored of "deep," even in the sense that Satie and Poulenc are deep, may be "completely, unabashedly, and irrevocably French," as Ransom Wilson points out in his liner notes for the Musical Heritage disc: but it is so only in accordance with a cliché, belied by countless Gallic endeavors, that would have all French artists concerned primarily with stylistic hedonism.

Rehearing Furtwangler's bizarre interpretation of the Franck D minor Symphony, one wonders whether he knew what "lento" (or "allegro non troppo," or "a tempo") means. Admittedly, some of his tempos taken separately might—with some stretch of the imagination—be justifiable; but in the second movement, in the Furtwangler Franck, there are more problems: the disregard for both a tempo markings, the uncalled-for ritenuto along with the molto diminuendo at bar 228, the swollen portentousness of the string figurations at bars 191-95, the generally unidiomatic, monochromatic Vienna woodwind playing throughout the symphony. (In the second movement, the all-important English horn sounds particularly threadbare and starved.) The second movement is not so much eccentric in tempo as stodgy and overripe, but the finale returns us to the aimless meandering of the first movement.

The sound, however, is highly acceptable, this is one of the last and, from a purely technical standpoint, best of Furtwangler's Vienna recordings.

Since Daniel Barenboim is an ardent admirer of Furtwangler, one is not surprised to discover in his first movement the same fast Lento and slow Allegro, the same fondness for overripe expressive lingering. The second movement goes more crisply, and the strings of the Orchestre de Paris, while less decisive than the Vienna Philharmonic, has more of the requisite opulence. Ironically, Barenboim projects Furtwangler's tempo alterations less decisively and authoritatively, and the resulting performance sounds more mystical, less hard to like.

The shorter Franck pieces are acceptably played, and Barenboim is not insensitive to the music's beauty. My own feeling is that this literature is best served by underplaying its prominent rhetorical and mystical qualities. Toscanini's "Psyché et Éros" is a case in point: Heard alongside that plastic, yet more firmly delineated account, Barenboim's, well played as it is, sounds turgid and overripe. But make no mistake, he is improving as a conductor.

Knappertsbusch's Siegfried Idyll is a curious filler for the Franck symphony, and it happens that Furtwangler himself recorded the piece with the Vienna Philharmonic for EMI (available in Seraphim IB 6024). Knappertsbusch's genial, mellow approach works passably here, but one looks in vain for the tensile shaping of phrase and line practiced in divergent ways by Furtwangler. Toscanini, Arturo, Weingartner, and Cametti. The sound holds up well: the strings sound even rounder and warmer than in the Furtwangler Franck. H.G.

Franck: Symphony in D minor (1889)
Wagner: Siegfried Idyll, Vienna Philharmonic/Willhelm Furtwangler/ and Hans Knappertsbusch, cond. LONDON TREASURY R 23207, $3.98 (mono) [from LONDON LL 967, 1954; from LL 1250, 1955]
Franck: Symphony in D minor, Redemp tion (symphonic piece) Orchestre de Paris, Daniel Barenboim, cond. [Gunther Breet, prod. ] DEUTSCHE GRAMMOPHON 2530 707, $7.98 Tape 83 3300 707, $7.98
Franck: Le Chasseur maudit; Nocturnes; Psyc he (orchestral version), Christa Ludwig, mezzo-soprano, Orchestre de Paris, Daniel Barenboim, cond. [Gunther Breet, prod. ] DEUTSCHE GRAMMOPHON 2530 771, $7.98

Furtwangler: Symphony No. 2, in E minor Berlin Philharmonic Orchestra, Wilhelm Furtwangler, cond. [Fred Hamel, prod. ] DEUTSCHE GRAMMOPHON 2707 086, $15.96 (two discs, mono, manual sequence) [from LPM 18114/5, recorded December 1951].

Wilhelm Furtwangler's activity as a composer was divided into two periods. As a boy, his extraordinary musical gifts were early manifest, and he pursued composition equally with performance: works in various media, climaxing in a Te Deum that was first performed in Essen in 1911. But the demands of his conducting career—first the need to learn a broad repertory, then the need to learn a broad repertory, which his early, humanistically oriented education had ignored, and then the growing demand for his services—severely circumscribed the time available for composition. Ironically, it was the advent of the Nazis...
that changed this, after the 1934 showdown with Goebbels over Hindemith, when he re-signed all his positions, and during similar periods of enforced inactivity later on. Furtwangler again found time to compose: two violin sonatas, a "Symphonic Concerto" for piano and orchestra, and three symphonies (the final movement of the third not completely revised when he died in 1954). The Second Symphony was written during the last years of the Second World War, and completed in Clarens, Switzerland, on October 18, 1945. But you would hardly guess this from the music, which shows little trace of any developments since, roughly, the turn of the century. Furtwangler evidently resumed composition where he had left off decades earlier. Not that he was unaware of what had passed in between. He had conducted at least three Mahler symphonies in the pre-Nazi years, and many works of Schoenberg, Bartók, Hindemith, Stravinsky, Honegger, and Prokofiev as well, and he believed that the music of his contemporaries deserved active support. But his heart was in tonal music, in the great German tradition that he consid-ered inextricably dependent on the tonal system. (Schoenberg, an equally fervent musical nationalist, sought to make his peace with that tradition by demonstrating that all his innovations were firmly rooted therein.) To understand this, we should note that the Germanic fin-de-siècle cultural milieu about which we know the most—Vienna—was hardly typical; its ferment of ideas and personalities played no role in Furtwangler's youth. In Munich and Austria, bringing faced southward, to Greece (his fa-ther and his tutor, Ludwig Curtius, were both noted classical archaeologists) and Italy (his fiancée, Bertel Hildebrand, was the daughter of a famous architect who kept a house in Florence). In these forma-tive years he was exposed to all the artists in their classic manifestations: a world in which Aeschylus, Michelangelo, Goethe, and Beethoven held equal places—and Mahler, Freud, and Klimt none at all. That aspect of nineteenth-century German cul-ture which yearned after the Medi-terranean is one of its most appealing, and it was Furtwangler's spiritual home during what seems to have been an idyllic youth—so it is not surprising that his musical sympathies remained rooted there.

The language of the Second Symphony is then, conservative: a big, brooding four-movement symphony in classical form with clear-cut themes, developments, and returns. Its aspirations are high—in those days, you didn't write a piece lasting an hour and twenty minutes unless you planned to say something pretty weighty. But the lengths are not covered in the leasurely, long-phrased strides of Bruckner—this is more nervously active music (though a certain obsessive quality in the duple-metered scherzo does recall Bruckner), and very tightly reasoned thematically. Often, in fact, one feels that the lengths are not so much covered as filled out, that the rela-tively neutral expressive character of the themes doesn't bear the weight they are called upon to support by the massive structure. And the prevailingly gray charac-ter of the orchestral writing (perhaps accentuated by a rather dim recording job, es-speially in the first two movements) doesn't make for greater variety. I've known this recording for about fif-teen years, and come to respect much of the symphony for its professional skill. Despite all my admiration for Furtwangler as a mu-sician, however, I cannot find it a success-ful piece, least of all in the final pages—vic-tory grasped from despair—where the scoring turns conventionally grandiose. This may not be the final word, however; though the symphony was recorded in 1951 and published in 1952, a 1954 letter to a con-ductor planning a performance refers to a "second conclusion."

This recording was made several years after the 1948 premiere, and the Berlin Phil-harmonic had not played the work in the meantime, which may account for some patches of uncertain execution. In another letter to that same conductor, Furtwangler said that the recording of the symphony was "certainly in many ways authoritative, but partly a series of tempos later became faster." Tapes of later performances are in evidence that might confirm this (and also clarify the matter of the "second conclu-sion")—but the discs are, in any case, a fervent enough brief for the work. Deutsche Grammophon's double-fold sleeve includes a slightly abridged trans-lation of the article by Peter Wackernagel that appeared on the original issue, plus a brief biographical sketch by Karla Hocker.

"An Invaluable Reference"

High Fidelity Magazine, Leonard Marcus, Editor

1976 Schwann Artist Issue

"Whether you're a novice classical disc col-lector or a jaded music critic, this elegant, easy to read, clearly ordered catalog is all to-gether invaluable." The Boston Phoenix. David Moran. Music Reviewer

"A Godsend to... wonderful aid for music writers and researchers... people have yet another reason to be grateful to Schwann."

—Record World, Sprightle Jenkins, Classical Editor

The 1976 Schwann Artist Issue lists classical records and tapes (as in Schwann-1 and -2 through January 1976) by performing artists. It contains some 25,000 entries and is in six sections:

1) Orchestras, Quartets, etc.
2) Conductors
3) Instrumental Soloists (Violinists, Pianists — performers on 52 different instruments.)
4) Choral Groups
5) Operatic Groups
6) Vocalists

Be sure to get your own copy of this 280 page book. It is in record shops throughout the U.S.A. If your dealer has run out of copies, ask him to order more from us while limited supplies last.

$3.95
at your dealer's
$4.50 by mail

Schwann Publications
137 Newbury St., Boston, Ma. 02116

I am enclosing $___.00 cash or check (no stamps) to cover costs plus postage and handling.

Name

Address

City State Zip

Please send me a copy of the 1976 Artist Issue.
HANDEL: Messiah (ed. Hogwood). Elly Ameling, soprano; Anna Reynolds, mezzo; Philip Langridge, tenor. Wynne Howell, bass; Nicholas Kraemer, harpsichord; Christopher Hogwood, organ; Academy and Chorus of St. Martin-in-the-Fields, Neville Marriner, cond. [Chris Hazell, prod.] Argo D180 3. $23.94 (three discs, manual sequence). Tape: ● K18K 32, $23.95.

From 1742 until a few days before Handel's death in 1759, there were fifty-six performances of Messiah, each determined to a considerable extent by the circumstances: portions of the score were omitted, new numbers added, others transposed to accommodate new singers, and so forth. As Christopher Hogwood, the editor of the version recorded here, says, Handel left "not one Messiah, but many.

Actually, the situation is not so bad. Judicious selections from among the different versions of Messiah have been made within the last decade or so by Alfred Mann, Watkins Shaw, and John Tobin (the latter's score published in 1965 in the Halle critical edition). Handel disapproves of these "standard performing editions," substituting the first London version, which survives only in a late-eighteenth-century copy. This is a legitimate decision, and we are grateful to this devoted scholar for letting us hear Handel's first thoughts, with several numbers that deviate from what we are used to.

But it is difficult to accept Hogwood's claim that the London version, which is not always unequivocally clear and portions of which had to be reconstructed, is better than Shaw's or Tobin's—in the absence of a definitive version, selections must be made in any event. And surely some of the additions and changes that Handel made are worth considering, as the product of second thoughts or the availability of better singers. (The "official" Tobin score prints the important variants in an appendix, the same procedure followed by Arthur Mendel in his invaluable edition of Bach's St. John Passion, which similarly survives in four versions.)

Neville Marriner's performance is admirably vignetted. I have never seen a better-trained, more accomplished and accurate boys' choir, the orchestra is first-class, the general performing discipline is exemplary, and the sound is good. Yet there are some disappointing contradictions.

On the one hand, Marriner, an excellent and much respected conductor, follows the modern enlightened way of dealing with baroque music: The tempos are bracing (even, in many instances, too fast); the proportion of the performing forces is correct and well balanced, avoiding the pyramids of sound favored by the old-line choral societies: the dynamics are tasteful; most numbers are sharp and clean, if often too fast and pointed. Colin Davis, in his remarkable recording, also displayed ample virtuosity but hit just the right degree of brilliance to bring out the incomparable charm of these pieces.

The contradictory quality comes in the self-conscious sentimentialty of the solo numbers. Elly Ameling and Anna Reynolds, both very good singers, fairly tremble with emotion: some of the recitatives are really unctuous. Also, "I know that my Redeemer liveth" should not be performed, as it is here, like a French minuet, which is just as sentimental, if in a different sense, as when it is soulfully dragged. Ameling still delivers some fine singing, with her ringing high tones, and Reynolds too can sing well when she is not inhibited—interpreting "He was despised" she seems to emulate Handel's friend, the tragedienne Susanna Cibber, who reportedly had "a mere thread of a voice." Tenor Philip Langridge is also a little awestruck but holds his own, though his is not a bel canto voice; bass Wynne Howell is good. Both men struggle a little with the coloratura.

Finally, a word about an important aspect of the performance: the overdone embellishment, which I take to be the editor's work. In the harqueo era the performer was king, but some composers, like Lully and Handel, did not permit undue liberties, and we know that in many instances the decorations were excessive. Common as well as musical sense demands that with changed circumstances and sensibilities we should hold such embellishments to a tasteful minimum. In this recording: "I know that my Redeemer liveth" is covered with the musical equivalent of costume jewelry. (I am aware of the existence of such a sequinned-studded version, contemporary with Handel but anonymous, but who would want to break up such a glorious melody with meaningless burlesques?)

The so-called fermata cadenzas at the end of pieces or sections are, as usual, inept and a photo of the composer/conductor occupying some 240 square inches of space that might more usefully have been devoted to thematic citations, more historical detail, or to a translation of Furtwangler's own "Prefatory Note to the Premiere of the Second Symphony.

D.H.

IVES: Songs. Dietrich Fischer-Dieskau, baritone; Michael Ponti, piano [Corg Garben, prod.]. Deutsche Grammophon 2550 696, $7.98. At the River; Elegie; Ann Street; A Christmas Carol; From "The Swimmers." West London. A Farewell to Land; Aside with Me; Where the Eagles; Disclosure; The Gulls; The Children's Hour; Two Little Flowers; Autumn; Tom Selleck Away; Ich grobe nicht; Feldensamkeit; Weil' nur mir; in Flinders Fields.

Since my October 1974 Ives discography, in which I noted that the songs represented a still largely untapped source of some of the composer's finest and most accomplished music, we have had Jan DeGaetani's wonderful Nonesuch disc (H 71325, August 1976) and now this collection by Fischer-Dieskau. Although I cannot say that his achievement matches DeGaetani's, this is certainly a fascinating and valuable contribution to the Ives shelf. Simply to have someone of his musical background and experience deal with this literature is an exciting and intriguing prospect.

From Ives's roughly 150 songs, Fischer-Dieskau chooses a varied group of nineteen that covers the entire thirty-five years of the composer's productivity. Included are live songs not previously available on record ("Elegie," "Abide with Me," "Where the Eagle," "Disclosure," and "Weil' nur mir") and although some of the better-known songs do appear—such as "At the River" and "Ann Street"—emphasis is most placed upon those that are less frequently performed.

In the performances, Fischer-Dieskau never simply takes the obvious course but shapes the pieces in unusual and unexpected ways. Indeed, my chief complaint with this disc is that the works seem over-interpreted: Fischer-Dieskau is so intent upon constantly "doing" something with his voice—articulating every possible nuance and inflection—that the music tends to get buried beneath the performance. One of the most impressive aspects of DeGaetani's disc is the way she meets the music on its own terms, neither condescending to it nor trying to make of it something that it isn't. Particularly irritating is Fischer-Dieskau's habit of scooping into (or out of) notes, presumably to lend them more expressive warmth; this rarely works with Ives.

Yet there is much that is excellent about this disc. I particularly like the performances of four early settings of texts taken from European art songs (three in German, one in French), and the reading of "West London" is as beautiful as any I have heard.

April 1977
One problem in approaching this disc may simply be that we are accustomed to hearing voices done in a certain way, by homegrown vocalists. Fischer-Dieskau's English is constantly intelligible (though his determination to sound 'American' frequently gives his voice an unpleasantly nasal timbre). Michael Punt's sensitive accompaniment is real plus.

Richard Leech

TIME-LINE BULLETIN

by PARADOX™

"... a clarity and openness that we would not have suspected possible... the TA-12 impresses us very favorably. Its sound fairly sparkles... without being cold or clinical. Some listeners judge that their sound outperforms their price. That doesn't surprise us — not at all!" — High Fidelity Magazine

March, 1977

This special pulse is used in the Time-Align™ Technique to create the most accurate acoustic reproducers you've ever heard. Each of the components of a complex acoustical wave are presented to the listener with exactly the same time relationships they had in the original sound.

For more information about Time-Align™ Technique and the name of your nearest TAT™ series loudspeaker system dealer, write:

SONIC ENERGY SYSTEMS

6910 Harvin Drive
Houston, Texas 77036

Manufacturers of Paradox Loudspeakers

TA & Time-Align are Trademarks of E.M. Long Associates

Circle 46 on Reader-Service Card

KABALEVSKY: Colas Breugnon, Opp. 24/90

Jacqueline Mlle de Termes
Soleni (ms)
Duke d'Asnois
Robinet
Griffard
Colas Breugnon
Chamaille

Valentina Kaychevchenko (p)
Albina Chirkova (p)
Natalya Cherkasova (ms)
Anatoliy Marchevsky (p)
Nikolai Gurtsovich (p)
Yevgeny Vaskin (p)

Chorus and Orchestra of the Stanislavsky Nemirovich-Danchenko Musical Theater, Georgi Zhemchuzhin, cond. [Yuri Kozhyan and Nikolai Daniin, prod.] COLUMBIA/MELodiA M3 33588, $20.98 (three discs, automatic sequence).

This opera, Kabalevsky's first, was initially performed in 1938 in the composer's native city, Leningrad. Though its overture and an orchestral suite drawn from the opera gained a certain currency, the piece itself did not hold the stage. Kabalevsky puttered over it for thirty years, finally producing a revised version in 1960 (hence the dual opus listing). This second version has evidently achieved some success in the Soviet Union.

The dramatic problems of the work arise from the original sound.

The hero, Colas, is a sculptor and carver of the mate, even sentimental side of the story. Kabalevsky does his more comfortable performance.
lando nature, and here he tends to sound like any above-average Russian character bass. I respected and enjoyed his work, but he did not quite persuade me that Colas is the magnetic, charming rascal he is supposed to be, which is only to say that he does not transcend the writing.

Anatol Mishchevsky used to sing romantic tenor leads with the ensemble (and, for all I know, does yet). He still has plenty of voice, though to judge by present evidence it is beginning to sound dry and constrained around the break and to lose some of its malleability. In what amounts to an extended character part, he gets off some ringing top notes and throws himself into the caricature with a will. Gyorgy Dudarev is a solid basso for the quasi-buffo part of the Cucu. Yevgeny Maximienko a guttural-sounding baritone for the important but musically thankless role of a toady for the duke who is Colas' sexual rival.

Nina Isakova, the Selina, is an experienced mezzo whose voice now inclines to some harshness and heaviness. She sings reliably, but at least in purely aural terms does not convey the allure intended in the music. Valentina Kayevchenko, as the wife, does a committed piece of vocal acting, but her lyric soprano has taken on a case of the Slavic shrills. To compare the singing of these two women with their earlier work in the Duenna recording is to have specified the sort of stiffness and wininess that seems to invade the vocalism of almost all Russian female singers as they move out of their youthful primes.

The sound is decent enough, though the soloists are at points rather aggressively with us, and the empty room acoustic is in evidence. The booklet includes libretto with a careful, annotated transliteration by Dr. Albert Todd and some informative background notes by Boris Schwarz. C.L.O.


Comparison—same coupling: Szel/Cleveland Col. MS 4708

Neither of these conductors succeeds in projecting the quite individual satiric wit of these scores. Ormandy, who introduced the Háry János Suite to records more than four decades ago with the Minneapolis Symphony, has not here captured the music's sardonic bite and wild fantasy and the lushness of the Philadelphia Orchestra, at least as recorded by RCA, doesn't suit either piece. Both works, though brilliantly scored, need more dry-point etching to match their humor. Dorati comes closer to meeting the textural requirements, but he too lacks the necessary wit to carry them off successfully. Moreover, the intensely detailed Phase-4 recording does not flatter the Netherlands Radio Philharmonic. Dorati's performance of the Kodály with the Philharmonia Hungarica in their set of that composer's orchestral works (London: USA 2313) was in every respect better.
Among the many recorded performances of these scores I will return to Szell’s coupling: The lean sound of the virtuoso Cleveland Orchestra and Szell’s rather strained sense of fun seem infinitely more idiomatic in both pieces. For the record, both Ormandy and Dorati use a cymbal on in Hary Jónas and opt for the instrumental version of the Romance in L.t. Kje. P.H.

**Lalo: Symphony in G minor: Rapsodie norvégienne; Le Roi d’Ys; Overture. Monte Carlo Opera Orchestra, Antonio de Almeida, cond. Philips 6500 927, $7.98.**

Edouard Lalo’s Symphony in G minor (1885–86), like many such minor Romantic pieces, starts out with the suggestion of a rather heroic theme, does very little with it, moves on to other themes (some quite attractive) that likewise have little place to go, and ties its loose ends together with fairly empty dramatic flourishes. Much of the symphony sounds to me like excellent accommodation to vocal lines that were never devised, or perhaps a curtain-raisers for a curtain that never rises. Attractive as much of the music is, it leaves me with an empty feeling.

Much more effective, despite the blatant Wagnerisms that pervade Lalo’s work, are the overture to the opera Le Roi d’Ys (here, at least, one knows the curtain will go up) and the Presto from the two-movement Rapsodie norvégienne, the composer’s orchestral arrangement of his violin-and-orchestra Fantasie norvégienne. The cute folkliness of the Rapsodie’s opening movement, however, does not last for long.

In some of the big tutti passages, the Monte Carlo Opera Orchestra sounds quite impressive, and it is helped by Philips’ big, present sounds. In more subdued passages, though, weaknesses appear, particularly a thinned-out, often flat oboe. Antonio de Almeida is good enough with the flashier material, but I do not find much cohesiveness in his approach to the symphony. R.S.B.


Richard Bonynge’s coupling of Les Patineurs and the ballet music from Le Cid competes with Jean Martinon’s equally proficient version of the same music with the Israel Philharmonic (London Stereo Treasury STS 15051). What gives Bonynge a decided advantage, however, is the six-minute excerpt from Massenet’s Lamento of the neglected opera Ariane, one of the many accounts of Ariadne on the island of Naxos with which the history of opera is studded. The performance of K. 331 is elegant, sensitive, and impressive. Brendel places the opening variations well and throughout more modest but meaningful embroidery. The minuet is stately but never, as is sometimes the case, stolid. In the celebrated Rondo alla turca, the nimble fingering is a treat to hear and the delicately handled Turkish passages scintillate. The B minor Adagio, if less gloom-laden than it sometimes is, loses little poignancy in this coolly chaste, classical treatment. Formal elements are respected, and the effect is more Mozartian than Beethovenian.

In K. 333, Brendel’s mincing and rigid staccato rears its head. His insistence on hitting every downbeat squarely precludes the communication of meaningful line and structure; his handling of the wonderful second-movement development section lacks mystery or poetry (he further distorts the binary structure by repeating only the first half), and there is absolutely no adorning of the opera buffa qualities and harmonic teasing in the rondo’s ‘C’ section. What finally puts me off is Brendel’s maddening reliance on pedal for legato; the resulting sound is, consequently, bothicky and unclear.

Philips’ processing is, as usual, splendid. H.G.
Here's your FREE "at home" shopping service!

It's easy! All you do is use the Reader Service at right.

<table>
<thead>
<tr>
<th>MAIL ORDER BUYER'S SERVICE</th>
</tr>
</thead>
</table>

Now you can enjoy the best in both musical worlds—in one colorful magazine:
HIGH FIDELITY/MUSICAL AMERICA

For the full story of music and musicians, include MUSICAL AMERICA as part of your High Fidelity subscription.

MUSICAL AMERICA covers the live musical scene completely. You'll get news, reviews and reports of important musical events all over the world—written by critics who know the score and how to write about it. You'll meet today's outstanding composers, conductors and performers . . . learn how they work and live . . . what they think and say about music.

MUSICAL AMERICA adds a new dimension to High Fidelity—and to your enjoyment of music. Use the postage-free card to start copies coming your way regularly.

(MUSICAL AMERICA is available only by subscription . . . and only with High Fidelity. It is not sold on newsstands. Another important reason to order your subscription now!)
Here's your FREE "at home" shopping service!

It's easy! All you do is use the Reader Service card at right.

1. Just circle the number on the card that matches the number below the ad or editorial mention that interests you.
2. Then type or print your name and address. Don't forget your zip code.
3. Drop the postage-paid card into the mail.

You'll receive literature, colorful brochures and specifications about the products that interest you. . . free and without obligation!

Use HIGH FIDELITY's "at home" shopping service today!

MAIL ORDER BUYER'S SERVICE

Three Great Buyer's Guides from
HIGH FIDELITY—Order Now!

To order, circle the number on the attached card that matches the number of the Buyer's Guide you want, enclose payment with your order and mail to:

Reader Service
P.O. Box 14306, Annex Station
Cincinnati, Ohio 45214

(Enclose payment. No credit orders.)

Both Slatkin and the fast-maturing St. Louis Symphony do remarkably well with these Mussorgsky showpieces, even though they inevitably fall short of matching the best earlier versions. Like other young conductors in such demanding scores, Slatkin has to be so intent on maintaining taut control that he isn’t yet able to inject much distinctive individuality.

There is no real challenge here to the fierce drama of the Toscanini and a few other accounts of Mussorgsky-Ravel (or to the more pictorial lyricism of Ansermet in the same score), but with the invaluable aid of luminous engineering, Slatkin makes the Midwest orchestra sound mightily impressive in both stereo-only and even bigger auditorium-authentic quadraphony. The four-channel technology is of the ambience-only type, however, and hence not quite as thrilling as the more enveloping “surround sound” of the Mackerras/Vanguard Pictures, especially in the latter’s fully discrete Q-reel edition.

R.D.D.

Off: Carmina Burana. Norma Burrows, soprano; Louis Devos, tenor; John Shirley-Quirk, bass-baritone; Southend Boys’ Choir; Brighton Festival Chorus; Royal Philharmonic Orchestra, Antal Dorati, cond. [Raymond Few and Tim McDonald, prod.]. London Phase-4 SPC 21153, $6.96. Tape.

Given the mushrooming vogue of this Off showpiece, the only surprise is that there hasn’t been a Carmina Burana long before this from London. As might also be expected, especially since this is a Phase-4 release, the audio engineering is outstanding for its strength, solidity, and dramatic impact. Technologically, this version ranks among the very best. And it is, moreover, distinctively different from any of the others in its choice of vocal/instrumental balancing, with the voices somewhat more prominent—which may or may not be an advantage.

Unfortunately, however, the producers must have been so preoccupied with engineering considerations that they neglected to choose performers who know and relish the music. Dorati, with his long ballet experience, should have been a good choice to conduct, but he gives the impression of dutifully reading an unfamiliar score, never conveying any real sense of personal involvement. All three soloists are at best routine, at worst indolently mannered, while the often somewhat coarse-toned chorus is neither first-class to begin with nor adequately rehearsed so as to seem so in this particular work. And when Carmina Burana is given no better than a barely adequate performance, the best recording in the world can’t save it.

So it’s the discographic status quo ante: The 1970 Ozawa/KKA version (LSC 3161) remains grandly unique; the 1975 Thomas/Columbia account (M/MQ 33172) remains the most provocatively exciting but its spectacular quadrophony, the recent Ravel/Philips version (8540 046, December 1976) is my all-around preference for its infectious combination of authority, musicality, dramatic point, and relish.

R.D.D.

Paganini: Caprices (24). Op 1. Michael Rabin, violin [Richard Jones, prod.]. Seraphim SIB 6096. 1/26 (two discs; automatic sequence) [from Capitol SPBR 8477, 1959].

I hope that no one lives with a soul so dead as to not to vibrate in every bone at a really spectacular performance of the Paganini Caprices. For my money there are few artists quite so beautiful and over the years those impossible feats among the thirty-second-note chromatic octaves, the left-hand pizzicatos, the ornamental four-octave leaps, the flying spiccato, all the rest have remained one of the great roller-coaster rides of all time. And over the years too one man’s recording of the Caprices has remained at the top of the heap.

Michael Rabin first recorded eleven of them for Columbia at the age of fourteen, the year he made his Carnegie Hall debut. His complete set, here reissued by Seraphim, was released in 1959. In the early 1960s, he was afflicted with health problems, and he died tragically in 1972.

THE BEST CASSETTE IN THE WORLD!

"...outstanding in sound and consistent in quality."

THE NEW YORK TIMES

"...let me be among the first to applaud London...for its achievement."

STEREO REVIEW

"...most remarkable in spell-binding testimony to the current ability of cassette technology...an audiophile's delight."

HIGH FIDELITY

"I was truly astonished with the high quality of the sound."

AUDIO

Imported from England
All Dolsby processed
Opera sets packaged in deluxe presentation boxes with complete libretti.

A Selection From Our Outstanding Cassette Catalogue

R. Strauss: Also Sprach Zarathustra - Till Eulenspiegel - Don Juan - Sir Georg Solti - The Chicago Symphony CSS-6978

Mahler: Symphony No. 2 - Zubin Mehta - The Vienna Philharmonic CSAS-2242

Puccini: La Boheme - Pavarotti - Freni - Won Karajan - Osais-1299

Messenet: Esclarmonde - Sutherland - Aragall - Bonynges - Osas-1318

Beethoven: The Five Piano Concertos - Vladimir Ashkenazy - Sir Georg Solti - The Chicago Symphony CSS-2244

Rachmaninov: Piano Concerto No. 3 - Alicia de Larrocha - Andre Prévost - CSS-6977

Gershwin: Rhapsody in Blue - An American in Paris - Lorin Maazel - The Cleveland Orchestra CSS-6946

Pachelbel: Canon - Karl Munchinger - The Stuttgart Chamber Orchestra CSS-6206

Wagner: The Ring - Complete (Deluxe Edition) - Sir Georg Solti - Ring SS-1

London Classical. 225 W. 57th St., N.Y., N.Y. 10019

For a complete list of available cassettes, write to:

London Classics, 225 W. 57th St., N.Y., N.Y. 10019

Circle 26 on Reader-Service Card
Join High Fidelity Editor Leonard Marcus and soprano Phyllis Curtin behind the scenes as they discuss music, performance and recordings with world-famous musical artists. CONCERT STAGE features a distinctive blend of musical analysis, personal anecdotes, and the finest classical recordings. Don’t miss inaugural programs with André Watts, James McCracken, Charles Rosen, Henry Lewis, Gunther Schuller, Gary Graffman, Roberta Peters, Jorge Mester, Ruth Laredo, Rudolf Firkusny, Kyung-Wha Chung, Charles Treger, John Alexander and other internationally-acclaimed performers. Enjoy CONCERT STAGE each week on the following network of radio stations. Please consult your local newspaper for program day and time.

CONCERT STAGE is presented by Discwasher and Ampex
Produced in association with Cinema/Sound Ltd

Handbook of Multichannel Recording

Here is very possibly the single most important book on sound recording for the layman or professional who wants to make quality recordings of musical groups. For the first time, here’s a book that covers it all—dubbing, special effects, mixing, reverb, echo, synthesis—for both stereo and four-channel recording. Simply circle No. 781 on the coupon below.

“Handbook of Multichannel Recording” is only one of a wide selection of carefully chosen audio books made available to HIGH FIDELITY readers through Music Listeners’ Book Service. Many of the selections are not readily available in bookstores. Choose your books today from the list below, circle the numbers on the coupon, and enclose your check or money order. That’s all there is to it.


No. 598 OFFICIAL GUIDE TO HIGH FIDELITY. Compiled by the Institute of High Fidelity. An informative introduction to the various components that make up a modern high fidelity system, covering everything from photo cartridges to quad systems. Paperbound: $2.00.


Check or money order must accompany your order. No cash or C.O.D.’s, please. Allow 60 Days for Delivery.

It is wonderful to have his Caprices back, and they are still at the top of the heap. In 1972, in reviewing Itzhak Perlman’s version (which Perlman dedicated to Rabin’s memory), I found Rabin in major instances a shade more elegant, more secure in intonation, more yielding in Paganini’s sweet sentimental moments. Going over the two versions again, I feel the same way, though Perlman’s set is so good that I am slightly embarrassed to place it second to anybody’s. (Paul Zukofsky, of course, is also a fabulous technician, but his Vanguard version is highly idiosyncratic—so peculiar, in fact, as to put it almost out of the running.) At any rate, Rabin is full of presence and tensile energy. He is positively princely in his sense of rhythmic resilience (the bounce of those punctuating eighth notes as they offset the cascade of thirty-second-note runs in No. 17) and surprisingly sensuous in Paganini’s slower, more beguiling moments, like the dolce opening of No. 20 or the luminous, sentimental chromatic thirds of No. 13. It is, in fact, this sensuousness that distinguishes Rabin from Perlman; the latter is inclined to be a little more restrained, a little more on top of the strings, a little cooler. A case in point is the fanfare figure of No. 14, which Rabin digs into to the point of grittiness; Perlman employs a lighter touch and keeps his distance a bit. It is, on the whole, a shade paler. (Says Angel’s sound, which does not have the presence, oddly enough, of Seraphim’s run.)

So Rabin is back. And you won’t really know what the Paganini Caprices hold until you hear him.

S.F.

POULENC: Gloria*, Concerto for Piano and Orchestra*: Norma Burrowes, soprano*; Cristina Ortiz, piano*; City of Birmingham Chorus* and Symphony Orchestra, Louis Fremaux, cond. [David Motley* and John Wilan*, prod.] ANGEL S 37246, $6.98 (50-encoded disc).

Poulenc’s piano concerto, composed in 1949, opens with one of those melodies so immediately striking that heads automatically turn when it is played. After a slight recrudescence of those punctuating eighth notes as they offset the cascade of thirty-second-note runs in No. 17!, and surprisingly sensuous in Paganini’s slower, more beguiling moments, like the dolce opening of No. 20 or the luminous, sentimental chromatic thirds of No. 13. It is, in fact, this sensuousness that distinguishes Rabin from Perlman; the latter is inclined to be a little more restrained, a little more on top of the strings, a little cooler. A case in point is the fanfare figure of No. 14, which Rabin digs into to the point of grittiness; Perlman employs a lighter touch and keeps his distance a bit. It is, on the whole, a shade paler. (Says Angel’s sound, which does not have the presence, oddly enough, of Seraphim’s run.)

So Rabin is back. And you won’t really know what the Paganini Caprices hold until you hear him.

S.F.
Kyung-Wha Chung
A breathtaking violinist

chino/Prêtre performance (Angel S 36426), but the latter is quite a bit more idiomatic.

Poulenc’s 1959 Gloria may prove one of the last great musical works based on Catholic liturgy. Opening with a fanfare based on a much earlier (1928) Hymne for piano (itself probably inspired by the “Hymn” opening Stravinsky’s 1925 serenade for piano), the Gloria is a perfect example of the most sensual richness Poulenc brought to his liturgical music. Whether in the bantering jocularity of the “Laudamus Te,” which struck certain religious spirits as inappropriate at the time of the work’s premiere, or the rather Prokofiev-ish, impassioned plea of the “Agnus Dei,” he subtly manipulates the texts.

Frémaux’s Gloria, while more idiomatic than his piano concerto, is still drier and less exuberant than Prêtre’s. And although I like the churchlike ambience of the choral passages, the recorded sound here lacks depth and bright-ambience of the choral passages, the repression is often enough to suggest that it is a mannerism rather than a technical flaw, and the habit does not crop up in the Vieuxtemps at all. But the point is a small one. Put this alongside Milstein’s as one of the finest performances of the work on discs.

The Vieuxtemps is a less substantial piece, but as a vehicle it is astutely designed to encompass sweet-toned rhapsodizing, a lovely lyricism, and spurs of derring-do. Chung manages a little more snap than even Zukerman, and throughout she displays the fine, free phrasing and capacity for aural color that are characteristic of her. Zukerman is not overshadowed by any means—these Levritt winners (they shared that prize in 1967) are a fair match for each other. But Chung’s performance is enormously attractive.

She gets strong support from Lawrence Foster and the London Symphony, who see eye to eye with her on the inherent drama in each work. A special salute to the oboist, who performs his concertante role in the Saint-Saëns middlesmiddle movement with a soloist’s verve.


Saint-Saëns’s Requiem was written, in a very short time in 1877, as a response to an inheritance that enabled him to give up his post as organist of the Church of the Madeleine. Although the Requiem is characteristic of its composer, it differs radically from its celebrated nineteenth-century cousins by Berlioz and Verdi.

It is a low-keyed, reflective work, attuned to church rather than concert hall, with the music remaining subservient to the text. Its best qualities lie in this straightforward-ness and in Saint-Saëns’s craftsmanship. In this respect, the Requiem recalls eighteenth-century works in tone and feeling; its aura of quiet repose and its shunning of melodramatics is found again in the Fauré Requiem.

To my ears, though, this music demands all the clarity it can get. There is so much going on, the chord structures are so complex, the instrumentation is so kaleido-scopic in its shifts of pitch and timbre, that the average listener can do with all the help the engineers can give him. That is particularly the case, of course, with conductors like Craft and David Atherton, who do their best to take the music up to Schöenberg’s invariably fast tempos. Daniel Shulman, though, by no means sentimentalizing the score, is prepared to allow his players rather more leeway, occasionally to the point of losing the music’s forward impetus, I feel. This is very much a matter of subjective impressions, of course, but it seems to me that the serenity of the penultimate “Song Without Words” is undercut by too many suggestions of the same mood earlier in the work.

On the other hand, these fairly easying
"... buy a speaker with a need for reflecting walls, corners, complex horns, magic filaments, a brain, and V8 configuration, and you'll have something to talk about at your next party.

Acquire an ADS 810 system, and you'll get honest, superior technology, refined to a point where unbelievable accuracy and clarity deny this speaker's physical existence."


The fate on records of Schoenberg's Orchestral Variations—the first twelve-tone work for orchestra—has not been very happy. After two undernourished Craft versions, a dimly recorded but capable Records of Enigma (on Wergo, now difficult to acquire), there is a light—indeed, not for most listeners. The Adduci three discs).


Vol. 3 of Frankl's Schumann series can be recommended both for the unusual music and for the performances. As in the earlier installments (SVBX 5469, December 1974, and SVBX 5469, November 1975), the Hungarian-born, British-resident pianist plays with a modern artist's exactitude of detail and note values but is fully sensitive to the inner voices, and gracious expression. All that is really lacking in these brightly textured interpretations is that touch of fire, textural diversity, and asymmetry—in short, temperament. The highly intelligent artist from the born re-creator. This interpretive homogeneity is more evident when all the playing is heard in concentration—a state of affairs common for reviewers with a deadline but, fortunately, not for most listeners. The additional items from the Album series for the Young

THE INVISIBLE ADS 810.

ADS manufactures a complete line of high fidelity mini-AMP, pre-amplifiers, power converters, two-way and three-way speakers for mobile, home and studio applications, priced between $500 and $700 (approximately). ADS also makes a line of complete three-way speakers for mobile, home and studio applications, priced between $500 and $700 (approximately). For a catalog and dealer list send this coupon to ADS, ANALOG & DIGITAL SYSTEMS, 64 INDUSTRIAL WAY, WILMINGTON, MASSACHUSETTS 01887.

Comparisons:
Bernstein: N.Y Phil. Prev.: London Sym. RCA LSC 2666

Angel has regrettably muffled and dulled the clean, bright, well-defined sound of the British issue of this recording (SLS 5044, coupled with Berglund's Shostakovich Tenth, also scheduled for domestic release). Heard on its own, the Angel version sounds decent enough, but the difference is substantial enough to make it worth any interested listener's while to search out the British edition.

Berglund's interpretation stands with those of Bernstein, Prev. and Maxim Shostakovich as the best available. Yet his approach differs from the others' in important ways. The music flows more smoothly, along much more expansive lines. Berglund avoids both Bernstein's hyperbolic jaggedness and Maxim's Shostakovich's dramatic contrasts. Prev. does maintain a more even keel, but his is a more extraverted reading.

Berglund often reaches an almost meditative quietness that puts the carefully prepared peaks into particularly strong relief. The finale, of course, is another story, but even here Berglund's middle-of-the-road, one-principal-climax point of view makes his perhaps the most palatable rendition on disc. Throughout the symphony, he succeeds in using slowing tempos and understating his points while maintaining the music's dramatic vitality. The results are most effective.

H.G.

Phase Linear FM Tuner with exclusive Dynamic Range Expander.

With the new Phase Linear 5000 FM Tuner you can actually improve FM broadcasts to rival that of tapes and records. Advanced electronics combine excellent reception capabilities with a unique Dynamic Range Expander that restores compressed FM signals to their original sonic quality. The Phase Linear 5000 has many other unusual features not available on most conventional tuners, including an L.E.D. Multipath Distortion Indicator that identifies this type of distortion, thus simplifying its removal; a Variable Muting Control; De-emphasis; and more.

See your dealer and listen to this remarkable tuner.

Manufactured in the USA. Distributed in Canada by H. Roy Gray, Ltd.

CIRCLE 36 ON READER-SERVICE CARD
One talks of influences—and Beethoven has remained a constant influence on Tippett, most patently on the piano concerto, the Third Symphony, and the Third Piano Sonata—but Tippett’s style is all his own, hard to describe and very easy to recognize. Anyone who has heard A Midsummer Marriage knows it. One element is an exuberant, joyful, dancing quality of rhythm, achieved sometimes by cross-accents within a regular meter (as in the finale of No. 2), sometimes by an impetuous flow of lively movement that defies regular barring (as in the finale of No. 1 and the scherzo of No. 2, where the time signatures on the page keep changing while the ear is carried forward without restraint). Another element is the resolution of contrapuntal lines into concord, with an effect sometimes poignant, sometimes wonderfully consoling.

Tippett seems to be incapable of writing a dull or routine line. If anything, there can be at times too much musical energy. (Someone once remarked that his Third Quartet must contain more notes than all Shostakovich’s quartets together.) This can lead to a contrapuntal busy-ness that has prompted comparisons with middle Hindemith at his most remorselessly active. It makes Tippett hard to play. Like Berlioz, he used to be accused of lacking instrumental dexterity—until performances such as those Colin Davis has put on record made everything clear. The Third Quartet has had some currency in Britain, but I own that my admiration for it remained qualified until the Lindsay Quartet on the recording under review—well, one cannot exactly say made light of its difficulties, for it is not a light piece, but at any rate showed the necessity for the writing’s being as energetically florid as it is.

This young quartet (formed at the Royal Academy in 1967, quartet-in-residence at the Universities of Keele and then Sheffield) has forged the kind of special relationship with Tippett that the young Fitzwilliam Quartet (formed in Cambridge in 1969, quartet-in-residence at the Universities of York and then Warwick) had with Shostakovich. Its players possess the buoyancy, the energy, and the passion that Tippett’s music needs. Let me pinch two sentences from a colleague that characterize its merit: “The Lindsay Quartet is remarkable not only for the strength and panache of all its members, but for the collective concentration with which it pursues its sharply defined musical purposes. There is a strong sense that each player is given his head, and yet that all the heads seem to think the music the same way.” The tone is keen without coarseness. Lesser sweetness is missing; there is no sense of polish for polish’s sake. The Lindsay’s Beethoven is regularly praised; its Haydn and Mozart are praised only with reservations. The recording is beautifully clear and immediate, producing a strong sense that the players are in the room with one, not heard from a seat in a concert hall. One of the players—I think it is the leader—can be heard snatching his breaths rather noisily: it adds to the reality of the recording but can hardly be counted a virtue.

It was about ten years since I had last heard any of the Tippett quartets. Listening again to all three, I hear again and again the kind of musical thinking that was to produce A Midsummer Marriage. Tippett writes music that owes nothing to fashion and owes much—which is frankly avowed—to Tallis, Beethoven, and Schubert. (The composer thinks that his experience of the Bartók quartets also played a part in the making of his Third, and perhaps it did, in manners of writing for the strings.) There are later and greater works by him that should be the first acquisitions for the record collector eager to know his music. But since the string quartet is so direct and so personal a medium, the Tippett enthusiast should not be without this disc. Nor, for that matter, should anyone capable of being exhilarated and inspired by an encounter with one of the rare visionary minds of our age. As Wilfrid Mellers once remarked of these quartets. “Although he does not achieve late Beethoven’s vision of paradise, he writes Beethoven’s kind of music.”

A MICROCASSETTE recorder that’s so unique, it’s like having your own mini-studio in your pocket with remarkably good fidelity for music as well as voice. It’s smaller than a checkbook (5 1/4" from top to bottom, slightly thicker than a pack of cards), and lightweight (12 ounces with batteries), but it’s packed with studio precision and professional features.

• 60 minutes recording time.
• Capstan drive for constant tape speed, built-in electret condenser microphone, AC bias, record-warning light.
• All metal construction for years of dependable service.
• One-hand operation; instant loading.
• Fast forward and rapid rewind.
• Automatic level control.
• Connects to your stereo or full-size recorder with a Comapaticord, for both recording and playback.

The Pearlcorder-S performs beautifully in an office, in your car, even on airplanes, and its backed by the reputation of the Olympus Optical Co., Ltd., a company famous for fine cameras, medical and other precision scientific instruments.

The Pearlcorder-S. Carry one. And have a studio with you.

Available at fine photographic, audio, and A-V dealers everywhere. Or write for our brochure, “Pocket Full of Miracles.”

OLYMPUS CORPORATION OF AMERICA
TWO NEVADA DRIVE NEW HYDE PARK NEW YORK 10026

60 minutes of sound in this actual-size MICROCASSETTE.

PHILIP JONES BRASS ENSEMBLE. [Michael Bremner, prod.] Argo ZRG 613, $6.98.

WAGNER: Siegfried Idyll—See Franck: Symphony in D minor.

This superlative British ensemble, which I praised so immediately in 1971 (the Argo ZRG 655 "Just Brass" program), is back with another outstanding batch of contemporary quartets and quintets. Again both the playing and the recording are incomparably fine—and this time there is special interest in the fact that all four selections have been specifically composed for Jones (who plays first trumpet) and his colleagues. If none of the composers is as yet exactly a household name (in this country), Richard Rodney Bennett (b. 1936) and Stephen Dodgson (b. 1924) are both known and respected here, while the other two should be if only on the basis of the skillfully turned, often piquantly amusing Divertimento and Variations by John Addison (b. 1920) and John Gardner (b. 1917), respectively. The first two are for two trumpets and a trombone (two trumpets, horn, and trombone). The larger-scaled, more serious Bennett and Dodgson works add a tuba to the foursome; yet in these instances I can’t, of course, complain about that sonic behemoth’s being anachronistic, as it is so jarringly in baroque-era brass music. As a
Manchester (N.H.) circa 1850: You Are There
by Irving Lowens

Vox has put together an extraordinarily entertaining and informative album that attempts to present an accurate picture of what music was like between roughly 1850 and 1865 in one particular small urban center in New England, the town of Manchester, New Hampshire, population in 1850 approximately 13,500 but growing.

During that period in our development, there were three primary sources of musical performance: the brass band, the social orchestra, and singing groups with theatrical, political, or religious overtones. Each of these groups produced music almost totally lacking in self-consciousness—what they played and sang was not intended to be profound or "artistic," but rather to entertain and instruct the average citizen, unpretentious in the ways of high art but quite capable of enjoying a good tune, technical virtuosity, and sentimental or didactic texts.

The album, appropriately named "Homespun America," draws on the musical repertory of three ensembles known to have been active in Manchester in the middle of the nineteenth century: the Manchester Cornet Band, the Manchester Quadrille Orchestra, and the Hutchinson Family Singers. The instrumentalists are all members of the Eastman Wind Ensemble and the Eastman Philharmonia under the direction of Donald Hunsberger, the singers (called the New Hutchinson Family Singers here) are all members of the Eastman Chorale with Robert DeCornier conducting.

Most of Manchester's population earned its livelihood in the knitting mills in the vicinity and in the Baldwin Locomotive Works, but this did not stand in the way of the town's strong interest in music. Fortunately, an extensive collection of orchestral music, vocal works, keyboard music, and the Cornet Band's part books is preserved as the Walter P. Dignam Collection in the Manchester Historical Association, and this (plus a manuscript score collection in the New York Public Library inscribed by Hosea Ripley of Bethel, Maine, and J. W. Perkins of the 17th New Hampshire Band dated December 7, 1782) was the primary source of the selections and the instrumentation utilized in the recordings of the Manchester Cornet Band repertory.

The Quadrille Orchestra relied upon such publications as The American Collection of Instrumental Music (Boston, 1856) compiled by John W. Moore of Bellows Falls, Vermont, and programs of balls and dances printed in the local newspapers or in broadsides for its repertory. As for the Hutchinsons, they frequently traveled the few miles south from their home in Concord, New Hampshire, to Manchester to sing hymns, anthems, and glees from the best collections of the time, such as The Kingsley Social Choir and The American Lyre, and to propagandize for abolition (in which they were strong believers), temperance, and other worthwhile causes.

The specific pieces included in "Homespun America," chosen for the instruments by Rayburn Wright and for the voices by Hunsberger, are a constant source of delight and, in the case of the Cornet Band, of excitement and discovery as well. What astonished and pleased me most of all, I think, was the fresh brilliance of the Cornet Band's instrumentation, and the manner in which its repertory fitted that sound so well. One might not expect anything much from pieces with such titles as Eaton's Grand March, Quickstep Blues, or Congo's Quickstep, but listening to them as performed here quickens the pulse and sets the toes to tapping. But for sheer excitement, I would recommend that you listen to Hope Told a Fluttering Tale, an air varié that runs on for almost ten minutes, as played with astounding virtuosity by solo E flat cornetist Allen Vizzuti.

In comparison, the Quadrille Orchestra repertory is downright genteel. Such pieces as the Pelina Rondow with Slain, The Vulture of the Alps, and the Hand Organ Polka (all taken from G.W.E. Friederich's 1856 collection, The Orchestra Journal) vividly recreate the swirling hoopskirts and the dashing culways of the time. But the standard pair of fiddles, cello, clarinet, flute, cornet, and harp or piano that made up the standard midcentury social orchestra were no match for the blazing brasses when it came to making the heart beat faster. Also, it should be remembered that Manchester's concert life differed in summer and winter. The hot days of summer brought the outdoor programs and the frequent band concerts; the cold days of winter brought the indoor programs and the no less infrequent balls and dances calling for softer-voiced instruments.

The Hutchinson Family repertory is the only one of the three that sounds really dated. It is impossible not to smile (and, at times, laugh out loud) at the sung texts, which apparently moved our forefathers. Occasionally, it did come forth with a stirring ditty such as "The Old Granite State" (which came pretty close to serving as its theme song), but who could keep a straight face listening to "King Alcohol," "Colonel" (a spoof of the medical practice of the day sung to the tune of "Old 100th"), or that masterpiece of unabashed sentimentality, "The Vulture of the Alps," which caused so much eye-dabbing with lace handkerchiefs?

In a two-record album entitled "Our Musical Past" (OMP 101/2, October 1976), the Library of Congress attempted a very similar re-creation of the American brass-band tradition of approximately the same period. But the recording utterly failed to generate the kind of liveliness and whop-de-doo that is so characteristic of "Homespun America," which is superior in every respect, even that of scholarship. It is true that Hunsberger attempts to jam an enormous amount of information into his program booklet, and not all of it is organized with the clarity that one might like, but he does supply the interested listener with a great deal of food for thought.

"Homespun America," a research and performance project of the National Center for the Symphonic Wind Ensemble at the Eastman School of Music of the University of Rochester, is a credit to all concerned. It is a genuine contribution to our much too scant knowledge of musical life in nineteenth-century America.

Homepun America, Eastman Chorale, Robert DeCornier, cond.; Eastman Wind Ensemble, Eastman Philharmonia, Donald Hunsberger, cond. Vox SVBX 5309, $10.98 (three discs)

matter of fact, John Fletcher plays it so well that the tuba parts in both works must rank among their most distinctive features.

Incidentally, avant-garde fans and other tender-eared listeners need have no fears: This all is unmistakably, sometimes notably, original music, but its sounds as well as its melodic and rhythmic materials make immediately intelligible sense.

R.D.D.

Yolanda Marcoulescou: French Songs.
Yolanda Marcoulescou, soprano; Katja Phillabum, piano. [Jon Stoll and Giveon Corrfield, prod.] ORION ORS 76240. $6.98.


Yolanda Marcoulescou's first American-made disc (Orion ORS 75184, October 1975) introduced those of us unfamiliar with her earlier Czech and Romanian recordings to an artist of rare quality: a sensitive, distinctive interpreter of the chanson and one, moreover, interested in such neglected but fascinating composers of them as Roussel and Enesco. That is a record that no one responsive to superb vocal musicianship should be without. The same is true of Mme. Marcoulescou's latest recital, which is equally interesting in repertoire and even more distinguished as a performance.

In purely vocal terms, it's true that the soprano sounds somewhat less fresh than on her previous disc: One is aware here of a certain diminution of resonance in her low notes and less freedom at the top of her range. The result of this, however, is not so much to weaken her effectiveness as to increase it. As if responding to a challenge, she makes the very most of her resources, communicating moods and meanings with greater vividness than ever and bringing into play an increased range of tonal colors, subtle rhythmic emphases and penetrating verbal nuances.

And all, let it be said, without ever stepping beyond the bounds of the musical concept, whose integrity she always maintains—unlike some famous singers with reputations for intelligence and insight who are so intent on "interpreting" the song that they almost neglect to sing it. There is an awareness throughout of the need to maintain a singing line, and as a result we get some exquisite examples of legato—for example, in the first of the Honegger songs on the words "les coupes d'orgueil des glaieuls" ("the proud goblets of the gladioli").

Even so, the ultimate distinction of this record is the breadth of Marcoulescou's interpretive range, which reaches from the melancholy gravity of "La Citerne des mille colonnes" and the mordant irony of "La Tortue et le lièvre" (the second and third of Schmitt's Trois chants) to the provocative fousse parvyte of Satie's "Daphneoe." The words of the latter are, as the jacket folder informs us by "M. God"—in actuality, Mimi Godebski, the young girl for whom, with her brother Jean, Ravel wrote his Ma Mere l'Oye.

Neither the latter information nor anything about the music and the circumstances of its creation is to be found on the jacket. It would, I think, be useful to have some musical guidance, especially about the Schmitt and Honegger songs, to learn, for example, that the first three Satie pieces comprise his Trois Melodies of 1916 and that the last three are in effect pop songs, written around 1900 for café-concerts and, in the case of "La Diva de l'Empire," a revue (called Devidons la Bobine).

But other than this, and the fact that my pressing was somewhat noisy, there can be nothing but praise for this enterprise. Orion has supplied full texts and accurate translations. The performances are superb—not only Marcoulescou's, but also, as before, pianist Katja Phillabum's. The songs are often revelatory. I cannot think of a more satisfying and illuminating vocal recital in the past year.

D.S.H.

Kirsch Shelving . . . because you can design a unit to fit your needs now and as you need more you can add to it. For folder and dealer near you, write Kirsch Co., Dept. DU-477, Sturgis, Mich. 49091.

Kirsch
This record is both attractive and instructive. Because its contents are miscellaneous in character—they range from opera and oratorio to art song and drawing-room kitsch—it supplements very usefully our knowledge of Sayao, who apart from the Boccherinis brasilierises No. 5 (on Odyssey 32 16 0377) is otherwise in evidence on current reissues only as an operatic performer.

What is so interesting about Sayao is the consistency of approach she maintained in all the music she sang. By consistency I refer not to sameness, for there is much variety in her exquisite art, but to unity of style. In assignments as diverse as Manon, Mimi, Susanna, Zerlina, and Violetta and, as we can see from this new recital, in her performances of songs, she is essentially and consistently a miniaturist. Whatever the music, she relies on refinements of emphasis for her effects, which are out of all proportion to the subtlety of their means. She neither forces nor coarsens. She has complete confidence in the distinctiveness of her vocal personality. She does not so much reach out toward her audience as draw it irresistibly into her orbit. She commands our attention by the very quietness of her assurance. It comes as no surprise to learn that, like Elisabeth Schumann, she could without any seeming effort reach to the farthest corners of the most enormous auditoriums simply through the perfect poise and clarity of her vocal projection.

Actually, a certain amount of artificial homogeneity is imposed upon this recital by the fact that there are orchestral accompaniments for all the material on Side 1 and piano accompaniments for all the material on Side 2, though on the former there are songs by Hahn and Duparc and on the latter arias by Campra, Auber, and Ravel.

Luckily, Sayao's performances are mostly good enough to overcome these drawbacks. The legato with which she sings the last lines of the Hahn song ("Si mes vers avaient des ailes, comme l'amour") and the first lines of the Duparc ("Dans ton cœur dort un clair de lune, / Un doux clair de lune d'été") helps to drown out any seeming effort reach to the farthest corners of the most enormous auditoriums simply through the perfect poise and clarity of her vocal projection.

The superiority of the Superex will surprise you. And leave you at least $30 richer than you expected to be.

THE NEW SUPEREX TRANSLINEAR TRL-77

NEWLY PERFECTIONED OPEN DESIGN

LESS THAN $30.

SUPEREX

PRODUCTS WITH A DIFFERENCE

151 Ludlow St. New York 10016

For years, the unique, high-precision CBS Laboratories Technical Series Professional Test Records set an industry standard. Now the new series is even better—revised, recut, and expanded.

Each record contains a complete series of easy-to-use tests to help rapidly and accurately evaluate components and systems.

Seven Steps to Better Listening (STR 101)—Only $6.98. Helps you make sure your equipment functions properly helps tune your system to your ears and your room acoustics. Included is a 15-page booklet by Edward Tatnall Canby explaining how to use the record's "ears-alone" tests for left-right identification, phasing, speaker balance, tone control setting, buzz and rattle elimination, lateral tracking, and vertical tracking.

Our biggest competitor makes fine headphones and sells more of them than anyone else. To compete, we have to make our headphones better or price them lower. Or do both.

Next time you're at an audio dealer, compare the new Superex TRL-77 with any competitive headphone that costs up to twice as much. Close your eyes to make the test a fair one. Listen carefully for solid bass, mid-range presence, clean highs.
uncharacteristic aspires in the anonymous "C'est mon ami" and Chopin's "Tristesse," the singing is very fine. The beautiful rise to high B flat toward the end of Moret's "Le Nélumbo" is memorable.

Texts and translations (only one verse of the Auber is included, though Saydoo actually sings two). Good, clean dubbing. The anonymous "C'est mon ami" and Chopin's uncharacteristic "Tristesse," the singing is very fine. The American Music Consort is the West Coast-based repertory ensemble of the Yankee Doodle Society, a nonprofit organization of artists and scholars interested in exploring American history through mass communications, and this recording is the first in a series of American Archive Recordings undertaken by the Society and Takoma Records, Inc. Other projected albums include music of early Negro minstrels, "The Southern Harmony," early American patriotic music, spirituals of the Fisk Jubilee Singers, songs of the ragtime era, and nineteenth-century virtuoso instrumental music.

The songs in this album are performed from original editions of the sheet music for voices and accompaniment, which was usually either piano or guitar, but the Consort does not stick to the letter of the original. Ornamentation, improvisation, and adaptation to other instruments are used, the apologia being, according to music director Joseph Byrd, that this practice is "stylistically consistent with contemporary music practice, in which the song was subject to interpretation by any voices and instruments available. Such instrumentation might be restrained or lavish."

The Consort consists of sixteen musicians—a vocal quartet, brass, strings, harp, piano, and stage director. The music is presented, Byrd states, "with historical authenticity (including costumes and instruments) and includes a narration which re-creates vividly the social setting of earlier American culture. Humor, melodrama, heart-piercing lyricism, and flamboyant virtuosity were important components of the music, and are equally important in its reconstruction."

Fortunately, the disc spares us the narration, and even giving the Consort the benefit of the doubt, I was somewhat startled to hear the sound of the mandolin, French horn, trumpet and low brass accompanying these simple (and not infrequently awful) songs. If you agree with Byrd's premise as to the use of any instruments that happen to be lying around, this is a perfectly acceptable disc. But if you don't, these sentimental songs will sound pretty strange to your ears.

BARRY TUCKWELL AND VLADIMIR ASHKENAZY: Works for Horn and Piano. Barry Tuckwell, horn; Vladimir Ashkenazy, piano. [James Mallinson, prod.] LONDON CS 6938, $6.98


Several years ago Itzhak Perlman, Barry Tuckwell, and Vladimir Ashkenazy recorded a superlative performance of the Brahms horn trio. Now, with violinist and pianist working their way through the Beechethoven violin sonatas, it is only just that the other member of this illustrious threesome has his say.

If the horn's repertory cannot rival the violin's in size or quality, Tuckwell and Ashkenazy deserve our gratitude for garnishing the expected Beeethoven and Schumann works with the lesser-known but by no means trivial Danzi and Saint-Saëns compositions. All four works are superbly performed. The Beeethoven sonata is attractively audacious. Neither player tries to invest this early work with Germanic profundity, preferring instead to delight the music's formal lines with grace, decorum, and—when appropriate—a touch of stinging vehemence. In its way, the rounder, more mellower quality of the old Dennis Brain/Denis Matthews version (Seraphim 60040) was equally, but certainly not more, convincing.

The Schumann Adagio and Allegro is if
Of the many atrocities committed at Acad-

The magnificent concert and marching bands of the University of Michigan must be indebted for some of their best players to the music department's professors of per-

cussion and tuba, Charles Owen and Abe Torchinsky, both onetime Philadelphia Or-

chestra members. This release documents the work of these specialized teachers with skills so many and surprising of what an academic than avant-garde contem-

porary compositions. By Anthony Janac-

ccone and William Presser for tuba quartet and Arthur Gottschalk for ten tubas; by Mi-

loslav Kabeliè, Robert Myers, Frank Ben-

ciscuto, and William Kraft for variously contemporaries. The appeal may be too restricted for most general listeners, yet even they may relish the jolly swing of Presser's Serenade finale and the jauntily imaginative rhyth-

mic animation of Benciscuto's the prizewin-

ning Rondo. Certainly odd-sounds-fan-

ciers will find considerable fascination in Gottschalk's Substructures for two tenor and eight bass tubas and in William Kraft's always-authoritative manipulations of some forty percussion instruments in his well-named Momentum. Throughout, but particularly in the per-

cussion-works side, the recording is ex-

 tremely robust and crisply brilliant in stereo only, more dramatically expansive in unexaggerated quadraphony, and in both modes marred only by considerable breathing and other extraneous background noises.

R.D.D.

To Kill A Mockingbird. Original film score by Elmer Bernstein. Royal Philharmonic Or-

chestra, Elmer Bernstein, cond. and prod. FILM MUSIC COLLECTION Album 7, $8.00 plus $6.96 handling to members only (annual mem-

bership $10). Elmer Bernstein's Film Music Collection, Box 261, Calabasas, Calif 91302)

Of the many atrocities committed at Acad-

ey Award time, few have been more flag-

grant than the 1963 award of the best-origin-
score Oscar to the turgid pseudo-

Arabianisms of Maurice Jarre's Lawrence of Arabia rather than to Elmer Bernstein's To Kill a Mockingbird, one of the treasures of film music. Although Aaron Copland and Virgil Thomson set the precedent in a way, Bernstein with this score became the Holly-

wood composer to establish a recognizable American idiom in movie music. He could not have chosen a better vehicle than Rob-

ert Mulligan's 1962 film based on the Harper Lee novel, a tender, nostalgic, yet subtly tragic view of the U.S. that cannot fail to find sympathetic vibration within those who were brought up outside the cities in pre-1960s America.

Bernstein's score evokes, on its own, all the principal feelings created by the film and the story, first and foremost the bitter-sweet longing aroused by the remembrance of childhood innocence and the first awak-

enings from it. The composer accomplishes this on an immediate level by the simple, aching ingenuity of the chamberlike scoring, in which solo piano, harp, flute, acco-

cord, and celesta weave in and out like different strands of the same memory. Even when larger ensembles are playing, the score has a very unsympathetic quality that perfectly suits the picture. And as Christo-

pher Palmer (who helped reconstruct the score) puts it in the liner notes, the opening theme is "one of the quietest ever heard on an American soundtrack." Furthermore, by using simple, rocking ostinatos and by creating mild harmonic clashes here and there between theme and accompaniment, Bernstein maintains a hypnotically out-of-
time perspective that rather unnannily fuses the adult and the childish into a single, deeply moving autumn-waltz.

For me, this new recording of To Kill a Mockingbird was essential. The long-dis-

continued Ava release of the original music track, although better than nothing, was badly recorded to the point of frustration. The new version benefits from warm, bright sound, and it includes several cuts not heard on the original disc. It also fea-

tures a penetrating, sensitive performance from the Royal Philharmonic (this is the first time an orchestra has been identified in the Film Music Collection series), with Bernstein giving beautiful shape to his own music, from the most hushed reminiscences to the Americana syncopations and the nervous, disjointed drama as the music-story reaches its climax.

If the general production quality of this disc carries over to the series' next release, Rozsa's classic Chief of Baghdad, then Bernstein's outfit will certainly have realized its potential.

R.S.B.

The Pink Panther Strikes Again. Original film soundtrack recording. Composed and con-

ducted by Henry Manco, Tom Jones, voc-

cal. [Joe Reisman, prod.] UNITED ARTISTS LA 694G, $6.98

Even the most commercial films these days have picked up the new-wave device of cinematic in-jokes. Instead of heavy-hand-

edly satirizing the James Bond flicks, for in-

stance, this new Inspector Clouseau caper.

April 1977

AKG has created a new line of car-

tridg es that go beyond left and right channel separation. Now, a third dimension has been added... depth, in which the relative place-

ment of instruments from front to back can be recognized. With Transversal Suspension, these new cartridges recreate orchestral sound precisely as you would hear it during a live performance... and with a spatial fidelity you must hear to be believe.

In conventional stylus assemblies, the stylus pivot point tends to shift, particularly when tracking higher frequencies. The result is reduced separation... unstable stereo "im-

aging."

The unique AKG-patented Trans-

versal Suspension allows the stylus to move freely, yet suppresses tors-

ional and axial forces so that pivot point shift is virtually eliminated. The full sound spectrum is reproduced precisely... without the effects caused by (1) mechanical resonances or (2) intermodulation.

There's much more to the story be-

hind the superb performance of the new AKG cartridges. So take your ears to your dealers, listen critically... and compare. You're sure to be favorably impressed. There's a wide range of models to meet your particular needs.

At selected dealers everywhere.

AKG ACoustics

A K 1-

MICROPHONES

SCREQ 4145, 

PHILIPS AUDIO VIDEO SYSTEMS CORP.

91 McKee Drive, Mahwah, New Jersey 07430

(201) 529-3800

Depth.
Next time you plan a trip to Europe, make sure you visit the unique country.

Where can you find: Europe’s largest waterfalls?
Europe’s blondest blondes?
Europe’s highest geysers?
Europe’s greatest glaciers?

And where can you find moonlike craters where the astronauts trained?
More volcanos than anywhere else on earth?
Historic landmarks of the world’s oldest continuous parliament?
Celebrations marking Europe’s youngest republic?

The answer to all of these questions is—Iceland. Next time you plan a trip to Europe, make sure you visit Iceland.

The only thing it may cost you is time well spent. Because you’ll save enough money on Iceland’s lowest jet fares to Luxembourg to pay for your stopover in Iceland. Or, you can hop over from New York or Chicago for longer tours. See an erupting volcano. Take a cross-country pony trek.

Next time you plan a trip to Europe, ask your travel agent about Icelandic Airlines. Or phone Icelandic Airlines, for folders about Iceland and lowest jet fares to Europe. In New York State, phone (212) 757-8585. Elsewhere in U.S., phone (600) 555-1212 for local toll free number.

R.S.B.
Nonpareil nonagenarian. Restless on his innumerable laurels, Leopold Stokowski incredibly has been more productive than ever in the last few years. Indeed, he is so active, so musically versatile, and so commercially impartial that he enables cassette collectors to celebrate his ninteenth birthday, April 18, 1977, by playing his recordings of no fewer than eleven works (four of them for his first time, I believe) in five releases representing four labels and five different audio engineers.

Advent's latest list of deluxe, Dolby-B, chromium-dioxide musi-cassettes features the respective National Philharmonic and Royal Philharmonic programs of his Rachmaninoff Third Symphony (with a Vocalise transcription in Desmar E 1046, $7.95) and his Dvofák Op. 22 String Sere naide (with Vaughan Williams' "Tallis Fantasia and Purcell's "Dido's Lament" in Desmar E 1047, $7.95). For Philips, he leads the London Symphony in Tchaikovsky's Serenade and Francesca da Rimini (7300 304, Dolby, $7.95). For London Phase-4 it's the Czech Philharmonic in Elgar's Enigma Variations (filled out with the Op. 20 Sere naide and Op. 58 Elegy, conducted by Ainslee Cox, in SPCS 21136, Dolby, $7.95). And for RCA Red Seal, Stokowski, with the London Symphony, resumes his lifelong devotion to Wagner with a Gotterdammerung concert triptych: Siegfried's Rhine Journey and Funeral Music and Brunnhilde's Immolation (ARR/KRS 1-1317, cas sette/cartridge, $7.95 each).

All these are quintessential Stokowski interpretations: idiosyncratic, romantic, sometimes unexpectedly restrained, always electrically pro-vocative. With one exception they are magnificently recorded, yet with the distinctively individual sonic differences of the various producer/engineer teams. Even the exception, Bob Auger's Rachmaninoff recording, is as fascinating as the singularly ambivalent music itself: more remote, with less strong contrasts between the lushly songful and the fiercely dra matic than the Ormandy/Columbia version; less auditorium-authentic, yet illuminatingly lucid in what seems like a sonic synthesis of multiple channels.

But if no qualifications are needed for Stokowski aficionados, more objective listeners may need reminding that most of these are not necessarily the top-ranked versions of each work. For those, I'd cite Marriner's Dvofák, Tchaikovsky, and Vaughan Williams music for strings, and Haitink's Elgar variations and Tchaikovsky Fran cesca. Yet Stokowski's Elgart warrants special consideration for its uniquely glowing enchantments. And for the Ring excerpts, all qualifications and demurrers can be forgotten: Stokowski himself has never played them better nor achieved more gloriously authentic sonics.

On and off the beaten paths. Among the many other current musiccassettes (all in Dolby B except for RCA's) one can stick in a thumb and pull out a plum almost at random. My single sampling of various labels turns up the following diversified prizes:

**ANCIET**: Hard on the heels of last month's London reissue of Ravel's first piano concerto comes the most recent— and vividly "live"—version starring Caballe (4X3S 3815, three XDR casset tes, $23.98; libretto on request). Conductor Muti's reading may not be the subtlest or most tautly dramatic, but the individual roles are exceptionally well sung and few opera-house choruses and orchestras sound as fine as the chorus of the Royal Opera House. Covent Garden, and the New Philharmonia Orchestra do here.

**ARGO**: Also exceptionally animated and vivid are Marriner's 1971 Academy of St. Martin-in-the-Fields fresh approaches to those usually stiffly ceremonial monuments of the high baroque: Bach's four orchestral suites (K.R.Z.C 687/8, $7.95 each). This is "Bach Without Wig" in truth, yet more authentically idiomat ic, as well as far more piquant, than many more pretentiously purist performances.

**DESMAR/ADVENT**: Valenti's ten Soler harpsichord sonatas (E 1050, $7.95) are welcome both as the first taped solos (all in Dolby B except for RCA's), and as the first in the many other current musiccassettes. Each master's most demanding piano potential is recorded with exceptionally lucid pianism in these sonatas; the gentler, more lyrical ones seem temperamentally best suited to the small and compact (for twenty-first-century ears) piano of the so-called "concertsize" type. By now we have at least a dozen versions of the famous Belcanto Sonata (Concerto Without Orchestra) (K.R.Z.C 687/8, $7.95 each). This is "Bach Without Wig" in truth, yet more authentically idiomat ic.

**Finnadar**: The classical music subsidiary of Atlantic Records presents the brilliant young French-trained Turkish pianist Idil Biret in an ingeniously imaginative Ravel and Stravin sky program (CS 9013F, $7.97). Each master's most demanding piano works—Gaspard de la nuit and the Petrushka "Three Scenes"—are contrasted with his earliest or simplest ones: Ravel's rarely heard Serenade grotesque, Stravinsky's Valse pour les enfants and Cinq doigts miniatures. The bigger showpieces have been done in higher-voltage versions by others, but Miss Biret plays them and is recorded with exceptionally searching lucidity, further italicized by somewhat dry acoustical ambiances. And the smaller pieces are both disarmingly charming in themselves and—as tape firsts—essential to every Ravel and Stravinsky library.

**Philips**: An unknown Mozart opera? Not exactly, but few Mozarteans are familiar with the fragmentary opera buffa Lo Sposo deluso, K. 430, which I find more interesting than Paul Henry Lang did in his February disc review. Here is the chance to hear what has been preserved of the work—an amusingly martial overture, swaggering quartet, two arias (completed and orchestrated by Erik Smith), and decided buffo trio—by soloists and London Symphony players under Colin Davis (7300 472, $7.95). It's coupled with the more familiar Schauspieldirektor, K. 486—live!—in less well sung than the Bohm/DGG version—but that's sheen lagnappe to the Mozartian music acquisition.

**RCA Red Seal**: The "Vladimir Horowitz Concerts 1975-76" program (ARR/KRS 1-1766-8, $7.95 each) presents the super-virtuoso not only at a new height of his Himalayan technical powers, but radiating more warmth than ever before. As best I can tell, both Schumann's ambitious if only intermittently inspired F minor Sonata (Concerto Without Orchestra) and Scriabin's now mystically melting, now passionately proclamatory Fifth Sonata are tape firsts. But that primacy is the least of their appeal as incomparably grand piano playing and recording.
The new 1977 edition of High Fidelity's Test Reports is packed with more than 200 test reports of currently available stereo and four-channel equipment and accessories, including:

**Receivers • Headphones • Amplifiers • Tape Equipment • Turntables & Pickups • Speakers • Tuners... and more!**

This new book is bigger and better than ever before! 300 pages of in-depth analyses with charts, tables, pictures and prices, plus a guide to technical audio terms.

Order now. Indicate the number of copies you want and return your check or money order with this form.
Judy Collins
& the Art of Transition
by Susan Elliott

No question about it, Judy Collins has staying power. Sixteen consecutive years of recording and fifteen albums to show for it (six of which have gone gold) make her a true rarity in this business. Those who are lucky find the crest of the wave and ride it for a while. But the general buoyancy limit (at least before the skin starts to wrinkle) is at most three to four years. After that it's time to gracefully ride the wave to shore and bask in the sun, leaving big brother to release a few token remembrances from what's left in the can—perhaps even with thoughts of an eventual comeback cash-in.

Judy's never made a comeback, simply because she never went away. Her initial stardom came as the folk queen of the Sixties. But her continued successes well into this decade are true indicators of her ability and efforts to explore, ingest, and put forth with confidence, thereby keeping her close to the forefront of this country's changing musical tastes. "I'm obsessive about work—that's part of it. But there's a more essential reason. I was raised to consider the long-term goals of a situation. I'm not averse to success, nobody should be. But I don't see it as the only source of nourishment. I see much more invested in the long run in just the process of work and growth... and I do have a sense of where I'm going."

Behind what appears to be a down-to-earth understanding of herself and her own goals lies a rich background in music and show business. Her father was a musician and songwriter with his own daily radio show in Denver. "He was the housewife's standby—'10:15, Chuck Collins calling'—and he played the piano and sang all the old standards."

Judy began her own piano studies at age seven with Antonia Brico, and for ten years was "a very serious student" occasionally even performing with conductor Brico's Businessmen's Orchestra of Denver.
She took three lessons a week, practiced morning and night, and "never had a social life." The switch to folk was not an easy one, especially considering her deep respect and admiration for her teacher. "I felt very guilty. It wasn't that folk music pulled me away from the piano— I was fed up with practicing and all the Sturm und Drang, the tears ... the things that every serious student goes through with a serious teacher if there's any real commitment at all." That there was. 

"At the moment that I quit, I had just finished memorizing the Rachmaninoff Second Piano Concerto and I was ready to begin the years of polishing that would eventually prepare me for my next performance with the orchestra."

But even that prospect was not satisfying enough—she needed something more. "I have a love of literature and of music, and singing combines those two things. I wanted to find some kind of music which would be an outlet for drama and storytelling, and it wasn't opera. I needed something which gave me more of a scope to explore through words, and that was folk music."

Judy had always been interested in folk, "but I didn't know what it was, other than just popular song." When in high school, she heard The Gypsy Rover on the radio. "My friends and I kept listening to get the words. We made a skit out of it ... choreographed the story, and performed it all over the place." A man who called himself Lingo the Drifter seems to have been the one who finally hooked her on the medium. He was a singer/raconteur who had come to Denver from the East bringing with him the songs of Pete Seeger, Woody Guthrie, and the Weavers. He had his own radio show, and Judy eventually became part of his entourage of friends, listeners, and singers. "We would get together and sing, drink beer, and carry on to all hours of the night."

Her first "professional" engagement came about at age sixteen—the result of having won a Kiwanis Club singing contest. The lucky winner was given $500 and the opportunity to perform in Atlantic City, New Jersey. "I played in the convention center where the Miss America contest was held. It was an enormous, concrete vatican filled with people with their Kiwanis hats on, eating popcorn and junk food from the boardwalk." Shortly after, she got her first regular singing job for $300 a week at Michael's Pub in Boulder, a college hangout. At this time she was singing downhome American folk (If You've Never Made Love to the Landlady's Daughter Then You Cannot Have Another Piece of Pie and Ten Thousand God-dammed Cattle) in her as yet untrained voice and accompanying herself on guitar. "The audiences were very devoted and reverent—the folk music boom had just begun."

After Michael's came the Gilded Garter in Central City—a tourist joint—and in 1960, on the basis of a tape she had made of The Great Silkie of Shule Skerry, a job at the Gate of Horn in Chicago. Surprisingly, she had no aspirations for stardom ("I didn't see myself as Judy Garland, or even Tim Holt")—only for her family's survival. "I was launched by the necessity to support my husband. That's really the reason I went out and got the job at Michael's Pub. We had a baby and it was a very cold winter, and Peter said, 'Why don't you go get a job?' In a way, I owe that initial kick to him."

By 1960-61, Judy was truly doing the folk circuit—which included New York's Greenwich Village—but was apparently oblivious to her successes. "I was so naive, so out of it. I was like five years old. I kind of floated through all that time working in clubs in Chicago and New York, and still nothing ever got to me. I was not paranoid, I thought everything was wonderful—I was just gaga. I can't get over it. The protective nature of innocence is incredible."

Jac Holzman, president of Elektra Records at the time, had heard her the first summer she played at the
Gate of Horn. The following year he offered her a recording contract. But Judy was still gaga. "He said, 'Judy, I think you're ready to record.' And I said, 'Oh no, anything but that!'" But he was insistent, and from his insistence came her first album, "Maid of Constant Sorrow," recorded at Fine Recording in Manhattan's old Great Northern Hotel. Judy is quite definitely a soprano, but if you listen to those first albums, you'll notice a very direct, earthy-sounding alto. "In those days I was a very untrained singer, and I was literally using about the lower third of my voice all the time because I didn't know that there was anything up there." Fortunately for recording history, she eventually studied voice and "found" the other two thirds.

The folk material on her first two L.P.s was primarily public-domain traditional, but the next three included the songs of Tom Paxton, Bob Dylan, Woody Guthrie, Richard Farina, Gordon Lightfoot, and Phil Ochs. By the mid-Sixties, Time magazine had dubbed her "a major contender for the female folk crown." But Judy was moving on. "My producer [Mark Abramson] and I decided that we'd like to do Brecht, and more theatrical kinds of things."

And so in 1966 she released "In My Life," thereby introducing Leonard Cohen's songs to recording (Suzanne, Dress Rehearsal Rag), as well as exposing the work of Jacques Brel and Randy Newman for the first time on a major U.S. label. The new genre of material necessitated a more sophisticated musical setting, and this was ably provided by Joshua Rifkin's orchestrations. At that time Rifkin was still associated with Nonesuch, Elektra's classical label.

With the production/engineering/arranging team of Holzman, Abramson, and Rifkin, the L.P.s that followed continued to treat folk and pop material with art-song taste and sophistication: four of the six albums from this period went gold. "Wild Flowers" represented Joni Mitchell's debut as a writer ("I just fell in love with her music," says Judy) with Both Sides Now and Michael from Mountains, and introduced Collins herself as a songwriter. (She continued to contribute one or two of her own songs to the recordings from this period.)

In 1973 came "True Stories and Other Dreams."

"'I was launched by the necessity to support my husband.'"

with five of her own compositions. I asked her if she was heading in the singer/songwriter direction. On the contrary—just another exploration. Her primary concern seems to be the maintenance of a well-rounded standard of repertoire and performance, both live and on record. And after she had finished writing the five songs (it took eight months) on "True Stories" she found herself "absolutely itching to get back on stage. I really need that direct contact with an audience—it's tremendously satisfying to me."

"I have a career on many different levels... it would be very limiting for me to do all my own mate-
the documentary about her teacher, *Antonia: A Portrait of the Woman*. The film was released in 1974 and won the Independent Film Critics Award as well as an Academy Award nomination. It was also at about this time that she left Harold Leventhal to become her own manager (Leventhal still produces her New York concerts). "In 1972 I had decided that I wanted to try working a different way—have my own business and see how that went." It apparently went well, for by now Ms. Collins has a reputation in the industry for being a professional on all levels. "I don't want to have somebody take my life and run it... appear when and where they say I should. I have a need to guide my own life... with professional help. People tend to categorize themselves as either artists or business people. My own feeling is that there's always a lot of overlap, and if you're responsible, then you can take care of your own business."

Having launched her own business and completed *Antonia*, she again turned her attention to musical exploration. "I was very disturbed about what direction to go in. I spent six months tearing around the world, meeting different producers and engineers." The result of the restless search was her current production/engineering team of Arif Mardin and Phil Ramone. She had worked with Phil before in New York, and knew his work through her good friend Paul Simon. "I'd fallen into the pattern of going to California to record or going to England. I suddenly woke up to the fact that I'm a New Yorker, and I wanted to be at home to record. Arif and Phil were the perfect combination."

The new triumvirate's initial release, "Judith" (1975), was the artist's first recording without either Jac Holzman or Mark Abramson (David Geffen replaced Holzman as president in the Elektra/Asylum merger). The difference in sound and approach is astounding. Lavish production and rich orchestrations couch a totally mixed bag of material that stretches from Collins to Mick Jagger to Stephen Sondheim. The latter was responsible for one of Judy's few hit singles, *Send In the Clowns* from *A Little Night Music*. "In choosing that Sondheim song there was a major step. I was saying through that album, there are many different kinds of music that I want to do, and here's one of them. It's a matter of having realized that a good song is a good song, no matter where it comes from. I look in every nook and cranny for material—I'm open to any avenues."

The unusual nature of her repertoire was and still is a risky proposition within today's what-bag-is-it-in record industry. She claims, however, that she receives as much support from Geffen as she had from Holzman. "He's the one [Geffen] who encouraged me to do what I do and not be thrown by the big changes that the business was taking." And the risk proved worth it—"Judith" became her sixth gold album.

On her next and most recent recording, "Bread and Roses," she continued to explore new avenues of expression through different writers. As always, her own contribution—*Out of Control*—stands out as one of the better cuts. But the light, pure voice sounds strained and uncomfortable in the upper limits of the more commercial songs. She seems forced to travel on her own characteristically ethereal plane while an overly texturized backup bustles itself around her. The inclusion of this kind of material is no doubt part of her conscientious contemporizing, but Elton John and Andrew Gold (who composes and arranges a substantial amount of Linda Ronstadt's material) do not write Collins songs. One can only surmise that this was a passing tactical error, for the more dramatic cuts (notably Ellington's *I Didn't Know About You*) come across with characteristic sincerity and depth.

I asked her how she felt about today's popular music. "I don't like it much. It doesn't grab me a lot. People who have come through for me in the past as artists I find very disappointing now—with a few exceptions. The record industry is becoming such a big business that perhaps quality is sacrificed. We don't have the same kind of stimulation that we had in the Sixties with the Beatles and with Dylan."

Where does a Judy Collins fit into today's scene? "I see myself as a performer, a very visible person in entertainment—in television and concert work and recording—in developing myself as an artist. And you know, that's a lifetime goal. That's not how one fits into a scheme of what's fashionable at the moment."

Whether or not it's "fashionable" (and that depends on your pocketbook and your cultural preferences), plans are in the works for the inevitable Vegas appearance. "Basically, I think I'd like to do a show. I'm moving in that direction—my concerts are more theatrical, with elements of lighting and design—toward getting away from that impersonal, hard-rock, electronic look that a singer's stage very often has in contemporary music. Reaching people of all kinds is part of the challenge and I'd like to make it a totally satisfying experience, visually and musically."

In addition to Vegas, she mentioned the possibility of doing a show on Broadway. In either case, she seems quite adamant about it being a performance-hall vs. supper-club situation. "I don't really feel that I will ever be capable of working while people eat." (This could be a reaction to an incident in Odessa, Russia, where she had various kinds of "produce" thrown at her. Apparently the audience was expecting rock & roll, not Judy Collins.)

Immediate plans include another recording, television, and "lots of writing." The new album will include some of her own songs and possibly another cut from *A Little Night Music*. She hopes to do some acting but has no plans to revive her career as a film producer. "That was a unique and once-upon-a-time situation. I don't think I could do that again."

But that's just the point. Why should she? Unlike many contemporary pop artists, following past success formulas for shoo-in results has never been—and one hopes never will be—a Collins characteristic. Rather, she seeks her reward in the means, not in the ends they might bring about. The successful evolution from classical to folk to cabaret/pop serves as proof of her own need to change, explore, and develop. And that, after all, is what artistic longevity should be about.
A funny thing has happened in the last decade or so: Music synthesizers have come of age. It really wasn't all that long ago—seven or eight years, perhaps—that Bob Moog was running a cottage industry in Trumansburg, New York, and Donald Buchla was custom-making synthesizer equipment for composers like Morton Subotnick. True, Walter Carlos' now-classic breakthrough recording, "Switched-On Bach" was beginning to reach a mass audience, but hardly anyone really believed that a performable electronic music synthesizer was anything more than a pleasant, science-fiction sort of dream.

There wasn't, after all, much precedent. In the early Sixties, the only way for most composers to work electronically was with either home-made Rube Goldberg assemblages (a couple of Eico oscillators and a rewired tape deck served me admirably at the time) or—for the lucky and mathematically oriented—one of the rare monsters like the vacuum-tube synthesizer put together by RCA for the Columbia-Princeton electronic music department.

So, in the Sixties when Moog told me that the proliferation of performance synthesizers was not only possible but inevitable, I snickered a bit, nodded my head, and asked him to show me a few more tricky ways to patch the Moog together. But as anyone who's been to a rock concert in the last six or seven years can testify, Moog sure knew what he was talking about. Performance synthesizers have eased into our consciousness as smoothly as a Dino Ferrari into the high-speed lane of a California freeway.

In fact the last few years have seen enough synthesizers, semi-synthesizers, and quasi-synthesizers—from monster corporations like Yamaha and from small companies in the wilds of New England—to startle even Moog (who by now has become part of a rather large conglomerate himself).

Curiously, it happened almost in a frontier fashion. There aren't too many areas of endeavor left in which the good old virtues of perseverance, self-reliance, and imagination can be translated into real commercial results. The manufacture of sound components for the home started out that way (and a few hardy souls persist as independents) but what began as specialized equipment and devices for hobbyist aficionados and sound freaks soon evolved into sophisticated mass-produced units for a huge consumer market.

Electronic musical instruments—including everything from sound modifiers for woodwinds to full-blown, multi-keyboard synthesizers—do continue, however, to pour out of small, independent operations. Their development involves a quixotic mixture of the most sophisticated electronic know-how, jerry-

"Performance synthesizers have eased into our consciousness as smoothly as a Dino Ferrari into the high-speed lane of a California freeway."

Four-voiced polyphonic synthesizer with programmer
built production lines, and primitive sales techniques. It’s wild, wonderful, and, for the people involved, a lot of fun. They’re making money. They’re doing what they want to do, and they feel that their work places them at the cutting edge of the creative community.

Tom Oberheim is a prime example. He’s a tall, graying, fortyish man who could easily be mistaken for, say, the defensive line coach of the Los Angeles Rams rather than what he is—the founding father, designer, engineer, and chief proselytizer for the company that bears his name. Virtually unknown outside the specialized world of music electronics until a year ago, Oberheim’s development of modularized four-, six-, and eight-voiced synthesizers with built-in computerized programming potential has thrust him and his equipment into the thick of the competition.

He operates from a small, well-coordinated building in Santa Monica. Although his business has grown substantially in the past few years, his “shop” is still small enough for him to personally test each synthesizer; the shipping clerks and the women who wire the units reach the boss by simply walking into his office.

Oberheim is modest about his entry into the field: “Boy, when I started, I just didn’t know anything. When Moog was making his impact in the late Sixties I knew essentially nothing about synthesizers.”

A self-trained engineer, Oberheim had been scrambling around in musical electronics ever since the early Fifties, when he was nineteen years old. He picked up a physics degree from UCLA, went most of the way toward a degree in vocal music, and spent a lot of time in the Sixties singing avant-garde music with the Gregg Smith Singers and the Roger Wagner Chorale.

“I started doing a little electronic work for a couple of friends of mine who used to work in a group called the United States of America. Dorothy Moscowitz, the singer, was trying to get the group back together again, and they needed amps. So I built some for them. Then one day Dorothy said, ‘Why don’t you build us a ring modulator?’ ”

Oberheim smiled at the recollection: “Do you believe that I had no idea what a ring modulator was? I went up to the UCLA engineering library and found a few textbooks that said, ‘A ring modulator is this...’ but I couldn’t, for the life of me, figure out how you could use it for electronic music. Finally I dug up an article from an old issue of Electronics magazine—I think it was actually from 1960. A guy named Harald Bode—he’s worked with Moog on and off through the years—described several modules, including a ring modulator and other stuff that you plugged together with patch cords. [Basically, what a ring modulator does is enable you to produce a simultaneous cluster of random tones from a single tone.]

“So I built one, and this friend hooked it up to a piano and made some weird sounds with it; he thought it was terrific. Around the same time, I was building amplifiers and other little things for Don Ellis, the jazz musician, and he decided he wanted a ring modulator too. Well, the word got around fast. In 1969, Leonard Rosenman, a film composer, heard about it and decided to use one in the score of Beneath the Planet of the Apes. He called me and I traipsed over to 20th Century-Fox for the recording. The funny thing was that some of the guys in that big orchestra listened to what was happening and said, ‘Hey, I want a ring modulator, too.’ So because of all these little unrelated incidents, I decided that maybe there was a market for these units. I set up a little business, got a...
few investors, and went into ring modulators."

My first awareness of Oberheim came at about the same time, when a friend loaned me one of his meticulously handcrafted early ring modulators. Oberheim's was a remarkable unit, emblazoned with his own logo—a bright and jaunty example of the R. Crumb-inspired graphics of the period. I used it in a somewhat unorthodox hookup with a soprano saxophone, but it functioned superbly and the audiences I played for reacted as though I had revived the ancient sirens of Odysseus.

Oberheim was surprised to hear I'd used one. "I don't know how you got hold of it. There sure weren't that many around then. We didn't hit the 'big time'-ho, ho,—until around 1970, when I put a free ad in a little throwaway newspaper. A guy from Norlin Music called and said they wanted to market my ring modulator in their Maestro line."

Even so, Oberheim was still operating what was essentially a backyard industry: "I was still working full time as a computer engineer." Once again, contact with musicians stimulated a further development in his thinking.

"I was doing home recording for some rock musicians around that time." One was Wendy Waldman, the others were Andrew Gold and Kenny Edwards.

"'I want to stay small enough so that we're never blinded by what looks good in ad copy. In the end it's how it sounds that matters.'"

They had a band called Brendel that didn't get anywhere but they were all super musicians. Working with them turned me on to a lot of rock, and one of the big rock fads of the time was putting guitars through Leslie speakers. Well, I liked that sound, and since I was always keeping an ear open for another possible product for my company, I decided I'd see what I could do with it.

"I worked for a month trying to figure out what a Leslie really did; it's so complicated that I never did really figure it out. So before I even made an attempt at duplicating the Leslie sound I just sort of gave up and said, 'What's the next best sound that I'd like to make?' And the answer was phasing. But I was back at go again; I didn't know much about that process either. I looked around and finally found a classic textbook phase shifter circuit, added some circuitry to allow for variation, and put one together. Well, lo and behold, it didn't sound like phasing—or flanging, in the studio sense—but it did sound a lot like a Leslie, which was what I had wanted to do in the first place. You just never know, do you?"

Oberheim fixed up the unit ("a nice box with controls and stuff can do wonders") and took it to Norlin. They were reluctant to distribute it, in 1970 the sound of Hendrix was in the air (fuzz tone, distortion, feedback, etc.) so they didn't think there'd be much commercial interest in something as relatively conserva-

tive-sounding as a phase shifter.

But Oberheim persisted, and Norlin had the first commercially viable phase shifter as a result. "It really made us a company," he said. "The business that started in my second bedroom was grossing a million dollars a year: zap—just like that!"

But he knew that he needed another product. One-crop economies have had a lousy reputation ever since the South lost the Civil War; every time Oberheim went to the bank he was told to diversify or expect the worst. "I knew I could make a living no matter what happened, but I wanted to get into synthesizers. I wanted to make something that could use my knowledge of digital computers and, I guess, most important, I wanted something that I could sell on my own, without a middle man."

In fairly short order, Oberheim and his engineer put together two new products. The first was a digital sequencer—a device that stores and replays a sequence of sounds in various forms, transpositions, inversions, and rhythms. They followed up with an instrument that directly complemented the sequencer: They called it an Expander Module.

The Module was actually a reduced-to-the-bare-bones synthesizer. Its original job was to provide a sound source for sequencers. (Until recently, all synthesizers were monophonic, which meant that they could not provide a sound source for both keyboard and sequencer operation at the same time.) It had all the capabilities of, say, a Minimoog or an Arp Odyssey, but Oberheim saw it in the beginning "as an add-on unit that would let a player run a sequencer and play his keyboard at the same time."

About two years ago, at the height of the recession, Norlin suddenly canceled nearly $100,000 worth of orders for ring modulators and phase shifters. Even a very viable cottage industry would find it hard to survive that kind of setback, and Oberheim still had pretty much a "one-crop" operation.

"I looked around," he said, "and asked myself 'what do I do now?' I had become friends with a little..."
company up in Santa Clara called E-MU Systems that had developed a digital keyboard system with polyphonic capabilities. The combination was an absolute natural: their keyboard with my Expander Modules. Wow! A polyphonic synthesizer!"

He was absolutely right; it was a terrific idea. From the very beginning the essential rap against performance synthesizers had been their inability to produce more than one sound at a time. A multi-voiced instrument is, by definition, enormously more versatile and correspondingly more complex to use and program; but it also comes a great deal closer to fulfilling the creative potential of synthesizing instruments.

Of course Oberheim wasn’t the only person who realized the value of a multi-voiced synthesizer. The idea was in the wind and (like calculus and the Western hemisphere) was arrived at by different people using different means. Moog came out with the Polymoog, Arp with the Omni. There no doubt will be others. “There are going to be a lot of things on the market calling themselves polyphonic synthesizers,” said Oberheim, “and there will be some controversy brewing over which does or doesn’t deserve the name.”

The question of name is important, because there is very little agreement about what a music synthesizer really is. Many of the instruments on the market that are called synthesizers are actually organs. The confusion is understandable. Synthesizers and organs both use oscillators; they both have ways of altering timbre with filters; they both have circuits that introduce varying degrees of attack and decay.

It’s not exactly surprising, then, that any number of companies start with an organ, add a filter that can be swept to produce the characteristic synthesizer “weeeeee000www” sound, add a couple of other gimmicky controls, and call their units synthesizers.

The point, I suppose, is that one person’s music is another person’s noise. Definitions, in this case at least, depend upon what you’re looking for. The most useful description seems to take two connecting considerations into account. First, the more parameters that the user can control, the closer he is to a true synthesizer, at least—full circle, back to the time when Moog and Buchla were making units to fulfill the direct wants the instrument to sound like, rather than the sound that we build into it, is what I think really makes our instrument unique.”

But Oberheim’s pièce de résistance is another modular element—one that traces back to Oberheim’s interest in computer technology. He calls it, logically enough, his “programmer.” “It allows you,” he explained, “to make the settings in the twelve most critical synthesizer parameters; when you have those set for a sound you like, you press a button and it’s stored in the digital memory. You can store a different patch on all the modules or you can store the same patch, and you can do that sixteen different times. So when a guy goes on a gig, he can have his own personal approximation of a string sound on one, his brass sound on another—whatever. And it’s not like a preset patch that’s been dreamed up by an engineer at the factory; the sound is the musician’s sound, and it can vary infinitely.

“This capacity for producing what each performer wants the instrument to sound like, rather than the sound that we build into it, is what I think really makes our instrument unique.”

With his new polyphonic instruments, Oberheim seems to have taken the music synthesizer—he’s synthesizer, at least—full circle, back to the time when Moog and Buchla were making units to fulfill the direct needs and requests of musicians.

“I don’t want my company to be real big,” he told me. “Our competition puts a lot of energy into the kind of corporate organization that simply doesn’t exist here. Most important to me is having the time to talk to musicians when they come in, and I want to be able to continue to listen to music—all the time. I know a lot about rock, a lot about jazz, I have an ear, I’m a musician, and I listen—I hope—intelligently.

“Our directions are motivated by what we feel musicians need or by what musicians tell me they need. I want to stay small enough so that we’re never blinded by what looks good in ad copy. In the end it’s how it sounds that matters.” He paused for a moment and flicked a control on his newest synthesizer. “We are making musical instruments, you know.”

We feel we’re closest to a true synthesizer, primarily because so many of our parameters are voltage-controlled,” said Oberheim. “Our unit has a completely logical sequence of controlled connections: Voltage-controlled oscillators drive voltage-controlled filters that drive a voltage-controlled amplifier. You’ve got control over all those parameters.

“I personally find certain musical values in a voltage-controlled synthesizer—in the classic Moog system of VCOs, VCFs, VCAs, envelope generators, etc. That’s the best we’ve got and that’s what we—at this company—are going to stick with.”

Oberheim’s polyphonic units have the additional versatility provided by the Expander Modules. When four or six of them are assembled, then panned across a stereo spectrum, the sound can justifiably be described, in Oberheim’s word, as “luscious.” And the modular makeup of the equipment allows the user to start with a small unit and build from there. (Herbie Hancock started with Oberheim’s four-voiced synthesizer—serial No. 3, expanded to an eight-voiced and then added a programmer; other musicians have done the same.)

But Oberheim’s piece de résistance is another modular element—one that traces back to Oberheim’s interest in computer technology. He calls it, logically enough, his “programmer.” “It allows you,” he explained, “to make the settings in the twelve most critical synthesizer parameters; when you have those set for a sound you like, you press a button and it’s stored in the digital memory. You can store a different patch on all the modules or you can store the same patch, and you can do that sixteen different times. So when a guy goes on a gig, he can have his own personal approximation of a string sound on one, his brass sound on another—whatever. And it’s not like a preset patch that’s been dreamed up by an engineer at the factory; the sound is the musician’s sound, and it can vary infinitely.

“This capacity for producing what each performer wants the instrument to sound like, rather than the sound that we build into it, is what I think really makes our instrument unique.”

With his new polyphonic instruments, Oberheim seems to have taken the music synthesizer—his synthesizer, at least—full circle, back to the time when Moog and Buchla were making units to fulfill the direct needs and requests of musicians.

“I don’t want my company to be real big,” he told me. “Our competition puts a lot of energy into the kind of corporate organization that simply doesn’t exist here. Most important to me is having the time to talk to musicians when they come in, and I want to be able to continue to listen to music—all the time. I know a lot about rock, a lot about jazz, I have an ear, I’m a musician, and I listen—I hope—intelligently.

“Our directions are motivated by what we feel musicians need or by what musicians tell me they need. I want to stay small enough so that we’re never blinded by what looks good in ad copy. In the end it’s how it sounds that matters.” He paused for a moment and flicked a control on his newest synthesizer. “We are making musical instruments, you know.”
Ever since the invention of the recorded disc annoying "clicks" and "pops" caused by scratches, static and imperfections have consistently disturbed the listening pleasure of music lovers.

Now, SAE introduces the unique model 5000, an Impulse Noise Reduction System which eliminates those unwanted sounds with no adverse effect on the quality of the recorded material.

This breakthrough in electronic circuitry is so demonstrably effective that the SAE 5000 is destined to become an essential part of any sound system.

The SAE 5000 is compact and sleek, built to SAE's exacting standards, and ready to enhance the performance of any system, from the standard receiver/turntable combination, to the most sophisticated audiophile components.

SAE is proud to add the 5000 to their broad line of Components for the Connoisseur.

SCIENTIFIC AUDIO ELECTRONICS, INC.
P. O. Box 60271, Terminal Annex
Los Angeles, Cal. 90060

Please send more information on the 5000.

Name ________________________________
Address ________________________________
City __________________ State ______ Zip ______

CIRCLE 42 ON READER-SERVICE CARD
The Independent That Could: A&M Records
by Todd Everett

There is a strong case to be made that the most interesting record companies are the smaller, independent ones. While sometimes characterized by shoestring budgets and shotgun distribution, it's the independents—with no parent company pressure—who have traditionally supplied most of the imagination and set many of the trends in the music business. Rock & roll, disco, reggae, and to some degree mass appeal black music all owe their initial exposure to independent labels. Almost invariably, they've been founded by the need to make music available through means other than existing distribution channels. Witness the proliferation, even in these relatively sophisticated days, of small companies dealing in contemporary classical, avant-garde and traditional jazz, blues, folk, spoken-word, and both legitimate and bootleg reissues of vintage material from all categories.

With the absorption in recent years of Decca by MCA, Mercury by Phonogram, and Elektra and Atlantic by Warner Communications, only a few major independent labels exist—A&M, Motown, and Casablanca among them. A&M has the largest number of charted albums (forty-six in 1976, according to Billboard), but despite its size (something like three hundred employees) and financial solidity it remains the classic independent.

The company was founded in 1962 by its current owners, Herb Alpert and Jerry Moss. Both were young; both were determined "record men." Alpert was a record producer (notably, Jan & Dean's early successes), songwriter (several of Sam Cooke's, including All of My Life and Wonderful World), singer (remember Tell It to the Bees by Dore Alpert? Don't worry, neither does anybody else!), and actor. Moss was a promotion man, whose first job—at a salary of $75 a week—was to get the Crests' 16 Candles played in Philadelphia.

Alpert, who also played trumpet, had recorded an instrumental of a song called Twinkle Star, written by a friend. He had added corrida crowd noises and then dubbed it The Lonely Bull. Rather than try to sell or lease the master to another label, he and Moss decided to launch their own, operating from Alpert's low-rent Hollywood garage. The Lonely Bull, performed by the Tijuana Brass, eventually sold 700,000 copies—most of them during the several-month period that A&M continued to crowd Alpert's car out into the driveway. But not much time passed before the company moved to a real office on the Sunset Strip (in the years since, that office has been considered good luck by the superstitious in the industry—Uni, 20th Century, and Casablanca are now headquartered in the same building). In 1966, A&M settled permanently in the Charlie Chaplin film studio lot, which is today a historic monument preserved in much of its original condition. The label uses the huge sound stage for rehearsals and occasional showcase performances.

Typical of the independents, A&M's artist roster reflected the personal tastes of its owners—smooth, adult-oriented pop, occasionally with a slight jazz, rhythm & blues, or Mexican tinge. Aside from Alpert's Tijuana Brass, the label's successful early acts included the Baja Marimba Band (like the Brass's, their music was Latin-flavored pop-instrumental with more than a hint of humor in the arrangements and presentation), the Sandpipers (a Letterman-styled vocal trio whose first hit was Guantanamera, in Spanish), Sergio Mendes and Brasil '66, wispy-voiced Claudine Longet, and the quietly folk-rocking We Five (You Were on My Mind).

Some attempts were made at entering other...
areas. Captain Beefheart's first single was on A&M and became a hit in Los Angeles. Waylon Jennings was signed to the label in the mid-Sixties, and Leon Russell released a couple of energetic songs including an uptempo Misty that predated Ray Stevens' version by a good nine years. But generally, A&M was one of the country's major suppliers of tasteful middle-of-the-road music.

Today the roster is large—about fifty-five acts currently signed—but still a clear indicator of Alpert and Moss's personal tastes. The music of Karen and Richard Carpenter, the Captain and Tennille, Lani Hall, Chuck Mangione, and Gino Vannelli is a Seventies extension of what was happening on the label ten years ago. Most of the rock artists, signed in a blitz that started shortly after the 1967 Monterey Pop Festival, are of the clean-living, not-too-heavy type like the Ozark Mountain Daredevils and Peter Frampton. Heavy metal acts (Nazareth and Budgie being two examples) remain the exception.

The most recent cultural inroads have been in the area of r&b, starting with the signing of veteran composer/arranger/producer Quincy Jones and keyboard player/singer Billy Preston several years ago, and continuing up through the recent success of the Brothers Johnson and LTD.

Though record sales are substantial enough to be competitive in the CBS/Warner league ("Frampton Comes Alive!" has sold in excess of six million units alone) A&M continues to operate as an independent. Alpert's duties are largely musical, as a producer and recording artist, and Moss handles the executive/administrative end of things. Both are still in their early forties; neither has the slightest desire to sell out to a larger corporation (though there were rumors not so many years ago that the company—then in a lean period—was on the auction block). "There are only two reasons to sell," Moss explains. "To get a lot of cash so that you can tick off the days till your retirement, or you sell a part of the company for cash in order to expand rapidly. I'm only forty-one, and I've been with A&M for fourteen years. There's nothing that I would rather be doing than what I'm doing now—it's not a job, it's my life.

In addition to the money generated by such huge-selling acts as the Captain and Tennille, the Carpenters, Frampton, Jones, Preston, and Cat Stevens, A&M counts on other sources of revenue. For one, the recording studios are in constant use by outside artists. Also, it distributes one outside label, Ode, which is owned by Alpert's long-time friend and former co-writer and co-producer, Lou Adler. Artists include Carole King (though she recently signed with Capitol, she owes Ode one more album), comedy duo Cheech and Chong, and several other less familiar acts. (Rumor has it as we go to press that Ode is up for sale.) A&M's music publishing wing, Irving/Almo, is notably strong. Aside from handling the administrative work for many of the label's acts, they own (for instance) all of Brian Wilson's early copyrights; they've also recently established their own print division, publishing and distributing sheet music and folios.

At various stages in the company's development, there have been tactical errors—largely the result of wanting to expand too rapidly into areas that the staff wasn't prepared to handle. Moss still grimaces at the mention of A&M's short-lived 1968 venture into motion picture production; within a year's time the movie branch was announced (with three initial projects planned) and dissolved. Sometime later, the label
co-financed the film of the Joe Cocker/Leon Russell tour with a band called Mad Dogs and Englishmen. In a few years, all rights to that picture revert to the label, but one can assume—since no other ventures along these lines are planned—that this too was an error in judgment.

A&M also recently pared its artist roster by some fifteen acts to make it easier to handle. And various artist and/or production deals have proven less fruitful than expected. One with producer Phil Spector in 1969 resulted in a couple of moderately successful singles (by the Checkmates and Ronettes) but nothing more. One with George Harrison in 1975 resulted in albums by Ravi Shankar and bands like Attitudes, Splinter, Jiva, and Stairsteps, but nothing by Harrison himself. This all climaxed in a huge lawsuit that was settled out of court last year in A&M’s favor. An attempt to initiate a jazz series, Horizon (loosely patterned after ABC’s Impulse and Arista’s Freedom lines), isn’t showing the kind of profit anticipated. The artists, production, and presentation are topnotch, but the A&M sales and promotion forces are apparently unable to push Jim Hall, Ira Sullivan, Paul Desmond, and Charlie Haden—though those same forces are doing well enough with Chuck Mangione and Gato Barbieri’s albums on the parent label. Nevertheless, says Moss, “In retrospect, any mistakes have been minor. We’re still here, and I don’t owe anyone any money.”

Whether or not they owe anybody anything, A&M must operate with less capital than a label funded by a huge international corporation. So it saves where it can. Rather than invest in huge branch warehouses and sales staffs, the company remains as it started, with an independent distribution system—distributors in every marketing region but two handle A&M together with several other lines. Rather than set up international offices, A&M licenses recordings to established local labels, except in Great Britain and Canada, where its wholly owned affiliates operate on a semi-autonomous basis, able to sign their own acts as well as distribute A&M’s U.S. roster. Manufacturing in the U.S. is handled by Columbia Records, saving A&M the cost of pressing, packaging, warehousing, and shipping facilities. (The exceptions to A&M’s independent distribution system are in Atlanta, where they share ownership of Together Distributors with Motown, and in the Northeast, which is served by an A&M office in Boston. Both resulted from an urge to experiment and from what Moss felt to be inadequate performance by their previous distributors in those markets. There are no plans to expand in this area.)

When A&M does expand its roster, it does so slowly—again with an eye to sensible financing. Although the early acts included the Canadian Sweethearts and Waylon Jennings and later country-rockers like Steve Young, Dillard and Clark, and the Flying Burrito Bros., the label never really felt at ease with country music and eventually ceased its attempts in that area. Though now a strong force in the R&B market, initial inroads were made by acts like Billy Pres-
Polytone Mini-Brute II. In the years that I've been in the recording business, I suppose I've seen most types of instrument amplifiers—from the homemade jobs with their dazzling speaker arrays, to the gigantic Marshalls, Peaveys, Sunns, Acoustics, Gibsons, and so many models in the Fender line that I've lost track. While recording these amplifiers is usually not a problem, there are always a few that need endless attention as they hum, buzz, and hiss their way onto my avoid-this-one-the-next-time list.

Then there's the "bigger the better" syndrome. When a rock group books studio time, the members invariably drag in their own monster stage-type amps, much to the delight of the local chiropractor and to the grief of roadies, friends, and the resident recording engineer. So when Polytone announced its 18-pound Mini-Brute II, rated at 60 watts (17¼ dBW) continuous, you'd better believe I was eager to try it. The amp has two standard ¼-inch phone-jack inputs, both of which will accept an instrument or microphone output signal. Front panel controls include a three-position BRIGHT/DARK switch, separate bass and treble tone controls, a reverberation potentiometer, and dual concentric volume controls for preamp and power amp gain. The dual volume controls allow you to increase the output level of the preamp while maintaining a constant power amp output level. Simply stated, this means you can create a distortion effect (if you like that sort of thing) without an external distortion device—an impressive feature for so small a package.

The Mini-Brute II has an auxiliary preamp output and accessory speaker jacks; the power amps' frequency response is said to be from 20 Hz to 50 kHz, and the preamp's flat response from 60 Hz to 35 kHz. Despite the seemingly modest power rating, the amp is capable of high output levels and produces sound of surprisingly high quality. Clearly, this is no toy amp and the clarity and impact of the sound—even at high levels—is excellent.

We used a Mini-Brute I (no reverb or preamp controls) on a recent recording session with Jay Leonhart playing a Fender Precision bass. The instrument's output was fed directly to one console input while a microphone placed near the Mini-Brute's speaker was fed to another. With the amp's tone controls in the flat position, neither Jay nor the producer could tell which was which. Of course one of the purposes of an amplifier is to color the sound of the instrument played through it, and that can be done on the Mini-Brute by using the tone controls. But there are remarkably few amps that can boast this kind of transparency. As with a subsequent test of the Mini-Brute II, there was no hum, no buzz, and no hiss—in short, an engineer's dream.

Well, fine, you may say, but I'm not an engineer—I play clubs, concerts, bars, or in my home, and I don't really care how it records. Fair enough, but it can be just as useful in live situations. It's small, it eliminates the need for two amplifiers in a two-input situation (say guitar and voice), and with the tone controls and built-in reverb you can achieve the same two-input mix that you would with a small mixer.

A clean-sounding, powerful amplifier that records beautifully, is usable with a wide range of instruments from bass to voice, and weighs only 18 pounds deserves your attention—unless you're a chiropractor. The Mini-Brute II retails for $325, the Mini-Brute I which does not include preamp control or reverb, costs $275.

Switchcraft Guitar Plugs. Here are three new brass-construction guitar plugs for you do-it-yourselfers. Model C-420P2 is equipped with internal threads for strain relief, and the black plastic casing will accept cables up to 5/16 inch in diameter. Model 440P2 has no internal threads in the handle and will accept cable up to 9/32 inch. Model 470P2 is a variation of the 440P2 but is sturdier in that it has a shielded metal handle with knurling for more secure grip and protection against damage. This model will accept cables up to 9/32 inch in diameter. Prices are, respectively, $4.75, $4.35, and $5.45.

Ibanez Flying Pan. This is a stereo panning device with a built-in phase shifter. Designed for use with two power amp/speaker systems, it could create some new possibilities for the stage performer. Panning (the movement of sound between two amps or speakers) is similar to turning the balance control on your stereo set. You can place the signal extreme left, extreme right, or anywhere in between. The PAN SPEED control sweeps the audio signal back and forth between the speakers at a rate that is said to be variable from a slow sweep to a rapid tremolo. Phasing may be added to either or both of the speaker outputs, and FEEDBACK DEPTH regulates the depth of the effect.

Among numerous possibilities, the Flying Pan might be used to simulate the rotating-speaker (Leslie) sound, by a careful balancing of the phasing and sweep rates. Retail price for the unit is $139.50.

April 1977

Fred Miller

CIRCLE 122 ON READER-SERVICE CARD

CIRCLE 123 ON READER-SERVICE CARD

CIRCLE 124 ON READER-SERVICE CARD

CIRCLE 125 ON READER-SERVICE CARD
Lionel Hampton Is All Over the Place


"Complete" means everything recorded by Lionel Hampton's small groups for RCA Victor from February 1937 to April 1941. This is far and away the best period in Hampton's recording career for thorough documentation. His was one of four classic small groups of the Twenties and Thirties (the others included Louis Armstrong's Hot Five and Jelly Roll Morton's Red Hot Peppers in the '20s and Teddy Wilson's all-star groups, originally with Billie Holiday as vocalist, in the '30s). Both Wilson and Hampton drew from the major big bands of the day for their recording personnel: Ellington, Goodman, Hines—whoever happened to be in New York at the time. But while Columbia gave Wilson a relentless diet of current and usually forgettable pop tunes (most of which his sidemen and Billie Holiday managed to salvage), Hampton's opportunities were not so limited. He recorded a large number of unadulterated, riff-based jazz originals as well as good jazz and pop standards. In this impressive six-disc set—ninety-one tunes with five additional alternate takes—there are wild zig-zags of style and cohesiveness because the players changed from session to session. The first, played by Goodman sidemen, is rather stiff and tentative, but the second, dominated by Ellingtonians on the loose, is brilliantly brash and joyous. Although Hampton could use excellent jazz grist such as Ellington's Ring dem Bells (with a hair-raising Cootie Williams trumpet entrance) and Morton's Shoe Shiner's Drag, he also got an occasional dog such as Stand By! For Further Announcements (and More Good News). Most of the great jazz instrumentalists of the '30s (with the exception of Basie's sidemen) are heard all through the series in loose, free-wheeling circumstances and some who were not widely known—Dizzy Gillespie, Nat King Cole—get an early chance to shine. Hampton is all over the place, playing vibes or one-finger piano, drumming, singing. Yet it is usually the sidemen who make or break each piece. Toward the end even they can't rescue the dull material that Hampton was drifting into or the bland vocals by several dismal singers of his choice.

J.S.W.

This first-rate producer/songwriter/performer team that emerged out of Motown in the late '60s try on their fourth Warner release to reconcile sophisticated soul with the more streamlined sound of '70s disco. The most ambitious attempt is Tried, Tested and Found True, a straightforward, melodic dance tune with homogenized vocals and a propulsive beat. But the cut lacks the aural spaciousness of contemporary disco. Its elaborate arrangement and solid rhythm tracks qualify it as superior soul, but the vocals are not close enough to chant and the beat not throbbing enough to make it as hard-core disco. The hallmarks of Ashford & Simpson's style remain unchanged. They excel at writing and arranging chromatic vocal tradeoffs that take their time building to a big payoff. But on their recent albums the dramatic scope of the lyrics has
narrowed and the melodies, though well-crafted, are not nearly so bold. Perhaps one reason is that Nick Ashford's gospel singing lacks the stamina and power of his wife's. And though he has an appealing soulful style, in performance their gospel is sensibly tempered with a supper-club intimacy that underplays the discrepancy. The moody title cut is the finest example of what they do best: Graced with a sophisticated orchestral arrangement. So So Satisfied is an erotic call-and-response ballad which carries '60s soul to a lavish climax as welcome as it is unusual in the harder-edged, discarded late '70s.

S.H.


Each new album since their first collaboration with producer Arif Mardin has reinforced this predominantly Scottish sextet's sense of r&b classicism. For that career-making album, titled after the group and boosted to eventual platinum status by its impact on pop, rock, and r&b audiences alike, has served as a stylistic primer, rather than a starting point for continual development.

That's not necessarily a weakness, as the best moments on this live, two-disc package attest. AWB's forte is fluid rhythm playing, with vocals and instrumental solos inherently restricted by the intricate, syncopated clockwork of the basic rhythm and horn arrangements. In that respect, the band is simply following a time-honored r&b tradition created by the Flames, Booker T. & The MG's, and the Bar-Kays—three seminal instrumental units that excelled in making infectious dance music. Like those predecessors, AWB continues to bring heartening drive and precision to their work, and the new set's live environment only verifies that energy.

Yet there are problems here, despite the familiar repertoire of past singles and album tracks. The band's most glaring blind spot is their emphasis on their own material, which too often degenerates into interminable riffing that might be mesmeric in concert but proves simply tiring here. Had the band never covered more melodic, driving material like the Isleys' Work to Do and the Leon Ware/Pam Sawyer If I Ever Lose This Heaven (the latter included here), the lack of melodic color and structural focus wouldn't be so apparent.

DON'T INTERRUPT LIFE'S GREAT PERFORMANCES.

With the new AKAI GXC-730D, great moments in music aren't shattered by those not-so-great moments in cassette rewinding and flipping. Instead, a bi-directional GX record/playback head allows you to play both sides continuously. Automatically. And you can play or record both sides without ever having to stop and physically turn the cassette over.

The fact that the 730D is the most versatile front-loading cassette deck on the market is just the beginning. It's also loaded with some pretty fantastic features. Like Dolby and AKAI's exclusive Automatic Distortion Reduction System (ADRS). Memory rewind. Pause control. Separate right and left channel record level controls. Soft touch, direct function operating controls. Peak level indicator. Illuminated VU meters. A great-looking walnut cover. And all the specs you'd expect an AKAI top performer to deliver.

Hear it at your dealer's.

The AKAI GXC-730D. Dedicated to the proposition that some of your performances are just too good to interrupt.
Thus, their first concert package proves appealing primarily for con-

confirmed fans, rather than interested but unas-

quainted newcomers. An eighteen-

minute version of the band's first hit, Pick Up The Pieces, certainly affirms each 

member's strength as a soloist, but there is little in the way of discovery that justi-

fies its length. Similarly, the fourteen-

minute TLC gradually rambles toward a 

formal song structure only to again sub-

divide into featured riffs.

Capping the problem is a lengthy re-

working of I Heard It Through the 

Grapevine, which elaborates Marvin 

Gaye's recorded arrangement without 

approaching its taut, tough power. Six-

teen bars of vamping where four are 

needed may be advisable for disco play, 

but this is also a classic song, a fact that 

is obscured by all this exposition.

Mardin's production and Lew Hahn's 

engineering are superb, presenting each 

instrument and voice with clarity and 

definition (especially drums and cymb-

als) without sacrificing the crowd noises 

and hall ambience that give the record its 

definition (especially drums and cym-

bals). The result is an undeniable energy, and a 

sense of 

Braxton's music is more striking for the 

sense of déjà vu it creates than for its im-

plicit interest. The musical problems that 

concern him are problems that were 

thoroughly and exhaustively explored a 

decade ago.

Working with pianist Muhal Richard 

Abrams, Braxton uses virtually the entire 
gamut of single-reed instruments (alto 
sax, soprano sax, contrabass sax, clarin-
et, E-flat clarinet, and contrabass clarin-
et) to labor through six mostly impro-
vised pieces. Miss Ann, Eric Dolphy's 

brightly humorous line, and Scott Jop-
lin's Maple Leaf Rag receive the most 

ingratiating performances, simply be-

cause they provide ample bases from 

which to improvise.

The remaining four pieces (three de-

vised by Braxton, one duo improvisa-

tion) employ the now-familiar avant-
garde techniques of pointillism, inter-

naturally beautiful ballad Everything Must 

Change, while not matching Randy 

Crawford's state-of-the-art rendering, 
does come across fairly well.

The instrumentals are similarly vari-

able. The Wind and I swings a good deal 

more than most of the funk jazz around, 
thanks as much to keyboardist Ronnie 

Foster as Benson himself: War's The 

World Is a Ghetto is marred by producer 

of strings as a (saccharine) "sweetener"—awful throughout—and 
dreary disco/funk oom-pa-chuck a-

chicka-chicka-chuck drumming. Donny 

Hathaway's subtle Valdez in the Country 

cooks mightily from the start, despite 
drooling violins.

In all, "In Flight" is an agreeable 

enough album that will probably sell, 

and despite a certain lack of conviction 

and a rather aimless wandering between 

modes, it far outsrips most current funk 

rock. But musically it is no match for two 

other recent Benson releases: CTI's 

recording of him and Foster in concert 

with Hubert Laws, "George Benson in 

Concert—Carnegie Hall" (CTI 6072 S1), 

and Polydor's reissue (which contains 

one previously unreleased cut) of a 

bunch of 1968 sessions under the title 

"Blue Benson" (Polydoll PD 1-6084).

David Bowie: Low. David Bowie & Tony 

Visconti, producers. RCA CPL 1-2030, 

$6.98. Tape: C 8 CP1 1-2030, C CPS 1-

2030, $7.98.

I've always found George Benson a 

rather cold though skilled player, but 

that's only part of the reason I was un-

moved by this second bid for the pop/

jazz (or is it jazz/pop?)flipover that he 

achieved with "Breezin'". Benson sings 

adequately and plays pleasant guitar. 

But the results are very uneven. His vocal 

performance is little in the way of discovery that jus-

tiles a sense of 

brilliant English synthesist Brian 

Eno, is the most portentous piece, 

Weeping Wall, in which Bowie overdubs 

to improvise.

It creates than for its im-

proved vocals 

amounting to little more than the repeti-

tion of Dadaist phrases. Though the ef-

fect is distancing, it's not totally alien-

ating. For despite robot-like rhythms, 

there is an undeniable energy, and a 

frame of reference can be gained with re-

peated listnings.

The LP's major aesthetic problem is 

stylistic inconsistency. Not content to de-

velop a single musical idea per album, 

Bowie explores a different, chillier 

avant-gardism on Side 2. The pieces are 

longer, sparer, cooler, and lack rhythm 

tracks. Warszawa, a collaboration with 

the brilliant English synthesist Brian 

Eno, is the most portentous piece, 

Weeping Wall, in which Bowie overdubs 

all the instruments bringing vibraphone 

and xylophone to the foreground, is the 

most subtly captivating and tantalizingly 

reminiscent of some of the sounds 

created by avant-garde composer Steve 

Reich. There is probably much more to 

this music than meets the ear, and it can 

at least claim a certain charm in its low-

keyed, arctic impressionism.

Anthony Braxton: Duets 1976. Steve 

Backer, executive producer. Arista A 1 

4101, $6.98. Tape: C 8 330 1-4101, $7.98.

Braxton's music is more striking for the 

sense of déjà vu it creates than for its im-

plicit interest. The musical problems that 

concern him are problems that were 

thoroughly and exhaustively explored a 

decade ago.

The remaining four pieces (three de-

vised by Braxton, one duo improvisa-

tion) employ the now-familiar avant-
garde techniques of pointillism, inter-

S.H.

George Benson: In Flight. Tommy Li-
Puma, producer. Warner Bros. BS 2983, $7.98. Tape: C M5 2983, C M8 

2983, $7.98.

Rock music's most eclectic and often 

most grandiose avant-gardist has finally 

made an album that makes no compro-

mises toward commercial accessibility. 

"Low" takes its direction from the 

soundtrack of Bowie's film, The Man 

Who Fell to Earth (the cover art repro-

duces the ad for the film), and offers 

"space music" as chilling as it is evoca-

tive. The music is of roughly two types.

Side 1 comprises seven short pieces 

(songs is hardly the right word) of 

abrasively textured guitar and synthesis-

er-based rock. Here some of the most 

stock hooks in the rock repertory act as 

mechanized instrumental fragments 

with Bowie's superimposed vocals 

amounting to little more than the repeti-

tion of Dadaist phrases. Though the ef-

fect is distancing, it's not totally alien-

ating. For despite robot-like rhythms, 

there is an undeniable energy, and a

Anthony Braxton—maybe next time

High Fidelity Magazine
vallic leaps, substitution of a sound-and-silence flow for a jazz pulse, and spontaneous back-and-forth "sound effect" episodes. None of this is wrong, or even uninteresting, but much of it was done to much greater effect years ago by performers and composers like Bill Dixon, Ken McIntyre, Cecil Taylor, Don Ellis, Paul Bley, Jimmy Giuffre, George Russell, and John Benson Brooks, to name only a few.

The real question, then, is to what extent Braxton can push out beyond the confines of the artistic cul-de-sac he has created for himself. If this outing is any indication, not very much. And that's regrettable, because he's a superb technician and—potentially—one of the finest contemporary jazz improvisers. Perhaps next time.

Kim Carnes: Sailin'. Jerry Wexler & Barry Beckett, producers. A&M SP 4606, $6.98. Tape: CS 4606, $7.98. Singer-writer Kim Carnes is the slickest new exponent of an enduring pop subgenre: white soap opera schlock with a strong flavor of Southern country soul. Like Dusty Springfield and Jackie DeShannon, Carnes plays the sexy, slightly faded belle who has lived long enough to see her dreams of a Cinderella ending tarnish but not so long as to have forgotten the fantasy completely. Although she has a lovely voice, she does not project the real masochistic desperation of Springfield or the tough/tender resilience of DeShannon. Rather, she is a superb technician who turns the subgenre into a pleasant Hollywood pastiche.

Jerry Wexler, who coproduced Springfield and DeShannon's finest albums, takes exactly the same approach with Carnes on her second LP, accentuating and stretching her emotive range in distinct, carefully preconceived sound settings. Thus the melodiousness of the ballad "Sailin'"—co-written with husband Dave Ellington, is enhanced by striking passages of a cappella part singing. Let Your Love Come Easy skillfully plays her voice against a stunning pop/jazz flute solo by Chris Coldesser. But it is with the daydream ballads that the album hits its peaks. The richly orchestrated "He'll Come Home" makes delicious country/soul schmaltz out of a woman's suffering nobility. And the Carnes-Ellington American Song Festival winner, "Love Comes from the Most Unexpected Places," is as fine a traditional pop expression of wish-fulfillment as has come along in many years.

If we can design a vented, equalized system for audiophiles, we can design one for everyone.

It took E-V engineers over 2 years to design and construct the original Interface: A speaker system, one of the most measurably accurate systems ever introduced. We weren't about to compromise the integrity of that effort when we brought you Interface:B. In its price category, Interface:B outperforms all the other bookshelf speakers. You get extended low-distortion bass response (3 dB down at 36 Hz), a trademark of Interface technology.
Who Is Leon Redbone & Why Is He Singing All Those Oddball Songs?

Any way you look at it, Leon Redbone's ascendance is slightly anomalous. How do you account for a man who sings old ballads, blues, jazz, and novelty tunes in a voice somewhere between Mississippi John Hurt and a '20s lounge crooner, yet still manages to sell records in the '70s? When was the last time you thought you'd want to hear a new version of Shine On Harvest Moon complete with background whistling? Hiding behind shades, pith helmet, muttonchop sideburns, facial hair, stogie, and riverboat gambler's tie, Redbone comes across as a retrogressive Frank Zappa. Warner Bros. attempts to compound this affected air of mystery by referring to Redbone in his bio as "the reclusive Pied Piper of Esoterica" who has an aversion to revealing his age or origins ("Mr. Redbone ... finds the interrogations to be irrelevant in the extreme").

Stranger gambits have been used to sell "difficult" music, but the irony is that Redbone may not need the gimmicks. What his record company will allow us is that he was first spotted playing Toronto clubs in 1970, that he went on to become a hit of the Mariposa Folk Festival in '71 and secure laudations from the likes of Bob Dylan, Ramblin' Jack Elliott, and Maria Muldaur, and finally that his 1975 debut album ("On the Track") sold modestly until an appearance on Saturday Night Live turned him into a national cult figure and moved 200,000 units.

Not surprisingly, the coyness and secrecy surrounding all this has turned some people off. What can be questioned are not his basic intentions, but the nuances of his method and the contrivance of his image. While he is obviously working the nostalgia market, he just as clearly loves and has an archivist/historian's comprehensive understanding of his material. His act is not so much the camp schtick it might at first appear as another manifestation of that peculiar '60s cranny wherein certain members of the grass-smoking youth culture came to decide that there was nothing so hip as the (particularly black) pop arcana of the '20s and '30s. (After all, the early jazz musicians and their fellow travelers were the original American pothead "underground.") Redbone also derives from the sort of longhair record collectors who assume outlandish monikers like "Dr. Demento," probably in order to dissociate their far-out personae forever from the popular image of the neurotic musty collector.

Obviously, there are hazards to this approach. Nostalgia tends to soften the raw edges of the past, and it's not surprising that Redbone generally downplays the pervasive wildness of early blues and jazz for a more marijuana-sympathetic? Stephen Fosterish? style. What had been a Rabelaisan roar, a party record of its day in both the modern senses, here serves as a pleasant vehicle to showcase Redbone's basso vocal expertise and parakeet whistling. And is it Redbone's liberalism that prompts him to change Smith's "I'm gonna do like a Chinaman, smoke myself some hop" to "I'm gonna do like a madman, get myself some hops"? Such revisionism, however well intentioned, inevitably undercuts the vitality of folklore.

But such cavils are ultimately minor. "Double Time" transcends both its idiosyncrasies and its coyness.

Come and wrap the sounds around you.

The album was recorded live at an outdoor concert, and now it's all coming back to you. The heady, magical electricity of a hot, metallic blue night—the air crackling with energy as the musicians tune up—the stage has become an island of colored light, chrome and glitter. Suddenly you're part of the interplay between rhythm, bass, lead and harmony as every note flowers. Each unfolding in your head. You're wrapped in the sound of KOSS PRO 4AA Stereophones, hearing all ten audible octaves. It's a power you can hear and feel as though you were in the spotlight with the musicians. And yet you're home, free to explore this private realm of listening pleasure. This uncluttered expanse of pure sound that makes KOSS PRO 4AA's the most popular stereophones in the world.

Your audio specialist has a pair of KOSS PRO 4AA's you can try. Visit him, and gather the sounds of musical perfection around you. Or write for a free, full color catalog c/o Virginia Lamm. Either way, remember that, for the price you'll pay, KOSS PRO 4AA's are a rather inexpensive ticket to a performance that begins at your command and goes on and on, encore after encore, for as long as you want. It's like buying a stairway to heaven.

KOSS CORPORATION, 4129 N. Port Washington Ave., Milwaukee, Wisconsin 53212 • Koss International/London, Milan, Dublin, Paris, Frankfurt • Amsterdam • Koss Limited/Burlington, Ontario

from the people who invented Stereophones.
Both of these decks will improve the sound of your cassettes. One even improves your tuner.

Introducing the RS-671AUS and the RS-677US with Dolby FM. Both decks will dramatically improve the sound of your cassettes. But with the RS-677US you'll also get a dramatic improvement in the sound of your tuner. Like a quieter FM S/N ratio. Increased dynamic range. Even better FM reception.

And to improve the sound of your cassettes both units employ a two-motor drive system. Including an electronically controlled DC motor used exclusively for capstan drive. The results: 0.075% (WRMS) wow and flutter for the RS-671AUS. And 0.07% (WRMS) for the RS-677US.

You also get a quiet S/N ratio of –65dB (CrO2 tape, above 5kHz). As well as lower distortion and excellent transient response. The reasons: A Technics low-noise pre-amplifier. Selected low-noise transistors. And Dolby.

And both decks also give you an extremely wide frequency response of 30 Hz – 17kHz (CrO2 tape). Thanks to the exceptionally narrow gap of our patented HPF heads.

You'll also get quiet, highly accurate recordings, with plenty of dynamic range, because both decks have peak check VU meters. So you can precisely set recording levels for the barest minimum of overload distortion, especially when recording from live sources.

Both decks have memory rewind. Fast-acting silent electronic switching. A lockable pause control. Mike/line mixing. A CrO2 tape selector. And with the RS-671AUS, you'll get selectors for high and low bias. And with the RS-677US, memory play and solenoid activated remote control.

So when you're ready to improve your system, the RS-671AUS and the RS-677US are ready for you.

'Dolby is a trademark of Dolby Laboratories, Inc. Cabinet is simulated wood.

Technics by Panasonic

ABBA’s Scandinavian pop has lost none of its sweet sweep but has gone a little soft on this album, which finds guitar playing second fiddle to keyboards. Still, the combination of crafty 60s choruses and girl-group harmonies with consummate 70s production is so catchy it deserves a Golden Glove. Pigs will object to the meaningless lyrics, yet triviality has always been one of pop music’s chief delights. What was so great about Tutti Frutti?

Can a man dismiss an all-woman band? When it’s as bland as sic’s chief delights. What was so great about Tutti Frutti?

Atlantic SD 18207, $6.98.


Bread’s reunion seems a second marriage of convenience: None of its members enjoyed much success as a solo artist. This album may fare no better, for lead singer David Gates’s limpid sentimentality has turned limp and the playing is perfunctory. Change of Heart is a pleasant pop. and Be longing reprises The Diary, but nothing here equals the eloquent pathos of Bread’s original hits.


Can a man dismiss an all-woman band? When it’s as bland as his. I think he can. If it doesn’t excite, good women’s music should at least unsettle the opposite sex. But the playing here, though always professional, is never inspired, and the arrangements are tepid at best. After four years, Isis still lacks a musical (as opposed to ideological) purpose—and a rhythm section.


It’s easy to quarrel with the selections (only one track from “Baxter’s,” its most adventurous album?), but this ecumenical, double-album retrospective of a decade’s work by the Airplane/Starship and its multi-talented spinoffs still fascinates. What’s especially interesting—and disturbing—is that much of the music doesn’t live up to one’s memories of it. The outstanding musician is bassist Jack Casady, who manages to be lumber and lumbering at the same time.


On Queen’s fifth album, guitarist Lee May’s heavy-metal crunch and lead singer Freddie Mercury’s heavy-breathing camp are often at cross-purposes. The helium harmonies are exquisitely engineered but mesh awkwardly with the Led Zeppelin riffs. Nothing on this slick but schizoid album approaches the temerity of last year’s Bohemian Rhapsody, and one searches in vain for a glimmer of genuine feeling amid the glittering contrivance.


As if in anticipation of his Inaugural appearance, Rosalynn Carter’s favorite singer spruced up and fleshed out his act for this album. The conventional arrangements on some of these tracks detract from Talley’s homespun originality, but the songs with simpler settings are elegiac syntheses of blues, country, and folk music, and vivid evocations of a South that isn’t New.


Dave Van Ronk has never prevailed, but he’s certainly endured. To show he has kept the folk-blues fall, he even includes a song he performed and recorded at the Newport Folk Festival in 1963. This set of blues rags and holters accompanied by acoustic guitar lacks the intensity of his best 60s albums, but Van Ronk’s growl hasn’t lost its grit—or its poignance.


His new label seems to have given Muddy Waters a new lease on life. Like the album title says, these blues are as hard as they come. Waters plays little guitar (those chores are left to producer Johnny Winter and Bob Margolin), but he punches out the vocals with the virility of a man half his age. James Cotton’s hackneyed harp is featured throughout, but the real star, apart from Waters, is Willie “Big Eyes” Smith and his tough, fundamental drumming.


Gary Wright has long deserved the attention he received last year, but this album’s rudimentary melodies and rhythms are too flimsy to support its elaborate superstructures of multiple keyboards. These are castles built on sand, and Wright’s brawny voice with its paradoxically husky yet wispy falsetto cries out for meatier lyric fare than hippy-dippy metaphysics.
Continued from page 139

on Buckingham's part; and Gold Dust Woman, softly sassed through by Nicks on lead vocal. On the uptempo side, the standout cut is Don't Stop, a get-it-on number showcasing the group's ability to sparkle as individual players while maintaining a hard-to-match tightness. Other songs, such as The Chain, Never Going Back Again, Second Hand News, and You Make Loving Fun add up to an effort free of any throw-away album filler.

While it's still early to tell, I think it's a safe bet that "Rumours" will end up as one of the year's top ten releases. And although it is one of the first albums to carry the $1 price increase, I highly recommend making an exception before contemplating a boycott.

J.M.

Janis Ian—teenage rejection


This is a disappointing production and contains no songs of the At Seventeen/Watercolors caliber found on Ian's best-selling "Between the Lines" album. The Frangipane co-production lacks the distinctiveness of Ian's earlier work with Brooks Arthur. Her voice sounds less intimate than before, and the moody string and horn arrangements that embellished much of the best material on her earlier LPs have been replaced by less sophisticated keyboard work, electric guitar fills, and part singing between Ian and Claire Bay.

Even more crucial to the failure of "Miracle Row" is its dearth of strong material. Many of the new songs are inferior recyclings of old ideas. Party Lights, Let Me Be Lonely, Slow Dance Romance, Will You Dance? and I'll Cry Tonight in one way or another all touch on a theme that Ian has treated more directly in the past: the plight of the grownup wallflower who can't get over the traumas of teenage rejection, even as she recognizes the hypocrisy and shallowness of the rituals that caused that...
In the ambitious dipitych _Miracle Row/Maria_, a detailed psychological portrait of the relationship between two women, does lan extend her self beyond the short-form sill-life songs that seem increasingly like carbon copies of a single humorless and self-pitying idea.


These three albums are testimony to Kenton's unflagging musical integrity. At sixty-five, he is the Billy Graham of jazz, proselytizing from his chartered bus at one-night stands beneath the floodlights. On “Kenton '76,” he turns Sondheim's _Send in the Clowns_ into an evocative musical statement about the values of our society and _My Funny Valentine_ into a pseudo-symphonic tone poem. “Journey to Capricorn” includes Hank Levy's _Time for a Change_. Decal/Panmor ST 44276, $6.98. Tape. ** SP 44276, * SP 44276, * SP 44276, $7.95.


Delbert McClinton is the avatar of Southern rock. He put the bullets in Johnny Ace's gun. He beat Buster Brown in a Fort Worth Battle of the Harps. He's got one bag for his whisky, one bag for his wine, and he ain't got nothing but time, sweet time. Watch him now.

This is McClinton's third album with ABC, and there is no reason to believe it will be any more appreciated than the previous two. But God, it's great: an awesome mix of r&b and redneck flames. The title cut is so strong, so dark, so hot that it could get Delbert clipped from his record deal. (Go and hear his _Hold on to Your Honey_.)

There are three great resurrections here: _I'm in the Jailhouse Now_. Jimmy Rodgers' immortal hymn to reprehensible conduct: _Turn on Your Love Light_, which may emerge as the party cut of the year; and _Ain't I No Come on the Brazos_, a classic piece of Texas dirt that'll make you close your eyes and shiver. In the good words of Geno Vincent, git it. N 1.

The Mighty Clouds of Joy: Truth Is the Power. Frank E. Wiles producer. ABC AB 986, $6.98. Tape. ** 7 986, * 6 986, $7.98. Each of the Mighty Clouds of Joy's three pop albums has surrounded a couple of excellent tracks with a range of more or less bland material. Saved only by the group's strength and professionalism.

_Delbert McClinton—'git it'_


_Please rush me our FREE Audio Catalog and complete information. I understand there is no obligation._

_Delbert McClinton._
On "Truth Is the Power," the first and last cuts are the standouts. There's Love in the World is a joyous gospel/soul number with rollicking church piano and sharp church harmonies. Even better is the last, Like a Child, which marries incandescent preaching vocals with contemporary solar plexus-funk accompaniment, electronics and all.

During a decade in which they were nicknamed "The Untouchables"—the leading black quartet in the gospel field—the Clouds brought this kind of shout-for-joy singing to a fine pitch, and they have been able to bring it over in their cross into pop. But the rest of the album is a battle between their ability to put soul into everything (and the resultant sameness that tends to haunt all their work) and an array of contemporary producers' clichés like the wide horizon TV-commercial French horn themes that intrude on three of the cuts. The production-by-numbers approach is at its worst on God Is Not Dead, which combines pompous drums, Grand Canyon horns, birdies going twitter, plastic-funk drumming, disco-drug string riffs, and gospel-hackneyed music and lyrics.

The Mighty Clouds of Joy's church-bred intensity carries all before it—but it shouldn't need to. At their best they are phenomenal, but they deserve a producer who can draw that best out of them. Then we shall know whether they are capable of outstanding albums, or are essentially makers of brilliant singles.


"Festival" continues several themes of Santana's last album, "Amigos," with a piece for acoustic guitar, a richly melodic ballad, and above all a return to his early rock and salsa sources. But there's also something new here: a major, mainstream Brazilian infusion. The opener, Carnaval, is based on Rio carnival music, all percussion and up-tempo minor singing. The acoustic guitar that was so enchantingly blended with Cuban music in last-time-around's Giano gets a somewhat less successful workout in Verão Vermelho (Red Summer). One of this album's best tracks, Maria Caraços, blends a New York salsa mozambique rhythm with strong Brazilian inflections in both melody and rhythm.

Like "Amigos," "Festival" has a remarkably wide focus. Revelations opens with an extremely beautiful, very French 3/4 ballad treatment, then picks up in both tempo and urgency as Santana's guitar creates swirling counter rhythms above the percussion. Jugundo is full of Latin rock's special tension between acid guitar and salsa drumming. The guitar work on Reach Up reflects rock's roots in the '50s Chicago blues masters, and Try a Little Harder is infectious lilting r&b party-party music. Not that all is positive. Santana's tradition of blah lead vocals is carried on by Leon Patillo.

Santana is obviously settled in his return to broad-appeal music, but he has switched personnel quite thoroughly since the last album. Most important are the absence of the previous rhythm section's anchor, conga-player Armando Peraza, and the return of "Chepito" Areas' tense and flashy timbales playing. Only keyboardist Tom Coster remains to offset Santana's acid calm with his flourished bop-tinged runs. Aside from him and alumnus Pablo Teixeira (who also played with the group Mala at one time) on bass, percussion, and one lead vocal (Maria Caraços), all other musicians are new to the band. This creates some important changes in texture, especially in the percussion, but continues to reinforce the fact that Santana's musical conception is very much his own.


Billy Swan is a rockabilly holy man, a jukebox prophet. What's at the heart of his music is what's missing in most: fire and heat. When Swan wants to make music, he makes music. It may be a love song so weird that you hesitate to listen to it in the dark; it may be a flurry of rhythm and words so plain and so perfect that it must be a hit (in my mind, Swan's 1974 I Can Help was the most natural, wildflier hit since the Stones' Satisfaction, ten years before it); or it may be Ubangi Stomp, a shard from the rock & roll hideout that no other man would dare commit to record. There are no plastic flowers in Swan's sunny brain-garden.

"Four" is as fine as the three albums that came before it. Swept Away, written by Swan and Dennis Linde, is wet and funny and mean and vulnerable and right. Oliver Swan is the tale of a Missouri drunk (and here we must pause to recall that Billy is from Missouri) sucked into space by a ravenous crew of sauce-roid girl-things. And so on: grits and magic; love letters in the sand; blue-shift universes. Saddle up and scream. This is Swan country.
You may have noticed that few turntable manufacturers call your attention to the critical role of the tonearm in record playback. Dual is an exception. Whatever the shape, materials, or mechanics of a tonearm, the goal is always the same: to maintain the cartridge in the correct geometric relationship to the groove, and to permit the stylus to follow the contours of the groove walls freely and accurately. Whenever the stylus cannot follow the groove undulations, it will gouge its own way. And as we have frequently reminded you, there is no way to repair a damaged record. Every tonearm designer should consider geometry, mass, balance, resonance, bearing friction, and the accuracy and stability of settings for stylus force and anti-skating. However, despite the simple fact that the shortest distance between two points is a straight line, some designers are more concerned with appearance. Hence, the curved tonearm whose deviations between pivot and stylus simply add mass, reduce rigidity and increase the likelihood of resonance.

Dual engineers have always designed for optimum performance. The essential differences in approach and results are indicated below. You might keep all this in mind when you are considering your next turntable. Chances are you'll want it to be a Dual.

**Why we want you to know more about tonearms. And why others may not.**

**Dual United Audio Products, 120 So. Columbus Ave., Mt. Vernon N.Y. 10553**
Exclusive U.S. Distribution Agency for Dual

The curved tonearm may appear longer than the Dual tonearm, but both actually have the identical effective length and horizontal tracking angle.

---

**Active size of Dual tube (A) and typical curved tonearm (B).**
For the same effective length, straight Dual tonearm has lower mass and resonance, yet greater rigidity.

---

**Dual 1249. Single-play/multi-play. Belt-drive.**
Fully automatic start and stop, plus continuous repeat. Mode Selector parallels tonearm to record in single-play. 6% pitch control. Illuminated strobe, cue-control, viscous damped in both directions.

**Dual 510. Similar except semi-automatic.**
Leads the groove sensor. Tonearm lifts automatically at end of play and motor shuts off. Less than $200.

**Dual 502 Semi-automatic.**
Less sensor, strobe and pitch control. Less than $160.

Specifications (DIN B): Rumble, >66dB; Wow and flutter, &pm;0.05%
New Acts

Mr. Big: Photographic Smile.
Val Garay & John Punier, producers. Arista AL 4083. $6.98. Tape: 5301 4083, 8301 4083. $7.98.

This five-man British rock group should do for the FM radio-oriented what the label's Bay City Rollers did for the AM teeny-bopper set. Musical fare is well structured and varied, ranging from a Caribbean-flavored title cut to the multi-layered rocker Wonderful Creation. Influences from other U.K. rock groups—the Who among them—surface throughout, but not to the point where Big's identity suffers. Expect to hear a lot about this band in the future, especially leader Dicken.


Lead singer Maggie Kelly holds the spotlight throughout most of this Scottish group's debut. The overseas press has likened her to Linda Lewis and Minnie Riperton, but the view here is that her voice, though pleasant enough, doesn't pack the punch or range for comparison. Enjoyable listening throughout, but not really a must.


A Seals & Crofts sound-alike that seems a cinch to take best-record-of-the-year honors. For those into the sound, the arrangements, production quality, and vocal harmonies are generally good. But material tends to be candy-coated on the lyric side, and solo tries are not up to the standards of their mentors.

Crackin': Makings of a Dream.
Russ Titelman, producer. Warner Bros. BS 2989. $6.98. Tape: M5 2989, M8 2989. $7.97.

This tight and well-defined seven-piece group from San Francisco is as capable of funk as it is rock. Problem is, though, that they're as derivative as they come: a little bit of Stevie Wonder, a touch of Santana, a smack of Sly Stone, and so on. The right material could break them out the next time around. Let's hope. The talent is definitely there.


Ely's singing seems to have all the earmarks for a strong country music following, but it's going to take some polishing. He goes the outlaw route as successfully as he follows in the footsteps of a Marty Robbins. But the edges are a bit too rough, including material and backup band.

Kalyan. Tony Silvester, producer. MCA 2245. $6.98. Tape: MCA 2245, MCAT 2245. $7.98.

Salsa recently had its shot at the big time; now comes soca-defined as "soul calypso." As played by this fourteen-piece band from Trinidad, soca shows promise, especially when its calypso percussive elements are out front. Unfortunately, slick American r&b and disco arrangements clutter this first LP and undermine the music's natural vitality. This band can boogie, but next time let it be native style.

Ray Sawyer. Ron Halftine, producer. Capitol ST 11591. $6.98. Tape: 4XT 11591. BXT 11591. $7.98.

Ray Sawyer, eye-patched member of Dr. Hook, makes his first solo recording here. Country style. The results are disappointing. Singing predominantly love ballads, Sawyer comes across as a willowy reflection of the Dr. Hook performer who's at his best with meatier material. Both country-music fans and Hook followers should find this a turnoff.

Seawind. Harvey Mason, producer. CTI 5002. $6.98. Tape: CTI 5002. CT8 5002. $7.98.

A potpourri of jazz, rock, and r&b sounds, all cleanly played, mark this Hawaiian mainland group's debut. Production is excellent, as are the arrangements. No new ground is broken, but the old ruts are skillfully avoided. Support on Pauline Wilson's just-average vocals would be a welcome improvement on the next go round.


Sounding as zany as they look (jester-like suits and pointed hardhats), this seven-piece New Zealand band is a welcome musical goose. It'll probably take more than one listen, but the extra spin will be worth it. Their basic sound is camp rock, with lots of instrumental breaks spiced with horns and mandolins. Cuts like Late Last Night and Lovely Dovey should put Split Enz in the spotlight.
Five reasons you’ll want the Realistic® 2000 and 5000 places to buy it.

1. **Powerful electronics.** Realistic’s finest receiver will drive almost any speaker to “live” listening levels. 75 watts per channel, minimum RMS at 8 ohms from 20-20,000 Hz, with no more than 0.25% total harmonic distortion. Sensitive dual-gate MOSFET tuner with PLL circuitry. The phono preamp has differential circuitry for a high overload margin.

2. **Audiophile controls.** Dual-concentric bass and treble knobs. For the purist; each control has a tone flat position. Pushbutton loudness, MPX filter, FM muting and 20 dB attenuator.

3. **Flexibility.** With the capacity to control an elaborate system of up to 12 hi-fi components — you can add on to your heart’s content. Two-way tape dubbing. Dual calibrated power meters.

4. **Deluxe styling.** The controls have a solid, precise feel and they’re logically arranged on the brushed aluminum panel. Oiled walnut veneer end panels. It’s the kind of receiver people notice before you turn it on.

5. **Realistic price.** Realistic has a 23-year reputation for quality plus value. Made in our own factory, sold only by us. Come by your nearby Radio Shack and hear the deluxe receiver you only thought you couldn’t afford. Just 499.95.*

SOLD ONLY WHERE YOU SEE THE SIGN.

Radio Shack®

Ordinarily the random sequence of songs in a folio does not bother me, as long as each piece of music is acceptable on its own terms and playable.

In this case, however, the recording has a concept, as specified in a cleverly written foreword on the album sleeve (but omitted, unaccountably, from the folio). This is a bizarre bedtime story, and each of the eleven numbers is an episode in Alice's adventures in Underland, beginning with his "punishment for criminal acts and violence on stage," and ending with his release from the nightmare, a presumably chastened ghoul. The missing explanation and hap hazard placement of the songs are a gaffe of major proportion on the part of the Warner Bros. folio production team; it simply defeats the purpose of the album. One hopes that crazy Alice will forgive them.


This folio corresponds to a double-sided album by the now-defunct blues/rock Allmans. True, we've heard the songs before, on "Win, Lose, or Draw" and "Brothers and Sisters," but never with such intensity. These are live, on-location recordings. Do you purchase the matching folio, which promises that you, the home or pro musician, can re-create those fantastic instrumental bends, slides, and dips on your own axe? Regrettably, no. For in this case, what you hear is not what you get: Vital improvisatory performances are represented in print by the original transcriptions of the previously recorded material, with no allowances for maturity, rethinking, or musical growth. Listen to "Wipe the Windows," check it out. Nothing matches: not the structure, not the riffs, the guitar choruses, or the vocals. Only the titles are the same. The old, outdated material is simply dressed up with a shiny new Art Deco cover by Jim Evans and six pages of on-the-spot, relaxed photos of the band. And I'm cynical enough to believe it will work for Warner Bros.; the folio will sell as successfully as the LP. But it will do so only as an expensive souvenir book and not as an accurate musical representation of the album.


England Dan and John Ford Coley are
MOR minstrels in the Stairs/Croce and Loggins/Messina tradition. Piano–vocal transcriptions of their hit single, "I'd Really Love to See You Tonight" and the title song, "Armstrong:" "When the Night Is Old," are tidily packed into a folio that is highly pleasing in its functionality, exactness, and above all content. The finely crafted material deals with love in its many phases; it is universally appealing and should find special favor among cabaret singers in search of fresh audience-winning songs.


This folio is an update on some of the mellower rock trends of the mid-Seventies. Thirty-six of these fifty songs were published in 1971 or later and included are such welcome newcomers as Elton John's "Goodbye Yellow Brick Road," Eric Carmen's "All By Myself," the 1976 Grammy-winning "Love Will Keep Us Together," and Barry Manilow's "Try to Get the Feeling Again."

But, like a guilt-producing mother, Warner Bros. will not allow us to forget our obligation to the past. We are subjected to the likes of the Association's "Never My Love" (1967), the Beatles' "Michelle" and "Yesterday" (1965), and, incredibly, that tenacious bag of bones, "Blown in the Wind" (1962). One tries to repackage these threadbare standards in order to gain access to the newer Warner copyrights, but the general excellence of the folio cannot be denied; it's a good value.

Van McCoy: The Hustle and Other Great Disco Songs, Warner Bros. Publications, 22 songs. $5.95.

Are you ready for a Van McCoy retrospective? The Hustle King is represented here by twenty-two of his current compositions, most of which demand an exceptionally high degree of concentration from the home musician if the steady interplay of rhythms is to be maintained.

Considering that the piano is, at best, an inadequate medium for capturing the vibrancy of this dance form, the transcriptions are very good indeed: but still, it is only reasonable to assume that "with-it" hustler freaks would rather practice at their neighborhood disco than at the keyboard, so the rationale for this folio is beyond my comprehension. Hustle sing-along, anyone?

Carly Simon: Another Passenger, Warner Bros. Publications. 12 songs. $5.95.

For students of total confusion, this folio represents a breakthrough. I am well aware that de-chronizing Ms. Simon's richly overproduced albums was no easy task, but there is no necessity for so many eye–ear conflicts, unless the editor had a nervous breakdown mid-pencil.

From the first smoked-salmon-pink page to the last, we are bombarded with inconsistencies: missing D.S. signs in one song ("Footsteps Father"), cue-size rhythmic notation on some, but not all, measures of alternate verses ("Tutti Fruiti, In Times When My Head"), an important repeat omitted from the chorus of "Be With Me," melodic and/or chordal errors in hook sequences ("Riverboat Gambler, Have I Ever Loved You," "Life Is Like a Roller"), is it possible that the folio was not designed to coordinate with the recording? So, the keys should have been transposed across the board for singability. In any case, the lady is an artist and a money-maker (not always synonymous), and her printed material deserves the best possible editing. That's the way I've always heard it should be. Carly

Elise Breton

---

SONY FRONT-LOAD CASSETTE DECKS

FEATURE PRESENTATION:

Dolby Noise Reduction System virtually eliminates high frequency tape hiss. Signal/noise ratio zips up as much as 10 db at 5 kHz and over with Dolby in that spectrally impressive. There's a 25 μs de-emphasis switch and rear panel calibration controls for recording Dolby-Five broadcasts.

Ferrite and Ferrite Head lasts up to 200 times longer than standard permalloy. Provides wide flat frequency response. And—the high density of the ferrite and ferrite material and Sony precision craftsmanship of the head gap make possible a feature we call Symphonic Recording. Here, you can record a 4-channel source (Stereo or Five matrix) for playback through a comparable 4-channel deck-equipped sound system without phase shift. This means that all signals will be positioned in the same area of the 4-channel spectrum during playback as they were in the initial recording.

Front Load convenience allows you to stack with other components.

Solenoid Operated Transport Controls mean feather-light operation. Jam-proof feature lets you go directly from one mode to another—by-passing stop—without damaging either mechanism or tape. (Available on 204SD only.)

FEC Equalization when used with the new Sony Ferri-Chrome tape provides significantly improved dynamic range and signal/noise ratio, and optimum frequency response.

Level Measurement includes 2 VU meters plus a Peak Limiter. Together they eliminate sudden transient high level input signals that can cause distortion and tape saturation—without compromising dynamic range.

Mic/Line Mixing lets you blend signals from various sources for master quality recordings. (Available only on 204SD, 209SD.)

Sony front load cassette decks have the features you need for the recordings you want. Check them out at your SuperScope dealer soon. Hear in the Yellow Pages.

Brought to you by SuperScope

Listen to us.

---

April 1977 151


Save on Sacred Cows—Bose, Sae, Revox, Sansui, Kenwood, Marantz, Bic, Technics, Sony, JVC, Philips. Over 50 top brands. Write for quotes. SOUTHBOUND sound, P.O. Box 52508, Atlanta, Georgia 30335.

miscellaneous

Diamond needles and Stereo Cartridges at Discount prices for Shure, Uher, Empire, Grado and ADC. Send for free catalog. All merchandise brand new and factory sealed. LYLE CARTRIDGES, Dept. H, Box 69, Kensington Station, Brooklyn, New York 11218.


Congratulations! You are now reading one of High Fidelity's best read pages. Use it yourself when you want to sell equipment, or a service, or want to let the avid music listener know about anything. High Fidelity Classified 130 East 59th St., N.Y. 10022.

Searching? Write Discontinued Records, 216 North Rose, Burbank, California 91505.


Table tennis equipment—Tournament paddles, balls, accessories. Mail order catalog, 54c refundable. TTO, Box 32193, Warr Acres, Ok 73132.

new equipment for sale

Don't pay the high mail order prices. Thieves Warehouse of Tampa, 1531 South Dale Mabry, Tampa, Florida 33609.

Don't pay the high mail order prices. Thieves Warehouse of Mobile, 1170 Beltline Highway, Mobile, Alabama 36609.

Don't pay the high mail order prices. Thieves Warehouse of Pensacola, 313 Navy Boulevard, Pensacola, Florida 32507.

Don't pay the high mail order prices. Thieves Warehouse of Montgomery, 3366 Norman Bridge Road, Montgomery, Alabama 36105.

Don't pay the high mail order prices. Thieves Warehouse of Atlanta, 3164 Peachtree Road, N.E., Atlanta, Georgia 30303.

Don't pay the high mail order prices. Thieves Warehouse of Atlanta, 4186 Buford Highway, N.E., Atlanta, Georgia 30345.

WILMSLOW AUDIO

Expo Dealer. Bank Wilmslow Cheshire, England SK9 1 HF

AVAILABLE SEPARATELY. Domestic and exotic wood veneers available. For more information: Accurate Sound, 1213 "D" Street, Lincoln, Nebraska 68508 (402) 489-1216.

AUDIOPHILES WANTED! Put your knowledge to use, earn an excellent spare time income. We need dealers to sell name brand stereo equipment at substantially discounted prices in your area. No investment necessary. For information and application please write: ASCO, Dept. CR, 1201 East Main Street, Meriden, Conn. 06450. Call (203) 238-7797.

The Warehouse—Lowest Prices on Tape, cassettes, turntables, speakers, phono cartridges, turntable record changers, speakers, wood veneers, speakers, audio tapes. You can't buy it anywhere for less! Fast Service. The Warehouse: Dept. B, 807 North Main Street, Milltown, New Jersey 08650.

Audio Stereo Components and Sony TV's at rock bottom prices. Why pay up to 40% more? Ask Ayak Audio, 68-B Watertown Street, (Route 16), Watertown, Mass. 02172.

Professional Hi-Fi Home Study Course—Instructors include Len Feldman, Julian Hirsch, Larry Klein, and Larry Zide. Send $2.00 for full color Audio Primer and full information on joining Society Audio Consultants (SAC): 49 E. 34th Street, Dept. HF, N.Y. 10016.

Save 50% build your own speaker system. Write McGaw Radio Electronics, 1501 McCabe Street, Kansas City, Missouri 64108.

If music reproduction is what you are after, the Sonex Two speaker system deserves your attention. For the name of your dealer, write: Sonex, Box 5046, Berkeley, California 94705.

Don't pay the high mail order prices. Thieves Warehouse of Ft. Walton Beach, 602-D Beach Park, N. W. Ft. Walton Beach, Florida 32548.

Don't pay the high mail order prices. Thieves Warehouse of Mobile, 1170 Beltline Highway, Mobile, Alabama 36609.

Don't pay the high mail order prices. Thieves Warehouse of Montgomery, 3366 Norman Bridge Road, Montgomery, Alabama 36105.

Don't pay the high mail order prices. Thieves Warehouse of Pensacola, 313 Navy Boulevard, Pensacola, Florida 32507.

Don't pay the high mail order prices. Thieves Warehouse of Atlanta, 3164 Peachtree Road, N.E., Atlanta, Georgia 30303.

Don't pay the high mail order prices. Thieves Warehouse of Atlanta, 4186 Buford Highway, N.E., Atlanta, Georgia 30345.
Don't pay the high mail order prices. Thieves Warehouse of Atlanta, 1030-3 Cherokee Road, Smyrna, Georgia 30080.

Don't pay the high mail order prices. Thieves Warehouse of Tallahassee, 1119 Apa-lechee Parkway, Parkways Shopping Center, Tallahassee, Florida 32301.

Don't pay the high mail order prices. Thieves Warehouse of North Miami Beach, 1807 Wood Avenue, S.W., Atlanta, Georgia 30315.

Don't pay the high mail order prices. Thieves Warehouse of Pensacola, 2920 Main Street, Pensacola, Florida 32503.

Don't pay the high mail order prices. Thieves Warehouse of Clearwater, 1502 S.W. 13th Street, Clearwater, Florida 33755.

Don't pay the high mail order prices. Thieves Warehouse of Atlanta, 1030-3 2769 Lake-Chase Boulevard, Atlanta, Georgia 30314.

Don't pay the high mail order prices. Thieves Warehouse of West Palm Beach, 76 Washington Avenue, Duntont, New Jersey 07628.

Don't pay the high mail order prices. Thieves Warehouse of Fair Lawn, 34-09 Broadway, Fair Lawn, New Jersey 07410.

Don't pay the high mail order prices. Thieves Warehouse of Ridgewood, 25 Godwin Avenue, Ridgewood, New Jersey 07450.

Don't pay the high mail order prices. Thieves Warehouse of Boca Raton, 495 10th Street, Boca Raton, Florida 33432.

Don't pay the high mail order prices. Thieves Warehouse of Atlanta, 7 215 Copeland Road, Atlanta, Georgia 30342.

Don't pay the high mail order prices. Thieves Warehouse of Gainesville, 343 NW 13th Street, Gainesville, Florida 32601.

Don't pay the high mail order prices. Thieves Warehouse of Hollywood, 5719 Hollywood Boulevard, Hollywood, Florida 33021.

Don't pay the high mail order prices. Thieves Warehouse of Hollywood, 61 West 4th Street, Hollywood, Florida 33020.

Don't pay the high mail order prices. Thieves Warehouse of Tallahassee, 1119 Apa-lechee Parkway, Parkways Shopping Center, Tallahassee, Florida 32301.

Don't pay the high mail order prices. Thieves Warehouse of North Miami Beach, 1807 Wood Avenue, S.W., Atlanta, Georgia 30315.

Don't pay the high mail order prices. Thieves Warehouse of Tallahassee, 1119 Apa-lechee Parkway, Parkways Shopping Center, Tallahassee, Florida 32301.

Don't pay the high mail order prices. Thieves Warehouse of Tallahassee, 1119 Apa-lechee Parkway, Parkways Shopping Center, Tallahassee, Florida 32301.

Don't pay the high mail order prices. Thieves Warehouse of Tallahassee, 1119 Apa-lechee Parkway, Parkways Shopping Center, Tallahassee, Florida 32301.

Don't pay the high mail order prices. Thieves Warehouse of Tallahassee, 1119 Apa-lechee Parkway, Parkways Shopping Center, Tallahassee, Florida 32301.

Don't pay the high mail order prices. Thieves Warehouse of Tallahassee, 1119 Apa-lechee Parkway, Parkways Shopping Center, Tallahassee, Florida 32301.

Don't pay the high mail order prices. Thieves Warehouse of Tallahassee, 1119 Apa-lechee Parkway, Parkways Shopping Center, Tallahassee, Florida 32301.

Don't pay the high mail order prices. Thieves Warehouse of Tallahassee, 1119 Apa-lechee Parkway, Parkways Shopping Center, Tallahassee, Florida 32301.

Don't pay the high mail order prices. Thieves Warehouse of Tallahassee, 1119 Apa-lechee Parkway, Parkways Shopping Center, Tallahassee, Florida 32301.

Don't pay the high mail order prices. Thieves Warehouse of Tallahassee, 1119 Apa-lechee Parkway, Parkways Shopping Center, Tallahassee, Florida 32301.

Don't pay the high mail order prices. Thieves Warehouse of Tallahassee, 1119 Apa-lechee Parkway, Parkways Shopping Center, Tallahassee, Florida 32301.

Don't pay the high mail order prices. Thieves Warehouse of Tallahassee, 1119 Apa-lechee Parkway, Parkways Shopping Center, Tallahassee, Florida 32301.

Don't pay the high mail order prices. Thieves Warehouse of Tallahassee, 1119 Apa-lechee Parkway, Parkways Shopping Center, Tallahassee, Florida 32301.

Don't pay the high mail order prices. Thieves Warehouse of Tallahassee, 1119 Apa-lechee Parkway, Parkways Shopping Center, Tallahassee, Florida 32301.

Don't pay the high mail order prices. Thieves Warehouse of Tallahassee, 1119 Apa-lechee Parkway, Parkways Shopping Center, Tallahassee, Florida 32301.

Don't pay the high mail order prices. Thieves Warehouse of Tallahassee, 1119 Apa-lechee Parkway, Parkways Shopping Center, Tallahassee, Florida 32301.

Don't pay the high mail order prices. Thieves Warehouse of Tallahassee, 1119 Apa-lechee Parkway, Parkways Shopping Center, Tallahassee, Florida 32301.

Don't pay the high mail order prices. Thieves Warehouse of Tallahassee, 1119 Apa-lechee Parkway, Parkways Shopping Center, Tallahassee, Florida 32301.

Don't pay the high mail order prices. Thieves Warehouse of Tallahassee, 1119 Apa-lechee Parkway, Parkways Shopping Center, Tallahassee, Florida 32301.

Don't pay the high mail order prices. Thieves Warehouse of Tallahassee, 1119 Apa-lechee Parkway, Parkways Shopping Center, Tallahassee, Florida 32301.

Don't pay the high mail order prices. Thieves Warehouse of Tallahassee, 1119 Apa-lechee Parkway, Parkways Shopping Center, Tallahassee, Florida 32301.

Don't pay the high mail order prices. Thieves Warehouse of Tallahassee, 1119 Apa-lechee Parkway, Parkways Shopping Center, Tallahassee, Florida 32301.

Don't pay the high mail order prices. Thieves Warehouse of Tallahassee, 1119 Apa-lechee Parkway, Parkways Shopping Center, Tallahassee, Florida 32301.

Don't pay the high mail order prices. Thieves Warehouse of Tallahassee, 1119 Apa-lechee Parkway, Parkways Shopping Center, Tallahassee, Florida 32301.

Don't pay the high mail order prices. Thieves Warehouse of Tallahassee, 1119 Apa-lechee Parkway, Parkways Shopping Center, Tallahassee, Florida 32301.

Don't pay the high mail order prices. Thieves Warehouse of Tallahassee, 1119 Apa-lechee Parkway, Parkways Shopping Center, Tallahassee, Florida 32301.

Don't pay the high mail order prices. Thieves Warehouse of Tallahassee, 1119 Apa-lechee Parkway, Parkways Shopping Center, Tallahassee, Florida 32301.

Don't pay the high mail order prices. Thieves Warehouse of Tallahassee, 1119 Apa-lechee Parkway, Parkways Shopping Center, Tallahassee, Florida 32301.

Don't pay the high mail order prices. Thieves Warehouse of Tallahassee, 1119 Apa-lechee Parkway, Parkways Shopping Center, Tallahassee, Florida 32301.

Don't pay the high mail order prices. Thieves Warehouse of Tallahassee, 1119 Apa-lechee Parkway, Parkways Shopping Center, Tallahassee, Florida 32301.

Don't pay the high mail order prices. Thieves Warehouse of Tallahassee, 1119 Apa-lechee Parkway, Parkways Shopping Center, Tallahassee, Florida 32301.

Don't pay the high mail order prices. Thieves Warehouse of Tallahassee, 1119 Apa-lechee Parkway, Parkways Shopping Center, Tallahassee, Florida 32301.

Don't pay the high mail order prices. Thieves Warehouse of Tallahassee, 1119 Apa-lechee Parkway, Parkways Shopping Center, Tallahassee, Florida 32301.

Don't pay the high mail order prices. Thieves Warehouse of Tallahassee, 1119 Apa-lechee Parkway, Parkways Shopping Center, Tallahassee, Florida 32301.

Don't pay the high mail order prices. Thieves Warehouse of Tallahassee, 1119 Apa-lechee Parkway, Parkways Shopping Center, Tallahassee, Florida 32301.

Don't pay the high mail order prices. Thieves Warehouse of Tallahassee, 1119 Apa-lechee Parkway, Parkways Shopping Center, Tallahassee, Florida 32301.

Don't pay the high mail order prices. Thieves Warehouse of Tallahassee, 1119 Apa-lechee Parkway, Parkways Shopping Center, Tallahassee, Florida 32301.

Don't pay the high mail order prices. Thieves Warehouse of Tallahassee, 1119 Apa-lechee Parkway, Parkways Shopping Center, Tallahassee, Florida 32301.

Don't pay the high mail order prices. Thieves Warehouse of Tallahassee, 1119 Apa-lechee Parkway, Parkways Shopping Center, Tallahassee, Florida 32301.

Don't pay the high mail order prices. Thieves Warehouse of Tallahassee, 1119 Apa-lechee Parkway, Parkways Shopping Center, Tallahassee, Florida 32301.

Don't pay the high mail order prices. Thieves Warehouse of Tallahassee, 1119 Apa-lechee Parkway, Parkways Shopping Center, Tallahassee, Florida 32301.
with Yusuf Lateef's simple three- and four-note soprano sax figures completing the historic linkage. M. Jelly Roll Morton and Blind Blake's Dandy Daddy Was Done, meanwhile, comprise the original phat mass blues joke, with Redbone's lament salaciously all the way.

Vohbe's Sweetheart is weakened by its camp peculiarities—"Painted lips and painted eyes/Wearing a bird of paradise"—but mostly redeemed by Joe Wider's fine muted trumpet solo. And it's songs like Melancholy Baby that almost make you wonder if Redbone might be competing with Bryan Ferry in the effort to revive cornball ballads with a vibrating baritone. Come sweethearthime! Don't sit and pine etc. Add a nonsensical string arrangement reminiscent of the layered effects used by avant-garde experimental composers like Gavin Bryars and you have a truly peculiar piece of music.

Sheik of Araby, on the other hand, poses as being even more bizarre and is actually more relatable. Redbone's delivery is almost all scat and with his growls, groans, slobberings, gurgles, burbles, snarl of laughter, and assorted eructatory noises he brings to mind the phallic blues jive.

For no other artist working today better exemplifies the supreme contradictory vitality of American music. LESSER BANGS

SHOW ALBUMS—Rare. out-of-print LPs. 52-page catalog. 300 ROBBER BRIDE SHOW. 77" STEREO. 33 1/3 songs—Jerry Orbach, Virginia Vestoff. $3 55. Broadway-Hollywood Recordings, Georgetown, CT 06829.


JAZZ RECROUS EXCLUSIVELY CURRENT RARE out-of-print. FREE Lists—Dept. HF6, PO Box 129, Jamaica, NY 11435.

LIVE-RUCK CONCERTS also RARE and STANDARD OUT-OF-PRINT catalog of over 6500 albums. Free catalog. 10-SASE. Box 724-HF, Redmond, WA 98071.


RADIO RECORDS radio shows. jazz personalities. Rare catalog. $3 50. SASE. Box 260, Brooklyn, NY 11214.

Mr. Jells. Roll Morton and Saturday Night Live —none comprise the original cornball ballads with a sucking baritone. Come sweethearthime! Don't sit and pine etc. Add a nonsensical string arrangement reminiscent of the layered effects used by avant-garde experimental composers like Gavin Bryars and you have a truly peculiar piece of music.

SHOW ALBUMS—Rare. out-of-print LPs. 52-page catalog. 300 ROBBER BRIDE SHOW. 77" STEREO. 33 1/3 songs—Jerry Orbach, Virginia Vestoff. $3 55. Broadway-Hollywood Recordings, Georgetown, CT 06829.


JAZZ RECROUS EXCLUSIVELY CURRENT RARE out-of-print. FREE Lists—Dept. HF6, PO Box 129, Jamaica, NY 11435.

LIVE-RUCK CONCERTS also RARE and STANDARD OUT-OF-PRINT catalog of over 6500 albums. Free catalog. 10-SASE. Box 724-HF, Redmond, WA 98071.


RADIO RECORDS radio shows. jazz personalities. Rare catalog. $3 50. SASE. Box 260, Brooklyn, NY 11214.
Straight talk about direct drive

The DD75 is our first direct drive turntable. It reflects a lot of what we’ve learned in half a century of building quality turntables.

The heart of any direct drive turntable is the motor. Since it is in direct contact with the platter, it must be as steady—and as free from vibration—as a pacemaker. The performance of the motor is measured by these specifications: rumble, wow and flutter.

But without a lightweight tonearm, unrestrained by friction, the best motor can’t deliver high quality, high fidelity sound. After all, the only thing that moves the tonearm is the minuscule stylus tracing the record groove. If the tonearm is heavy, or drags, the sound will be distorted. The specifications which determine tone-arm performance—mass and friction—are as important as rumble, wow and flutter.

Direct drive turntables can be manual or automatic. The difference has a direct bearing on record safety. With a manual turntable, you risk scarring your records or damaging your stylus, particularly when lifting the arm off the record. That’s because the human hand can’t always be steady and accurate. The risk is minimized with a system that lifts the arm precisely, automatically.

Motor. Tonearm. Record protection. Convenience. These essentials directed the design of the new direct drive DD75.

The Garrard DD75 delivers rock-steady speed with a DC motor, governed by an electronic servo system. It is totally immune to fluctuations in household current. The specifications are impressive: rumble -70dB (Din B), wow and flutter 0.03%. The same electronic system provides variable speed control, ±3%, monitored by an easily-read, illuminated strobe.

Unlike the tonearm in most direct drive turntables, the slender arm of the DD75 is extremely low in mass—just 16 grams. It rides effortlessly on jewel bearings, with friction so low that it will track the finest cartridges at their minimum rated stylus pressure.

In addition to fully damped cueing, the DD75 automatically lifts its tonearm and shuts off the motor at the end of play. This is done non-mechanically by a reliable photo-electric circuit. You never have to leap across the room to stop playing the lead-out groove. You can even use this system in mid-record, by lightly touching the Stop button. Play can be resumed at the precise point where it was interrupted.

The appearance of the Garrard DD75 fully complements its performance. It is mounted in a base of genuine teak veneer, with shock-absorbent feet to insulate the turntable from external vibration. The tinted dust cover has special friction hinges: it stays where you raise it.

Garrard’s first direct drive turntable yields some very direct benefits. Not the least of which is the price: a straight and sensible figure—under $230.

For an illustrated, detailed folder on the DD75, please write: Garrard Division, Plessey Consumer Products, 100 Commercial Street, Plainview, N.Y. 11803.

Garrard
Turntable specialist for 50 years.
Marantz is just about the only component manufacturer around that's devoted to system interfacing.

Sound engineers and audiophiles were invited to evaluate Marantz professional components, including the 3800 Preamp, the 510M Power Amp and the 150 Tuner. The following comments were taken from that taped discussion.

The 3800 Preamp

"When you build a phono preamp, you never know what you're going to plug it into. But the Marantz 3800 can interface with the outside world. Whatever amplifier you hang on it won't affect the operation of the preamp one iota. The 3800 will drive any amp on the market—even the super amps."

"Let's say you use three Sony reel-to-reels with the nearest competitive preamp. You'd wipe out the bottom end. Not with the 3800. It'll actually drive a load as low as 1000 ohms at a reasonable level and maintain full frequency response."

"Until now you had to shell out over $1000 to accomplish that with a preamp. This unit goes for what... $599.95?"

"Then there's the fact that the 3800 is virtually the quietest preamp going. Not only in specifications, but in perceived noise. Eight-tenths of a microvolt specified."

"Another thing about systems planning—the 3800 has variable frequency turnover tone controls. Designed to complement both speakers and listeners. What that'll let you do is bring up a string bass and leave the viola alone."

"Or if you use the mic feature, like in a live recording, and you're playing your string guitar and you want that nice ring you hear in recordings. You just put the tone controls in the four kiloHertz position and run the treble control up and you've got it."

"It's just one of the most versatile preamps in the world. Not only does it include a full-process Dolby Noise Reduction System, but also the tone controls can be used for tape equalizing."

"Maybe you want to listen to something else while you're making tape copies. You just let one tape recorder talk to the other—one recorder is playing back and one is recording. And you can use the Dolby in that loop. Then you keep yourself entertained by listening to a regular FM or AM station at the same time. And the same preamp is available without Dolby for $100 less. That's the Marantz 3600."

The 510M Power Amp

"This is a locomotive when it comes to power. Delivers 256 watts minimum continuous power per channel at 8 ohms with no more than 0.1% total..."
harmonic distortion and a power band of 20 Hz to 20 kHz."

"The whole package is smaller. Heat dissipation is one reason why. That's where this baby really moves ahead... Marantz has implemented a new method of heat dissipation. It's based on turbulent air flow."

"They call it a staggered finger heat dissipator. It was originally developed for the computer industry where they really have heat problems. What it does is break up the air flow. It's aero-dynamically designed to eliminate stratification and create vortices."

"Efficiency can be up dramatically compared to a convection system. And you do it all in a smaller, lighter package."

"There's one competitive unit that weighs over 140 pounds. The 510M weighs 43."

"It's got gain controls—two of them. Meter range switches with the advantage of not being part of the limiting circuit. And peak/overload indicators that are really sensitive to the fluctuations of line voltage."

"The 150's 18-pole linear phase I.F. filters give you this excellent performance and long-term stability of alignment. It'll be right-on five years from now without alignment."

"I'd go so far as to say it exceeds the performance of the original Marantz 10B and the 10B was the ultimate tuner in my estimation."

"Gives performance so high in quality that if there's a problem with the signal you tend to question the source, not the tuner."

"Phase lock loop. Of course. Even with multipath and antenna problems shown on the oscilloscope, it sounds cleaner than virtually any tuner around."

"All this is accomplished through the use of the linear phase I.F. filter system—a system composed of three filter blocks of four poles and one block of six poles. Eighteen poles in all."

"Of course, we can't forget the five gang front end with dual gate MOSFET RF amplifier and mixer. Gives the best image and spurious rejection I know of, combined with the best available sensitivity."

The Marantz 3800 Preamp, 510M Power Amp and 150 Tuner are just part of the exciting Marantz component line. Prices start as low as $199.95. Each reflects the technical expertise and engineering excellence that has made Marantz the choice of professionals world-wide. Stop by your local dealer and see the exciting Marantz line. Or send for a free catalog.

Marantz. Ask an expert.

The 150 Tuner

"Biggest advantage to the Marantz 150 Tuner is the ease of tuning. You can go 60 to 80 kHz of detuning with little change in distortion or separation characteristics. Tuning's less critical because good performance is obtained over a wider segment of the pass band."

"The Model 150, in stereo, performs for almost all conditions with FM distortion under 0.2%. In mono it's around 0.1%. And this is right down to test equipment residuals. You'd have to spend a lot of money for a tuner to match that."

"Suggested list price. Actual selling price at dealer's discretion **TM Dolby Labs, Inc. ©1976 Marantz Co., Inc., a subsidiary of Superscope, Inc. 20525 Nordhoff St., Chatsworth, CA 91311. Prices and models subject to change without notice. Consult the Yellow Pages for your nearest Marantz dealer."

*TM Dolby Labs, Inc. ©1976 Marantz Co., Inc., a subsidiary of Superscope, Inc. 20525 Nordhoff St., Chatsworth, CA 91311. Prices and models subject to change without notice. Consult the Yellow Pages for your nearest Marantz dealer.
NO ONE PUTS A TURNTABLE ON TOP OF A SPEAKER, RIGHT?

We realize no sane person ever puts their turntable even close to their speakers, but we did it to prove a point.

Which is, it's now possible to build turntables that effectively deal with that unbearable "howl" known as mechanical and acoustic feedback.

The first of these new turntables are the Kenwood KD-3055 and KD-2055.

How did we do it?

With a special base made of an anti-resonance concrete so dense it absorbs vibrations from the speakers and the floor before they get to our new S-shaped tone arm.

To prove it, we did the unheard of.

We put the turntable right on the speaker box. The worst place for vibrations. Then we turned up the music.


To make a believer out of you, ask your Kenwood dealer for a demonstration comparing the Kenwoods with any other turntable in the store.

And once you've made the comparison based on performance, make a comparison based on price.

The semi-automatic KD-2055 is only $139.* The fully-automatic KD-3055, only $179.*

And that's amazing, right?