Preview

* a random-access cassette deck
* a record depopper
* a fluid-drive turntable
* a TV audio tuner
* and much more —

Next Season's Audio Equipment

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and Sullivan Photography

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HAZEL GREEN KY
4132
UNFORTUNATELY FOR THEM, THIS ONE SELLS FOR UNDER $300.*
The average $600 receiver sounds as good as the new Pioneer SX-650 until you start listening to prices.

If $600 is your kind of price, an SX-650 should qualify as your kind of receiver. Not only will it give you the kind of features and sound quality you'd expect for that kind of money; it'll also leave you with roughly half your receiver budget unexpectedly unspent.

But suppose your idea of a receiver price is somewhere under $300: The SX-650 is going to sound better to you than anything you thought you could afford. Because it has more power, a wider frequency range, less distortion, and far greater versatility than most other receivers in that category.

All this might sound a little extravagant; but an authentic breakthrough, an achievement like the SX-650, doesn't happen often. We've learned that when our promises seem to sound especially rich, the best thing to do is simply review the facts.

It's a fact that the SX-650 provides a continuous power output of 35 watts per channel, min. RMS into 8 ohms, from 20 to 20,000 Hz, with no more than 0.3% total harmonic distortion. It also delivers each instrument and voice at its intended level, balanced within $\pm 0.3\%$ of the RIAA curve.

The facts of its stereo separation, selectivity and sensitivity, however, must be experienced: numbers are impressive, but sometimes only hearing is believing.

You'll also be impressed by what you don't hear from the SX-650. You won't hear an assortment of background noises, or the thousand miscellaneous acoustic devils that live in the limbo between FM stations on lesser receivers.

On your next visit to a high fidelity dealer, listen to a Pioneer SX-650 with any reasonably accurate speakers. You'll find either its price or its performance amazing. Depending on which you hear first.

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For informational purposes only, the SX-650 is priced under $300. The actual resale price will be set by the individual Pioneer dealer at his option.

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CIRCLE 29 ON READER-SERVICE CARD
MOST $600 RECEIVERS SOUND AS GOOD AS THIS ONE.
According to TRUTONE RECORDS: "The Stanton calibrated 681 series is our total point of reference in our Disc Mastering Operation"

Carl Rowatti, Chief Engineer, adjusting the Program limiters prior to cutting a master lacquer.

Trutone can be described as a family enterprise... but what a family! Father Lou Rowatti is the President; Son Carl is Vice President and Chief Engineer; and daughter-in-law Adrienne handles the business end of the operation. They have great pride in their family, in their family's enterprise and in their products. That's why they insist on using the best — always.

Trutone Records in Northvale, New Jersey always uses the Calibrated Stanton Triple-E for A-B comparisons between tape and disc. They also use the Triple-E to check the frequency response of the cutter head (they'll record a 1,000 Hz tone and a 10 kHz tone twice a day to check the condition of the cutting stylus and the high end frequency response of the cutter head).

They make test cuts and play them back, using the Triple-E for reference, as high as 15 kHz all the way down to 30 Hz. Carl Rowatti says "We use the Stanton Calibrated 681 series as our total point of reference in our disc mastering operation. Everything in the studio is judged — and we think perfectly judged for quality—with this great cartridge". Professionals can't afford to take chances with quality. That's why they depend on Stanton in their operations.

Each Stanton 681 Triple-E is guaranteed to meet its specifications within exacting limits, and each one boasts the most meaningful warranty possible. An individually calibrated test result is packed with each unit.

Whether your usage involves recording, broadcasting, disco or home entertainment your choice should be the choice of the professionals...the Stanton 681 TRIPLE-E.

Write today for further information to: Stanton Magnetics, Terminal Drive, Plainview, New York 11803

CIRCLE 44 ON READER-SERVICE CARD

Lou Rowatti (The Prez) adjusting the high frequency limiter in his cutting room.
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BACKBEAT begins on page 103
If your cartridge is more than three years old, don’t replace your stylus!

Don’t get us wrong. There is nothing 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 Shibata stylus and our unique and effective Dual Magnet™ system beginning at just $75.50 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.


Audio-Technica
IF OUR TAPE SOUNDS BAD ON YOUR HI FI SYSTEM
YOU NEED A BETTER HI FI SYSTEM.

Maxell tapes are the best way to see just how good or bad your hi fi system is. Because Maxell tapes are made to stricter standards than many hi fi systems.

To begin with, only the highest quality materials go into Maxell tapes. The finest polyester, screws, hubs and pressure pads.

Every batch of magnetic oxide we use gets run through an electron microscope. If every particle isn't perfect, the sound you hear won't be either.

Since even a little speck of dust can make a difference in what you hear, no one gets into our plant until they've been washed, dressed in a special dust-free uniform, even vacuumed.

The fact that we're such fanatics about making Maxell tapes pays off for you in the enjoyment of superior sound. And in the Maxell guarantee.

Which says if you ever have a problem with any Maxell tape, send it back and we'll send you a new one. No questions asked.

Naturally, a product this good doesn't come cheap. In fact, a single reel of our best tape costs more than many inexpensive tape recorders.

So if you don't have a good hi fi system, save yourself some money and buy cheaper tapes.
COMING NEXT MONTH

June has traditionally been our Speaker Issue, and next month Ed Foster continues his series of basic articles with How to Judge Speakers. A companion piece, Speakers Without Boxes, explores—no, not raw speakers—the revolutionary flat-panel systems (including some new, if not revolutionary, electrostats). Our Test Reports will comprise five speakers, including some panels. A Chat with Lorin Maazel caught the conductor of the Cleveland Orchestra at the moment he first heard his new direct-to-disc recording, and we will present our reviewer's reaction as well as our editor's and Maazel's. Pop Producer Peter Asher, generally associated with Linda Ronstadt but producer James Taylor's next album as well, will be the subject of another interview. Gene Lees will discuss The Effect of Black Anger on Jazz.

The Incredible Talking Machine

Please accept my most enthusiastic congratulations on your superb issue [January] devoted to the "Salute to the Incredible Talking Machine." You've made an important contribution to the literature concerned with the first century of recording activity. I, for one, am thrilled beyond words to find such a marvelous treatment in one excellent volume.

Many thanks to you and everyone who contributed to the success and completeness of "Volume 27, Number 1." Bravo! Merrill F. Mulvyn Merrill Sound Recording Buffalo, N.Y.

I think you caught a little stardust in your eyes while compiling the impressive chronology, "100 Years of Sound Reproduction." That first lunar travelogue during Apollo 11's flight in July 1969 was not telecast in color. Your wording is inexact—no actual lunar landing ever has been telescop, at least not by earthing—and color transmissions were first sent by Apollo 12, four months later. We viewed Neil Armstrong's first steps, along with the lunar exploration, in exhilarating black and white.

Otherwise, a terrific issue!

Harold Vail
Hialeah Gardens, Fla.

As a devoted reader of your highly respected publication, I looked forward to your "Salute to the Incredible Talking Machine" with great interest. But I was surprised to see that you had left out one of America's most significant milestones—the marketing of the first tape recorder, the Brush Soundmirror. The Soundmirror was manufactured by Brush Development Company and marketed in 1947.

Robert A. Dearth
Meadow Brook Performing Arts Company, Bakersfield, Calif.

As a devoted reader of your highly respected publication, I looked forward to your "Salute to the Incredible Talking Machine" with great interest. But I was surprised to see that you had left out one of America's most significant milestones—the marketing of the first tape recorder, the Brush Soundmirror. The Soundmirror was manufactured by Brush Development Company and marketed in 1947.

Robert A. Dearth
Meadow Brook Performing Arts Company, Bakersfield, Calif.

We did include the fact that Brush Development was marketing a tape recorder under the Soundmirror brand name, but we erred in putting this fact under 1938 rather than 1937—ten years before Mr. Dearth's date.

In the January 1958 issue of HIGH FIDELITY, Martin Bookspan published an account of the first recordings of the Boston Symphony, Karl Muck conducting, in the Cambridge studios of the Victor Company on October 2, 1917. He stated that this was the beginning of the recording history of American symphony. Bookspan was immediately challenged by George A. Kuyper, then manager of the Chicago Symphony, who pointed out in a letter in the April 1958 issue that the Chicago Symphony, directed by Frederick Stock, had recorded in New York for the Columbia Company during a tour in 1916. These sessions, May 1-2 at Aeolian Hall, in fact represent the beginning.

That should have settled the matter, but apparently it did not. Your chronology of great dates in recording history omits both the Chicago sessions of 1916 and the Boston sessions of early October 1917 and gives the palm to Stokowski with the Philadelphia Orchestra on October 22, 1917. I find this very strange in an issue that, elsewhere, goes to such pains to get details right.

Robert C. Marsh
Chicago, III.

I was pleased to see the numerous articles about the phonograph and Thomas Edison in your magazine. I hope you plan to publish more concerning the history of the phonograph.

In particular, I think it would be interesting to your readers if certain questions raised by the writers of January's articles could be answered. For instance: Why did lateral recording methods win out over vertical ones? What were the results of Edison's experimentation with placement of artists before that 125-foot horn? Why did Edison's long-playing system fail? Finally, why did the disc become standard instead of the cylinder?

Ronald Dethlefson
Bakersfield, Calif.

We plan to publish more information concerning the history of the phonograph throughout 1977. Each of the questions Mr. Dethlefson raises requires an essay of considerable length, for which we had not the space in a single issue.

I enjoyed the issue in celebration of the centennial in New York recordings very much but would like to correct a mistaken impression readers might receive from the last para-
"...the Sansui tradition: solid, well thought out... right up there with the best... a fine value..."

High Fidelity Magazine, Dec. 1976

"SANSUI Model 707C, a stereo FM/AM receiver... under $523."

"Here is yet another receiver in what we have come to think of as the Sansui tradition: solid, well thought-out, neither barebones nor feature-enormous, delivering performance that is right up there with the best.

"Some 'extras' are immediately apparent when you lay an inquiring finger on the controls. The tone knobs are stepped... and include a MIDRANGE as well as the usual BASS and TREBLE... two phono inputs... mono mike input with its own mixing level control... There also is output-power metering...

"One special feature of the 7070 is its provision for outboard decoding of Dolby FM broadcasts...

"The tuner section is excellent — at least good in every respect and near-superalative in many...

"The amplifier section is rated at 18dBW (60 watts) per channel and actually will pump out 1/2 dB (10 watts) more before exceeding the distortion rating at any audio frequency. More impressive, harmonic distortion is far below Sansui's 0.3% rating at all tested power levels, exceeding 0.5% in few measurements... intermodulation too is low...

"... if your expectations are high, there's very little about the 7070 that we think might disappoint you. Feel the thrill of the parts; excellent, as we have come to expect of Sansui. The capable amplifier section has enough power for use with two pairs of speakers... The tuner section is among the best; the ancillary functions... are comprehensive and efficient. All in all, a fine value for the money."

In every power and price range, Sansui offers you a receiver in their tradition of excellence. Visit your nearest franchised Sansui dealer today and select the model that is right for you — from the new luxury Model 9090D to the no-frills Model 22, at less than $350.

*Approximate nationally advertised value. The actual retail price will be set by the franchised dealer at his option.

Trademark of Dolby Laboratories, Inc.

A whole new world of beautiful music.
It's time for everybody else to

From the very beginning, Yamaha receivers have set new laboratory standards. Our achievements in low distortion engineering, superb signal-to-noise, as well as high sensitivity and selectivity throughout the line have yet to be duplicated by any other manufacturer.

Now we've raised our standards even higher, beyond the laboratory and into the home. The result is the CR-2020: the pinnacle of a new line of advanced performance Yamaha receivers, rated to meet the more critical demands of real life.

**Real Life Rated™** While traditional laboratory measurements provide a good relative indication of receiver performance, they simply don't tell you how a receiver will sound in your living room in actual operation.

For example, in the lab, each receiver component is tested separately. At home, you hear them together as a single unit.

In the lab, distortion is measured at full-rated amplifier output. At home, you rarely, if ever, use the amplifier's full-rated power.

In the lab, power and distortion measurements are made with the volume control at maximum. At home, maximum volume would be painfully loud to listen to.

In the lab, noise and distortion are measured separately. At home, you hear them together.

Clearly a new standard is needed for evaluating overall receiver performance under real life conditions. Yamaha’s new standard is called **Noise-Distortion Clearance Range (NDCR)**. No other manufacturer specifies anything like it, because no other manufacturer can measure up to it.

We connect our test equipment to the phono input and speaker output terminals, so we can measure the performance of the entire receiver. We set the volume control at -20dB, a level you’re more likely to listen to than full volume. We measure noise and distortion together, the way you hear them.

On each of our new receivers, Yamaha's Noise-Distortion Clearance Range assures no more than a mere 0.1% combined noise and distortion from 20Hz to 20kHz at any power output from 1/10th watt to full-rated power.

**Component-by-Component Excellence.** By all conventional laboratory standards, as well as Yamaha's more stringent standards, the CR-2020 offers a new level of receiver performance.

At full-rated output, the 100 watt-per-channel power amplifier reduces total harmonic and intermodulation distortion to a new absolute low—a mere .05% from 20Hz to 20kHz into 8 ohms.

The CR-2020's exceptionally fine preamplifier is largely responsible for an incredible -95dB signal-to-noise ratio, from moving magnet phono input to speaker output.

The CR-2020's tuner makes FM reception up to 18kHz possible for the first time with unique negative feedback and pilot signal cancellation circuits (patents pending).

What's more, Yamaha's patented use of special ceramic and LC filters (developed for our revolutionary CT-7000 tuner) provide the highest selectivity and lowest distortion available.

**Built-In Moving Coil Head Amp.** Today, more and more people are discovering the superior performance of the moving coil phono cartridge. While
Start playing catch-up. Again.

Other receivers require an expensive preamplifier or step-up transformer, which can compromise sound quality, the CR-2020 already provides for it—the same solid-state device first developed for our superlative C-2 preamplifier.

**Input/Rec Output/Pre Out Selectors.** Here's extra convenience for tape recording enthusiasts. Record any source while listening to another. For example, copy a tape or disc at the same time you're enjoying an FM program. When you're in the mood to play recording engineer, you can use all the tone controls and filters to compensate for poor quality sound sources.

**Fast Rise, Slow Decay Power Meters.** The CR-2020's large, accurately calibrated power meters, with fast rise, slow decay characteristics, make accurate readings possible from 1/10th watt to 200 watt peaks without switching ranges.

**Multi-Function Signal Quality Meter.** When tuning, the right channel power meter automatically converts to a signal quality/strength meter. Needle oscillation indicates the degree of multipath present, while the meter calibrations indicate the strength of the signal. After tuning, the needle automatically reverts to power reading.

**Optimum Tuning System.** Yamaha takes the problem of inaccurate tuning out of human hands. After you manually locate the desired station, OTS automatically fine tunes it to the single point that gives maximum stereo separation and minimum distortion. A defeat switch is provided for special applications.

**Built-In Equalizer.** Think of the CR-2020's tone control circuitry as a small multi-band equalizer. Feedback bass and treble controls have selectable turnover frequencies. A midrange presence control adds more flexibility. Two-position low and high filters have 12dB/octave slopes. For the purist, a defeat switch removes the effect of the tone control circuitry entirely.

**The Best Is Yet To Come.** Now that you know about Real Life Rated, you'll want to hear a real life performance. At your Yamaha Audio Specialty Dealer, you'll find uncommon dedication to faithful music reproduction and genuine customer service.

If your Yamaha Audio Specialty Dealer is not listed in the local Yellow Pages, just drop us a line. Along with his name, you'll get complete details about this unprecedented receiver.

Yamaha Audio Division, P.O. Box 6600, Buena Park, CA 90622
Listening to a demonstration of music systems at a dealer is an excellent way to make a buying decision. But it can be misleading. Because what you hear in the dealer's acoustically designed sound room may not be what you hear at home.

The reason is simple. Sound quality is determined by various factors, including the size of a room and its acoustic elements. Drapes. Carpet. Furniture. Windows. Ceiling height. Walls. They all play a role in the sound you hear.

To help you get the best sound from your music system—wherever you listen to it—JVC has built into its top three receivers (S600, S400, S300) their exclusive SEA graphic equalizer system. This unique 5-zone control lets you create 371,293 different tone adjustments. As a result, you can custom tailor the sound to compensate for any room size and acoustic surfaces. The graphic equalizer also enables you to overcome deficiencies in old or poor recordings and the placement of speakers. Nobody else has this built-in feature. Nobody. And the only way any other make of receiver can match the sonic versatility of these three JVC models is by your adding to it (at an additional cost of $100 or more) a separate, outboard graphic equalizer.

When you consider that you get the built-in graphic equalizer plus JVC's many other outstanding features for the price of a conventional receiver in their price ranges, you can understand why the JVC professionals are rapidly becoming the #1 receiver to own.

JVC also offers the less sophisticated, moderately priced S200 and S100 receivers with precision, linear slide controls for bass, treble and volume. Regardless what you plan to spend for a receiver—think like a professional and get the best. Think JVC.

Visit your local JVC dealer, or call toll-free (outside N.Y.) 800-221-7502 for his name.

graph in your "Notes to Future Scholars" concerning the very first musical recordings.

The letters the young Josef Hofmann sent to Edison subsequent to his visit to the Edison Laboratories in 1887 might cause one to suspect the prodigy had neither met Edison nor recorded any cylinders on that occasion. But this confusion stems from the fact that Hofmann, only eleven years old at the time, was just not proficient in the English language. He did, in fact, meet Edison and recorded several cylinders, which Edison himself always claimed were the first ever made of music by a professional artist. Some of the story of this event appeared years later in the biography of the great inventor written by his secretary, and I have been able to verify this information in discussions with Edison's daughter and others familiar with the circumstances. I will of course include complete information when my biography of Hofmann is published.

The most important question concerning these recordings is whether or not any of them survive. International Piano Archives owns the actual recording machine and the autographed photo that Edison later sent to Berlin, where young Hofmann was studying in 1890. The cylinder machine bears a silver plate with the inscription: "This phonograph is presented to Joseph Hofmann by its inventor, Edison, January 1st, 1890."

No trace of cylinders Hofmann made either on that historic occasion or later in Berlin has ever turned up. However, we do know the titles of four of the selections played, and that some of them were duets with his father Casimir, and that each was announced by the boy himself. It is hard to conceive that at least some of these cylinders do not exist somewhere, and any reader with information about their whereabouts who gets in touch with me will be amply rewarded for his trouble.

Gregor Benko
International Piano Archives
215 West 91st St.
New York, N.Y. 10024

Mr. Benko's 1887 date is in conflict with the 1888 date given by other authorities, which itself is questioned in "Notes to Future Scholars." However, if anyone does come up with the cylinders recorded by Hofmann in Edison's studio in either year, our doubts will be set at rest.

Seeing the pictures of Edna White, the brilliant American trumpet player [January], reminds me that she was once married to the operatic baritone Torcom Bezazian, who recorded for Columbia, Victor, and Edison records. Mr. Bezazian became somewhat of a hero when he dashed through the flames and saved the operatic scores when fire destroyed the famous old French Opera House in New Orleans in 1919.

We all look forward to reading Edna White Chandler's new book Seven Hilarious Years in Vaudeville, scheduled for publication last February.

Keith Moyer
Everett, Wash.

Congratulations on Backbeat. My primary musical interest has always been in popular music, and I have continued my subscription to your magazine for five years mainly because of your excellent technical features. Indeed, I always found the minimal attention paid to popular music in Hi-Fi Fidelity grossly misinformed, over-simplified, and not infrequently condescending.

Backbeat, even on the basis of the first issue, seems to have changed all that. Not only were the initial articles excellent, but you have a fine group of knowledgeable writers listed. If things keep on at this level, my subscription will be renewed in the future without a second thought.

James L. Spates
Penn Yan, N.Y.

If you are aiming for the 15- to 25-year-old age group with your Backbeat section, that may be where the money lies. But I have read your magazine for twenty years and am interested primarily in music and in good equipment. Certainly one does not buy new equipment every month or even

---

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Because they're the same. So, if good sound is what you want to hear, feed a good program into a KLIPSCHORN®. You'll get it all back the way it was recorded. That's what the KLIPSCHORN® was designed to do. Three balanced horns, full use of room corners, and Klipsch testing. These are what give the KLIPSCHORN® its full range, honest flat response, and almost non-existent distortion.

**KLIPSCHORN® loudspeakers are made by a small group of dedicated engineers and craftsmen under personal supervision of Paul W. Klipsch. And they're sold by a small group of equally dedicated dealers. For the name of the one nearest you, send this coupon. He's a man whose judgement you can trust.**

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In Canada: Superior Electronics, Inc.

CIRCLE 25 ON READER-SERVICE CARD
Some Very Clear Statements From Reviews of the Advent Model 300 Stereo Receiver.

From Julian Hirsch's report in Stereo Review:

"We have always admired value engineering of the sort associated with products from Advent and a few other companies, in which a maximum of consumer-benefiting performance and features are provided for a minimum cost. It is relatively easy to make a 'super' product if price is no obstacle, but it requires some ingenuity to achieve a high level of performance at relatively low cost. This is exactly what Advent has done in the Model 300."

"The Advent's actual sensitivity (ability to receive weak stations without excessive noise and distortion) is as high as will ever be needed by the majority of users. The phono preamplifier is designed to be immune to interaction with phono-cartridge inductance, which affects the high-frequency response of many preamplifiers, and to have an effectively negligible noise level (inaudible under conditions of practical use)."
"All of which brings us to the question of how a 15-watt receiver sounds in this day of 100- to 200-watt amplifiers and receivers. In a word, great! Critical A-B tests in FM reception between the Advent Model 300 and a receiver with more than ten times its power and three times its price revealed absolutely no audible difference between the two at any listening level within the sound-output capability of the Model 300 (of course, the other receiver could play much louder). Even that limit is surprisingly loud despite our use of fairly inefficient acoustic-suspension speakers."

"The phono preamplifier sounded first-rate and as a demonstration of its low noise level, at maximum gain only a faint hiss could be heard within a foot or so of the speakers."

"We find it refreshing that this caliber of sound, combined with reasonable control flexibility, has been designed into a really small, light package, one whose installation doesn't call for the services of an Olympic weight lifter or special reinforced furniture."

**From an Equipment Report in High Fidelity:**

"If it were possible to devise a performance-to-appearence ratio for audio products, those of Advent Corporation would, in all likelihood, be strong contenders for top honors. It's not that they don't look good, but that there has been no attempt to make them into sculptures. The value (and thus the cost) has been put inside the box and is directed at the consumer's ears, not his eyes....This is the tradition that the 300 springs from and is meant to advance—and as far as we are concerned the advance has been made."

"Separation could almost be mistaken for that of a supertuner. In fact, when reasonably strong signals are available, it is amazing how closely the FM sound of the Advent resembles that of tuners—without a preamp and power amp—whose prices are close to twice as much."

"Perhaps the most striking feature of the 300 is its new phono preamp circuit...conventional measurements don't tell the whole story. The key question is: what will it sound like with a cartridge rather than a test generator connected, when it has to operate with a complex source impedance. Advent's engineers have studied this matter in depth and have designed the circuit for minimal impedance interaction. We found that an otherwise fine pickup that had seemed somewhat shrill was much smoother than we had thought possible—when it was connected to the Advent preamp. This tends to support the company's boast that the 300 will audibly surpass many far more expensive units."

"With moderately efficient speakers, we were able to generate substantial sound pressure levels before clipping set in. And the recovery from clipping, an important consideration in a small amp, is instantaneous and graceful."

"Advent's announced intention with the 300 is to make a receiver that, within its power capability, sounds as good as anything available at any price. While we cannot substantiate that claim—it is, after all, a partially subjective one—we cannot dismiss it as untenable either. And that, considering the price of the product, constitutes a remarkable accomplishment."

[As a postscript to this report, HIGH FIDELITY indicated that it was uprating the performance of a previously tested phono cartridge because its high-frequency performance when used with the Advent 300 was free of an edgy quality it had exhibited when connected to several more expensive preamps. This kind of difference is exactly the point of the 300's unique preamp design.]

If you would like more information on the Advent Model 300, including reprints of the full reviews excerpted for this ad, please send us the coupon.

Thank you.

Advent Corporation, 195 Albany Street, Cambridge, Massachusetts 02139.
Page dimensions: 584.6x786.2

Mr. Marcus replies: Messrs. Birchenough and Dana are only two of many who apparently neither read my editorial introducing BACKBEAT in February nor examined that and subsequent issues of HIGH FIDELITY very carefully. Nothing has been taken away—neither classical music nor audio coverage—by our adding BACKBEAT. In that February issue we had three times as much space devoted to classical record reviews as to popular record reviews, and in addition we ran nearly a dozen pages on composer Edgard Varése, his music, and the recordings thereof. "Squeezed out," indeed. Mr. Dana. "Rock/soul-oriented," indeed, Mr. Birchenough.

Many of our readers do not read our audio coverage; many others do not read our classical music coverage; now, we expect that many readers will not read BACKBEAT. But we will continue to strive to satisfy those whose interest lies in any of the areas we cover.

"Follow the same trend," Mr. Dana? What other American publication carries as many pages of classical record reviews as HIGH FIDELITY does? It does not bother me that today there is so much more of what I don’t care for on the FM airwaves than there was twenty years ago; there are so many more FM stations now. What bothers me is that there is so much less of what I do enjoy. I do not intend that HIGH FIDELITY go that route.

Maria Muller’s Birthdate

In reviewing the 1943 Bayreuth recording of Wagner’s Die Meistersinger [September 1978], I questioned the 1889 birthdate cited therein for soprano Maria Muller, and asked if any reader could supply further information. Several were kind enough to do so, citing various German reference works, nearly all in favor of the 1888 date given by Baker’s, Grove’s V (supplement), and the Kutsch-Riemens dictionary of singers.

The later date surely fits better with the facts of Muller’s career: debut, Linz, 1919; Met debut, 1925, regular member of the Berlin State Opera, 1926-45; last known recording, Act I of Die Walküre, on the 1965. A debut at age 30 and retirement at 61 seem less probable than a debut at 21 and retirement at 52.

Curiously, the most convincing evidence, called to my attention by John Freeman at Opera News, is a clear falsehood: In Olin Downs’s New York Times review of her Met debut, Muller’s age was given as 23—a plausible vanity in a singer just short of 27, but risky for one approaching 36!

David Hamilton
New York, N.Y.

CORRECTIONS

R. D. Darrell, one of our contributing editors, informs us that the pianist in the picture accompanying our article “Edison as Record Producer” [January] is not the Victor Young “remembered today for his film scores.” He is the Victor Young who was the musical director of Edison’s experimental labs from 1919-27 under the personal supervision of Edison himself. Ironically he did compose a considerable number of early film scores, none of which are widely remembered today. He also composed serious and light-symphonic piano and vocal music.

In our test report of Yeaple Corp.’s Stereo Pillow [March] we gave an incorrect address. The company is located at 1255 University Ave., Rochester, N.Y. 14607.
"I am the dancer, watch me move Wind to a feather, any heart that I choose."

Introducing the little Baron. Dedicated to the exquisite joy of music.

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Australia: An Embarrassment of Cultural Energy
by John Culshaw

ADELAIDE, AUSTRALIA—I have to admit at once that, after two long visits, I have fallen hopelessly in love with Australia. All that is wrong with it, from my point of view, is that it is too big and too far away. (It is virtually the size of the U.S. minus Alaska, yet its total population is only 13.5 million.)

The society that has developed from the early settlers and the 160,000 convicts who were transported there by the British in the nineteenth century is interestingly ambiguous. On the one hand, Australians are proud of their country; on the other, they mock themselves remorselessly. On my last trip I was given a book called The Ugly Australian, which is an anthology containing such gems as the remark of Henry Lawson in 1896, “It’s the best country to get out of that I was ever in,” and that of a Brisbane psychiatrist in 1970, “Australian men don’t like the dentist because of a deep-seated fear of castration.” The built-in self-doubt is even more explicit when we turn to cultural affairs.

My visits were instigated by the Australian Broadcasting Commission, which is a non-commercial network roughly equivalent to the BBC, and my brief was to advise on matters of sound production for both radio and television. The exercise culminated last year in the very first “simulcast” (FM stereo with live television) of a concert of Russian music from the studio in Adelaide. Now such a happening is nothing new in the U.S. or in Europe, but to be in charge of the first one in such an isolated country is, to put it mildly, frightening; and that it came about at all in view of what else was going on is a measure of Australian tenacity.

What else was going on concerned the fact that the ABC happens, logically enough, to run the permanent orchestras in Australia. (There are six of them—Sydney, Melbourne, Adelaide, Brisbane, Hobart, and Perth—plus a training orchestra.) All of a sudden the government in Canberra (which city has no orchestra) decided that national economies were necessary and that a reduction in the number of orchestras might make a start. You can imagine the flurry created within the orchestras, since at least three were already seriously undermanned. Petitions went flying about, and certain politicians made quite incredible speeches. What some of them said was roughly equivalent to what I might say on the subject of shearing sheep, about which I know nothing at all. One gentleman suggested that a
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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 83 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 60 kHz + 1 dB at main amp. Total Harmonic Distortion less than 0.1% at rated output. 0.2% at 1 watt output. Rated FM sensitivity 1.81 µV (stereo). Image rejection and alternate channel selectivity 70 dB. IM distortion 0.3% 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 60 kHz + 1 dB. Total Harmonic Distortion no more than 0.5% at rated output; 0.2% at 1 watt output. IM distortion 0.5% at rated power; 0.3% at 1 watt output. Usable sensitivity in FM 2.5 µV (mono). 5 µV (stereo). Image rejection 45 dB; alternate channel attenuation 60 dB. S/N 65 dB (mono), 63 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.

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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.
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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 capabilities of the T-9, it features a dual gate MOSFET/4 gang-variable capacitor front end and usable sensitivity 1.7 μV, 50 dB quieting sensitivity of 3 μV, 85 dB image rejection, 13 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 45 dB; at 100-10,000 Hz, separation is 35 dB.

As a result of the technology of tuning, the T-9 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 50 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 which corresponds to the 50% modulation of the FM signal and enabling the recording level of the tape deck to be accurately set, as well as 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 quality, featuring reserve power for optimum sound reproduction with the absolutely minimum distortion.

Because of this basis, any low distortion design requires amplifiers requiring exceptionally muscular and stable power supplies with more power than needed for normal operation, and a lot available when needed for peak demands. These needs are met through use of transformer-type power 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 cm thick cabinet which allows for the flow of cooling air.

A final Onkyo touch for touch, 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 cooper 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 45 watts per channel, minimum RMS into 8 ohms, both channels driven, from 20 Hz to 20 kHz with no more than 0.1% Total Harmonic Distortion.

Onkyo avoids the primary distortion found in solid state amplifiers with Class A push-pull driver stage different from direct coupled, pure complementary circuitry. The A-5 delivers exceptional frequency response all 2 Hz to 70 kHz ≤ 1 dB, with system square wave response showing less than 5% tilt at 50 Hz, S/N ratio is extraordinary at 115 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 transistor killer circuitry.

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-7 frequency response is 2 Hz to 80 kHz ≤ 0.01 dB with square wave response showing less than 5% tilt at 50 Hz. At no point does the A-7 exceed 0.1% Total Harmonic Distortion at rated power, and at 1 watt output, Total Harmonic Distortion is as low as 0.03%.

In the amplifier section the phono equalizers are based on Class A, differential push-pull circuitry with exceptionally low noise characteristics, e.g., the A-7 shows an impressive S/N ratio of 1/0 dB.

A number of special features are included, such as a subsonic filter and a high frequency filter as well as transient killer circuitry. Stepped tone controls are provided with two turnover frequency switches and tone control defeat. Phono overloads are exceptional at 250 mV RMS at 1 kHz, 0.1% Total Harmonic Distortion, and the RIAA Curve Deviation of ± 2 dB, 30 Hz to 15 kHz produces superb reproduction of your records.

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single orchestra permanently on tour would solve all the problems at a stroke. (It took me approximately two minutes, with the aid of my pocket calculator, to work out that such a venture would actually cost more than maintaining the present orchestras in their proper locations; indeed, the surplus was sufficient to bring the existing orchestras up to their necessary strength.) Then another sheep-shearing gentleman proposed that all the orchestral parts of opera should be tape-recorded once and for all and used in perpetuity.

Thus we face the paradox: Australia is a country that is positively embarrassed by its cultural energy—so embarrassed that it has erected a symbol in the form of the Sydney Opera House. You can argue that it was a daft project from the start, or that it is not being used for the purpose for which it was designed, or that it is difficult to reach and has too many steps and no car park. Yet when all the shouting has stopped, the fact remains that it is a building of astounding beauty that could not possibly stand anywhere else in the world except where it does. Having put it up, the Australians still don't know what to do with the wonder they commissioned. My prediction is that they will not have to worry much longer. The problem has been that of time and distance related to artists' availability, but at the moment of writing Concord is about to fly from London to Melbourne in 14½ hours, and since last December a modified 747 has been flying from San Francisco to Sydney nonstop. Australia is getting nearer to us in more ways than one.

Which brings me back to that simulcast from Adelaide. All sorts of things went wrong before the event. It was meant to be carried on the network but, for scheduling reasons, was not, so it was restricted—restricted—to South Australia. Studio lights blew up in the final rehearsal and showered the violas with glass, microphones failed, and until fairly late in the day television and radio personnel were neither eye to eye nor ear to ear. In other words, it was not much different from what goes on during similar events throughout the world, except that this was a first. But when it came to the moment of truth, which is the moment of transmission, everything went calmly and professionally.

It is no longer feasible to think of our friends from Down Under as immature, either artistically or technically. The advice given by Dame Nellie Melba to Dame Clara Butt many years ago (and of course quoted in The Ugly Australian) is simply no longer valid: "Just sing 'em muck!'
Some $5 blank cassettes have the nerve to tinker with Beethoven. We think it's outrageous.

Beethoven, 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.

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

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4. Jazz: Pop or Classical?

by Gene Lees

It has been said that popular music is music for the people, folk music is music by the people. This was perhaps true in the past, but with the emergence of “folk” music by Bob Dylan and other professional entertainers in the early 1960s and, more recently, of rock, the distinction was permanently obscured.

By definition, popular music should be simply that which is popular. But there are obscure songs by Rodgers and Hart, Sheldon Harnick, Johnny Mercer, and many others that have never been popular yet are called popular music. Conversely, after the film 2001: A Space Odyssey used part of Richard Strauss’s Also sprach Zarathustra in its underscore, the opening theme became extremely popular. Elvira Madigan gave Mozart his day in the pop-music sales charts, and Walter Carlos brought success to Bach with his “Switched-On” album. None of this music, however, is popular music as the term is generally understood.

Years ago, when composer/arranger Gil Evans wrote the famous “Sketches of Spain” album for trumpeter Miles Davis, he scored for jazz orchestra one movement of Rodrigo’s Concierto de Aranjuez. This, I told him, was causing confusion in some quarters: Was the album classical music or jazz? “That’s a merchantiser’s problem, not mine,” Evans replied. “I write popular music.”

Since the brilliance of Evans’ music has received minimal and only intermittent public recognition, the remark seems puzzling. What he meant, presumably, was that the intent of the music was popular. It was not intended as a sophisticated work accessible only, or at least chiefly, to those with the special cultural background to appreciate it. Thus its exclusion from the elevated category of classical music.

I will accept his viewpoint, although only tentatively. (Harold Arlen admitted to me once that he, Cole Porter, George Gershwin, and other great theater composers of the 1930s and ’40s were quite aware that what they were creating was art music.) And for the purposes of this discussion, I am including in the category of popular music all that which is not intentionally classical.

Thus jazz falls into this category, though it is a little uncomfortable there. It began as a folk music, evolved into a popular music, and finally became an art music—primarily instrumental—which like classical music is most thrilling to those who have a measure of knowledge of its nature, construction, and techniques. It borrows classical techniques and at times even sounds classical. (In fact some of its finest practitioners, such as Clare Fischer, reject their classification as jazz musicians.) But it is largely an improvised music—“spon-

taneous music,” to use Bill Evans’ term—rather than planned, composed music.

Furthermore, jazz has always used material from the popular repertory as a basis of improvisation. And many a jazz instrumental composition—such as Ralph Burns’s “Early Autumn,” Erroll Garner’s “Misty,” and even Thelonious Monk’s “Round About Midnight”—has, with the addition of lyrics, been turned into a popular song. Jazz has always had a close relationship with popular music, and indeed in the early 1940s big-band jazz was our popular music.

But there is a more compelling reason for the classification. Jazz musicians are forced by circumstance to make their living in popular music—playing in the studios on recording dates, for example—or on its fringes.

The contemporary classical composer does not, if he is a realist, expect to reach a large audience. He might wish that the American educational system would place as much emphasis on music as on literature and thus increase the size of and raise the standards of the musical public. He might even harbor a faint and secret dream that he will one day be as famous as Alice Cooper. But he knows that if he does his work honestly and in accord with his inner criteria, his audience will be small and to some extent specialized. He subsists on grants, fellowships, occasional commissions, and perhaps a teaching post. Pierre Boulez became widely famous not for his composing, but for his conducting. Looking with an unblended eye on the lot of the “serious” composer in America, Charles Ives did not even try to make a living from his music but earned his money as an insurance executive.

The jazz musician, on the other hand, must reach out to the audience; being largely excluded by the academic community and the artistic establishment (a condition that fortunately is changing at last), he must earn his living from the record-buying public.

Ray Brown, perhaps the greatest bassist in jazz today, produced a series of albums by Quincy Jones for A&M Records that became successively more successful commercially as they became poorer in musical value. “That,” Brown said as he threw a sales report on his desk, “is all these mothers [record company executives] are interested in.”

If a musician does not achieve sufficient popularity to generate what a record company considers reasonable sales, it will not record him. And if he is not recorded by a company of a size and power to give his records wide

High Fidelity Magazine
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A musician who begins to compromise his aesthetics in seeking the larger audience can do one of two things. He can remain aware that the music he is now making is not good while promising himself to make better music whenever circumstances permit, or, in order to eliminate this discomfiting contradiction in his artistic life, he can convince himself that this commercial music has real merit. If he does the former, his talent will usually survive, though not necessarily undamaged. If he does the latter, the talent may be more than damaged; it is frequently destroyed.

It is so commonplace for jazz composers to seek, sometimes desperately, to get into the business of writing jingles for television and radio commercials that one becomes desensitized to the fact that this is one of the tragedies of American music. It is a disgrace that some of this country's most gifted musicians must write thirty- and sixty-second snippets of music to assist the sale of deodorants, detergents, and automobiles in order to make a living.

A somewhat better alternative for the jazz composer is writing motion-picture scores, but even here the standards are falling steadily. One of the principal reasons for this is that film companies have corporate links to record companies, which in turn have ties to music publishing divisions. One of the largest of them, Warner Bros., has connections with a whole complex of labels, including Warner Bros., Reprise, Elektra, Asylum, Atlantic, and Atco.

So important is radio exposure of a song to publicizing a picture (the popularity of "Lara's Theme" is credited with saving Doctor Zhivago from failure) that the composer often works under the burden of having to write a "hit" song in his film score. Thus jazz composers such as Quincy Jones, Lalo Schifrin, Johnny Mandel, Benny Carter, J.J. Johnson, Benny Golson, Dave Grusin, and the late Oliver Nelson found that they had not escaped the pressures of the popular music business after all.

But it is precisely because it is part of the world of popular music that jazz provides such an immediate reflection of American society. This I will consider more closely in the next issue.
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That's the way it's been. But no more. We want the world to know that we make loudspeakers...probably the very best made anywhere. And the only way we know of convincing you is for you to go to your audio dealer and listen to a Frazier. If your dealer doesn't have Frazier, ask him to get Frazier. Or go somewhere else. Once you hear a Frazier, we're pretty sure you'll buy a Frazier. Frazier. The best kept secret in the audio industry. Until now.

The owner's manual for my Dual 1229Q turntable suggests that the vertical tracking force (VTF) applied to the phono cartridge be slightly less than the maximum specified by the cartridge manufacturer. I have noticed recently that many audio specialists suggest the opposite: that optimum VTF can best be achieved by setting the force closer to the minimum requirements of a cartridge. Which of these opinions is correct?—Joseph R. Stanton, New York, N.Y.

As far as we are concerned, neither is correct. We would suggest setting the VTF at the center point of the range recommended by the pickup manufacturer and increasing it slightly if optimum tracking is not achieved. If you have to exceed the maximum VTF, the cartridge is probably in the wrong arm. Generally, any VTF setting is a compromise between a reserve of tracking capability (for coping with warps, unusually heavy modulation, and the like) and pressure against the vinyl of the disc that might cause excessive wear. We note that some manufacturers have taken account of this by indicating a preferred VTF with limits, as for example, 1.5 grams, -0.5 to +1 gram.

Recently I came across an old issue of Popular Electronics (March 1973, page 16) stating that researchers at Memorex and other companies had found that the high frequency response of cassettes fell off progressively with each play. Cobalt-doped iron oxide tapes lost 8 dB at 15 kHz and 4½ dB at 10 kHz after 25 plays! Ordinary iron oxide and chromium dioxide tapes lost 1½-2½ dB at 15 kHz after 25 plays. They also indicated that, although the loss with iron oxide and chrome tapes tended to stabilize, the loss with the cobalt-doped tapes continued with each play.

Is this true of today's cassette tapes? Which popular premium cassette tapes are cobalt-doped? Does the same problem affect open-reel tapes?—Richard Zultner, Williamsburg, Va.

It is still true. The mechanical stresses involved in play (and fast winding) cause progressive erasure of cobalt-doped ferric tapes, open reel or cassette. These findings do not, however, apply to ferricobalt tapes like TDK SA and Maxell UDDL II, in which the cobalt ions are incorporated into the basic magnetic particle, causing the tapes to behave more or less the way standard ferrics and chrome do in this regard. We know of no current premium tapes that use the kind of doping to which you refer.

Recently I purchased a Technics SL-1500 turntable and a Shure V-15 Type III cartridge. A report on this combination appeared in your March 1976 issue. If the CBS Technology Center aimed to obtain optimum test results, I would like to know the VTF and antiskate knob settings chosen (which didn't appear in the report) and for what reasons.

Since it would be difficult for me to borrow a distortion analyzer, are there any test records that you would recommend to set the VTF and antiskate?—Joseph P. Campbell, Binghamton, N.Y.

According to the Technics engineers, the variation in antiskating bias for various types of styli is on the order of ±5%. Accordingly, they have designed their bias mechanism with a single scale that provides a value acceptable for all cartridges. The skating force developed by a cartridge depends, among other things, on the exact composition of the vinyl and the level of modulation, thus it is not constant even for successive sections of the same selection. Using a test record with or without a distortion analyzer will optimize your equipment for the test record and accomplish little else. Since antiskating bias is a ballpark matter at best, it would seem preferable to accept the settings arrived at by Technics rather than quibbling about the exact geographical center of the ball park. The March '76 report, incidentally, was on the turntable alone. The Shure pickup was used in testing it, but only with the standard tracking force recommended by Shure and the corresponding antiskating as recommended by Technics.

Because of some misinformation given in a mail-order catalog, I bought four Bose 501 speakers to go with my Sansui XR-7500A receiver, thinking that their impedance was 8 ohms. I have recently learned that the impedance is 4 ohms. How will this affect my receiver and speakers? Could I hook up two sets of four speakers to the receiver and run both sets at once? Can I run an 8-ohm set and a 4-ohm set from the A and B selectors without causing damage?—James H. Villazon, FPO, New York, N.Y.

Since the Sansui is rated at 4-ohm minimum impedance, the only parallel connections that are permissible are those in which both of the speakers connected to a single output are 8 ohms or more in impedance. Thus two sets of Bose 501s or a set of Bose 501s and a set of anything else can only be used singly. Again, the stereo mode is perfectly safe as long as these restrictions are met.

I own a BSR 520 that came with an ADC K7E. With antiskate properly adjusted, at nearly the end of every record I hear a very distorted high frequency spectrum on the left channel; the right isn't as bad. Should I buy a new stylus (about $10) or a whole new cartridge? Would a Shure M-91ED solve my problem?—Javier Camba, Houston, Tex.

Your antiskating mechanism is not necessarily properly adjusted. Assuming comparable levels of modulation in the two channels, the
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:

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

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

**The highest quality component:** 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.

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First, you play your favorite records, tapes or FM broadcasts through the expander section of our Model 128 to restore missing dynamics and reduce noise that's been robbing you of live performance realism. Then, you preserve the dynamics of this vibrantly enhanced program by copying through the 128 noise reduction section to eliminate tape hiss normally added by copying. Finally, you play back your taped copy through the decoder of your dbx 128 and hear music with more dynamic range and detail than you've ever heard before off any tape. Sound unbelievable? Well, it was until the dbx 128 came along. But now you can make dynamically enhanced copies that sound better than the originals, with no hiss build-up, on any open-reel, cartridge or cassette recorder.

To learn how, ask the dbxpert at your local dealer for a demonstration of the new dbx 128. For full product information and a list of demonstrating dbx 128 dealers, circle reader service number or contact:

dbx, Incorporated, 296 Newton Street
Waltham, Massachusetts 02154  •  (617) 899-8090

Dbx 128 tape copies sound better than your records.

First, you play your favorite records, tapes or FM broadcasts through the expander section of our Model 128 to restore missing dynamics and reduce noise that's been robbing you of live performance realism. Then, you preserve the dynamics of this vibrantly enhanced program by copying through the 128 noise reduction section to eliminate tape hiss normally added by copying. Finally, you play back your taped copy through the decoder of your dbx 128 and hear music with more dynamic range and detail than you've ever heard before off any tape. Sound unbelievable? Well, it was until the dbx 128 came along. But now you can make dynamically enhanced copies that sound better than the originals, with no hiss build-up, on any open-reel, cartridge or cassette recorder.

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distortion should be about equal. It is possible that you have set the antiskate too high and are reducing the effective tracking force on the left channel to too low a value. It is possible that your tracking force is too small altogether. There is nothing wrong with tracking a cartridge in the upper part of its force range. As you suggest, your stylus should be checked for wear. We have no way of knowing whether a new cartridge will help.

Does radiation from a color television affect records or prerecorded tapes? If so, how far away should they be stored? Also, since I understand that radiation from a color television is usually emitted backward or downward and perhaps in front of it, does it help to place the recordings to the sides of the set? I also store records and tapes on a wall in an adjacent room directly behind a color television set.—Morris Y. Mintz, Paramus, N.J. While the soft X rays emitted by some color television sets may be a health hazard, they have very little potential for affecting records or tapes. The more serious problem is magnetic fields emanating from the power transformer and other components of the TV chassis. To adequately protect recorded tapes, we suggest that you keep them at least 3 to 4 feet away from the television. Intervening walls are of no help unless they are made of materials like iron or steel.

A salesman recently told me that moving-coil cartridges are much superior to even the best moving-magnet types but that people don't buy them very much because they require a separate pre-preamp. Would you call this a fair statement? If so, are there any receivers or integrated amps with this pre-preamp built in? Will a good integrated amp, say McIntosh or Lux, offer any advantages over a good receiver, say Tandberg or Yamaha? I do not listen to FM very much and would gladly buy an integrated amplifier if such advantages do exist; otherwise I would like to have the tuner section of the receiver around for occasional use. Also, a recent brochure from Yamaha mentions the possibility of using its integrated amp in Class A mode in which power output seems to drop to about one-sixth. Is this a desirable feature?—Anil Trivedi, New York, N.Y.

The statement about moving-coil cartridges is not altogether correct. They have their advantages, but they tend to be considerably more expensive than cartridges of other types. Typically, their stylis are not replaceable except by the factory, and they require pre-preamps in most, but not all, cases. We have found that they are generally low in IM distortion and output impedance, the latter characteristic making them less prone to undesirable preamp interactions than other types. Several companies offer moving-coil phono inputs in various forms. Assuming comparable prices, the integrated amp is likely to perform better than the receiver, if only because the receiver manufacturer has to provide more at the same cost. We have heard (and seen) the Yamaha amp demonstrated in both Class A and B, and while Class A is excellent in this case, Class B is very nearly as good. Most of the improvement in distortion is at ultrasonic frequencies. This may reduce long-term listening fatigue, but we'd probably go for Class B and the extra power.
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LMS: The new Dynaco hallmark of its Laboratory Monitor Series - speakers with lasting musical satisfaction. The rock-solid beauty of one inch thick genuine walnut veneer cabinets (33% thicker than the others) enhance the sound as well as the decor. They complement the output of high compliance linear suspension woofers with massive magnet structures and oversize 4 layer voice coils for highly efficient transfer of maximum energy levels. Rigidly isolated 5 inch midrange drivers add maximum definition in the three larger models. The same aluminum voice coil ultra-dispersion dome tweeter used throughout is paired in the top two models for maximum energy capability.

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For descriptive literature write Dept. P-2, LABORATORY MONITOR SERIES by DYNACO, INC. Coles Road—Box 88, Blackwood, N.J. 08012 • 609/228-3200
A New Look at the Numbers

Concurrent with the introduction of its new receiver line, Yamaha has promulgated a new specification—or, rather, a new way of relating several conventional specifications. The noise/distortion clearance range (NDCR), as the new parameter is called, is applicable chiefly to receivers and integrated amps (it could be applied as well to preamp/power amp combinations) and defines performance with respect to the combined effects of noise and distortion from a phono input right through the unit to the loudspeaker terminals.

This is in contrast to the more usual practice of giving the noise and distortion specs separately for the various sections of a single piece of equipment, leaving the customer to interpret the data—if he can. To our way of thinking, it is a welcome move away from numbers games and toward disclosure of meaningful information.

To take a practical example, the CR-820 receiver reviewed in the test report section of this issue has a rated NDCR of -10 dBW (100 milliwatts) to 17 dBW (50 watts) for a combined noise and distortion of 0.1% (-60 dB) with an 8-ohm load, using a 1-kHz sine-wave test signal with the volume control set at -20 dB. Thus, if the volume control is set for a normal listening level, as specified, the test signal at the output is at least 60 dB above all noise and distortion if its power level lies between 100 milliwatts and 50 watts—a 27-dB range, as the dBW conversion demonstrates. (Our standard tests do not go to power levels low enough to confirm this claim for the CR-820, but as far as we know, none of our measured data contradict it. In addition, Yamaha uses A-weighted noise measurements, and we do not.)

Anyone familiar with the “quieting” spec for FM tuners will see that the NDCR, insofar as it attempts to combine the effects of noise and distortion, is similar. It is not surprising, therefore, that it shares some of the same virtues and vices. We have already examined some of the virtues; the principal vice is that noise and distortion are not equally annoying to a listener. Given the choice of hearing music with noise at -40 dB and distortion at -60 or vice versa, we would almost certainly prefer the latter, since distortion, unless gross, is far more easily masked by a signal than is noise.

In penalizing distortion as severely as noise, the NDCR clearly reflects the philosophy of a company committed to extremely low distortion in its electronics, something that in itself can hardly be criticized. What is problematic, however, is that some competing products could look much worse when judged by this standard than they in fact sound.

We commend Yamaha for taking this step, but we feel constrained to point out that it is only a first step. More psychoacoustic research is needed if adequate weightings of noise and distortion are to be formulated. When a high fidelity manufacturer can offer to his prospective customer not just a great signal-to-noise ratio or vanishingly low distortion, but a clearly understandable promise of a certain degree of freedom from audible encumbrance to his music, an important milestone will have been reached.

A New Disc “Depopper”

Among the new products that we saw at the Winter Consumer Electronics Show, one struck us as highly unusual and of particular interest. That was the SAE 5000 Impulse Noise Reduction System, a device designed primarily to remove the clicks and pops that so often plague phonograph records—even new ones. Shortly before press time, we got our hands on one of these units for a quick trial and were so impressed with its performance that we could not restrain our impulse to tell our readers something about it.

In our admittedly limited experience, the SAE 5000 does a beautiful job of removing noise impulses from discs that are in otherwise reasonably good condition. Using the system in this way, you almost forget that it is connected, for the remnants of the disturbances are small enough to pass virtually unnoticed. When the unit acts repeatedly in a short period of time, the result is less successful and the “patches” become collectively audible. Actually, an analogy between this noise-suppression system and “invisible mending” is not really farfetched: If the garment looks like Swiss cheese to begin with, some of the repairs are bound to show. But over-all, the SAE 5000 has addressed itself with remarkable success to a difficult problem for the surprisingly low retail price of $200. We’ll have more details about the device in our July article on noise reduction.

Shilkret Receives ASCAP Kudos

Nathaniel Shilkret, a composer and conductor remembered by many as a pioneer recording-studio conductor, was awarded a plaque by ASCAP (American Society of Composers, Authors, and Publishers) on the fiftieth anniversary of his election to the society, January 27, 1927. Shilkret, who was born on December 25, 1895, was a child prodigy on the clarinet, and his association with orchestras started at the age of six when he began touring. By the end of adolescence he had played with the New York Philharmonic, the orchestra of the Metropolitan Opera, the New York Symphony, and the Sousa and Goldman symphonic bands. By the age of twenty-one, he was musical director for the Victor Talking Machine Company, and he directed many national broadcasts before moving to Hollywood in 1935 to devote his attention to motion-picture scores. [A reissue, on Victrola AVM 1-1740, of the 1929 performance of Gershwin’s American in Paris in which he conducted the RCA Victor Symphony Orchestra was reviewed in our December 1976 issue.] In announcing the award, ASCAP president Stanley Adams spoke of Shilkret’s “lasting contributions to American music.”
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The Technical Sound Industries, Inc. Speaker Warranty

Technical Sound Industries, Inc. warranties its products to be free of defects in materials and workmanship unconditionally for a period of five years from the date of purchase. The only exception to this warranty is that the product be used under normal operating conditions and that the warranty is void if the product is abused. The cabinet finish is under warranty for defects in materials and workmanship. The owner may also bring back his speakers to any Technical Sound Industries, Inc. Dealer Speaker Clinic. It will be repaired to specifications at no charge to the customer, for the life of the speaker. This warranty also applies to any owner of record and is fully transferrable within the five year period.

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A superb belt-drive manual. Eliminating the complexity of a changer cuts cost and noise, and lets Realistic concentrate on getting maximum music and life from your 33⅓ and 45 RPM discs. The S-shape tone arm tracks accurately down to ¾ gram. Wow and flutter: less than 0.1%. Rumble: better than −60 dB (DIN B).

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Realistic/Miracord-42
Fully automatic. Umbrella-spindle cartridge, simulated walnut finish. 149.95*

Realistic LAB-50
Fully automatic, belt-drive. Cartridge, walnut grained vinyl veneer base. 99.95*
HiFi-Crostic No. 24 (Gilbert & Sullivan)

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. “Comp.” means compound, or hyphenated word.

Transfer each letter to the square in the diagram that bears the corresponding number. After only a few correct guesses you should begin to see words and phrases emerging in the diagram, which when filled in will contain a quotation related to music, recordings, or audio.

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

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

The answer to HiFi-Crostic No. 24 will appear in next month’s issue of High Fidelity.

Solution to last month’s HiFi-Crostic appears on page 6.
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 float free of its magnets and coils. 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 tighter 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 we think you'll agree that, for the money, you can't do better than Empire.

Empire Scientific Corp., Garden City, New York 11530

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<td>CIRCLE 13 ON READER-SERVICE CARD</td>
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A CONSUMER’S GUIDE

A NEW EQUIPMENT REPORT

Yamaha CR-820: Mr. Clean in Sound and Style


Comment: Stereo components are like butlers: Some are efficient, some have class, some perform their duties at minimum cost, some continue to work longer than others; but few seem to have a great deal of personality. This receiver—like other Yamaha products we have tested—has class, is efficient, and has a very distinct personality as well: refined, thoughtful, and deft. Of these qualities, thoughtfulness is the key to the others. As you use the controls you seem to be in touch with their designer; you sense the intelligence and creativity that has gone into the product to make it unique.

The touch tuning—in which a station-locking circuit is defeated whenever you touch the tuning knob but locks on once again as soon as you release it—goes back to the first Yamaha components we tested and not only exemplifies Yamaha design, but has been imitated by other manufacturers. The CR-820’s tape-recorder switching probably will be imitated as well. Not only does it allow for dubbing (unmonitored) in either direction between two decks while you’re listening to another source—a feature offered by...
several manufacturers—but you can actually tape from tuner, phono, or aux while you listen to another source. You can, for example, enjoy an FM program while involved in a disc-dubbing project. (Since the phono inputs use some of the same circuitry, both cannot be used at once; similarly, the tuner is limited to FM or AM.)

The loudness control on this receiver is the best we have ever seen. Using the two knob approach (separate VOLUME and LOUDNESS) that seems to be making a comeback, it can be tailored to such variables as speaker efficiency, room size, and listening-level preferences, which the usual VOLUME/LOUDNESS switch can’t. And the knob calibrations make their use uniquely unequivocal: The VOLUME is numbered clockwise from 0 to 10; the LOUDNESS runs counter-clockwise from 0 (FLAT) to 10. For straight volume without compensation, you leave the LOUDNESS at FLAT. To include compensation for lowered playback levels, you first set the VOLUME for maximum normal playback, then reduce the level at the LOUDNESS instead. When this knob is turned half way (to 5), the midrange is reduced by about 5 dB, the deep bass and extreme treble by slightly less; by the time it is turned all the way to 10, the midrange and lower treble are reduced by almost 20 dB, while the deep bass has been cut by only about 6 dB and the extreme treble by about 12 to 15 dB. In other words, this control offers a range of some 20 dB in basic playback level, with increasing compensation for aural sensitivity loss as it is turned down.

Even the tone controls are unconventional. Yamaha has three, which is not uncommon, but the center one—marked PRESENCE—is not a conventional midrange control. It supplies up to 6½ dB of boost or cut in a relatively narrow range around 3 kHz (the so-called presence range that affects the apparent up-closeness of the sound) and has negligible effect below 1 kHz and above 10 kHz. Whether this will prove more or less useful than a real midrange control depends, we think, on just what you want to do with it. Moreover, the filter turnover frequencies strike us as well chosen and the slopes steep enough to do the job—which they are not on many receivers.

In the tuner section, the signal strength meter also shows multipath—by fluctuating once you are tuned to an FM station—and is calibrated in Q (for quality) percentages, with the full-scale 100 representing an incoming signal capable of delivering the full quality of which the tuner is capable. The FM muting switch not only defeats the muting switch, it normally controls as well chosen and the slopes steep enough to do the job—which they are not on many receivers.

Such details would be no more than gimmicks if a receiver did not offer better than average performance for its price class. And that it does by a substantial margin. Yamaha has placed a great deal of emphasis on listening quality, for example, keeping its products equally free of noise and distortion and specifying performance through the entire receiver, rather than through each subassembly individually, which might make performance look better than it is. (See “News and Views.”) Presumably as a result, there are no significant qualifiers to be added when we praise the sound.

The amplifier section makes its rated power—17 dBW (50 watts) per channel—without coming close to rated distortion, though the THD rating (0.05%) is unusually stringent. (Yamaha works to this figure throughout its receiver line, even for the least powerful models.) IM and THD also are specified as 0.02% at 25 watts (14 dBW); these too are met easily, though IM below 0 dBW (1 watt) quickly approaches 0.1%—still very good, of course.

The tuner section uses phase cancellation (as opposed to conventional low-pass filtering) to suppress the 19-kHz pilot in the output. This certainly explains the exceptionally flat FM frequency response. Though our graphs stop at 15 kHz (the highest frequency for which broadcasters must document performance), the mono response is down only 3 dB at 20 kHz in the CBS tests, while stereo response stays flat within a fraction of a dB to 17 or 18 kHz. The cancellation technique also presumably explains the relatively high 10-kHz distortion figure, particularly in so audibly clean a tuner: Some extraneous products (largely super-

Yamaha CR-820 Receiver Additional Data

<table>
<thead>
<tr>
<th>Tuner Section</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Capture ratio</td>
<td>¾ dB</td>
</tr>
<tr>
<td>Alternate-channel selectivity</td>
<td>78 dB</td>
</tr>
<tr>
<td>S/N ratio</td>
<td>71 dB</td>
</tr>
<tr>
<td>THD</td>
<td>Mono L ch R ch</td>
</tr>
<tr>
<td>80 Hz</td>
<td>0.10% 0.11% 0.11%</td>
</tr>
<tr>
<td>1 kHz</td>
<td>0.095% 0.11% 0.11%</td>
</tr>
<tr>
<td>10 kHz</td>
<td>0.18% 8.2% 8.2%</td>
</tr>
<tr>
<td>IM distortion</td>
<td>0.049%</td>
</tr>
<tr>
<td>19-kHz pilot</td>
<td>-53 dB</td>
</tr>
<tr>
<td>38-kHz subcarrier</td>
<td>-63 dB</td>
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</table>

<table>
<thead>
<tr>
<th>Frequency response</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>mono L ch</td>
<td>+¼, -¾ dB, 20 Hz to 15 kHz</td>
</tr>
<tr>
<td>R ch</td>
<td>±¼ dB, 20 Hz to 15 kHz</td>
</tr>
<tr>
<td>Channel separation</td>
<td>&gt;40 dB, 160 Hz to 3.3 kHz</td>
</tr>
<tr>
<td></td>
<td>&gt;30 dB, 22 Hz to 9 kHz</td>
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<table>
<thead>
<tr>
<th>Amplifier Section</th>
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</thead>
<tbody>
<tr>
<td>Power output at clipping (channels driven simultaneously)</td>
<td></td>
</tr>
<tr>
<td>L ch</td>
<td>17½ dBW (58 watts) for 0.47% THD</td>
</tr>
<tr>
<td>R ch</td>
<td>17½ dBW (57 watts) for 0.22% THD</td>
</tr>
<tr>
<td>Frequency response</td>
<td></td>
</tr>
<tr>
<td>+0, -¾ dB, 20 Hz to 50 kHz</td>
<td></td>
</tr>
<tr>
<td>+0, -3 dB, 10 Hz to beyond 100 kHz</td>
<td></td>
</tr>
<tr>
<td>RIAA equalization</td>
<td>+¼, -½ dB, 20 Hz to 20 kHz</td>
</tr>
<tr>
<td>Input characteristics (for rated output at full gain)</td>
<td></td>
</tr>
<tr>
<td>Sensitivity</td>
<td>Noise S/N ratio</td>
</tr>
<tr>
<td>phono 1, 2</td>
<td>2.15 mV -56 dBW 73 dB</td>
</tr>
<tr>
<td>aux</td>
<td>110 mV -75 dBW 92 dB</td>
</tr>
<tr>
<td>tape 1, 2</td>
<td>110 mV -75 dBW 92 dB</td>
</tr>
<tr>
<td>Phono overload (clipping point)</td>
<td>150 mV at 1 kHz</td>
</tr>
<tr>
<td>Damping factor at 1 kHz</td>
<td>48</td>
</tr>
<tr>
<td>High filter</td>
<td>-3 dB at 10 kHz; 12 dB/oc.</td>
</tr>
<tr>
<td>Low filter</td>
<td>-3 dB at 31 Hz; 12 dB/oc.</td>
</tr>
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</table>
sonic in such a test) that filtering would reduce are passed by the cancellation technique. We would only reiterate that the 10-kHz distortion figures, unlike those measured for lower frequencies, do not relate directly to audible quality and have occasionally been considerably higher even in very fine receivers.

And make no mistake, this is a superb receiver in the medium power range with performance that is consistently above average for this class and with an array of features that reflect in their synergism exceptionally careful thought on the part of the designer. When we were testing it, Yamaha had not yet determined the CR-820's price. On the basis of its performance, we thought it would be a fine example of a receiver in the $600 class. At $440, it's a steal.

**Square-wave response**

<table>
<thead>
<tr>
<th>Frequency (Hz)</th>
<th>Input in Microvolts</th>
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<tbody>
<tr>
<td>50</td>
<td>0.55</td>
</tr>
<tr>
<td>100</td>
<td>1.7</td>
</tr>
<tr>
<td>500</td>
<td>17</td>
</tr>
<tr>
<td>1,700</td>
<td>55</td>
</tr>
<tr>
<td>5,500</td>
<td>170</td>
</tr>
<tr>
<td>17,000</td>
<td>550</td>
</tr>
<tr>
<td>55,000</td>
<td>1,700</td>
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**FM Sensitivity & Quieting Characteristics**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mono Noise &amp; Distortion</td>
<td>-50 dB for 104 dBf</td>
</tr>
<tr>
<td>Mono S/N Ratio</td>
<td>64 dB</td>
</tr>
</tbody>
</table>

**Stereo Threshold**

-36 dBf (1.5μV) at 90 MHz
-10 dBf (1.5μV) at 98 MHz
-11 dBf (1.5μV) at 106 MHz

**Intermodulation Curves**

- 8-ohm load: < 0.036%, 0 dBW (1 watt) to 17 dBW (104 watts)
- 4-ohm load: < 0.06%, 4 dBW (0.4 watts) to 11 dBW (127 watts)
- 16-ohm load: < 0.038%, -4 dBW (0.4 watts) to 18 dBW (65 watts)

**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.

<table>
<thead>
<tr>
<th>Watts (dBW)</th>
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<tbody>
<tr>
<td>1.00</td>
<td>0.00</td>
</tr>
<tr>
<td>1.25</td>
<td>1.00</td>
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<tr>
<td>1.6</td>
<td>1.25</td>
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<tr>
<td>2.0</td>
<td>1.6</td>
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<tr>
<td>2.5</td>
<td>2.0</td>
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<tr>
<td>3.2</td>
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<td>4.0</td>
</tr>
<tr>
<td>6.3</td>
<td>5.0</td>
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<tr>
<td>8.0</td>
<td>6.3</td>
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**Watts dBW**

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**Watts (Watts)**

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<td>8.0</td>
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A Rock-Solid Turntable from Kenwood

The Equipment: Kenwood Model KD-550, a direct-drive two-speed (33 and 45) manual turntable ensemble, with arm, base, and dust cover. Dimensions: 19¾ by 15 inches (base); 6½ inches high with cover closed, 18 inches with cover fully open. Price: $250; without arm, as the KD-500, $200. Warranty: “limited,” two years parts and labor. Manufacturer: Trio Electronics, Japan; U.S. distributor: Kenwood Electronics, Inc., 15777 S. Broadway, Gardena, Calif. 90248.

Comment: Kenwood introduced this model, with its resin concrete base (actually a dense and deep baseplate formed of a conglomerate that includes limestone particles), late last year. Native skepticism raised our eyebrow when we saw the press handout; but when we sat down to play records on this turntable, all reservations vanished. The “antiresonance” base really does seem to make the ensemble markedly less subject to some kinds of vibration ills than any other turntable we’ve investigated. And by the time we looked up from our experiments and decided to give it the full CBS lab test, there already were generally similar models being announced by other U.S. representatives of Japanese manufacturing/marketing companies. The idea seems to be catching on fast.

The KD-550 is handsome and functional. Its dust cover is friction-hinged so that it stays open at any reasonable angle. The speed controls, including the strobe, are grouped neatly on the left, all other controls on the right. The arm is typical of those we have been seeing from Japan in recent years: From the controls near the pivot to the “standard” plug-in shell, all parts have fine detailing and finish. Some pickups come premounted in compatible shells, incidentally; Audio-Technica has begun marketing some of its models this way here, while several other manufacturers do likewise in Japan. Considering the rapid growth in popularity on the American market over the last two or three years of Japanese manual and semiautomatic turntables with this sort of arm, more pickup manufacturers may cater to its plug-in shell in the future.

The vertical tracking force is set by revolving the counterweight, which is calibrated in half-gram steps for a total of 4 grams in one revolution. Lab measurements show the calibrations to be 0.1 gram low up to 1 gram and 0.2 gram low to 3.5 grams—which is well within reasonable tolerances. The antiskating proved not quite linear in operation but near enough to theoretical values for elliptical styli (there is only one scale) to be beyond serious reproach. Cueing is quite accurate, as long as the turntable has been put on a level surface; arm friction is negligible. Arm resonance, measured with the Shure V-15 Type III pickup, is not severe (the rise measures 2 dB) but occurs a little lower (7.5 Hz) than the ideal range. Nonetheless we had no problems in playing warped records on the Kenwood. If you prefer a different arm you can, of course, mount your own.

When the speeds are set exactly at 120 VAC, no departure can be measured for the other test voltages. (The strobe system allows for both 60- and 50-Hz AC: there is a voltage-change switch beneath the platter should you move and need to alter operation accordingly.) Flutter is superb, measuring 0.03% average peak and 0.05% maximum instantaneous with the ANSI/IEEE weighting. The generous speed-control range checks out to about ±5% at 33, ±7% at 45. (We have one regret in this respect: How easy it would have been, given the KD-550's DC direct drive, to have added a 78 setting with a range of ±10% or so to accommodate hard-core collectors of historical discs!) Rumble, with the ARRL weighting, measures a very respectable –61½ dB.

That leaves the premier feature of the design, the stone base, to be discussed. Not only were we unable to induce significant loudspeaker feedback under conditions where it sometimes has been a problem in the past, but we have been using the KD-550 with excellent results in a room that is particularly inimical to turntable suspensions. Footfalls are enough to propel the stylus out of the groove with most assemblies; heaven forbid that the dog should bounce in while dubbing is in progress. Well, friends, the room no longer is off limits. While heavy footfalls still can cause mistracking, the improvement is astonishing.

That is not to say that we can be sure the base will solve all related problems. Ultimately they must be approached on a case-by-case basis, but we certainly were impressed by the insulation from external vibrations that the KD-550 offered in the situations in which we tested it. Moreover, it is exceedingly pleasant to use: basically simple in concept and execution, handsome, well constructed, practical, and par or better in performance (particularly in respect to the drive system) for its price class.
The Equipment: Sony Model TA-5650, an integrated stereo amplifier in wood veneer case. Dimensions: 18% by 6% inches (front panel); 12% inches deep plus allowance for controls and connections. Price $520. Warranty: "limited," two years parts and labor. Manufacturer: Sony Corp., Japan; U.S. distributor: Sony Corp. of America, 9 West 57th St., New York, N.Y. 10019.

Comment: If you are the type of audiophile who wouldn't be caught dead reading an instruction manual and prefer a kind of trial-and-error approach to learning what a new component can do, we would suggest that you change your ways in dealing with the Sony TA-5650. It's not that you are likely to damage the amp (which is about as resistant to abuse as any comparable design), but rather that you will probably miss out on some of the unusual features that don't operate quite the way you are used to.

For example, why would a designer divide the usual selector function between two switches? A three-position FUNCTION switch chooses TUNER, PHONO 1, or PHONO 2 / AUX, and a secondary switch subdivides the last position into PHONO 2 and three AUX positions. The arrangement seems oddball but turns out to be very convenient, since the secondary switch is seldom needed in the normal home installation. Similarly, if you want to use external processors (equalizers, expanders, and the like) without giving up one or both of the tape monitors or connecting your tape decks at the end of a long and confusing daisy chain, the TA-5650's two processor loops that follow the tape monitors in the signal path make this easy. Tape dubbing is possible with either of the decks as the source while another processor function between two switches? A three-position switch is seldom needed in the normal home installation. Similarly, if you want to use external processors (equalizers, expanders, and the like) without giving up one or both of the tape monitors or connecting your tape decks at the end of a long and confusing daisy chain, the TA-5650's two processor loops that follow the tape monitors in the signal path make this easy. Tape dubbing is possible with either of the decks as the source while another processor function between two switches?

The tone control section is about as flexible as it can be without the addition of a midrange control, selectable turnover points for bass and treble making it possible to tweak the frequency extremes with minimal effect at midband. Curve characteristics are very good, with a shelving contour in the bass (to avoid excessive boom and rumble), a tilting characteristic in the treble. The nominal turnover points (250 and 500 Hz in the bass, 2.5 and 5 kHz in the treble) are reasonably close to the actual 3-dB points for full rotation of the controls. The phono stage is unusually sensitive and yet has excellent overload and noise characteristics as well. (The S/N ratio is equivalent to 82 dB re the common 10-millivolt reference.) Phono equalization error is virtually negligible throughout the audible range.

Should hiss and/or rumble rear their ugly heads, the touch of a button engages filters with very effective slopes (12 dB per octave) and well-chosen breakpoints. Generally, the loudness compensation is good, but since it cannot be adjusted in reference level (very few amps can), achievement of optimum results depends on a bit of luck.

In its way, the power amp, rated at 17 dBW (50 watts) per channel, is as unusual as the preamp section. The output devices are V-FETs (vertical field-effect transistors), which combine some of the advantages of bipolar transistors and vacuum tubes and add some unique qualities of their own as well. One interesting property is that their gain goes down as they get hotter (a bipolar behaves just the opposite way), allowing a designer to use larger bias currents and minimize low-level distortion. At the same time, protection circuitry (which is itself sometimes a cause of audible misbehavior) can be simplified without the danger of the amp's self-destructing. One tradeoff is that the bias current develops heat and makes the TA-5650 very fussy about proper ventilation. But since the canons of the FTC require that the amp produce its rated power when hot, there is also a little extra power reserve at normal temperatures.

In the lab at CBS, the amp did very well indeed, with worst-case total harmonic distortion figures barely more
than half of ratings (0.1%) from full power down to -20 dB, the slight rise at low levels notwithstanding. IM distortion is on a par with THD, and damping factor is quite adequate both in terms of measured data and listening quality.

This is, in fact, one very clean and transparent unit that distinguishes itself from a superamp chiefly by running out of power first. Otherwise, it sounds as good as many of its larger rivals and actually better than some. Though by no means cheap, the TA-5650 is very attractive in terms of its ratio of price to performance.

**Square-wave response**

### Sony TA-5650 Amplifier Additional Data

<table>
<thead>
<tr>
<th>Power output at clipping (channels driven simultaneously)</th>
</tr>
</thead>
<tbody>
<tr>
<td>L ch</td>
</tr>
<tr>
<td>R ch</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Frequency response</th>
<th>+0, –½ dB, 17 Hz to 27 kHz</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>+0, –1 dB, below 10 Hz to 55 kHz</td>
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<table>
<thead>
<tr>
<th>RIAA equalization</th>
<th>+¼, –½ dB, 20 Hz to 20 kHz</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Input characteristics (for rated output at full gain)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensitivity</td>
</tr>
<tr>
<td>phono 1, 2</td>
</tr>
<tr>
<td>tuner</td>
</tr>
<tr>
<td>aux 1, 2</td>
</tr>
</tbody>
</table>

| Phono overload (clipping point) | 400 mV at 1 kHz |
| Damping factor at 1 kHz        | 40 |

| High filter       | -3 dB at 8 kHz, approx. 12 dB/oct. |
| Low filter        | -3 dB at 31 Hz, approx. 12 dB/oct. |

**Dynaco SE-10: All Octaves Are Equal. . . .**

**The Equipment:** Dynaco SE-10, a ten-band (octave) graphic equalizer, in metal case. Dimensions: 13½ by 4½ inches (front panel); 10¼ inches deep plus clearance for controls and connections. Price: $249 (kit), $349 (assembled); optional wood cabinet, $25.95. Warranty: "limited." one year parts (kit), one year parts and labor (assembled). Manufacturer: Dynaco, Inc., Box 88, Coles Rd., Blackwood, N.J. 08012.

**Comment:** One wonders whether the term "equalizer" is not something of a misnomer. Certainly it suggests that the frequency response of some component or program is to be made equal throughout its bandpass, but for some time now recording engineers and producers have liberally added eq.—as they affectionately call equalization—to their brainchildren, resulting in special effects and sound coloration that presumably are satisfactory when heard via the monitor speakers in use. At home, however, we listen to different speakers and often are faced with a situation in which some of the ten audible octaves are "more equal" than others.

This is, of course, only one of the problems to which a graphic equalizer such as the SE-10 is addressed: Equalization of a loudspeaker system and a listening environ-
ment is within its capabilities, and the unit can function as a super tone control. The manufacturer suggests that adjustment of the slide controls be done by ear, which is not an unreasonable idea, but one about which we have some reservations, since there seems to be a tendency for the ear to prefer a slight boost in the octave to which it is paying particular attention. We tried using recorded bands of pink noise and also the Shure Equalization Analysis System (see the accompanying report), and found no problems that could be traced to the SE-10. But although it can be well worth your while, environmental equalization is a rather fussy, tedious procedure.

In the lab at the CBS Technology Center, the Dynaco showed very competent performance. It can deliver an output of nearly 10 volts before clipping, and at 2 volts (a far more realistic level) the worst total harmonic distortion that can be wrung out is less than 0.02%. IM measures 0.002%, a figure that encroaches on the territory of many prestigious preamps. The gain controls are accurately calibrated: When they are set for +6 dB, a 1-volt input causes a 2-volt output.

With all ten octave sliders set at 0, the frequency response is +0, -½ dB, 10 Hz to beyond 70 kHz. The center frequencies of the individual bands are reasonably accurate; the largest deviation measured some 13%, roughly equivalent to one whole tone. As a kind of torture test, meant to push the SE-10 to as much THD as could occur with a 2-volt output, the lab fed in a 30-Hz tone with that band flat and all others set for maximum boost. Even in this extreme case THD measured a mere 0.02%. Signal-to-noise ratio with all controls flat is 83½ dB.

Using the Dynaco is an interesting and instructive experience. One learns quickly how sensitive the ear is to what seem like small changes in frequency response. Commentary on the sound of a signal-processing device such as this is about as useful as a mug shot of an impersonator: The job of an equalizer is to make your system sound the way you want it to. We can say, nonetheless, that the SE-10 strikes us as accurate in its operation and repeatable in its settings. As we noted earlier, adjusting a loudspeaker and room for flat response is not easy (in most rooms it will give best results only at a single location), but nothing about this equalizer adds to the difficulty: the way a particularly peaky speaker or a bad room might. Actually, in a case like that an equalizer having one-third-octave bands would probably be needed to get really good results.

We built our model from a kit, a task that took a few evenings of work at a leisurely pace. Instructions are clear, required tools are not exotic, and quality parts and construction are evident throughout. As far as we can tell, outright waywardness would be required for a kit constructor to get into any trouble. But whether you build it yourself or buy it already wired, the SE-10 would be a worthy addition to any high-quality music system.

CIRCLE 131 ON READER-SERVICE CARD
Shure Offers a “Critical Ear”


**Comment:** The characteristics of human hearing result at times in some vexatious paradoxes: While the ear can without too much difficulty resolve differences of pitch down to tiny fractions of a semitone, it is not very astute at remembering pitches or making consistent pitch comparisons over broad frequency ranges. This latter fact can be attested to by anyone who has tried to tune a piano or harpsichord entirely by ear. Even “perfect” pitch doesn’t help much—the results are usually dismal.

A parallel situation prevails when one tries to adjust the frequency response of an audio system (meaning primarily the speakers, as the least linear of standard audio components) by ear. In an A/B comparison test, most of us can detect very small changes in frequency response, but it is nearly impossible to obtain a flat response without measurement. There are psychoacoustic facts that account for this; indeed, some would consider it debatable whether flat frequency response is desirable in all cases.

If you do wish to adjust a system for flat frequency response as accurately as a 10-band equalizer will permit, you face either a tedious procedure using a moderately expensive sound-level meter or a fairly convenient one using an extremely expensive real-time analyzer (which represents conspicuous overkill for this application). The Shure M-615AS, with its octave sampling, combines convenience with a fairly moderate cost.

After you put the Shure through its prescribed initial setup and checkout, you connect the ES-615 microphone (or another high-quality mike of your choice) to the instrument and place the mike at your normal listening position. A pink-noise signal is applied to the input of one channel of the system under test and the input gain of the mike preamp adjusted. Then with the ENVELOPE control set at 12, the noise level is advanced until one or more of the HI light-emitting diodes on the front panel glows, indicating that the response in its band is excessive. You lower the appropriate controls of the equalizer until the LEDs go out (LO LEDs come on if you have cut too much) and turn the ENVELOPE control to the left until more HI LEDs come on. Then repeat the adjustments and lower the ENVELOPE control again. Continue this until the ENVELOPE control is set to 2 and all LEDs are out—or until, after several tries, you find that turning off a HI LED inevitably turns a LO one on, or vice versa. Your equipment is now as flat as it can be made; if the ENVELOPE control is at 2, that is ±1 dB.

Shure now suggests a touchup by ear. Since the ES-615 microphone is not perfectly flat (the analyzer can be switched to compensate for the low-end rolloff but not for the minor midrange irregularities), correction for its response is a good place to start. The curve that accompanies the mike suggests that a boost of 1 dB at 500 Hz and 1 1/2 to 2 dB at 2 and 8 kHz will make a system flatter still. When we tried this a subtle improvement was noted over the already fine results we had obtained.

How well the system will work for you depends in part on your equipment and listening room: Small peaks and dips are easier to fix than large ones. But for us the system worked well. After about ten minutes spent in making adjustments in each channel, we found that our speakers—which we considered excellent to begin with—could be more transparent than we had thought.

Shure originally intended the Equalization Analyzer System to be an aid in installing sound reinforcement systems, especially for temporary use. As such it’s a natural for making your portable equipment sound good wherever you set it up. (The unit can be set so that the final response will roll off at 3 dB per octave above 1 kHz, which is sometimes preferred by audiences in large spaces.) The system is not limited to room/speaker analysis: The pink-noise generator output is available for independent use, and the unit has inputs that accept high-level sources. Inputs and outputs offer the choice of various types of jacks, eliminating the need for multiple adapters.

The analyzer will of course work well in home systems, although many consumers will balk at paying such a high price for something used so rarely. On an improvement-per-dollar basis, however, the M-615AS seems competitive with many add-ons, and there’s nothing to prevent groups of audiophiles from sharing a single unit.

*CIRCLE 132 ON READER-SERVICE CARD*
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.


In Canada, contact Superior Electronics Industries, Ltd.

*Questions about specific decks will be answered upon request.
After people learn what we've done, no one will heckle our speakers.

We're as close to the impossible as possible.

Our new speakers 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 measureable 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.

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SONY is a trademark of Sony Corp.
The SSU-3000 and SSU-4000. Great speakers like these deserve an audience.
by Arthur Jacobs

Documents only recently made available for examination disclose startling facets of the Victorian composer's life-style—and its influence on his music.

The Secret Diaries of Sir Arthur Sullivan

Is life a boon?
If so, it must befall
That Death, whene'er he call
Must call too soon.

THREE YEARS AFTER Arthur Sullivan's death in 1900, W. S. Gilbert was asked to choose the words to be inscribed on a bust of the composer. He selected four lines from The Yeomen of the Guard for the memorial, which stands by the River Thames in London, a few minutes' walk from the Savoy Theater.

But it is not to London that the Sullivan researcher must go. The majority of the vital documents, many of which have only in the past decade been released from private possession, rest in the Gilbert and Sullivan Collection of the Pierpont Morgan Library in New York. This store of thousands of items includes letters to and from the composer, autograph scores, contracts, and address books. The other main source of investigation is Sullivan's own diaries. Apart from a single volume at the Morgan Library, the diaries repose at the Beinecke Library at Yale University, having been acquired at auction in 1967. Exploration of all these materials points to a major rediscovery of Sullivan.

It is high time. Arthur Seymour Sullivan is probably still the best known of native English composers; certainly his theatrical collaborations with William Schwenck Gilbert retain a vitality quite astonishing in view of the dusty oblivion that has overtaken other English musical and dramatic works of the late nineteenth century. Yet, precisely because the documentary material has only recently become accessible, the many books on Sullivan have been unable to accord him the critical and biographical scrutiny that is taken for granted with other composers of importance.

Arthur Jacobs is engaged in a full-length study of Sullivan under a University of London grant. The Pierpont Morgan and Yale University Beinecke Libraries have kindly permitted quotation from documents in their possession for this article.
To a dearth of fact has been added a superfluity of legend. In both Percy M. Young's Sir Arthur Sullivan (1971) and Caryl Brahms's Gilbert and Sullivan (1975) may be found the story that Stravinsky and Diaghilev developed a passion for Gilbert and Sullivan in London in 1912, Diaghilev making Russian translations of the patter songs and shouting them out over his morning ablutions. This story, falsely ascribed to a tape-recorded interview with Stravinsky, was in fact an imaginative concoction of Stravinsky's publicity agent, Lillian Libman, with the approval of the composer's amanuensis, Robert Craft. The deception was confessed in Libman's book And Music at the Close, which was published in 1971 but evidently escaped the notice of Brahms.

Because of various contradictions of dates, the historical implausibility of the tale was spotted by Reginald Allen, curator and co-founder of the Morgan Library's collection. The modern documentary approach to Sullivan virtually starts with two of Allen's publications: Sir Arthur Sullivan: Composer and Personage, published by the Morgan Library as a catalog to its Sullivan centenary exhibition in 1975; and The First-Night Gilbert and Sullivan, a bibliographical, critical, and illustrated edition of the libretti, published in a limited issue in 1958 by Heritage Press, New York, and recently republished by Chappell of London in a revised edition.

Sullivan's story, if not exactly of rags to riches, at any rate exemplifies the social mobility open to artistic genius in Victorian England. Born the son of a military bandmaster in 1842, educated at the Royal Academy of Music (he won the first Mendelssohn scholarship there, enabling him to study further in Germany), Sullivan attained leadership on the London scene as both composer and conductor. Personal charm, as well as artistic gifts, won him acceptance in the highest social circles. He had many friends both male and female, but he never married. Though deeply attached to his mother (in later years, the anniversary of her death in 1882 was usually marked by a note in his diaries), he maintained a home separate from hers and pursued the active but clandestine sex life of a Victorian bachelor.

It is in the revelations of that sex life, to be traced in the diaries held by Yale, that the documentation is certain to be called sensational. But even this is not a wholly sensational interest. It contributes to the total portrait of the man. Sullivan's most active sexual period coincides with his busiest and most fruitful creative period, and the two activities decline together. In his last decade, failing in general health, he became an "old" man who was to die before he was sixty.

In a youthful courtship of Rachel Scott Russell, Sullivan's ardor had led him to an indiscretion that caused her family to bar him from the house. That episode was long over when Sullivan—by now accepted as a leading musical figure in his country—began his long but always discreet affair with Mary Frances Ronalds, née Carter, of Boston. That she was his mistress has long been strongly

Above is a typical page from the Sullivan diaries, the bulk of which are in the Beinecke Library at Yale. It shows two entries (September 4 and 5, 1881) chronicling the ostensibly ordinary movements and encounters of a well-bred Victorian gentleman traveling abroad, in this case in the Rhineland and Hesse-Nassau: arrivals and departures, meetings and farewells, visits to doctors and to the haunts of tourists. But the second entry closes with Sullivan's distinctive indication of a rather different kind of encounter: the underlined abbreviation "L.W. 2.

For an interpretation, see the text.
surmised and may now be regarded as certain. Wealthy and attractive, she lived apart from her American husband, Pierre, in an elegant part of London at 7 Cadogan Place. In 1877, when Gilbert and Sullivan were working on *The Sorcerer* as their first full-length operetta under Richard D'Oyly Carte's management, the name of Mrs. Ronalds is to be found on a select list of Sullivan's dinner guests, a list that also includes Princess Louise (Queen Victoria's twenty-nine-year-old daughter) and the Lord Chief Justice of England.

Mrs. Ronalds' intimacy with Sullivan was never broken. Renowned as an amateur singer, she received from the composer the manuscript of his most famous song, *The Lost Chord*, which was to be buried with her in 1916. Sullivan's visits to Cadogan Place are as prominent in the diaries as visits to the gaming clubs where he sometimes lost hundreds of pounds in a night.

It has been inferred—particularly by Leslie Baily in *The Gilbert and Sullivan Book* (1952)—that Mrs. Ronalds was the "L.W." found in amorous references in the diaries and that those initials stood for "little woman." But it can now be stated that this is not so. Mrs. Ronalds is named openly hundreds of times, L.W. is someone else, and the two are occasionally mentioned in the same day's entry. L.W. is at times abbreviated further to "L.," so these are presumably genuine initials. And there is a third mistress, "D.H." Unlike Mrs. Ronalds, seen constantly in Sullivan's company (though always in circumstances of propriety), the other two apparently met him only in private. Their social positions can only be guessed at.

Sullivan's sexual encounters—both in London and on his many trips to the Continent with one or more prearranged companions—are recorded in the diaries, sometimes with a tick or a figure apparently denoting the number of orgasms he achieved. At Kassel on September 5, 1881: "Found my friends there. Our rooms are 5, 6, 7... Nothing to do in the evening. L.W. 2." And the next day:
"L.W. (1) straight up!... Himmelische Nacht (1)?."
(The German expression for "heavenly night"—
Sullivan invariably misspells "himmlische" as
"himmelische"—recurs, sometimes abbreviated.)
In the same year (the year of Patience) we find
more such entries: September 9, "Himmelische
Nacht (2)"; September 10, "Him. N. (2)." In April
1882, when he meets D.H. in Paris, the numbering
is also found (but not the German expression).
Back at home the forty-year-old Sullivan jots down
disappointed ambition!)" The "0" would seem to
be a zero, not an equivalent of "oh."

Amid the taboos of Victorian society, such a life
inevitably had its penalties and its fearsome anx-
ieties. On December 11, 1884, "Uncertainty
changed to conviction"; December 12, "Went to M.
alone"; December 13, "Things very bad. Took D.H.
to M. Usual course advised." Evidently M. was ei-
ther a doctor who performed abortions or an unli-
censed abortionist. On both December 19 and 20
the diary reported with relief, "Signals of safety."
This was not, incidentally, the only such occasion
noted.

But by the 1890s—and it should be remembered
that Sullivan was only fifty in 1892—a remarkable
change is seen in the diaries. They not only are
much more sparsely filled, but contain hardly any
indications of sexual activity. Moreover, Mrs. Ron-
alds has become "Auntie"! This appellation must
have been adopted first for the benefit of Herbert
Sullivan, the composer's young nephew, who
lived with him. But now it was used without irony
by Sullivan himself. A remarkable indication of
change of role, it would seem—all passion spent.
Here the correlation between Sullivan the man
and Sullivan the composer suggests itself.

A brief survey may serve to recall the concentra-
tion and curve of his professional activities—of
which his collaboration with Gilbert, although ex-
ceptionally lucrative, was only a part. The period
of their successful association runs from Trial by
Jury (1875) to The Gondoliers (1889). The two
works that failed are Utopia Limited and The
Grand Duke, both of the 1890s. It was also in the
1880s that Sullivan won his greatest success out-
side the operetta field with The Golden Legend.
Enormously popular in its day, it is a quasi-rel-
gious cantata on a text by Longfellow and spans
half an evening in performance. At this time too he
was occupied with the greatest—yet most stimu-
llating—burden of other activities: principal of the
newly founded National Training School for Mu-
ic (now the Royal College of Music) from 1876 to
1881 and conductor of the Philharmonic Society of
London from 1885 to 1887. Outside London he was
in constant demand as a visiting conductor.

The energy of his trip to the U.S. in 1879-80 is
evident from his own accounts, as well as from
newspaper interviews. He and Gilbert came to the
States to tour with H.M.S. Pinafore, and then, to
forestall American promoters who had cheated on
copyright with that operetta, launched a produc-
tion of The Pirates of Penzance. But Sullivan
stayed on and journeyed as far as Salt Lake City
and Los Angeles. He little knew that one of his
posthumous American "legacies" was to be the
song "Hail! Hail! The Gang's All Here," based (in circumstances that are still uncertain) on "Come, friends, who plough the sea" from Pirates.

Another commitment from 1880 onward was Sullivan's once-yearly trip, with a great deal of preparatory work, to England's northern city of Leeds, as conductor of its choral and orchestral festival. This was one of the few major posts that he retained until late in life (1898). But otherwise it may be seen that by 1890 he was in a general and not merely an artistic decline. Physical ailment—basically, it would seem, a kidney problem resulting in painful discharges—had taken its toll for several years. Following the custom of those Victorians of both sexes able to afford it, Sullivan repeatedly went to "take the waters" at German and French spas, and his diary records his impatience when obliged by doctors there to desist not only from exercise, but even from what he called "head work."

Reticence on medical matters and a complete exclusion of sexual considerations are features of the authorized biography of Sullivan by his nephew Herbert, in collaboration with Newman Flower (1927, revised 1950). Such a hagiographical approach was, at that time, perhaps understandable. What is astonishing in that book is the inaccuracy of its transcriptions from the letters and diaries—even in quoting from the texts of operas. It refers to "O buy, buy" instead of "O bury, bury" and "Cachnalia" for "Cachucha" in The Gondoliers, and it quotes Gilbert as referring to The Tower Warden as a possible title for The Yeomen of the Guard in 1889. December 4: "Settled to substitute second quintet ['Here is a fix'], previously cut, for first one ['Till time shall choose'] much to everyone's delight." Indeed, changes continued even after the first night. December 8: "Gilbert sent me alteration and substitute for No. 4 [first act]."

Researchers whose field is the social history of music will learn, to their surprise, that male altos (as well as contraltos) continued to be used in the amateur chorus of the Leeds Festival. They will find Sullivan occupied with the making of special trumpets for a performance of Bach's Mass in B minor and of special bells for The Golden Legend. They will learn what many musicians were paid. And they will read of the struggle of British performers and companies against snobbish preferences for the foreign artist. In a letter dated May 19, 1884, he wrote: "I think all this musical education for the English is vain and idle, as they are not allowed the opportunity of earning their living in their own country." They will note Sullivan's interest—one of his few instances of a broadly ethical stand—in encouraging Sunday concerts for the poorer classes, presumably against the stern defenders of the Victorian Sunday as a day without secular pleasures.

The autograph full scores at the Pierpont Morgan Library—notably a Trial by Jury that displays many discrepancies from the printed vocal scores used today—should stimulate a new critical study of the music itself. Although Sullivan's works are out of copyright, few are available in authentic form. Some autograph scores are accessible at the British Library reference department (formerly a section of the British Museum) and elsewhere; but the only "Savoy operas" that have ever been printed in full score are the pirated German scores of H.M.S. Pinafore (c. 1883) and The Mikado (1893), both long out of print. (The Gregg Press facsimile of The Mikado in Sullivan's autograph does not constitute an edition in the normal sense.) The scores in the Morgan Library collection are not, however, confined to the stage works, with or without Gilbert. Autographs and rare early printings of other works are also on hand.

But for the layman, the material at both the Morgan and Yale libraries is of greatest interest for what it tells us about the "private" Sullivan. Had he been a contemporary poet or painter of equal stature this would surely have been uncovered long ago: One thinks of the biographical attention already paid to Wilde, Ruskin, and Rossetti and, of course, in the text of the operetta, although it is eliminated from the title.) It need hardly be said that the extracts found in the Sullivan-Flower biography have been faithfully copied by subsequent commentators.

The newly accessible information obliges us not merely to add to, but also to correct, the meager excerpts already printed from the letters and diaries. We may now, like prospectors gazing at an obviously rich yet barely exploited mine, consider some of the ways in which these American holdings will bring enlightenment. First of all, they reveal a good deal about the day-to-day working of the two collaborators, the changes in both words and music as the work progressed, the scheduling and management of rehearsals. We learn of Sullivan's method of composing a song and then of "framing" it in place, and why (to avoid doing work that would eventually be thrown out) he deferred orchestration until rehearsals were well advanced and alterations and substitutions necessarily made. But in fact alterations continued until almost the last moment, as the diary records only three days before the opening of The Yeomen of the Guard in 1889. December 4: "Settled to substitute second quintet ['Here is a fix'], previously cut, for first one ['Till time shall choose'] much to everyone's delight." Indeed, changes continued even after the first night. December 8: "Gilbert sent me alteration and substitute for No. 4 [first act]."
Even we were astounded at how difficult it is to find an adequate other-brand replacement stylus for a Shure cartridge. We recently purchased 241 random styli that were not manufactured by Shure, but were being sold as replacements for our cartridges. Only ONE of these 241 styli could pass the same basic production line performance tests that ALL genuine Shure styli must pass. But don't simply accept what we say here. Send for the documented test results we've compiled for you in data booklet #AL548. Insist on a genuine Shure stylus so that your cartridge will retain its original performance capability—and at the same time protect your records.

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TECHNICORNER
The criteria for these tests involved the eight standard production line inspections used for all Shure styli: Visual and mechanical inspection, tip configuration, trackability, vertical drift, 1,000 Hz output level measurement, channel separation at 1,000 Hz, channel separation at 10,000 Hz, and frequency response.
Only genuine Shure styli have the name SHURE on the stylus grip and the words "This Stereo Dynetic* stylus is precision manufactured by Shure Brothers Inc." on the box.

May 1977
ONE HUNDRED TWO years ago, two Victorian gen-
tlemen named William Schwenck Gilbert and Ar-
thur Seymour Sullivan set about making a comic
universe, and it has been whirling along—maybe
better than our own—even since.

The achievement is larger than either probably
realized at the time. Gilbert thought very highly of
his serious and sentimental works for the stage;
Sullivan agreed with his queen when she an-
nounced that it was his destiny to "uplift British
music" by writing high-minded grand opera and
higher-minded Mendelssohnian oratorio. Set be-
side these goals, the making of comic operas didn't
seem all that important—the telling of stories of
silly young men who are usually watery tenors
who fall in love with silly young women who
are always twittering sopranos, their lives compli-
cated because of elderly ugly ladies who are con-
traltos who variously get in the way until things
are set right by nattering baritones who resolve ev-
everything in rhyme.

None of this ever has any direct relationship to
the experience of real life. Well, hardly ever. But
the indirect relationships are constant, amusing,
alerting, and cleansing. Nothing changes faster
than our sense of what makes sense; nonsense en-
dures because people never seem to realize what
fools they are making of themselves. Or hardly
ever. This "hardly-ever-ness" of the operas merges
with the workmanship of their makers to create
something enduring. The operas are, like Strephon
in Iolanthe, half fairy, half mortal; free imaginat-
tive play is matched by hardheaded craftsman-
ship.

Gilbert and Sullivan were alike only in possess-
ing personalities of most ingenuous paradox. Gil-
bert, the apparent bon vivant, was a rigid moralist,
an ill-tempered humorist; Sullivan, the composer
of "Onward, Christian Soldiers" and The Lost
Chord, spent his spare time at the gaming tables
and in various ladies' beds [see Arthur Jacobs' ar-
ticle in this issue] and wrote the scores in a terrific
careless last-minute rush, sustaining himself with
cigarettes and weak gin and water. The two men
didn't like each other very much, spent little time
together, frequently quarreled acrimoniously.

Yet somehow they completed each other. Gil-
bert once testily wrote to Sullivan, "You are an
adept in your profession, and I am an adept in
mine. If we meet, it must be as master and master-
not as master and servant." When they were at
their best, that is exactly what happened. When
they were not, they often helped each other as col-
laborators can. Sullivan rescued many a labored
lyric, a reached-for rhyme with the effortless-
seeming swerve of his music; Gilbert's poetical
craftsmanship—and he was a considerable lyric
poet in the tough Elizabethan line—holds the at-
tention sometimes when Sullivan's accompanying
music, in the words of Shaw, "smells mustily of
Dr. Day and his sham science of harmony, beloved
of the Royal Academy of Music." Sullivan's music
could take a certain brittleness of Gilbert's, a too-
insistent cleverness, and infuse it with warmth
and humanity; the ranging of Gilbert's wit could
free Sullivan from a tendency toward convention-
al, even sanctimony.

The critics and the public recognized the special

Richard Dyer is music critic for The Boston Globe.
Gilbert and Sullivan alchemy at once: The Times wrote after the first performance of Trial by Jury, "It seems, as in the great Wagnerian operas, as though poem and music had proceeded simultaneously from one and the same brain." The pity of it is that neither Gilbert nor Sullivan, despite their healthy egos, realized exactly what it was they had wrought together until it was too late. "There is no Sullivan without a Gilbert," the composer admitted; "a Gilbert is no use without a Sullivan, and I can't find one," the librettist wrote.

The history of recorded Gilbert and Sullivan is a long and colorful one. It goes back to 1898, when both men were still alive: A tenor named Scott Russell, who had appeared in the original cast of Utopia Limited five years before, went in front of the horn to record "Take a pair of sparkling eyes" from The Gondoliers. Since then the songs have attracted the diversest talents, not all of them specialists in the genre. There are few lyric sopranos more lovely than the German record Claire Dux made of Yum-Yum's song; there is nothing on records more absurd than Groucho Marx's voicing of "I've got a little list." Danny Kaye, John Charles Thomas, Nelson Eddy, Alan Jones, Cleo Laine—all have left unpredictable Gilbert and Sullivan discs.

The first complete recordings of the operas were made in 1908: Odeon sets of H.M.S. Pinafore and The Mikado, the second of them featuring former Savoyard Walter Passmore. His rather talkative performance of "I've got a little list" is reproduced on "The Art of the Savoyard," an important threerecord set of historical Gilbert and Sullivan recordings on the imported Pearl label (GEM 118/20).

Pearl has also reissued two from the first series of complete recordings made under the auspices of the D'Oyly Carte company, chief custodian of the Gilbert and Sullivan tradition. This first cycle, recorded in the acoustic process between 1918 and 1925 under the personal direction of Rupert D'Oyly Carte, included a number of the company's performers, but most of the singers were not Savoy regulars. It was felt that, for recording purposes, the music called for better voices than the company commanded at the time, so prominent concert and opera singers of the period like George Baker, Peter Dawson, Robert Radford, and Edna Thornton were brought in.

Some of these recordings are very catch-ascatch-can affairs: In the 1918 Mikado, Baker sang not only Ko-Ko and Pish-Tush, but also "other bits and pieces"; in many ways these records are no fair representation of the music—for one thing, they are reorchestrated for the recording horn, and the sound of the tuba is everywhere. Nevertheless they are of considerable interest and value, because they document the fact that much of what we consider the "tradition" of performing these scores is of later origin and development.

The second major series of D'Oyly Carte recordings dates from 1927–36. These are electrical recordings, conducted by Malcolm Sargent (not yet Sir Malcolm), and they feature the leading D'Oyly Carte performers of the period, supplemented once again by Baker in most of the patter roles, for the voice of Sir Henry Lytton, one of the most famous of Savoyards, was not a particularly phonogenic one. None of these recordings survives in the catalog today, though Chicago's radio station WMT broadcast the entire series a couple of years back and tapes circulate among collectors. Several of Baker's songs, delivered with incomparable verve and solidity of tone, are on a record issued in 1970 to honor the singer's eighty-fifth birthday; that disc (EMI HQM 1200) still turns up in cutout bins.

The third series, built around the prominent presence of Martyn Green, dates from 1949–55. Isidore Godfrey conducts these first LP sets, which (with the exception of Pirates of Penzance) remain available on the Richmond label. A fourth series, stereo remakes on London, mostly under Godfrey, stretched over the years 1958–68; a fifth is under way under the direction of the company's present music director, Royston Nash. In the mid-Sixties, Reader's Digest also produced a series of excerpted performances, with the D'Oyly Carte. These are favorites of collectors, because performers like Kenneth Sandford and Donald Adams appear in the "wrong" roles—the contract forbade them to record parts they had already recorded for London.

Finally there is the series of nine operas recorded by EMI between 1957 and 1962 (all but Ruddigore once available here on Angel), and cast in the manner of the first acoustic series. Prominent opera and concert singers were drilled by a conductor knowledgeable in the style; Baker, in his seventies, came back to do the patter roles once again. Only Pinafore and The Mikado survive in the Angel catalog, but most of these sets have been reissued in England in the HMV Concert Classics series, and they are a prospect for reissue on Saphim—Pirates has already been announced.

We all know what fate Ko-Ko has in mind for idiots who with enthusiastic tone praise every century but this and every country but their own. Nevertheless it has to be said that, considered as a whole series, those unavailable first electrical recordings are the most satisfying Gilbert and Sullivan recordings ever made. Sargent was at that phase in his career the best conductor to have turned his attention to the operas, the spriest, the wittiest, the surest in taste and scholarship. The recorded sound is in fact superior to that on most of the Richmond sets. And, most importantly, the D'Oyly Carte performers of that period were probably the finest in its history: Bertha Lewis and Darrell Fancourt and Leo Sheffield and Derek Oldham and the rest were great personalities and good
singers, and the good singing is what conveyed the
great personalities. These artists knew how to bal-
ance word and tone.

Much of Sullivan's music is inconsiderately
written for the voice: His musical imagination was
more instrumental than vocal. Sullivan wanted his
notes sung—and when they weren't he could com-
plain as bitterly as Gilbert did when his words
didn't carry. (“I didn't sit up all night for my words
to be distorted by this damned Italian method.”)
The great Gilbert and Sullivan performers, like the
great performers of any sort of vocal music, are the
ones who have the technique to choose among inter-
pretive options. The technique to sound the
notes and articulate the rhythms and savor the
texts and through all of that create, for the listen-
ing ear, a full and comic personality.

Too many of the LP recordings of the operas are
badly sung. In the theater that can even be amus-
ing. That's why the essential qualities of the pieces
can be communicated even in ineptly amateur
performances. These are mock-operas, after all
("act like Patti and Mario."
Sullivan advised the
original patter baritone George Grossmith and his
leading lady); it somehow fits if the vocalism
doesn't quite make it—it's delightful when one of
these dippy heroines is as vague in her intonation
as she is in her demeanor. But on the phonograph,
sounds to hear again and again, all those pinched
and squeaky little sopranos, those rhythmically
inaccurate baritones, those soggy basses, those
tenors who sing as if they had clothespins clasped
over their noses communicate more pain than per-
sonality. In the notes that follow, prejudice will fa-
vor the most musical performance, because that is
likely to be the most characterful and comic one as
well; those who retain vivid memories of some art-
ists on-stage will of course properly continue to
value their recordings as souvenirs.*

**Trial by Jury (1875)**

Of the first, almost accidental, collaboration of Gilbert
and Sullivan, Thespis, or the Gods Grown Old, only a
little remains—the text, one song ("Little maid of Ar-
cadee," which has never been recorded), and one
chorus, "Climbing over rocky mountain," which, after
a few word changes, wound up in The Pirates of Pen-
zeance. So the second collaboration, Trial by Jury, is ac-
tually the first we have. In some ways it is unchar-
acteristic of what was to come: It is in only one act, and it is
through-composed. (The title page calls it "A Novel and
Entirely Original Dramatic Cantata").

**Trial by Jury** may not be entirely original—part of the
text had been printed years before and the music, in
sound and procedure, owes much to Sullivan's knowl-
edge of national and Continental models—but already
we are in a world that is like no other. The plot is topsy-
turvy in its logic, the observation of society shrewd, the
awareness of human nature critical and sure. And all of
this is communicated in language that is droll, decent,
and delightful. How like Gilbert to translate the dodgy
language of the heart into the specific needs of the stom-
ach: "And it's not in the range of belief/To look upon
him as a glutton/Who, when he is tired of beef/Deter-
mines to tackle the mutton."

Musically there is the consistent cheerful tunefulness
and the awareness of the comic value of a kindly
chorus, changeably agreeing with whatever is sung. The
parody of grander models, Handel and Donizetti in this
case, sits companionably along sophisticated adapt-
ations of characteristic English melody.

Sir Malcolm Sargent's 1961 **Trial by Jury** (formerly
Angel S 35966, now available in England as a filler on
the second disc of his Pinafore, HMV SXLP 30088/9)
might easily have been the best, because he has by far
the most consistent cast. George Baker, recorded at the
age of seventy-six, is an energetically sputtering
Learned Judge, and Elsie Morison is the bloomiest of
Angelinas, fully justifying the portent in Usher Owen
Brannigan's imposing announcement of her impending
arrival. John Cameron's sonorous Counsel for the Plain-
tiff is the first of a consistently splendid series of por-
trayals in this series. Richard Lewis, the Defendant,
sounds a bit shy for a self-proclaimed ruffian, bully, and
sot, but his vocalism has real elegance.

What puts the recording out of the running for me is
the very exaggerated production: Water is poured for
the fainting Angelina, and the sound takes us from the
courtroom the WC; the laughter is wilder than at any
of Violetta's recorded parties. All these devices, repeat-
edly heard, draw attention to themselves and to the re-
sourcefulness of the record producer—and away from
the music.

Isidore Godfrey's 1964 version (London OSA 1155,
with excerpts from Utopia Limited), then, would be my
choice. Ann Hood's pretty voice tugs appealingly at An-
gelina's music, and there is a characteristically clear, di-
rect, and charming Defendant from Thomas Round,
best of the postwar D'Oyly Carte tenors. Kenneth Sand-
ford is an unctuous Counsel, and Donald Adams has the
burlry voice to shout down the opposition—"Silence in
court!" John Reed is a spruce and buoyant Learned
Judge, a bit excessively amused by himself.

Reed also appears in the 1975 "Centenary Record-
ing conducted by Royston Nash (London OSA 1167, with

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*I want to thank Dick Burgoy of London Records, Peter G. Davis, Kenneth Purie,
David Elliott, and Andrew Karzas for helping me locate certain hard-to-find record-
ings.
Sullivan's Macbeth Overture and incidental music to Shakespeare's Henry VIII. His voice has less twinkle, but he no longer sings in italics so much. He accomplishes more through less drastic means—consider the more proclamatory tone that comes into his voice in the stanza about his so-called orations "at the Sessions or Ancient Bailey." Michael Rayner is a sonorously pompous Counsel, though Sandford is in shuddery voice as the Usher. Julia Goss, the Angelina, has a prettily dimpled voice, but Colin Wright's impetuous singing and nasty little laugh get in the way of the Defendant's graceful music.

Godfrey's 1949 recording (Richmond R 23050)—dully recorded and vilely sung by a pudding-voiced cast—is probably the worst of the entire mono series.

The Sorcerer (1877)

"It is another nail in the coffin of opera bouffe from the French," Sullivan wrote to a friend about the success of The Sorcerer. And indeed its very Englishness—its village setting, its praise of the rollicking bun, muffin, and toast, and "the gay Sally Lunn"—is one chief source of its continuing appeal. Gilbert domesticates the factotum character of European farce and comic opera; John Wellington Wells is a sorcerer with a business card. Sullivan provides the first of his bewitching madrigal numbers, the quintet "She will tend him, nurse him, mend him, Air his linen, dry his tears."

The specific Englishness of the piece may also be its greatest limitation as well. Some of the dialogue leaves a sour aftertaste of class-consciousness, which Gilbert treats more amusingly elsewhere. Sullivan, in maybe his slowest score, gives us his highest concentration of characterlessly dreary parlor ballads. One of the ballads, though, isn't dreary at all: the Vicar's "Time was, when love and I were well-acquainted," which seems all the funnier the straighter it is sung. (Of course this is one of the great comic secrets of Gilbert and Sullivan: Jessie Bond, one of the most loved of Savoyards, wrote in her memoirs, "All must be natural, well behaved, and pleasant. The actors were trained to get their effects by doing and saying absurd things in a matter-of-fact way.")

Godfrey was particularly partial to The Sorcerer, perhaps because he didn't have to conduct it as often as works he had audible occasion to tire of, and both of his recordings of the piece (Richmond RS 62015, 1953, and London OSA 1264, 1966) are good ones. The casts pretty well balance each other. Peter Pratt in the earlier set is both a better singer and a more imposing personality than her successor as Lady Sangazure, Christene Palmer, a wildly wobbling hooter whose sound reverses the reported effect of the role's first performer, Mrs. Howard Paul, who had been a celebrated male impersonator. He accomplishes more through less drastic means—consider the more proclamatory tone that comes into his voice in the stanza about his so-called orations "at the Sessions or Ancient Bailey."

Among the modern recordings, there are two good ones and two bad ones. Sargent in 1956 (Angel SBL 3589 or, with Trial by Jury, HMV SXLP 3088/9) was occasionally a bit sluggish in the lyric music and in the recitatives, but his leisurely and detailed approach has its rewards—the little en travante, built on Buttercup's waltz, makes a lovely impression thanks to the rubato in the string pizzicato at the beginning and the lift in the phrasing of the tune. Godfrey's second recording (London OSA 1209, 1959) is clean and straightforward but less beguiling: Decca/London's stereo engineering helps music that has stereo effects written into it.

This was the first G&S recording to incorporate the spoken dialogue. Many fans count this a significant advance, and others will have had enough after the second playing of any of the dialogue sets, particularly since only Sandford, Reed, and Adams among the regular participants have an ear for the predictable periodicity of Gilbert's speeches and the imagination to make something individual out of them; the rest wheeze and rant and hallow and simper and misphrase to the point where you just wish they'd shut up.

Sargent has the more consistent cast. Baker sounds vastly amused to be Sir Joseph Porter, and Monica Sinclair—a mezzo, not a contralto, and strong, even punchy, in accent—brings an interesting touch of asperity to Buttercup. Brannigan makes a loud, steady, and characterful noise as Dick Deadeye, and there is a capital pair of lovers in Lewis and Morison; Morison has rouge on her voice and displays real interpretive imagination in her delivery of that startling recitative in which Josephine considers the consequences of marrying beneath her station.

For Godfrey, Reed delivers a neat, smug-sounding Sir Joseph Porter; Round is a pungently attractive Ralph: Gillian Knight, full of mischief, is an unimposing and kindly sounding Buttercup. The others serve.

The London Phase-4 Pinafore (SPCA 12001, 1971) is a catastrophe. The conducting of James Walker is fast, loud, and crude—it sounds as if he hates the piece—and apart from Reed and Masterson the cast is very poor. The production effects keep you laughing at all the wrong things: The cawing of gulls, the creak of boards, the casting of anchor, the throwing of line and tackle make the whole thing sound like a pretentious radio production of Moby-Dick.

The Richmond Pinafore (RS 62003, 1949) is sloppily conducted by Godfrey, and most of the performers, to paraphrase Gilbert on actors, have all of the faults of singers without being singers. What guarantees the
recording a place in the catalog is the presence in the cast of Martyn Green, still the most famous of Savoyards, at least in America. Green's best work, on the recorded evidence, was in the Thirties: by the time of the LP series his tuneful voice had parched and he had set himself in a number of irritatingly unmusical manners. Still, all of his performances are worth hearing, for he made something different of each of his roles—he never merely makes a complicated rattle of them. His Sir Joseph Porter is one of his better performances: He obviously wants to sound bored and worldly-weary, which he does by singing just behind the beat. (That it is an intentional effect is apparent, because Green doesn't do it in other roles—and he does do it again in his version of Sir Joseph's song on his spirited American patter-song LP, Columbia Special Products ACL 832).

The Pirates of Penzance (1879)

One would think better of The Pirates of Penzance if one didn't know Pinafore; more than any of the other pieces until the saddening end, it seems more dependent for its effects on a canny recycling of what had worked before than on fresh extensions of ingenuity and skill. The plot here is laboriously clever, and it assumes a disproportionate importance because the work lacks any real satiric focus: Major-General Stanley, for example, is present to sing one of the most dazzling patter songs, but nothing he has to say or do afterward has anything to do with it. There are shrewd observations in the text, of course, and the music is frequently delightful. The entire sequence involving the Sergeant of Police, for instance, brings out the best in Sullivan's grand-opera parodistic manner—just as Mabel's common little coloratura waltz-tune, a miserable Mireille ripoff, brings out the worst.

Pirates has been much recorded, though never with complete success. Sargent's characteristically detailed reading (formerly Angel SBL 3609, 1959, now scheduled for reissue as Seraphim SIB 6102) has Lewis and Mori-son again as the lovers; the tenor has the timbre and the range to sing one of the most dazzling patter songs, but nothing he has to do with it. There are shrewd observations in the text, of course, and the music is frequently delightful. The entire sequence involving the Sergeant of Police, for instance, brings out the best in Sullivan's grand-opera parodistic manner—just as Mabel's common little coloratura waltz-tune, a miserable Mireille ripoff, brings out the worst.

Patience (1881)

Patience, tiresome people are always saying, is the most "dated" of the Gilbert and Sullivan operas because the object of Gilbert's satiric attentions—the so-called "aesthetic" movement of Swinburne, Wilde, and the others—is so securely lodged in its own time. But sham in the arts was not limited to one time and place: Even Hindmarsh is extended by Mabel's demands, though her tintinnabulation of the waltz-song has charm; Beryl Dixon, briefly heard as Edith, makes an added adeno-dal sound that made me laugh out loud.

Godfrey's second stereo recording with dialogue (London OSA 1277, 1968), isn't as attractive, despite four good performances: the boy-next-door Frederic of Philip Potter, the shallow-sounding but technically accomplished Masterson as Mabel, Adams slavering again over the opportunities of the Pirate King, and guest Brannigan, enlarging on his sketch of the Sergeant on Sir Malcolm's recording to make a magnificently eccentric comic creation. Palmer is a dreadful Ruth—her voice turns on rusty hinges—and Reed, hoarse and sounding very out-of-sorts, forces his way through the patter song and makes a mess of the one stanza of the ballad he sings.

Hopelessly awful is the Pirates on Victrola VICS 6007, with a wholly amateurish cast, chorus, orchestra, and conductor supporting a very old and enervated Green. Green was far better in the 1950 Pirates (formerly London XLLP 80/81). That set is now available only in England (as Decca Ace of Clubs ACL 1276/7), which is a pity, because it may be the best of the entire mono series. He sings the patter song as the virtuoso exercise it is and approaches the ballad with real musical intent. Darrell Fancourt seems to be having terrific fun playing at the Pirate King, bringing to the song irresistible energy and swing, and Ella Halman makes a sympathetic Ruth—the sound of hurt that gets into her voice in the duet with Frederic shows how imaginative an interpreter she is. The romantic leads are unappealing, but the voice of Richard Watson, the Sergeant, is here so deep, so bottomless, that it becomes a source of innocent merriment in itself.

Martyn Green in the late Fifties
the D'Oyly Carte company once presented an act of Patience in flower-power hippie style.

Gilbert's plotting is especially deft here, and the satire is multileveled: It manages to take stage conventions—a uniformed corps of heavy dragoons, a pastoral shepherdess—and use them freshly, making them seem closer to reality than tendencies in contemporary art that in fact existed. An extension of this same mixing technique was to make the next opera, Iolanthe, Gilbert's gaiest, most inventive, and most complicated satire.

Not all of Sullivan's music rises to the occasion in Patience, but one number does provide an interesting example of the way he could correct or enlarge the implication of what Gilbert had done. "Silver'd is the raven hair" is the most derogatory of all Gilbert's unpleasant lyrics about aging women, but Sullivan lavished on it one of his best ballad tunes, one that lies so becomingly across the true contralto voice that the part has always been a favorite among singers; fitted out with different, sentimental words ("In the twilight of our love"), the piece became a drawing-room favorite.

Godfrey's stereo recording (London OSA 1217, 1961)—with dialogue—is especially good with a telling contrast between the voices and personalities of Reed and Sandford as the rival poets Bunthorne and Grosvenor, the one idyllic, the other fleshly—reversing Gilbert's descriptions! Reed does a finely job with the song, though his reading rather botches the celebrated "poem" about the medicinal powers of nature; Sandford's voice sounds particularly beautiful on these records. Adams and Knight leave very positive impressions as the Colonel and Lady Jane, and Mary Sansom is quite irresistible as Patience. Sansom has a tiny, sweet, delicate boy-soprano sound, like a shepherdess' pipe.

Morison sings better for Sargent (formerly Angel SBL 3635, 1962), but she sounds entirely too worldly, too knowing. Sargent is a more supple musician than Godfrey, and he has a major advantage in having singers like Marjorie Thomas and Elizabeth Harwood and Heather Harper in the small roles. Cameron makes a handsome-sounding Grosvenor, and Sinclair, driving effortfully across the register break, makes Lady Jane's feelings intense and memorable. Both John Shaw as the Colonel and Baker as Bunthorne have to work awfully hard to get through these parts; Baker makes it with less bluster.

The mono Godfrey Patience (Richmond RS 62013, 1951) has in Margaret Mitchell the most appealing of the bad lot of sopranos in this series. The top peters out, but the middle and lower parts of the voice have a pretty pout in them. Green adopts a twee, thinned-out sound: it is also a very slovenly affair musically, with a pretty bit of tear-in-the-voice as she sings her final plea. "Iolanthe! Thou livest?"—John Reed as the Lord Chancellor and Judi Merri as Iolanthe

The operas so far, Sargent's forces easily carry the day (formerly Angel SBL 3597, 1959, now HMV SXL1 30112/3). The Pro Arte Orchestra, the Glyndebourne Festival Chorus, and all the Sargent solo regulars excel. Four of the performances are particularly outstanding: Alexander Young's Earl Tolloller (you can see him licking his lips as he sings of the importance of "blue blood"); Cameron's Strephon (unique in sounding like a romantic figure); Brannigan's Private Willis (how he rounds off his song, how he differentiates the "little liberal" from "little conservative"); and Thomas' Iolanthe (a lovely bit of tear-in-the-voice as she sings her final plea).

The first Godfrey performance (Richmond RS 62005, 1951) suffers more than any of the others from dated sound: it is also a very slovenly affair musically, with a pained-sounding Green turning the Lord Chancellor into a dirty old man. The best performance in the set is

Iolanthe (1882)

Iolanthe retains all those elements of simple appeal that attract audiences to Pinafore and Pirates, but is also a whirligig of more complex invention. Gilbert's juxtapositions of the real and the fantastic perpetually leave you wondering which is which. And Sullivan's score is arguably his finest. He had venerated Mendelssohn from his youth (as a boy soprano at the Chapel Royal, Sullivan had been celebrated for his voicing of "Oh for the wings, the wings of a dove"), and the older composer had written no music more bucolic, lucent, and transparent than what Sullivan lavished on this opera. The first-act finale is one of his largest and most varied structures, full of differing uses of principals, ensembles, chorus, and orchestra; the first-night audience found the whole thing so capital they demanded an instant encore. Furthermore, it was in this work that Sullivan expressed real rather than conventionalized emotion: The plea of Iolanthe to the Lord Chancellor is very touching, and the recognition scene can, properly performed, move an audience the way the end of The Winter's Tale does. And, of course, the cry of chromatic pain from the fairies as Iolanthe breaks her vow is one of the composer's most famous imaginative achievements.
the Iolanthe of Drummond-Grant: The vibrato in her voice gives her utterances some real urgency.

Godfrey’s stereo remake (London OSA 1215, 1980) is still not neat in ensemble. Sandford’s Willis, less richly detailed than Brannigan’s, is nevertheless fresh, steady, and honest in sound; and this Lord Chancellor is one of Reed’s best performances, quite precisely stitched, accurate, and amusing. The others are not good, Sansom, as Phyllis, sounding alarmingly like Amahl wandered in from another opera, and Yvonne Newman, in the title role, suggesting in her first quaver-entrance that she has in fact been under water for twenty-five years.

There seems no particular reason for the making of the newest version (London OSA 12104, 1974), save perhaps to give Nash another opportunity to make a good impression. Reed and Sandford are both less impressive than earlier, and Reed in particular has developed a maddening way of punctuating the dialogue with squawks and chuckles. (He does, however, find a lovely inflection for “Iolanthe! thou livest!”) Michael Rayner, the best vocalist in the present D’Oyly Carte company, finds Strephon’s part too high for him, and the work of the others—the thick-sounding Lyndsie Holland as the Fairy Queen, the shrewish Pamela Field as Phyllis, the unsteady Judi Merrif as Iolanthe—does not suggest that Nash has sufficient authority over casting.

Both of the London sets include dialogue.

**Princess Ida (1884)**

Princess Ida does not seem as if it had proceeded simultaneously from one and the same brain. The book is awful: Gilbert simply reworked a blank-verse burlesque on Tennyson’s discursive poem about education for women, The Princess, that he had staged many years earlier. Some of Gilbert’s glancing blows hit targets, but the main thrust finds the castle of meaning adamantine.

Nevertheless he supplied some miraculous lyrics, and a sequence of them in the second act in particular led Sullivan to write some of his Wittiest, most individual, and most personal music. Ida becomes almost a heroic figure. And let no one say that Sullivan cannot summon infinite variety—compare the comically sinister trio of the three bad guys Arac, Guron, and Scynthius with, say, the most famous trio in the next opera, “Three little maids from school.”

The 1924 acoustically recorded performance reproduced on Pearl GEM 129/30 is a significant one. To begin with, it alone is complete: It contains Lady Blanche’s metaphysical melody “Come, mighty must,” omitted from all the other recordings. Conductor Henry Norris’s tempos are not slower than the more familiar ones from later recordings, but nothing in this performance seems rushed or scrambled or desperate, and that can’t be said of either of the more modern recordings. These singers have the sureness of technique to get through some exceptionally difficult writing with no sense of fluster.

Bertha Lewis hasn’t much to do as Lady Blanche, but there isn’t a concert contrario active today who commands that kind of burgundy tone and easy technique. Winifred Lawson, alone of recorded Idas, has a steady voice with some thrust in it for this Turandot among Sullivan’s heroines: She sounds schoolmarmishly authoritative. In his Handelian divisions about helmets hot. Fancourt reminds us that his voice was once focused, that he was, in fact, a singing student of Lilli Lehmann’s. Both tenors, Derek Oldham and Leo Darnton, display old-fashioned qualities: Some of them—like the closed vowels, the heavily rolled r’s and the liberal resort to portamento—have a period charm; others—like mere good legato and the kind of control over dynamics that gives the music light and shade and lift and life—are qualities our period could use more of.

Sir Henry Lytton’s King Gama may paradoxically be the best of his four recorded complete roles. Lytton was said to be the most natural, most lovable of all performers of the patter parts, but by the later years of his career his voice had turned unmusically rasping. But that rasp, coupled with Lytton’s unusual rhythmic insistence, natural musicality, and energetic spitting out of the words, makes of his Gama something artful and memorable and amusing—and, intentionally, disagreeable. The recorded sound, of course, is quite terrible, and the concerted passages, like the wonderful Swiftian trio about the scientific projects of Ida’s university, can’t make much impression.

Godfrey’s set (Richmond RS 62011, 1955) has in Pratt another excellent Gama: His teeth are less tightly clenched than Lytton’s. Though Round sings lightly and deftly as Hilarion, Leonard Osborn (Cyril) has a bit of trouble holding up his end. But nowhere near the trouble Victoria Sladen has with Princess Ida’s music: Her voice is of a gummy consistency, and she has to heave mightily to get it up onto the notes.

Harwood, in the Sargent/D’Oyly Carte set (OSA 1262, 1965), is somewhat better, but her enunciation isn’t clear and she often has to substitute accent for volume. There is a good pair of tenors, nicely contrasted, in Potter (Hilarion), who sounds good-natured and shy, and David Palmer (Cyril), whose personable timbre is darker. Sargent introduces some pretty special effects, such as the tinkling of dungeony chains in the trio of Arac, Guron, and Scynthius. But the conductor was unable to subdue Reed, who sounds positively psychopathic in his Gama-esque ravings, not least because he strays so far from the indicated rhythms and the notated pitches.

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With more midseason drop-ins than usual, 1977 component lines are marked by some remarkable individual models.

New Products at Half Time

by Robert Long and Harold A. Rodgers

It is traditional for high fidelity manufacturers to show off in June what the boys in the back room have been dreaming up all winter. This way, production can begin in the summer for fall delivery and stocks can be built up for the most intensive selling season—which, by no coincidence, centers around the winter solstice, when nights are longest and the Great Outdoors least inviting. Major introductions of goods for mass consumption, from TV programs to automobiles, also occur in the fall, but post-solstice seasoning often is added: new programs or models, sometimes with a special glitter intended to reflect well on their meat-and-potatoes neighbors.

There is a midseason trade show for components—the Winter Consumer Electronics Show—but it never has had the importance of its June counterpart. Among the welter of digital wristwatches and TV games and CB transceivers and calculators and car radios, high fidelity has seemed a little lost.

At this year's Winter CES—despite gossip that had given it advance billing as a bust and perhaps the last such display—the high fidelity exhibits were, if anything, livelier than usual. Not that all equipment manufacturers were represented; we base our comments here on all of the new products that came to our notice during the course of January and early February.

We saw a good deal of emphasis placed on convenience features: FM signal meters that will show multipath, automatic high-blend switching (in the presence of low signal strengths), reversing cassette decks, touch tuning (in which the tuned frequency is locked on as soon as the tuning knob is released), and many more. All share the same intent—to do electronically or electromechanically some chore that the user formerly had to perform manually.

One related trend seems all to the good: the inclusion of some sort of block schematic right on the equipment. It has been commonplace for some time in professional equipment (like the Crown electronic crossover—see HF test reports, October 1975) and recently turned up in Technics and Nakamichi components. The schematic saves fishing out the owner's manual each time you have a question about the relationship between the controls or the input and output jacks. Last summer Hitachi took this idea further by outfitting a cassette deck with a front-panel block schematic that lights up to show signal routing for whatever positions the appropriate switches happen to be in. A Philips preamp adopts a similar approach this year.

We perceive, at some companies, an easing of the insistence on pushbuttons in front-panel design and a return to levers or rotary switches whose settings can be seen at a glance. Pushbuttons, we believe, leave a good deal to be desired in terms of human engineering (particularly when both they and the surrounding faceplate are black), and the alternative of using lighting indicators to tell you what is switched in and out just drives up costs. So the trend away from pushbuttons, if trend it be, looks good to us.

On the strictly cosmetic front, while the black faceplates with which so many companies regaled

On the cover: The largest unit is the Sansui QXR-9001 quadriphonic receiver. Above it is the Bozak Model 909 preamp; at the lower right, the Polk Formula IV low-mass tone arm.
us last summer and fall are still there, new products appear to be under little constraint to adhere to this trend. Many exhibit the cool, silvery styling that has been associated with Yamaha’s receiver line.

Electronics

If the big cry in receivers over the last few years has been that their performance equals that of separates, the cry this year is that the super-receivers are the equivalent of a supertuner/superamp combination. In particular, there appears to be a wattage race going on. The Marantz Model 2385, at 22⅛ dBW (185 watts) per channel, seems to have the power-number prize at the moment, though only by a tiny margin. (While 180 watts—available in the Rotel RX-1603 receiver, whose amp section really can be mounted as a separate—translates to the Rotel RX-1603 receiver, whose amp section can be mounted as a separate, totaling to 22⅛ dBW, working to the nearest Y dB, the spread between the two actually is only about ½ dB!) Power isn’t all that makes a super-receiver, however, and Marantz tends to place even more emphasis on the technical accomplishments of its tuner section than on those of its amplifier.

Toshiba—which also talks of its receivers rivaling separates—has gone back to the term tuner/amplifier and has styled its receivers so that they have the appearance of a shallow tuner sitting atop a shallow integrated amp. The tuning dial, incidentally, is tilted for easier visibility when it is below eye level. Perhaps this is something of a trend; Pioneer, Nikko, Hitachi, Sanyo, and others also have angled dials. Some lines (like the new Wintec by Monarch series, distributed by SDI) put the dial flush with the faceplate to minimize visibility problems. Others, like Sherwood and Sansui, keep recessed dials tall.

Sansui uses a light-spot “pointer” that moves both horizontally and vertically over a grid calibrated for every channel on the dial. In tuning to 92.7 MHz, for example, you turn the knob until the light spot is in the grid area for 92–93 MHz, adjust it until it coincides with the horizontal calibration for 0.7 MHz, and then do the final fine-tuning from the meters. (We should note that the light-beam coupling that has become commonplace of vacuum tubes is making something of a comeback in transistor amps: the output transformer. Both Sansui and McIntosh have reintroduced it, largely in the interests of optimizing power transfer to the speakers—not among the strong points of the direct coupling that has become commonplace of late.

There was some skepticism when, a few years ago, Harman-Kardon introduced its models with a metering subassembly that Sherwood unveiled last summer and is expecting to have on sale this spring. Perhaps the most important new feature will prove to be pilot canceling. Both Pioneer and Yamaha are using this technique—involving an out-of-phase pilot, rather than a filter—to null out the 19 kHz in stereo reception because it does not impinge on the audio itself. Response curves should look flatter at the top end, though we suspect high-frequency distortion measurements may not look as good since unwanted harmonics that are suppressed by filtering will be allowed to pass with pilot canceling. (The Yamaha receiver in this month’s test reports section seems to confirm this surmise.)

Optonica (a new component line from Sharp) has adopted “air check calibration,” apparently similar to the recording-level-check feature introduced by Pioneer last year that helps in presetting levels for recording from FM. (Since full-modulation output is the same for all stations received above marginal signal strengths, a single reference tone can be used.) Switchable IF bandwidth—allowing a tradeoff between maximum selectivity and minimum distortion—seems to be on the increase in FM tuners. And Philips has, we hope, started a ball rolling by designing one of the few real high fidelity AM sections to go with the FM in its AH-673-44 tuner.

If receiver amplifier sections are embroiled in a power race, separate amplifiers apparently have moved away from their similar noisy rivalry of a few years ago and now are immersed in what might be called a class struggle. Class AB remains the rule for solid-state amps, but Sony has introduced its Class D (switching) amplifier, using vertical FET’s, while Hitachi continues to add models incorporating the Class G configuration. (For a description of Class G, see the HF test reports section, April 1977.) Incidentally, Class G—which originally was known as Class E and now is employed in products that Hitachi calls Series E—should not be confused with System-E, a term that has been applied to vacuum tubes making something of a comeback in transistor amps: the output transformer. Both Sansui and McIntosh have reintroduced it, largely in the interests of optimizing power transfer to the speakers—not among the strong points of the direct coupling that has become commonplace of late.

There was some skepticism when, a few years ago, Harman-Kardon introduced its models with a separate power supply for each channel. The purpose—ultimate clarity and stability in the stereo image through minimum possible interaction between channels—appears to be shaping up as a major concern among other companies, notably Technics, Kenwood, and Mitsubishi. The latter’s new electronics line includes one nice touch we had not seen before: a metering subassembly that can be added to the front of a power amp, making...
Features and power have been beefed up in new top models. Marantz 2385 boasts 22 3/4 dBW (185 watts) per channel, Dolby-FM decoding, tape dubbing, multipath indication, and so on.

Most glamorous of new tuners still is Sherwood Micro CPU 100, shown here in final touch-plate cosmetics for the first time.

Block schematic, appearing on many units, may light up (as in this Philips preamp) to show the functions actually in use.

An interesting innovation is metering/control front panel that can be added to Mitsubishi power amps afterward, if you buy the unmetered model and later change your mind.

it easy to retrofit power metering and the associated functions (level controls, speaker switching) that come on the same panel.

Phono inputs seem to be claiming a good deal of attention in integrated amps and preamps. The roster of available models appropriate for low-output moving-coil pickups, with input-impedance switching and with phono gain controls (to match nonstandard pickup outputs to the other input levels handled by the preamp), continues to grow. Hegeman Labs has introduced an electronic device called the Input Probe, designed to improve the match between the pickup (or a tape deck) and the preamp input and thus improve detail, dynamic range, and stereo over that of the same components without the Probe.

Among new preamps from relatively unfamiliar companies are the Ace 3000 and 3100 (the former also is available as a kit), the Audionics BT-2, and the Bauman Research M-200, which is designed around a J-FET operational amp module. Nakamichi has revived the preamp-plus-tuner format in its Model 630, which features a huge circular tuning dial and LEDs instead of meters as tuning aids. It also has introduced the 610 integrated amp in this series, plus the new 400 series, including the Model 410 preamp. All follow the black faceplate trend.

Equalizers remain important, though there are indications that the flood of new models has slowed. Cerwin-Vega has added the DB-10, which boosts response (by either 5 or 10 dB) in the 32-Hz range while reducing response sharply below 20 Hz and leaving the range above 60 Hz virtually unaffected. And SAE recently began delivery of its parametric equalizer. But most companies seem to be thinking primarily in terms of the graphic equalizer. JVC, for example, has included a ten-band SEA in its top (JP-S7) control preamp. An all-new separate graphic equalizer comes from Klark-Teknik in England, a division of Lamb Labs.

Among Bozak's newest electronics is the Model 900 Celeste time-delay unit, whose imminence has been rumored for some time. It uses the bucket-brigade technique to create its "ambience"—and, not incidentally, undersells previous consumer time-delay devices by some $100.

In noise-reduction equipment, probably the biggest news recently was the announcement of SAE's Model 5000 impulse-noise suppressor, designed to reduce the pops and clicks that most noise-reduction techniques are powerless to combat. [See "News and Views" in this issue.] Among the more conventional models, Burwen Research has updated its Dynamic Noise Filter (both in circuitry and in styling) with the DNF-1201A.

Two other units that attracted our attention this year are not what one might normally class as high-fidelity products. One is the Rhoades Model TE-300 TV-audio tuner, which is designed to deliver
to your stereo system the best signal quality broadcasters will allow (certainly the limiting factor on fidelity here). Though other companies have talked about putting out such a product for the consumer audio market, only Rhoades seems to have accepted the challenge. The other product is, in a sense, Rhoades in reverse: It takes audio and feeds it to your TV picture as an abstract color display. It's called the Atari Video Music, and it offers (by contrast to the typical "color organ" devices of a few years ago) a fascinating range of options.

**Speakers and Headphones**

Certainly the most striking thrust of loudspeaker design at the moment is the attempt to eliminate phase anomalies from the propagated sound. This thrust probably is most closely associated in most readers' minds with the Dahlquist designs in which the drivers are positioned so that, in effect, the voice coils all fall in the same plane, and with the B&O designs in which the crossover networks (including the use of "filler drivers" where necessary) are calculated for minimum net phase shift. But there have been other essentially minimum-phase designs (the Walsh drivers from Ohm, for example), and a number of companies—from B&W in England to Technics in Japan—have recently devoted themselves to the problems involved.

Not the least of these problems is the question of the audibility of phase distortion. While inquiry continues and the mass of data grows, one can easily find all shades of engineering opinion from the classic, "It doesn't matter, particularly when you consider the phase distortion to which all program sources have been subjected before they reach the speaker," to "This is the biggest breakthrough in speaker design in years." Take your pick. And take a listen for yourself.

We sense some me-too-ism among manufacturers of minimum-phase speakers. While most of these companies appear to be making an honest attempt to solve what they honestly believe to be a real problem, we suspect that during the next year or two a few designs will adopt (at least cosmetically) the set-back drivers of minimum-phase designs for reasons that have more to do with fad sales than with engineering.

But this sort of design still represents only a small fraction of the loudspeaker market—which continues to collect new models and new companies at an astounding rate. For years we have asked ourselves how all of these newcomers can continue in business, dividing the loudspeaker market into ever smaller slices. Yet most of the new—as well as old—companies survive; that is, their products fill a need of one sort or another.

The headphone market is quite different. New brands generally offer inexpensive models and seldom have much staying power because a business based on price rather than engineering can be demolished at one stroke of a price list. Among the engineering-oriented headphone-only companies, Koss and Superex over the last decade have put a good deal of emphasis on the development of couplers by means of which reliable measurements of headphone performance could be made, anomalies of behavior discovered, and designs improved through engineering knowledge as opposed to cut-and-try guesswork.

Having done all this work, which has had immense impact on design, these companies now seem to be taking a new look at the psychoacoustics of headphone listening with a view to further refining the perceived sound image. Models like the Koss ESP-10 electrostatic and Auditor and the Superex TRL-77 are the current result.
Tape Recording

The Elcaset is being eyed, perhaps a bit suspiciously, by manufacturers of tape and decks alike. In response to questions about when—and whether—products in this format might appear, we have consistently been given answers amounting to: “It’s too early to tell.” The question, even in the minds of those executives who already have committed their companies to Elcaset production, is what sort of customer will prove receptive. The shaping of products and marketing strategies hangs on that question, and until there are some answers the Elcaset probably will bob about, at times precariously, as a trial balloon.

Among companies not yet involved with the Elcaset, the emphasis on ever-improving cassette performance and convenience makes a strong bid to undercut whatever acceptance it might attain in the consumer market. Akai, for example, has introduced a bidirectional deck, the GXC-730D. And Optonica has an indexing system called APLD (Automatic Program Locate Device) that senses the absence of signal and uses the information for random-access playback of the cassette’s contents. The system—incorporated initially into the available RT-3535 deck but also shown (in a more sophisticated form) in a feature-refulgent prototype superdeck—directly counters the “cue track” of the Elcaset, which is its proprietary mechanism for random access (though initial Elcaset decks do not make use of it). Nakamichi, meanwhile, is directing attention to increased headroom in cassette gear—a process already begun in the Model 600—and introduced the 1000-II and 700-II (upgrades of the previous Models 1000 and 700, but without resorting to the 600’s IM Suppressor) to prove its point.

Many of the new cassette decks offer bias/equalization switching for ferrichrome tapes, but this approach is by no means accepted across the board. Some deck manufacturers, in fact, claim that they cannot optimize the eq. circuits for both ferrichrome and ferric tapes without driving costs up. Their solutions: either omit ferrichrome or get by with the nearest match that the ferric-oriented curves will yield. In addition, some models (the Dokorder MK-630, for example) incorporate continuously variable bias controls, allowing a degree of “fine tuning” that is denied by discrete-position switches.

A growing number of “chrome” settings seem to be engineered, rather, for the chrome-compatible ferric tapes like TDK SA and Maxell UDXL-II. (The difference in deck adjustment between these tapes and chrome is minor—only a few dB in sensitivity.) One reason for the change may be the assumption that Japanese tape manufacturers will continue to drop chromium-dioxide formulations, at least in part because of concern over chrome pollution in that country. (It seems to us that, if chrome pollution is a key factor, it will inhibit manufacturers of ferrichromes as well, but apparently different recorder companies lay their plans on the basis of different information.) The 3M Company now has a tape comparable to UDXL-II and SA—it’s called Scotch Master II—and another ferrichrome (in addition to Classic) called Master III.

Open-reel equipment continues to keep a vanishingly low profile in moderate-priced stereo consumer wares, while remaining pre-emptively popular with those who need quasi-professional capabilities. The assault of the eight-track cartridge on home high fidelity is a thing of the past; even in low-priced equipment—AC, battery-portal, automotive, whatever—it is staggering before the relentless growth in the popularity of the cassette in all but youth-oriented products.

Record-Playing Equipment

The biggest single threat to quality music reproduction in the home, we are told by equipment manufacturers and readers on so many occasions, is poor quality control in the manufacture of discs themselves. Paradoxically, there is a great deal of really sophisticated design going into record-playing equipment these days.

Moving-coil cartridges, sometimes at astrononi-
Quartz control, in many direct-drive models, is combined by Pioneer with phase-locked loop servo in PL-570.

cal prices, continue to attract much interest among listeners devoted to the best possible disc playback, as the availability of inputs designed for these pickups demonstrates. Not all require special high-gain inputs (or pre-preamps, otherwise known as head amps), however. Two high-output moving-coil lines mentioned in our new-products roundup (September 1976)—Satin and Onlife, the latter originally announced here by BGW—have found new U.S. distributors since then. The Satin line, now distributed by Osawa & Company, has several new models; the Onlife models are available as Dynavector from Audioanalyst.

Win Laboratories, after being held back by unforeseen problems, is in production with its pickup—a strain-gauge design related to the Elophonics cartridge of some years back (and whose patents Win has acquired). Another nonstandard pickup (assuming as standard the moving-magnet or similar magnetic pickups such as those produced by Pickering, Shure, ADC, Empire, and Stanton) is the electret design from Micro-Acoustics. Its latest, the 282-e, is specifically said to “track warped records 25% better than any competitive brand cartridge and [be] immune to the effects of cable [capacitance].”

These claims hit squarely at two centers of concern: The capacitance of interconnect cables and preamp input stages has, to some extent, been lowered and standardized by CD-4, to which these values are critical; and record warps seem as much in evidence as ever. Both problems have, in a sense, been aggravated by the ever greater stylus compliance achieved over the last few years—in itself a contribution to greater fidelity but requiring better matching in associated equipment if response characteristics from infrasonic warp reproduction through audible sound to supersonic CD-4 carrier recovery are not to get out of hand.

Arm/cartridge resonance, therefore, is a major concern, particularly in tracking what one reader recently called the “frilled” discs coming out of American pressing plants. The attempt to control resonance (and response to warps) produced the plug-in arm (as opposed to a plug-in shell), a major feature of the new Thorens turntable line. Dynavector this year will be introducing its radically different arm, whose moving mass is concentrated at the very end and decoupled from the rest of the arm by a pivot just inboard of the cartridge mounting. Several ultra-lightweight arms (like the new Infinity Black Widow and the British-made Polk Formula IV) also seek to keep resonance above the warp range with high-compliance pickups by reducing moving mass.

In turntables themselves, quartz-controlled servo drive is showing up from a number of manufacturers, including Pioneer, JVC, Sansui, and Technics. While direct drive remains a glamour feature, some companies continue to maintain that they can do better, particularly in terms of infrasonic rumble, which—though too low in frequency to be heard in and of itself—can intermodulate with audible frequencies and even overload preamp input stages if RIAA boost continues below 20 Hz. Thorens, for example, says that any rumble spec that can be achieved by direct drive always can be improved upon by adding a belt to decouple the drive from the platter. A new company, Gillespie-Thorn Systems, is readying for market the Oasis turntable, using a fluid suspension system for both drive and platter “bearings.” Netronics, a company that specializes in devices to prevent acoustic feedback, has added a 78-rpm speed to its dual-suspension turntable.

Automatic features abound on top single-play models, though no new models are as automated as the ADC Accutrac introduced last year. The new Mitsubishi DP-EC1, however, includes automatic disc-diameter sensing and, coupled to it, automatic speed setting (45 for seven-inch discs, 33 for others), plus arm setdown, liftoff, return, and (if you want it) repeat. In record changers—which, of course, have by no means been eclipsed by the recent renewed interest in single-play models—there is a new/old name: Collaro. Audiophiles with long memories will recall it from the 1950s; new models will issue from Collaro in Fort Wayne, Indiana. And, as we reported in our last issue, the Elac turntables—long sold as Miracords by Benjamin—are back with new designs and distribution. Welcome.
Better fidelity is available in all price ranges this year

by Stephen Traiman

WHEREVER YOU GO and whatever you do this summer, you can take some part of the world right along with you. Keeping pace with the trend to mobility—increasing, it seems, despite OPEC and shortages—audio (and video) equipment manufacturers have greatly expanded their lines of portables. Millions of us will be able to have far better sound than ever before in our cars, boats, and tents this year—and just about all the new hardware can be plugged into any AC you have available when you arrive wherever you're going, besides being powered by a built-in rechargeable battery pack or ordinary batteries.

Stephen Traiman, a new contributor to HIGH FIDELITY, is Tape/Audio/Video Editor of Billboard magazine.
When HIGH FIDELITY covered portable sound equipment seven years ago, the entries were relatively limited; multiband radios were just coming into their own and stereo cassette recorders new to the market. Today the range is vast, from the relatively low-cost eight-track player all the way to a giant twenty-four-band radio that pulls in the most remote shortwave (and long-wave) signals, and a three-in-one radio and cassette recorder with a built-in personal-size television screen. Better sound is available in all price ranges, and because of the end of fair-trade laws, there are better bargains than ever.

Consider some of the developments in take-me-along units that could have been only dreams a few years ago:

- General Electric offers ten multiband radios, one ten-bander with FM, AM, public service, UHF; aircraft, shortwave, weather, and forty-channel CB monitoring. Panasonic counters with nine models in its military-look Tech series, topped by a twenty-four-band monster that includes SSB (single sideband) and VHF television reception—at $2,500.

- Stereo is everywhere, in deluxe cassette tape recorders and eight-track players from a dozen or more manufacturers. Most feature stereo FM/AM radios and two-way speaker systems; several include noise-reduction capability and can double as home components. Some provide “stereo enhancement” to compensate for closely spaced built-in speaker pairs.

- Eight-track recording, finding increasing acceptance in home compact and console systems, is offered in a futuristically styled globe from Weltron along with a stereo FM/AM radio.

- A three-speed phonograph is available as part of a carry-along Voyager sound system that includes a cassette recorder and FM/AM radio—all in a compact attaché case that weighs only 12 pounds.

- JVC, the first manufacturer to publicize the beefing up of its TV audio sections (via its “Hi Fi TV” campaign for three new portables last year), is equally progressive with its other portables. First it introduced the Model 3050 AM/FM/public-service radio with built-in mini-TV and found the name—Gemineye—through a nationwide contest. Now it is bringing out Model 3060, adding a cassette recorder. And in Japan, Sony has a similar unit, dubbed the Pacer, that also may show up here soon.

- Under-dash car stereo systems have long offered “demountability” for use with an AC adapter or a DC battery pack—in fact, the alarming increase in auto-equipment thefts have made easy owner removal a necessity. Last year Nakamichi and ADS (Analog & Digital Systems) came up with the first component-quality car stereo system, and this year there is increasing emphasis on performance in more conventional automotive equipment.

- Virtually every mono cassette or eight-track player with or without multiband radio offers bigger and better sound, many supplying the increasingly popular “sing-along” mike feature, mike mixing capability, and public-address adaptability.

It's impossible to cover fully the astounding variety of portable products on the market, but this sampling of some of the more innovative and multifaceted models should give you an appetite-whetting idea of what's around for audio on the go.

Multiband Radios

Almost any combination of bands imaginable is available in a long list of radio models from dozens of major manufacturers. The CB boom of the last few years has given rise to the inclusion initially of twenty-three- and now forty-channel reception capability, together with a variety of other useful bands. The moderately priced GE line of multiband units, for example, includes the Searcher (FM, AM, and public-service scanner for police, fire, other emergency calls), the Super 7 (FM, AM, PS, forty-channel CB, aircraft, weather, TV), and the top-of-the-line Model 7-2970 (a ten-band radio that adds to the foregoing a second public-service and two shortwave bands) for under $120.

Panasonic, too, has an extensive array of multi-
Panasonic RF-8000 covers twenty-four bands from 150 kHz to 230 MHz. The radio tips the scales at about 50 pounds.

Band models, ranging from around $50 to $2,500 for the RF-8000. Reminiscent of Grundig giants that have occupied hallowed places in many homes—initially in Europe and then in the U.S.—the RF-8000 FM/AM/SSB/CB portable receiver covers all broadcast frequencies between 150 kHz and 230 MHz. Included are twenty-four bands, from long-wave to VHF-TV and aircraft, with a one-touch auto-drive selector switch. There is a beat-frequency oscillator to demodulate SSB and CW (continuous wave, used for Morse code) signals, automatic noise limiting and frequency control, squelch, and connections for stereo headphones, a mono earplug, auxiliary input, recording output, external speakers, AC power, and external VHF and SW antennas.

The Panasonic jumbo boasts twin oval speakers (7 by 4 inches) with separate bass and treble controls and built-in two-rod antenna, three ferrite-core antennas, and a frame antenna. It is big (more than 20 inches) and close to 50 pounds hefty. As a portable, it requires eight D cells, plus a ninth for an electric clock and a tuning-fork battery.

**Stereo Recorders/Players**

Stereo is the big feature this season. There is a host of eight-track and cassette players and player/recorders available either as simple tape units or with a variety of multiband radio combinations. The cassette is by far the most popular recording medium; the cartridge still is immensely popular in the U.S., particularly with the young music-buying crowd. It seems that the recording capability is less important to the average eight-track buyer than to his cassette-oriented counterpart, who may (among other things) want to use his portable equipment in conjunction with really high-quality home cassette gear, the likes of which don't even exist in the eight-track camp.

Among moderately priced (in the $150 range) stereo cassette decks are the new Bigston KSQ-1020 and the Sanyo M-9950. The Bigston has AC bias and erasure, one-touch cue/review, and a three-in-one meter that functions as a recording-level, battery-power, or tuning indicator, plus a variable monitor control during recording from radio, and a mixing switch for input from optional mikes. The Sanyo, actually a step down from Model M-9980 that offers twin two-way speaker systems with 5-inch woofers and 2-inch tweeters, includes two 5-inch full-range speakers, dual-function meter (showing recording level and battery charge), and a control to widen apparent stereo separation.

Among more deluxe models is the new top-of-the-line Panasonic RS-466S with stereo FM/AM radio, twin 5-inch speakers, 6-dBW (4-watt) output power, lockable mechanical pause/cue/review controls, level/battery/tuning meter, and mike mixing. The unit has a sleep switch that doubles as an automatic timer, and a variety of jacks for inputs—mikes, line-in, line-out, and external speakers, plus AC-in, DC-in, remote amplification, and headphones.

In the CRS-1800 stereo FM/AM radio recorder, Superscope has updated its CR-2000 with a mechanism that shuts off all modes of operation at the end of the tape. It features what the company calls "matrix stereo" enhancement—as opposed to the
"discrete stereo" delivered by the separate amplifiers that drive optional external speakers that can be placed for best stereo imaging.

The new model is at the same moderately high price level (around $200) as the CRS-152, a unique portable that offers a condenser mike built into each of two detachable speakers to afford maximum separation in recording and playback. Both Superscope models offer four-way powering, including an optional rechargeable battery pack.

Moving up further in price and features, we find the Voyager Calypso imported by Keith Ian Company, in a compact (13 1/2 inches wide) package weighing just 10 1/2 pounds. Among its properties are a mono/stereo/stereo-wide switch (the last to enhance apparent separation), fully automatic shutoff, automatic level and frequency controls, an antibeat feature for recording off the air, mike mixing, two built-in electret condenser mikes, plus AM, FM (including stereo), and two SW bands.

The Rolls-Royce category in battery-portable cassette equipment is, of course, the "professional" stereo deck for in-the-field use. HF has reported on samples from Teac, Sony, Nakamichi, and JVC. JVC's KD-2, for example, incorporates that company's own Super ANRS noise reduction and Sen-Alloy head and operates for up to twelve hours on D cells (120-volt AC and 6-volt DC are usable as alternative power sources).

There is, again, nothing comparable in eight-track equipment. (Nor should you expect there to be since the technical limitations of the endless-loop cartridge are inherently more severe than those of the cassette.) The emphasis is squarely on price and convenience.

Emerson has introduced one of the real bargains (about $50) in the PT-95, replacing its original Super 8 mono player. This compact (8 1/8 inches in its largest dimension) model has dual 3-inch speakers, lighted program indicators, and automatic and manual program change, and it operates on AC, batteries, or an optional 12-volt car/boat adapter.

GE's new eight-track model, 3-5531, features stereo FM/AM radio plus slider tone and volume controls, a stereo-enhancement switch, automatic/manual program advance, and a program repeat feature, plus twin 4-inch speakers and a moderate price—just over $100. At a somewhat higher price, you'll find the first of three Weltron futuristic globes. Model 2001. This stereo FM/AM radio-cum-eight-track player has two built-in 6-inch dynamic speakers, a semicircular, speedometer-style AM/FM station indicator, battery power indicator, and sliding controls for speaker balance, tone, and volume.

Striking again on the value front, Emerson offers the new PTR-505 stereo FM/AM radio and eight-track player. The stereo cartridge system provides pause, recording, fast forward, auto-stop, and program-selector controls, as well as an illuminated recording level meter, rotary microphone mix control, and a quite satisfactory mike.

The newest of the Weltron globes, Model 2010, adds recording to Model 2001 from its radio, from a phonograph, or via the microphone. The 15-pound deck includes a battery-powered tuning/recording-level meter, push-button tape controls, and sliding volume (left and right), bass, and treble controls.

"Big Sound" Playback

Virtually every new mono eight-track or cassette player features louder—and better—sound, meaning better clarity and fidelity, even at the low end of the price spectrum. Panasonic put its stamp on public consciousness by promoting its Dynamite 8 cartridge player using the talents of Jimmy (Good Times) Walker with his "dyn-o-mite!"; the Take 'n' Tape cassette player was added to the campaign as well.

GE is emulating that successful effort on behalf of its "big sound" portables, a line that began two years ago with the Loudmouth eight-track player with 6½-inch woofer and 2¾-inch tweeter. Showoff, an upgraded model incorporating AM/FM radio, was joined by the Music Machine, including a cassette recorder and using a 6-inch woofer and "overdrive volume boost control" with a claimed "twice output increase. All three models incorporate sing-along mikes and public-address capability.

Another new low-priced portable cassette recorder with FM/AM radio is the Panasonic RQ-516S. It has auto-stop, built-in condenser mike, sound monitor on/off switch, and AC/battery op-

Model CR-3520, Superscope's top AM/FM radio/cassette recorder combination, offers full mixing and tape speed control.
eration (6-volt DC or four C cells), plus a circular radio tuning dial with enlarging lens and a 3½-inch speaker.

In the moderate price range ($130-160), a quartet of cassette recorder/multiband radios are particularly interesting. The JVC RC-515 offers FM, AM, and three SW bands plus a device that adds fine tuning of SW. Other features include a 6½-inch dual-cone speaker, mike mixing, sleep switch, and a switch to eliminate beat noise while recording from radio. The Sanyo M-9600 has a 2½-dBW (4-watt) amplifier, 6-inch dual-cone speaker, mike mixing with fader control and public-address capability, in combination with an AM/FM/SW radio. It also has a three-way meter, ALC, AFC with defeat, auto-stop, and a memory digital tape counter and review function that provides automatic rewind and playback of any preset passage.

GE has six multiband radio/cassette combinations, but the initial model in its Monogram series is perhaps the most popular. Model 3-5250 plays and records from FM, AM, PS, aircraft, and weather bands and has a 4-inch speaker and multiple-function meter. It also provides a built-in electret condenser plus a remote mike for "sing-along" function. The JVC RC-443 combines a 3-dBW (2-watt) power output with sound mixing, public-address capability, and a memory rewind, plus an oval speaker (6 by 9 inches) for both cassette play and reception from FM, AM, and two SW bands. Added versatility in mixing comes from an independent external mike level control, plus a mixing volume control.

In the higher price range are the new Centrex RK-888 from Pioneer of America and the Superscope CR-3520. The Pioneer has a stylish top-mounted control panel along with 43A-dBW (3-watt) power output and a two-way (6-inch woofer and 1¼-inch tweeter) speaker system. The recorder has a wide-range permalloy head, pause/cue/review, memory rewind, and fully automatic stop.

Superscope's new top-of-the-line mono FM/AM radio/recorder also offers a two-way speaker system: a 6-inch woofer and 2-inch tweeter. There is full mixing with a mike level control, a multipurpose meter, automatic stop, pause control, and sliding bass, treble, and volume controls. The radio section has FM muting and an LED tuning indicator.

**"One-of-a-Kind" Units**

The Voyager carry-along stereo sound system imported by Keith Ian, surprisingly moderate in price (under $200), is built into a trim 12-pound attaché case. Available with an AM/FM or AM/SW radio, the system includes attached oval (4 by 2½ inches) speakers, a three-speed phonograph, and a cassette recorder sporting such features as a beat-cutter filter and two mike jacks. The four-way power supply includes 120/220-volt AC, 6-volt DC, or battery (four D cells).

JVC's Model 3060 audio/video package offers a high-performance AM/FM radio with ceramic IF filters and a 4½-inch speaker, plus a cassette recorder and tiny (3-inch diagonal) TV screen. The recorder features a sensitive built-in condenser mike, full mike mixing, automatic level control, tape-end stop, a multipurpose meter, simplified cue/review push tabs, and a sleep switch. The all-channel TV has a unique switch that inverts the picture for easier viewing, and the compact, 11½-pound unit operates on AC with built-in adapter or six D cells, an optional nicad rechargeable battery pack, or DC car/boat/plane systems.

At the very high end (around $700) of the portable market stands the Nakamichi/ADS car stereo system. Using the same transport found in the Nakamichi 500 and 550 decks, the top-load cassette player-only offers chrome/normal tape switching, Dolby, and a built-in preamp with volume, balance, and tone controls. Developed from the ADS 2001 speaker technology, the ADS 2002 also is a bi-amplified system with power amps built into the miniature (7 by 4½ by 5 inches) speaker enclosures. Each has a super-long-exursion 4-inch woofer and a 1-inch soft-dome tweeter. An optional AC adapter brings the system indoors.

Attentiveness while buying portables could pay off in a more carefree trip or vacation. Check the warranty to determine whether it's "full" or "limited," as the new Federal Warranty Act clearly spells out the terms a manufacturer must meet. Then test each function and operating mode fully before leaving on that first trip, to be sure that all systems are really go. And be sure to have that spare battery set, or sets, along—they always seem to go dead when you're far from a store, and nothing is more frustrating. Beyond that, with your choice from among the most extensive range of portables ever available, there should be little to do but enjoy.
In 1969, the United States government issued a patent for a loudspeaker design that was different from an ordinary loudspeaker as a laser is from an ordinary lightbulb.

It was a loudspeaker that could accurately reproduce the entire audio frequency range with a single dynamic driver operating as a wave transmission line. Because of this unique configuration, the loudspeaker would be free of the phase, time, and transient distortions common to all conventional multi-driver "piston-type" speaker systems. In other words, the first loudspeaker that wouldn't sound like a loudspeaker.

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Dischi Ricordi. The name of Italy’s most famous music publisher has not graced any new classical recordings since the series of operas (including Medea with Callas) coproduced with Mercury more than fifteen years ago. But last December, Dischi Ricordi issued twelve discs in a series that will continue in September with twenty more. I Classics, as the series is appropriately called, is the brainchild of Jürg Grand, a Swiss who came to this undertaking from EMI and DG. While with DG, from 1969 to 1975, he persuaded the company to take on Pollini (now its top seller in Italy after Karajan). Accardo, and, in greater quantity than planned, Abbado. When we heard of Grand’s plans, we asked correspondent Susan Gould to find out what he was up to.

When he decided to go into production on his own, Grand told Ms. Gould, he approached various artists in three categories. “First, Italian artists: There are 55 million Italians, and I want them to know that there are Italian pianists besides Pollini and Michelangeli. I consider Maria Tipo—a Neapolitan who studied with her mother, a pupil of Busoni—the greatest living female pianist after one I will not name. She had a fantastic beginning, winning the Geneva competition at seventeen, but was then used by impresarios and abandoned when she decided to take time off to study more. Her two records, of Scarlatti and Schumann, are tremendously important. Then there is Bruno Mezzana, whose only mistake is to live in Trent and not Milan; he studied with Michelangeli, and his recording of Liszt’s piano version of Berlioz’ Symphonie fantastique is the first ever. Of Dino Ciani, whose death in an auto crash in 1974 was a terrible loss, we have two discs of Weber sonatas, and with Bruno Camino, an outstanding pianist (heard as a member of the Trio di Milano in a Schubert trio disc), we’ve done two discs of Mozart variations.

“Second, I want to give famous artists the chance to do things they cannot not with their regular companies because someone else has, and to do them at the right artistic moment of their careers: Abbado conducts the Brandenburgs with the soloists of La Scala; Martha Argerich plays Schumann’s C major Fantasy and Fantasiestücke, Op. 12.

“Then, I want to give young artists a first chance. If I hear of someone promising, I will run to hear him and not wait until he comes to Milan, as the big companies do. The Quintetto Italiano, a piano quintet that specializes in contemporary repertory, was formed only in 1974 by Mezzana, of whom I was just speaking, with violinists Margit Spirk and Franco Mennella, violist Carla Pedrolli, and cellist Donna Maggioranzo Guarino. They have recorded Weber’s quintet for piano and strings and his piano-quintet arrangement of Schoenberg’s Chamber Symphony, Op. 9.”

Grand makes the recordings himself, with the best available facilities in carefully selected sites (halls, churches, etc.), then presents Ricordi with the tapes, at which point the work becomes the company’s for pressing, packaging, promotion, and distribution. “So far, my taste has proven reliable, the artists trust me, and it is I, not Ricordi, who pay for everything, including the performers themselves. I hope to create something like the Erato series, which began with the Charpentier Te Deum published as PR for their music books but had such enormous success it even became the theme for the Eurovision TV productions, and so they went on to recording, especially of French artists. Obviously Ricordi is confident in the project: My original contract was for only a minimum of seven records in a year, but I did twelve and now have a contract for twenty in eighteen months. I can’t wait for distribution to begin outside Italy.”

The final choice of an international distributor rests solely with Grand, and when he spoke to Ms. Gould he was still trying to decide among three contenders. We hope to have further word in the near future.

Cleveland Beethoven. The Cleveland Quartet is at work on a complete cycle of the Beethoven string quartets for RCA. Begun in December 1974, the project is scheduled for completion in time for late-1978 or early-1979 release (probably as an eleven-disc set) to mark the group’s tenth anniversary.

The Doge in Milan. Despite his resignation as music director of La Scala, Claudio Abbado has returned to Milan to continue the DG series of Verdi recordings begun a year before with Macbeth. The new recording is Simon Boccanegra, again with Piero Cappuccilli in the title role; the other principals are Mirella Freni (Amelia), José Carreras (Adorno), Nicolai Ghiaurov (Fiesco), Jose van Dam (Paolo), and Giovanni Foiani (Pietro).
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Justin Hurwitz's test report: "We doubt that any other $15 investment could make such an improvement in a record-sounding system."

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**Lieder-singer Bailey.** In the same sea-son that brought his Met debut as Hans Sachs, followed by his other great specialty, Wotan, baritone Norman Bailey has made his first Lieder record, for the British Saga label (distributed here by CMS). Included are Beethoven's An die ferne Geliebte, Brahms's Four Serious Songs, and six Schumann songs—among them "Widmung," "Die beiden Grenadire," "Ich
grolle nicht," and a rarely heard Heine setting, "Belsatzur."

**Louise (continued).** Just as Columbia's premiere stereo recording of Charpentier's Louise reached the stores, word came that a second would be made this summer in London. Beverly Sills will sing the title role (following a series of performances at the New York City Opera). Nicolai Gedda is slated for Julien, with Mignon Dunn and Jose van Dam as Louise's parents. Julius Rudel will conduct.

**Haitink in London.** The Haitink/Philips recordings of the Beethoven piano concertos (with Alfred Brendel) and triple concerto (with the Beaux Arts Trio) are with the London Philharmonic—not the Concertgebouw, as reported in February.

**Otello at the Met.** Once again this year the Metropolitan Opera is offering a broadcast recording to contributors of $100 or more to the Metropolitan Opera Fund. The new recording is Verdi's Otello, from the broadcast of February 24, 1940, with Giovanni Martinelli in the title role, Elisabeth Rethberg as Desdemona, and Lawrence Tibbett as Iago; the conductor is Ettore Panizza. (Contributors may choose instead one of two earlier issues: the 1941 Tristan und Isolde with Kirsten Flagstad, Lauritz Melchior, Kerstin Thorborg, Julius Hunehn, and Alexander Kipnis, or the 1946 Madama Butterfly with Licia Albanese and James Melton.)

Contributions should go to the Metropolitan Opera Fund, Box 590, New York, N.Y. 10023.

**Rare records.** Some help is now available to collectors seeking "records and tapes of one's favorite artists, conductors, of historic broadcasts, of special recitals, of out-of-print or rare issues." The Record/Tape Collector's Directory is a thirty-two-page booklet listing "over 100 addresses," with descriptions, of sources for such records and tapes in the U.S. and Europe. It costs $4.95, from Record/Tape Col-lector's Directory, 550 E. Rustic Rd., Santa Monica, Calif. 90402.

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**High Fidelity Magazine**

**Symphonies.** Nos. 1 and 5 have already been released in Europe.
Here's How Dolby FM Gives You: More Signal↑ Less Noise↓

These curves show the improvement in maximum high-frequency output level with Dolby FM. Contemporary wide-range program material will not "fit" under the 100% modulation limit of the 75 microsecond conventional FM curve; the signal must be high-frequency limited (or reduced in overall level) enough to do so. Such program material will, however, fit under the 25 microsecond Dolby FM curve. (Note that these curves are maximum output curves; they are not frequency response curves in the normal sense. At low modulation levels both curves would be flat to 15 kHz.)

All curves were made on a typical new stereo receiver with full Dolby FM decoding capability. The receiver was driven from the rf output of a Sound Technology 1000A FM signal generator, operating at a frequency of 97 MHz. The rf level was set at 100 μV at the 300 ohm antenna input terminals of the receiver.

For the maximum high-frequency output curves, the output of a B&K 1024 audio sweep oscillator was fed into the FM generator at a level giving 100% FM modulation at all frequencies (±75 kHz deviation, including 19 kHz multiplex pilot). One stereo channel of the receiver (tape output) was fed directly into a B&K 2305 chart recorder. The Dolby FM/conventional FM switch on the receiver was then operated to give the two recordings shown.

For the noise level curves, the audio input to the FM generator was switched off. The receiver output was fed to a Radiometer FRA 3 wave analyzer which was coupled to the chart recorder and calibrated to give a flat chart recording with pink noise input. The Dolby FM/conventional FM switch on the receiver was then operated to produce the two noise spectrum recordings shown.

In all of the chart recordings note that there is a sharp drop in response above 15 kHz. This is normal for all FM receivers and is caused by the filters necessary for rejection of the 19 kHz and 38 kHz multiplex components.

These chart recordings show the noise reduction effect of Dolby FM. The top curve is the noise spectrum of conventional 75 microsecond FM. The bottom curve shows the reduced noise level of Dolby FM.

These chart recordings show how the Dolby FM technique increases the available high frequency dynamic range of FM broadcasting.

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To find out more about this new development, please write to us for further details. The following information is available:
1. Explanations and technical details on Dolby FM.
2. A list of stations with Dolby FM encoder units (160 stations).
3. A list of receivers with built-in Dolby FM circuits (45 models).

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—Derrick Henry, Record Review

The ABC Classics scheduled for the coming months.


The Real Kurt Weill

The London Sinfonietta's DG set of vocal and instrumental works is a landmark in the appreciation of a twentieth-century master.

by Andrew Porter

In an introductory note to this album, David Drew says: "Whether you care to mention Weill in the same breath as Hindemith or as Holländer, as Copland or as Cole Porter, whether you see him as an outstanding German composer who somehow lost his voice when he settled in America or as an outstanding Broadway composer who somehow contrived to write a hit-show called The Threepenny Opera during his obscure and probably misspent Berlin youth... whether you feel him to be important or negligible, whether you love his music or detest it, admire it or despise it—you may rest assured that you are by no means alone."

Perhaps Drew draws his limits too closely. Whether, I would add, like a former professor at London's Royal College of Music, you are prepared to hold up Weill as an example of positively evil music, or whether, like me, you find him one of the four or five great twentieth-century composers whose music means most to you; whose melodies, harmonies, and instrumental sounds get under your skin and into your soul, make you weep for the injuries men do to
men and then laugh because goodness and generosity survive; whose sounds inspire you to lofty resolve... In any event, only the dull of soul and ear can remain indifferent to Kurt Weill. This Deutsche Grammophon album, containing works of his composed between 1924 and 1929, is a landmark in the rediscovery of a composer whose music the Nazis tried to destroy (and literally destroyed, when all the scores and materials they could get hold of were burnt). The earlier, as-it-were composite landmark consisted of the Dreigroschenoper, Mahagonny, Happy End, and Seven Deadly Sins recordings made by Columbia in the 50s with Lotte Lenya as their heroine—Weill-Brecht compositions from 1928 to 1933.

The success of those sets did not altogether destroy two misconceptions about Kurt Weill's music: that it was to be prized, with almost camp appreciation, as a nostalgic evocation of pre-Nazi Berlin; and that Brecht was the dominant partner in the collaboration and dropped Weill when he found in Hanns Eisler an artistically more congenial and musically less emphatic minstrel to set his verses. The first misconception (coupled—in all respect for Lenya's brilliant artistry, it still needs to be said—with the transpositions that Lenya had to make at the time of the recordings) also prompted the use of cabaret and otherwise unsuitable singers in Weill's lyric soprano roles: Covent Garden performed The Seven Deadly Sins with Georgia Brown as the singing Anna; she had to be amplified, and she put everything down a fourth. The City Ballet billed Bette Midler in the role, instead of engaging someone like Judith Blegen.

But in this DG album "all the songs are given to the voices which the composer had in mind, and are performed in the original keys with the original instrumentation." If a Stravinsky or a Schoenberg album were in question, such a declaration would hardly be necessary. But to anyone who has not previously heard "Surabaya-Johnny" or "The Song of Mandalay" (from Happy End) as Weill originally composed it, the version here should come as a revelation. In Happy End and in the Mahagonny Songspiel the colorful, incisive, piquant, scalp-pricking performance of the London Sinfonietta under David Atherton is what one notices first.

The Sinfonietta was founded nine years ago in the belief that a large musical city needs a regular orchestra whose members are adept at, specialize in, and enjoy playing contemporary music. (Saint Paul is the only American city I know similarly blessed.) Few major living composers have not worked with or composed for the Sinfonietta, and its "retrospectives" are also famous: of Roberto Gerhard, of Schoenberg (preserved in the five-disc Decca/London album), and now of Weill. At the 1975 Berlin Festival the Sinfonietta was invited to provide Weill memorial concerts (the seventy-fifth anniversary of his birth and twenty-fifth of his death), and the album under review is a direct outcome of those; this spring it is giving a fuller series of Weill concerts in London.
The British singers may not command so immediate an acceptance. But perhaps I am prejudiced. There is in all of them a kind of soft grain to the timbre, a reluctance to hit the words hard and keep the tone forward, traces of what Anna Russell once wickedly parodied as the nymphs-and-shepherds manner, that is not to my taste in this music (or, for that matter, in any music except a few Victorian pieces composed with King's College mellifluousness in mind). Sometimes the soloists assume a slinky and sometimes a tough manner, and either way there seems to be a trace of archness and self-consciousness about it.

But those are first impressions. It is also apparent that, in addition, they know and love what the music is about. The style is honestly and enthusiastically adopted, even though the essentially English temperament beneath can't quite be concealed. I wish that Michael Rippon, the bass in Vom Tod im Wald, did not sound quite so much like an Englishman imitating Fischer-Dieskau; that Benjamin Luxon in his vigorous performance of "Mandalay" focused on the real notes more precisely; that Meriel Dickinson and Mary Thomas were not quite so coy of timbre in the "Alabama" song.

Weill, a colleague remarks, needs to be sung as well as Mozart. Part of the trouble, I suppose, is that one might not want to hear these particular voices in Mozart either. Nevertheless, the coupling of the singers' committed, imaginative approach and the brilliant, eloquent Sinfonietta accompaniments (Atherton has the same sort of rhythmic bite that we hear in Weill's own piano playing) does prove highly impressive and in the end very moving.

The earliest work here is the Violin Concerto (1924), a fascinating piece that has links with the neo-classical Hindemith and Stravinsky, and yet stronger links with Mahler's disquieting world as—in the words of T. W. Adorno—it "calls everything secure and playful into question." The piece stands isolated and alien: that is, in the right place." Nona Lindell's performance stresses the lyricism, the poetic quality. The orchestral playing is bright, the recording not at all fierce.

Der Protagonist, a one-act opera, appeared in 1925. The pantomime from it, for wind instruments (a stage band of eight), has a bawdy scenario; musically it is a theme with eight variations and finale well worth hearing in its own right. Winds again plus solo bass (Mr. Rippon) are the forces of Vom Tod im Wald, a very powerful Brecht poem (he later took it into Bau! in a very powerful and beautiful setting. Vom Tod im Wald also began the Berlin Requiem in Weill's original score for it, but was removed before the first performance (1929). The Requiem is sung from the score that Drew reconstructed for the BBC revival of 1968, here with three solo voices and the orchestra of winds, drums, guitar, banjo, and harmonium. It was composed for broadcasting—one of the first major commissions of the kind—and its simple strength may reflect the simpler radio technology of the day. I believe it to be a masterpiece.

The Mahagonny Songspiel (1927) is, of course, the germ of the Mahagonny opera, but a very different work—a suite of six vocal numbers and three instrumen mental interludes, without any connected plot. (It should not be confused with that other "Little Mahagonny," which is a potted version of the opera, rearranged and rescored, not by Weill.) Here the composer starts to form his "song style." The songs of Happy End (1929)—and of The Seven Deadly Sins (1933)—are even more highly developed.

In Happy End, songs and play are not very closely linked; for concert performance, Drew has regrouped the former in a three-part sequence (Songs of Hell-Fire and Repentance/Songs of Love and Innocence/Songs of the Rival Armies), which forms a very happy presentation of some of Weill's most original, inspired, and affecting music. "Bilbao" is missing, which seems a great pity. ("It resists musically satisfactory incorporation in a suitelike structure.") But the shattering "Hosanna Rockefeller," absent from the published vocal score, is here: this is the number that caused an uproar at the first performance. ("Enrich the rich with your riches! Hosanna Rockefeller! Hosanna, Henry Ford! Hosanna, God's own Word! Hosanna, Right and Might!")

The Kleine Dreigroschenmusik, or wind suite from The Threepenny Opera, hardly needs any introduction. In the nursery, I had a disc of Klemperer's early recording of numbers from it (he conducted the premiere, in 1929), and, accustomed to the timbre of that tubby old Polydor recording, I had to adjust to the brightness of the Sinfonietta version. Drew's album notes, which provide informative, stimulating, and enlightening comment on all the pieces, are particularly valuable here as they point out the important ways in which the suite is more than a collection of numbers from the show rescored. This album presents the instrumental Weill, the Weill of the cantatas, and the Weill of the dramatic songs—one musical personality working in three different veins. The last of them is the best known—and I think it can be argued that it was in this vein that Weill made his most original, most distinctive contribution to our musical experience. On that count, the new album is valuable, both in its own right and as a corrective to the musically unworthy versions of the songs—transposed, reharmonized, accompanied by whatever forces happen to be available—which are so often heard.

On the other two counts it is perhaps more valuable still. I hope that other albums follow: We need the early Recordare, The Lindbergh Flight, and much else. That the City Opera should be playing Street Scene (as once it did) hardly needs saying. That the two symphonies should be in the symphonic repertoire must be plain to anyone who has heard the records of them. But that the Met should be doing Die Bürgerschaft is a claim perhaps hard to make until the whole of Weill's achievement becomes as widely known to the public as it deserves to be.

Weill: Vocal and Instrumental Works. Meriel Dickinson and Mary Thomas, mezzo-soprano, Philip Langridge and Ian Partridge, tenors; Benjamin Luxon, baritone; Michael Rippon, bass; Nona Liddell, violin; London Sinfonietta, David Atherton, cond. [Rudolf Werner, prod.] Deutsche Grammophon 2709 064, $23.94 (three discs, musical sequence)

A Poignant Backdrop for Cinematic Horrors

Pino Donaggio's ingeniously underplayed score for Brian de Palma's suspenseful Carrie heralds a major film-music talent.

by Royal S. Brown

ALTHOUGH A RELATIVE NEWCOMER, film director Brian de Palma has a streak going that is quite rare in the movie business: The musical score for each of his last four films has made it to disc.

Of course, A&M's release of Paul Williams' music for the 1974 Phantom of the Paradise (SP 3653) was not a surprise, since it is a pop-rock score. But De Palma was the first American auteur since Alfred Hitchcock to use the late Bernard Herrmann. Ironically, it took two years and a one-man operation to get on record Herrmann's brilliant score for the 1973 Sisters (Entr'acte ERQ 7001, May 1975), the first film in De Palma's recent suspense-oriented phase. London Phase-4 wasted little time in bringing out the Herrmann music for Obsession (SPC 21160, November 1976), though it had taken the film a good year to get into distribution after its completion in the summer of 1975.

No doubt the musical score for Carrie owes its quick release on United Artists to the immense popularity of the movie, a devastatingly effective suspense-tragedy. Pino Donaggio, a thirty-five year-old Italian composer residing in Venice, is all but unknown in this country. He had, however, scored another suspense film (also with psychic-phenomena overtones) before Carrie. Nicholas Roeg's Don't Look Now and it was because of this music that De Palma chose him.

De Palma told me in a conversation last December that he would have used Herrmann for the third time had the composer still been alive, so it is not surprising that the Carrie score evokes Herrmann more than once. Every so often the soundtrack hints at the Psycho violin shrieks (not heard on this recording), and there are allusions to the Sisters music. In a more general way, the sustained strings-against-strings heard in the "Mother at the Top of the Stairs" sequence bring to mind one of Herrmann's favorite devices.

But as much as I respect Herrmann's immense talents, I do not feel he would have been the right man to do Carrie. One of my complaints about Obsession was that the excessively serious score got locked in a death grip with De Palma's unaccountably humorless and heavy-handed direction, so much so that the film and music never got out of each other's way. Donaggio's score, by contrast, does not try to create constant suspense and drama. Instead of suggesting catastrophe around every corner, the music often has a poignant simplicity that highlights the deep, and very sad, human dimension so skillfully built up by De Palma. The title theme, for instance, is an ingenuous flute solo played over sustained, slowly modulating harmonies vaguely reminiscent of Georges Delerue, but with much more bite.

Another good example of the score's use of understatement can be found in the climactic scene after Carrie (Sissy Spacek) returns home from the prom. Rather than pulling out all the stops to accompany the violence that occurs, Donaggio uses a sad little ostinato (played principally on the piano) that de-emphasizes the violence and greatly enhances the viewer's involvement with the heroine. For part of this scene, in fact, Donaggio had originally composed something even more lyrical, following his tendency to go in just the opposite direction when there is a large amount of suspense or terror. De Palma got him to write music with "more drive" without sacrificing the basic character, and the result quite simply drains the emotions. Also perfect for the film are the brass chorales evoking the pervasive religious atmosphere in Carrie's home and the majestic full-orchestra chorale that melts away into low-string unisons and a chilling electronic vibrato as the house collapses.

As is usual on recent soundtrack recordings, this album contains two vocals. The first ("I Never Dreamed Someone like You Could Love Someone like Me") is heard during the prom scene and has very appropriate lyrics (by Merrit Malloy). The second, a vocal setting of the title theme, is fortunately never heard in the picture—its lyrics (also by Malloy) are quite inappropriate. Both are breathily but nicely sung by Katie Irving.

Besides musically documenting one of 1976's best films, this excellently recorded album introduces a major talent in film scoring. As De Palma said, "I have great belief that Donaggio is going to be one of the best, because he's so good already." I agree wholeheartedly.

BACH: Canons on the First Eight Bass Notes of the "Goldberg" Aria. For a review, see page 84.

BRAHMS: Symphony No. 1, in C minor, Op. 68. Cleveland Orchestra, Lorin Maazel, cond. [Michael Woolcok, prod.] LONDON CS 7007, $6.98. Tape: CA CS5 7007, $7.95. After the broad introduction, Maazel begins the exposition of the First Symphony at a lusty speed, but within a couple of measures the pace slackens abruptly. Then, most curiously, when he observes the rarely taken repeat the exposition begins again without the initial brisk tempo. It goes that way throughout. A Luftpause here, a sudden emergence of some textural strand there, but no balancing of such details at analogous structural points. The reading turns into a series of random happenings, with orchestral playing to match. For aficionados of the first-movement repeat, the excellent Kertesz/Vienna version (CS 6836) can be safely recommended. Levine's Chicago recording (RCA ARL 1-1326) is an object lesson in coherent virtuosity, American-style, and in urgent freshness of conception. For those who prefer Old World dignity, Haitink and the Concertgebouw (Philips 6500 519) speak a traditional tongue. By the time these words appear in print, a new orchestral work will have been introduced—and recorded—by Boulez and the New York Philharmonic.

In the Brass Quintet, the metaphors of conversation—discussion, argument, and so on—that some of us have applied to the string quartets still retain some applicability, but there are special twists to the work's progress. Among the five individuals, one (the horn) is "more individual"—at times downright obstreperous. During the earlier course of the piece, the instruments take turns teaming up in contrasting duos and trios that alternate and overlap with sections in which each concentrates on his particular vocabulary of materials. Eventually the horn asserts himself strongly, in a cadenza to which the others respond with fierce and startling octaves. A second kind of climax is then reached by all five together (that is, "separately together," in the usual Carter sense), after which they fall back on the slow music that, since the beginning, has been heard frequently in the background. This time the sustained notes form rich harmonies rising to an eloquent climax. This communal effort dissolves, but after recalling earlier arguments the characters in this drama do agree to settle on crescendo trills for an ending.

The writing throughout makes fantastic
demands, both on the players' command of their instruments and on their rhythmic fluency. Brasses are by nature exuberant, and there is hoisterous music—but also other kinds: Imagine trumpets slithering their way through the characteristic Carter score, evoking passagework that we know from the string quartets or the keyboard music. At another extreme, the warmth of the slow movement recalls the solemn chorales that lie at the heart of the Double Concerto. The Carter Brass Quintet is a challenge, and tonal blend, it will be very hard to assemble, fluency, rhythmic and dynamic control, and as a token of gratitude, the quintet who commissioned the piece. Its performance is simply amazing: In terms of ensemble, fluency, rhythm and dynamic control, and tonal blend, it will be very hard to re-create. As a token of gratitude, the quintet received from Carter a Christmas present, in the form of a splendid setting of Purcell's famous five-part Fantasia on One Note, which concludes the present set. Between the two brass pieces are sandwiched Carter's Eight Pieces for Timpani, a percussion parallel to the Eight Etudes for Wind Quartet. Six of these were written in 1949 and revised in 1966, at which time the other two (for pedal timpani) were added to make the present set. They can be a brave show in concert, where the player is visible (and these days most percussionists have cultivated a degree of visible showmanship)—although Carter asks in the score that not more than four be played at one time. I think this is worth keeping in mind when listening to the record: although the pieces are quite different, the medium is a robustly gutty sonorities eventually tend—of course to emerge as a solo instrument around the time of the continuo part by a harpsichord and second cello; and for the use of all period or replica period instruments, including even the cello bows. Better still, the young Pleeth's performances are authoritative straightforward, he is deftly if less boldly accompanied, and the close, vividly sonorous recording is powerfully realistic. Add a four-page trilingual notes-booklet that includes a facsimile of the original edition's title page, and we obviously have an invaluable discographic document.

But after having given it due honor, it must be added that the music itself, for all its harmonies and orchestrations, is not particularly interesting melodically or rhythmically. And the initially arresting robustly gutty sonorities eventually tend—of course to become wearisome. R.D.D.


The Marriner all-Handel discography for Argo and Angel is becoming impressive quantitatively (three sets and five singles in the current SCHWANN-1 catalog), but it is even more impressive qualitatively. Marriner and his Academy players have the rare knack of generally coming at least close to satisfying musicologists in their insatiable search for stylistic historical authenticity while at the same time infecting nonspecialist listeners with their own relish for the music itself.

The present program is no exception. And while the very early Agrippina Overture has been recorded before (notably by Richter for DG), as have these two of the three concerti a due cori (usually as fillers for Royal Fireworks Music releases), I've never heard any of them played with more piquancy and gusto or recorded with more vivid presence (in stereo only, as well as in quadraphonic playback). That's true, too, of the program's novelty, the first recorded version of the grandly expansive and excitingly driving overture to the 1734 opera Arianna in Creto. For everyone who shares my conviction that Handel's music at its best is incomparably satisfying and involving, this disc is not to be missed! R.D.D.
HINDEMITH: Sonatas for Brass and Piano. Philadelphia Brass Ensemble members, Glenn Gould, piano. [Andrew Kazdin, prod.] COLUMBIA M2 33971, $13.98 (two discs) Sonatas for Horn (Mason Jones), for Bass Tuba (Abe Torchinsky); for Trumpet (Gilbert Johnson); for Alto Horn (Mason Jones); for Trombone (Henry Charles Smith).

Hindemith was well suited to the writing of duo sonatas. A master at sustaining tension by juxtaposing diverse materials, he also got great mileage out of ear-warming, open-interval chords ideal for highlighting an instrumental line. Many of these instrumental lines are ingratiating melodies whose frequent reappearances within generally transparent, neoclassic structures have a particularly pleasing effect, like the return of welcome friends.

The three-movement horn sonata of 1939 is one of Hindemith's most characteristic. Strong, flowing themes immediately assert themselves; delicate, haunting figures in the piano set into the background; there is a constant sense of movement. The much brasher trumpet sonata from the same year uses the solo instrument's full expressive range, from militaristic flourishes to elegiac lyricism, while the piano favors stark octaves over chordal figures. The 1941 trombone sonata is the most modern-sounding of the five works in this set, with its eye-opening, wide-interval leaps from the trombone and its sometimes jarringly polytonal relationships between the piano and trombone parts.

The mellowest of these sonatas is the one for alto horn, a relatively rare instrument with a horn tone somewhat drawn toward the trombone. Opening with a lovely, rather archaic-sounding theme that moves into some strange dissonances, the sonata has an unusual slow-fast-slow-fast structure, with the second movement a typical Hindemithian march and the finale starting with a graceful piano tarantella preceded by a dialogue poem, entitled "The Post-horn," read by the performers. The most surprising work in the album is the bass-tuba sonata of 1955, the composer's last solo sonata. Hindemith apparently set out, improbably, to make the piece as light as possible, whether in the rather jocular, nonthematic opening banter or in the high-low juxtapositions of the finale, the listener is almost never aware of the cumbersome nature of the solo instrument, which even gets a trill to perform.

The opening pages are fine Mason Jones, in particular excels in the horn sonata, although his tone is understandably less sure in the alto-horn work. Gilbert Johnson's trumpet comes on perhaps a bit too strong (although this may be due to the mixing), while Abe Torchinsky makes the subtle tuba tones move with amazing ease. Henry Charles Smith's careful trombone playing duls many of Hindemith's dynamic contrasts, and the temps here incline to deliberateness. For the most part, Glenn Gould's sharp, precise pianism and unflagging rhythmic control serve the music admirably, even when his eternal détaché runs replace called-for legatiors.

The performers' excellent sense of balance is well seconded by the recorded sound.

R.S.B.


Chamber-music devotees were understandably gladdened a couple of years back by Columbia's announced intention to delve into the Library of Congress' treasure trove of live performances with an ear for Budapest Quartet material suitable for issue. The initial results were disappointing: only one new disc (the Franck piano quintet and Faure's C minor Piano Quartet, on Odyssey Y 33915, December 1975), released along with a crop of reissues hardly representative of the quartet's best work. While this latest disc is a considerable improvement, I still wonder about the selection process. Since the newly issued performances, although dating from 1959 and 1961, are in less than state-of-the-art mono anyway, wouldn't it have been possible to select other, earlier performances of the same works that represent the Budapest in its musical and technical prime?

Nevertheless, this release has given me great musical pleasure. For one thing, the works themselves are hardly as well known as they ought to be, that the Schumann A minor in particular is a complex masterpiece, with the specter of late Beethoven hanging over its pages. The Budapest plays both quartets with the kind of in-depth freedom and comprehension that comes from long experience, but the playing is technically inconsistent, veering between sheer incandescence and tarnished virtuosity.

In the Schumann, for example, the solemn introduction (much akin to the opening fugue of Beethoven's Op. 131) is sheer magic, but the first movement proper is rather scrappily and unsettled. The Mendelssohn is slightly more polished (note the delicate rubato and uncanny tonal blend at the beginning of the slow movement), yet paradoxically less intense. Unlike stylistically more old-fashioned ensembles, which could get away with executant chaos, the Budapest—with its basically modern, virtuosic approach—needed its full complement of energy and finesse at all times, and by the Fifies and Sixties that standard was only intermittently achieved.

That said, I prefer this Schumann to the suaver, less intense Quartetto Italiano performance (Philips) and the slicker Juilliard one (Columbia). And with the Juilliard's kinetic Epic recording of the Mendelssohn unavailiable, the only competition worth mentioning is the admirably incisive but rather bleak Fine Arts version (Concert Disc). H.C.

MUSORGSKY: Boris Godunov (ed. Rimsky-Korsakov). BOLSHOI OPERA SOCIETY. Opera, 000 (two discs, mono) [from Russian originals, recorded c. 1948] (available from Educational Media Associates, Box 921, Berkeley, Calif. 94701).

Bolshoi Theater Chorus and Orchestra, Nicolai Golovanov, cond. RECITAL RECORDS RR 440, $21 (three discs, mono) [from Russian originals, recorded c. 1948] (available from Educational Media Associates, Box 921, Berkeley, Calif. 94701).
A “New” Set of Bach Canons

by Andrew Porter

A hitherto unknown work by Bach? Two years ago a stir ran through the musical world, and quite rightly, when Bach’s own copy of the printed Goldberg Variations, corrected in his hand, came to public attention. On the last page of the volume, on sixteen neatly ruled staves, the composer had added a set of “Divers Canons on the First Eight Bass Notes of the Preceding Aria.” The Bibliothèque Nationale bought the precious volume in November 1975. At musicological meetings in France, Germany, and Los Angeles the canons were performed. Christoph Wolff, who was editing the Goldberg for the Neue Bach-Ausgabe, prepared an edition of them, setting out in full the “solutions” (for the canons are elliptically notated, with a verbal clue for their completion). Two of the fourteen new canons were already known (see The Bach Reader for details) and “solved”; others were solved in France; some awaited Mr. Wolff’s ingenuity.

The first performance of the new canons at a public recital was given by Alan Curtis and Bruce Brown, on two harpsichords, at Berkeley, on May 2, 1976. A few days later they were played in London, by an instrumental ensemble, during the English Bach Festival. The liner note to the Marlboro Recording Society’s recording describes a performance at Marlboro last July as “the world premiere of this work in a version for instrumental ensemble.”

In the Goldberg proper there are already nine canons—at the unison, the second, the third, and so on up to the ninth. One might have thought that, in twenty variations, Bach had already said everything worth saying over the bass of his aria. And yet, from just its first eight notes (G, F sharp, E, D, B, C, D, G), he was able to go on spinning music that is not merely ingenious, but also moving and beautiful.

Until I heard this record, I felt unsure whether the new canons really lent themselves to performance on their own. In Berkeley they were played as a parergon to the complete Goldberg, and certainly formed a moving little epilogue, a microcosm of Bach’s contrapuntal art. In the Marlboro performance, gravely, thoughtfully, intently played, with great beauty of tone color and phrasing, they amount to some twelve minutes of music that, I now feel sure, will lend itself to repeated listening.

As prelude, Rudolf Serkin plays the Goldberg aria, on the piano—a concentrated, reflective, crystalline, and beautifully balanced performance. The recording is close—children can hear the pianist’s breathing in a way that puts one into a room with the performers, not down in a hall while they are up on the platform. Then a bassoon plays the eight-note basic theme, very slowly, very firmly, setting down the foundation for all that is to follow. A second bassoon adds the canon simplex of No. 1, and so the canons get under way. None is more than four bars long; in fact No. 13, a close-knit six-part web, is only two bars long. Each of them is played through several times. How many times varies, and is carefully judged—often enough for the ear to discover with delight the way each is made, not too long for it to grow impatient of repetitions.

The arranger of this instrumental version is unnamed; perhaps it was
an ensemble effort. It is a convincing one. After two canons from has-
soons, the next pair is played by
cello and English horn. The change
of voice is pleasing, and all the players
"utter" with a beauty and purity of
timbre comparable to that of a
singer who understands the expres
sive power of a perfectly colored
vowel. The scoring keeps the contra-
puntal lines distinct. The canons
gradually increase in complexity,
and begin to span a wide emotional
range. Nos. 5 and 9 (played by
strings) are buoyant and dashing.
No. 11 is a poignantly chromatic
stretch of music. No. 14 a substan-
tial-sounding finale. On the disc, Ser-
kin then plays the Goldberg aria
again.

This Marlboro performance per-
suades me—the written page had left
me unsure—that the canons do form
a balanced and ordered set, not
merely a series of contrapuntal exer-
cises. There were numerological rea
sons for supposing that this was so.
Bach could have numbered his
pieces from 1 to 15, since No. 10 is a
pair of related canons. But if \( A = 1, \)
\( B = 2, \) and so on, the sum of
\( B A C H \) is 14 and of \( J S B A C H 41, \) its
"retrograde" (I and J count as one let-
ter); 14 and 41 were his personal
numbers. The fourteen canons fall
into groups of 4,1,4,1,4. Numer-
ological researches have been
pushed to extremes—one scholar at-
taches importance to the fourteen
silver coat buttons he counts on a
Bach portrait—but they have come
up with some results that cannot
simply be dismissed. However, the
ear and the Marlboro players pro-
vide a more pleasingly musical proof
of coherence.

A pity, I think, that one of the
blank pages of the booklet that ac-
companies the disc was not used for
a facsimile reproduction of the
newly discovered Bach page—so
much music in little room. It is fasci
nating to have this under one's eyes
and hear the music grow from the
composer's few concentrated mea-

Most of the booklet is given to an
impassioned plea, by Frederick Do-
rian, for a higher rating of Reger's
music than is common today. And
one cannot imagine more persuasive
advocates for the Clarinet Sonata,
Op. 107, than David Singer and Ru-
dolf Serkin. If any players can win
admirers for the piece, it is they.
Their performance is warm-hued,
pondered but not ponderous, ex-
quisitely played by both clarinet and
piano, filled with poetic and arrest-
ing detail, beautifully balanced in
ensemble.

Reger was a glutton, for art, work,
music, food and drink. In a 1938
Melos, Willy Strecker, of Schott, re-
called a day they spent together in
London. In the morning, the National
Gallery and a silent, careful, me-
thodical inspection of each picture.
Then the National Portrait Gallery
and Westminster Abbey, then lunch
at a German restaurant with gallons
of beer, many feet of sausage, and
many dirty stories. Afternoon, the
British Museum and the Wallace
Collection. That night, after another
copious meal, the composer, who
had made no comments all day, held
forth for hours about all that he had
seen and apparently photographed
in his memory. Composers' lives and
their works aren't necessarily a
match, but from Reger's music I of-
ten get a similar impression of thor-
oughness, industry, and appetite, not
exactly indiscriminating, never
careless, but finally exhausting, un-
appealing because so encyclopedic.

We are told that we need aural ex-
perience of the music to love Reger.
Would-be lovers can find plenty of it
on disc in the current catalog (but
not, rather surprisingly, the orches-
tral Variations on a Theme of Mo-
zart, his most celebrated composi-
tion, and not the Variations on a
Theme of Hitler, the work of his I ad-
mire most). The latest claim of his
champions (not, in fact, made by Dr.
Dorian, but at the Bonn centenary
concerts of 1973, and at some of the
London concerts where Reger gets a
hearing from time to time) is that Re-
ger is an art nouveau composer,
whose restless modulations must be
likened to Klimt colors, whose con-
stant embroidery is a form of Ju-
gendstil decoration. I can't hear the
resemblance, but listeners might like
to try pursuing it.

The more traditional derivation of
Reger from Bach is easier to main-
tain, and I suppose it was the reason
for this coupling. The clarinet sonata
is a long work—thirty-five minutes,
which have been accommodated on
one side with no loss of recording
quality—and very respectably made.
But it is for the Bach side that I shall
be taking this disc down from the
shelf.

**NOTES**

**BACH:** Canons on the First Eight
Bass Notes of the "Goldberg" Aria. *REGER: Sonata for Clarinet and Pi-
ano, in B flat, Op. 107. * Various In-
strumentalists - David Singer, clarin-
et; Rudolf Serkin, piano. * [Mischa
Schneider, prod.] MARLBORO RECORD-
ING SOCIETY MRS 12, $7.50 postpaid
(Marlboro Recording Society, 5114
Wissmoming Rd., Washington, D.C.
20016).

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the way the score directs, with conviction, brilliance, and expressivity. I've always admired this reading, and it stands up well on re-hearing after many years. Unfortunately, comparison with its last incarnation on Capitol (and, I'm sure, with its first on Victor as well) reveals that Seraphim has tempered the sound: A really troublesome resonance has been laid on, distancing the voices and muddying the textures. Have old recordings no constitutional rights? They really are not improved by being made to sound like bad newer recordings instead of good old ones. This one was a fine job in its day, a quarter of a century ago; if you have one of the older editions, hang on to it.

Christoff's impersonation of the three major bass roles is, of course, a tour de force--and a destructive one, for his timbre is nothing if not distinctive. On stage, doubling Boris and Varlaam is physically possible (Chaliapin did it occasionally, I believe), and good makeup would probably distract one's attention from vocal similarities—but on records, in the Kromy Forest, you can't help hearing the voice of the tsar (and, in this recording, of Shuisky as well) calling out condemnations of Boris!

The Pimen-Boris doubling isn't possible in the theater, and Christoff faces the problem of differentiation by singing Pimen almost entirely in mezz-soprano—lovely but limiting. At a couple of climaxes, this clearly won't do, so he sings out—and there once again is the tsar, right before our ears in another monk's clothing. These structures apply equally to the remake with Cluytens, naturally. In general, however, the earlier version is more strongly cast: Zarasets and Ceddia a more mellifluous team than Lear and Uzunov. Borg splendid as both Shchelkalov and Rangoni. The White Russians of Paris aren't as cohesive in sound as the Red Russians of Moscow, but their enthusiasm is effectively mustered by Dobrowen.

Neither this recording nor the Cluytens includes the St. Basil scene (correctly, of course), but whereas Cluytens gives us every note of Rimsky's 1908 edition, Dobrowen makes the "standard" cuts in the Monastery and second Polish scenes. Seraphim reprints two-thirds of the Angel liturgy (i.e., the transcribed Russian and the English, but not the Cyrillic text), with the appropriate excisions.

The latest entry, from Bulgaria, need not concern us long. Like Karajan's reading, it gives us all of Rimsky plus St. Basil, but in a stolid, provincial reading distinguished only by the presence of a few impressive voices. One of these is certainly Nicola Ghiaurov, who doubles Boris and Pimen without any perceptible effort at differentiation—or, indeed, very much characterization of either. (In fairness, I should note that he is more dramatic, and in smoother voice, on an independent disc of highlights from the opera with a different and better conductor, Harmonia Mundi HMB 130; this includes Varlaam's song and Pimen's two monologues as well as the usual solos for Boris.) But a few good voices can't salvage Naidenov's conducting, clumsy of transition and incompetent at accumulating long-range momentum; at every new musical idea, the performance seems to begin all over again. Nor does the Sofia chorus match its work of 1962, when it was exported to Paris for the Cluytens recording. Clean, rather dry sound; libretto in French only.

The upshot of all this isn't very satisfactory. For those who want Rimsky complete plus St. Basil, the choice is between Naidenov and Karajan: the one provincially dull, the other super-slickly dull. For Rimsky complete without St. Basil, there is Cluytens—an estimable but not overwhelming performance. Dobrowen is better, but makes some cuts and is not in stereo; Melik-Pashayev makes similar cuts and adds St. Basil—anon straightforward job. And Golovanov is strictly a supplementary choice, because of the cuts and the sound—but there's no clear-cut choice among the others for it to supplement.

D.H.

Puccini: Madama Butterfly

Carlo Maria Giulini

The Chicago Symphony Orchestra

perform

Mahler: Symphony No. 9

Prokofiev: Pictures at an Exhibition

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La Scala Chorus and Orchestra. Carlo Saba-}

Puccini: Madama Butterfly. Ancora un

passo; Love Duet (with Aureliano Pertile, tenor). Che tua
I think it was at my first or second visit to Covent Garden that I was introduced to Margaret Sheridan, the Irish soprano (1899–1956) who had made her debut there thirty years before and—so we were always told—had gone on to become a prima donna at La Scala. She had returned to Covent Garden in 1925, a Cio-Cio-San wearing the costumes that Rosina Storchio, the first Butterfly, had worn, and then sang there for five seasons. Harold Rosenthal in his history describes her as “firmly established at La Scala,” and John Steane as “the toast of La Scala.”

The annals of that house don’t exactly bear this out. In 1922 she made her Scala debut in Lo Wallo; in 1923 she was Candida in Respighi’s Belfagor; in the 1923–24 season, Anna Maria in Ricciottelli’s I Compagnucci and Maddalena in three performances of Andrea Chénier. Of course, the Scala isn’t all the world, or even the whole of Italian opera. Eva Turner sang only Frona and Sieglinde there, and won fame for her great Turandot in other houses.

But in her day, it is plain, Sheridan wasn’t quite deemed among the first flight of Butterflies. She has a strong shining voice, which can rise purely to fill a long, powerful line without strain and without resorting to that kind of pressure which (as, say, in Renata Scotto’s climaxes) imparts a squealy stridency to the tone. But she is not particularly imaginative or delicate singer. Her Cio-Cio-San lacks charm and fine detail. (When she first sang it at Covent Garden she was eclipsed by Rethberg, and when she next sang it there, five years later, by Maggie Teyte.) This complete Butterfly is a “plum-label” set: by color and by a lower price, HMV thus distinguished its more modest offerings from those in the red-seal celebrity series.

Club 99 provides no date. This Butterfly is the first listed in the 1931 HMV catalog and so can be assigned to 1930—the year of Sheridan’s last Covent Garden season, six years after her last Scala appearance. The recording is surprisingly good. What I found myself listening to with the greatest interest was the orchestral playing. Some of Sabajno’s tempos, particularly toward the start, are brisk to the point of seeming perfunctory, but I doubt whether there is on disc a more beautifully handled dawn prelude to Act II, Part 2 than he conducts. Despite the 1930 recording one hears the expressive, eloquent colors of the Scala woodwind. (Later, the clarinet that accompanies Butterfly’s quiet questions to Suzuki are heartbreaking.) Puccini noted his birdsong metrically; sometimes the player of the birdcalls comes in so strictly on the beats that the result is ridiculous—birds drilled to warble a dawn chorus in 4/4? Sometimes the player is just vague. But this player, without ever seeming unnatural, shows exactly how the composer evidently meant his touches of pretty warbling to fall.

It is also very good to hear the portamento of the Scala strings. String players today have not learned about portamento—or learned only to avoid it. But all the recorded evidence shows that in the first decades of this century it was taken for granted, and that eschewing it in music of that period is simply bad style.

Who was Lionel (or Lionello) Cecili? What did he do besides recording this Butterfly and, with Mercedes Caspir, a Traviata for Columbia? He is a tenor of a kind we could do with today, obviously very well schooled, even, with a true tenor ring at the top, and he is an aristocratic stylist. Vittorio Weinberg—the only Scala Weinberg I can trace sang the Theban Slave in Pizzetti’s Fedra in 1939—makes a Sharpless of uncommon courtesy, dignity, and feeling. Ida Mannarini and Nello Palai often turned up in small Scala roles of the time, and their Suzuki and Goro bear witness to the excellence of Scala comprimarios in the Toscanini years.

Obviously this is a set only for Sheridan-lovers, Irish operatic patriots, Puccini specialists, and anyone with a particular concern about Thirties performance practice. It is not a great performance from the past, but a run-of-the-mill performance with some interesting features. The Butterfly I recommend to anyone who says “Which version should I buy?” is still the Toti dal Monte/Gigli set of 1940 (Seraphim IB 6059), which as a whole has not—except in point of sonics—been surpassed by later versions. (And that despite a heroine less beautiful in voice than some of her successors.)

The titles collected on the final sides of the set are from “red label” HMV discs, recorded 1928–30. Because Sheridan was an uneven singer, there are some touches in the Butterfly excerpts that are preferable to the corresponding passages in the complete set, and some that are not. In the Manon Lescaut duet, Perlè’s cry of “O tentrurice” is stirring. Renato Zanelli was a famous Otello, but his share of the love duet, as John Steane says bluntly, is “without distinction of phrasing”; so is Sheridan’s share. However, there is a distinctive, dignified timbre to Zanelli’s voice that I like very much.

A.P.


It is intriguing that Ravel never thought to publish his first piano piece, the Serenade grotesque (1890), which offers considerably more interest than certain later vignettes, such as the two A la maniere de pieces, that are fairly well known. The music shows Ravel in a fairly impish, bad-hy mood, obsessively repeating accented dissonances and jerky rhythmic figures. And yet these rather jolting grotesqueries alternate with smoother, often Hispanic-flavored passages that foreshadow even more clearly the Ravel to come.

Turkish pianist Idil Biret offers the first recording of the Serenade grotesque, although another version—by Arbie Orenstein, who discovered the piece—will soon be released on Musical Heritage along with
some other previously unrecorded Ravel. Biret’s interpretation has many merits: hers is a nervous style given to sudden swells and jarring accentuations, and it works well enough for the Sérénade. Yet one might wish for a bit more relaxation and a bit more flow to hold the episodes together.

This feeling holds for Biret’s Gaspard de la nuit as well. The pianism impresses—there is a great deal of very nice shading, and the tricky balances between the music’s component parts are skillfully maintained. But this same balance is sometimes destroyed by Biret’s impetuousness, with beautiful passage work suddenly giving way to outbursts more spat out than articulated. And I have never heard a performance of the second movement in which the repeated B flat becomes so oppressive. Perhaps Biret intended it this way, but I doubt ever a performance of the second movement in which the repeated B flat becomes so oppressive. Perhaps Biret intended it this way, but I doubt it is all horribly unidiomatic.

Speaking of bad pedaling, Alexis Weissenberg does things in the Tombeau de Ravel did. In her pedaling as well, Biret occasionally indulges in excesses that go against the music’s grain.

If we exclude early appearances in Boccaccio, The Land of Smiles, and Der Bettelstudent, Fiorilla in Il Turco was the first of the two comic roles that Callas essayed. Rome had heard her only as Turandot, Kuny, Isolde, and Aida when she sang Fiorilla there in 1951. Four years later, in September 1954, she recorded the opera in anticipation of the Scala production, by Zeffirelli, which followed in April 1955 (a month after the famous Visconti Sonambula, a month before the famous Visconti Trevi) on the set of the Scala production, by Zeffirelli, which followed in April 1955 (a month after the famous Visconti Sonambula, a month before the famous Visconti Trevi). Callas, in secure voice, and she makes much of the words. Stabile, Rossit-Lemeni, and Calabrese are good. After all, it is a difficult piece, and a conductor who has a score of the vocal parts will do well.

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The Scala production was by all accounts a deliciously high-spirited occasion. Zeffirelli has recalled some of the ways in which the tragic melange was transformed into a comédie: the recorded performance, however, lacks hilarity. Although Gavazzeni gets bright, pointed playing from the Scala instrumentalists, there is not much wit or gaiety in his reading. Callas doesn’t bubble; the sly sparkle and merriment of the Rosina she tackled in 1956, and recorded a year later, were still to come. But she is in secure voice, and she makes much of the words. Stabile, Rossit-Lemeni, and Calabrese are good. A dinner of two plates, Valleti did the Rome and Milan stage performances, is acceptable; in any case the part is tiny. I think it’s Gavazzeni’s sobriety that keeps me from being more enthusiastic about the set. I love the opera, and wish there were more vino in its performance. All the same, the reissue is welcome: everything that Callas and that Stabile did deserves to stay in print. The set has been re-

Margaret Sheridan
Not quite a first-flight Butterfly

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cut, on four sides instead of five: the sound is fresh and clean.

A.P.

SCARLATTI, A: Stabat Mater. Mirella Freni, soprano; Teresa Berganza, mezzo; Andre Isor, organ; Paul Kuentz Chamber Orchestra, Charles Mackerras, cond. [Gerd Ploebisch, prod.] Archiv 2533 324, $7.98. Tape: D 1310 324, $7.98.

Alessandro Scarlatti's Stabat Mater, known to have been the model for Pergolesi's famous setting of the thirteenth-century poem, is an unusual work by a great master, but some questions must be asked even before starting the turntable. Simply put: What are we about to hear? The notes say that the Stabat Mater was edited by Fels Joseph, yet that quondam piano pedagogue was not an editor, but a notoriously high-handed arranger. The notes further state that the edition used for the recording was "corrected" from a manuscript preserved in Florence but fail to tell us whether this is a holograph or a copy. Why "correct" an unreliable edition when there is an extant manuscript, and who did the corrections?

Let us suppose, however, that we have a reasonably accurate musical text: now we must contend with the extraordinary shape of the great medieval poem. It consists of twenty Latin stanzas of three lines, more than half of the sixty lines containing three, or sometimes even two words—how can such a text be set to music? Scarlatti did not resort to the usual endless repetition of words, composing instead a string of canons of (if you pardon the anachronism) Webersque brevity, and while many of them are very beautiful, he could no more overcome the severe limitations of the frame than could Pergolesi; there was simply no room for through-composed structure. After about halfway along, a certain sameness descends on the listener. This, incidentally, may have prompted Scarlatti to become increasingly bold and chromatic as he proceeded. It is likely, of course, that performances at the private devotions of the Neapolitan brotherhood of the Confraternita della Vergine dei dolori were not continuous, but "tripped" with prayers or even with some other music.

The Archiv performance shows stylistic uncertainty, which is understandable because this work is not within any of the familiar categories of church music. Teresa Berganza knows what she is singing and enunciates and phrases intelligently, but her fine voice shows extremely contrasting color regions; when she descends low the timbre becomes very dark. Mirella Freni seems to be out of her bailiwick: she sings as well as she can but without communicative conviction—few words are understandable. Also, her frequent trills lack definition. Both singers are a little too close to the microphone, which makes Freni's high notes a bit shrill.

There is more trouble with the accompaniment. The "orchestra" consists of eight violins and continuo (cello, double bass, and organ). Nothing wrong with that. The fraternity that commissioned the work had modest means. This complement of instruments would have been satisfactory in a small chapel, but recorded in a church the
tiny ensemble is thin, pale, insubstantial. The typical church echo, though not excessive, is still disturbing because of the short sentences and frequent rests of the music. The organ continuo, "improvised at the performance," is far too busy, diverting attention from the work itself. Most seventeenth- and eighteenth-century theorists enjoined the continuo player not to compete with the composer, yet André Isor does just that, having with thematic bits and inserting imitations; some of the numbers sound as if the orchestra contained woodwinds.

Nevertheless, it is good to have this profoundly serious work available, and a fair amount of it does come across. I must add a remark about Archiv's curious English translation of Jacopone da Todi's poem. The German and French translations are faithful within the requirements of versification, but the English version, though equally well handled, departs fundamentally from the sense of the Latin in the second half. It is to the "Sancta Mater" that the prayers are directed; the English version, by addressing every petition to Christ, excuses Mary's role completely and changes the thrust of this tender hymn. Was this due to Protestant aversion to Marian worship? The answer, I am afraid, is "no," for what survives on these discs can only be a pale echo of what filled Philadelphia's Metropolitan Opera House back in 1932. The sound is muffled and muddy, the dynamics are ruthlessly compressed. Here and there, in lightly scored passages such as the Klaus-Narr episode, it is possible to hear some fabulously lively and accurate playing from the orchestra. The chorus is distant and makes little impact. In terms of balance, the soloists are pretty well treated, but only one of them—the young Rose Bampton—is particularly distinguished. Paul Althouse and Jeannette Vreeland are capable routine singers working at their outer limits. Abrasha Raboltsky has some rough moments, and Robert Betts speaks, rather than sings, most of his part. Both Raboltsky and the speaker, Benjamin de Loache, have some trouble keeping with the orchestra. If Flagstad and Melchior had been the soloists, we would listen avidly to these records even were the sound worse than it is—but there's nothing in the vocalism here that hasn't been done as well or better since.

As I've mentioned, the orchestral playing seems quite spectacular when it can be made out, and Stokowski certainly makes the piece flow along with a firm hand though sometimes a characteristically free interpretation of the tempo markings (Waldemar's "Mit Toves Stimme." marked "not too slowly" with a metronome of 72, is taken at about 48, which sounds precisely "too slow" and makes for poor Mr. Althouse's some problems he definitely doesn't need. Because of the dynamic compression, one can hardly even infer much about the over-all shape of the performance in terms of scaling climaxes and the like. According to RCA, this issue is based on the same tape transfer that served as source material for the mid-1930s LP issue in the "Treasury" series, though some fresh effort was made to improve the sound. The 78s surfaces grind away fairly quietly throughout (occasionally more disturbingly), and there is one overly hasty splice (at No. 69 in Part I). According to the liner notes, all three performances of the run were recorded, but my RCA informant says there is no trace in the files of the Friday afternoon concert—presumably a trial run that was not even noted in the books. The Saturday performance was taken on the 33-rpm standard-groove long-playing records that Victor experimented with at this time, and was issued as LN 127 (Stokowski collectors note: Your collection is not complete until you...
have that one]. The present recording is of the third performance, on Monday evening. The original 78 and 33 issues included introductory talks by Stokowski (different ones, of four and twelve minutes, respectively), but these are omitted here. For some reason, there is a noisy ovation at the start of Side 1, but the applause at the end has been cut off. The double sleeve includes a complete text and translation.

D.H.

**SCHUMANN: Quartet for Strings, No. 1—See Mendelssohn Quarter, No. 3**

**STRAVINSKY: Petrushka: Three Movements—See Ravel: Le Tombeau de Couperin.**

**VERDI: Macbeth.**

Lady Macbeth Florence Cossotto (ms)
Lady Macduff Nina Mae McKinney (ms)
Gentlewoman Sara Groves (ms)
First Apparition Timothy Sprackling (t)
Second Apparition Joseph Carreras (t)
Macleod Silvio Allocca (t)
Macbeth Jose Carerras (t)
Sara Caracciolo (t)
Sara Grossman (t)
Sara Borgato (t)
Malcolm Krzysztof Krajewski (t)
Sara Groves (t)
Third Apparition Leslie Fyson (t)
Cooch John Noble (t)
Banquo Leslie Fyson (t)
Servant to Macbeth Carlo del Bosco (bs)
Younger Servant John Noble (bs)
Lady Macbeth Sara Groves (bs)
Roderigo Ruggiero Raimondi (bs)
First Apparition Matthew Polenz (bs)
First Assembly Christopher Kaye (bs)
Second Apparition Dido Costos (bs)
Service to Macduff Thomas Masters (bs)

Ambrosian Opera Chorus, New Philharmonia Orchestra, Riccardo Muti, cond. [John Mor- dler, prod.] ANGEL SCLX 3833, $23.98 (three discs, automatic sequence). Tape: 4X3S 3833, $23.98.

**Companions:**

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Victr. VICS 6121
Lon. OSA 1380
Verrett, Cappuccilli, Abbado
DG 2709 062

This is the second Macbeth to be released within five months, and will presumably end recorded attention to the opera for a while. For some comparative commentary on the versions now available, I refer readers to my review of the DG edition in the January issue.

The present recording, like the Gardelli/London (OSA 13102) and the Abbado/DG, is of the complete 1865 revision, including all repeats and the full ballet sequence. The 1847 death of Macbeth (the arioso "Mal per me"), often inserted in performances of the 1847 score (as in the Leinsdorf/Victrola and the Abbado/DG, 1865 score (as in the Leinsdorf/Victrola and the Abbado/DG, recordings), is omitted, but is included on a separate band, together with 1847 arias for the two principals that have not been previously recorded.

I find this a satisfying performance, and one that sounded more persuasive on repeated hearing—the reverse of my experience with DG's effort. This has been largely a matter of adjustment to the approaches of the conductor, Riccardo Muti, and the Lady Macbeth, Fiorenza Cossotto. Muti's previous recordings have shown him to be an authoritative young Verdi conductor. He has a particular penchant for the driving, forceful side of the composer's writing, and for sudden accelerations in strettolike sections (as at the piu mosso, "Guerra! guerra!"). in the "Sol del Nilo" ensemble of Aida—one I'm not used to yet. But he never sounds merely excitable, and unlike some of the modern Verdi conductors who share some of his qualities (I think of Mehta and Levine; for instance) he seems to have a sure feel for the shape of a singing line, and for the moods of some of the more mysterious and poetic pages.

In this reading, a few of his quicknesses still bother me—for instance, the entire prelude slips right along, missing some of the weight that Verdi's commentaries sometimes have, and the brief's allegro brillante in the first scene ("Le sorelle veggono") expresses rather more the wish to get the show off the a,bang-bang stage than any evident impulses of the sisters in question. But other similar moments, which initially struck me as rushed, have on re-hearing come to seem quite just and genuinely exciting: examples are the presto at Lady Macbeth's "Vieni! vien altrove, ogni sospetto" (final section of the scene just after the murder of Duncan), or the allegro og- nito at Macduff's "Orrore! orrore!" a few pages later.

The instances where Muti takes tempos noticeably more deliberate than his customary choices seem to reflect collaborations with Cossotto to achieve her best ef- fect in solo numbers—the bars setting up the adagio for "Vieni, 'l'affretta" (at re- hearsal No. 19), where he effects a big slow-down, and the Brindisi in the Banquet Scene, which is markedly deliberate to start with, and accords definite ritards at the ends of verses. Since both these moments are highly successful in performance, the judgments are self-justified. On the whole, it is a somewhat quick, light-toned reading, emphatic and quite brilliantly executed by orchestra and chorus. The ballet has more of the flavor of a divertissement than it does in other readings, with the relationship to the incidental dances of Aida very obvious.

The two principal singers take over the performance rather more than those of other versions (except, perhaps, for the Leinsdorf/Met performance), and since this certainly isn't traceable to conductorial flabbiness, I count it a good thing. Cossotto is the first Italian to record her role, and while she sometimes sounds too disdainful toward the top recalled that inbaldness. His work can be externalized and given as much physical commitment as Callas.

Milnes's Macbeth does not quite stand out from the field in these same ways, but it is performance of stature—he is scrupu- lously, with respect to the musical and interpretive suggestions of the score, and his voice is closer in calibration to the role's de- mands than those of Fischer-Dieskau (with Gardelli) and Cappuccilli, his recent com- petitors in the uncut recordings. It is true that the voice has lost some of its freshness and openness—no brilliance, but he sang his early Valentino, Toscanini, and Yelena in the field before he took over. The timbre has become a bit gritty and gray, the handling of the passaggio rougher and lower in the voice.

However, this is still a powerful, wide- ranged instrument, and the technique has its points of expertise as well as its prob- lems: Milnes's Baritone Aria has a far broader range of color and dynamics than does Cappuccilli, and more command of sustained sing- ing line. There is also a basic vitality and energy in his singing that keeps it above dullness. His work can be externalized and general (while he is usually interesting and sometimes exciting, he is seldom moving), but its physical commitment is never in doubt.

Here, his best work is in the murder scene with Lady Macbeth and in the Banquet Scene, where he shows a welcome dra- matic involvement and an honest portrayal of Lady Macbeth, but often in a way that is static. The timbre has become a bit gritty and gray, the handling of the passaggio rougher and lower in the voice.

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Cossotto can comfortably accommodate, and she sings it shrilly. Macbeth's "Vada in fiume" is a hit better, being at least a decent standard vendetta piece that would not be out of place in, say, I Masnadieri, but a far weaker conclusion to the second witches' scene than the duet that replaced it. Milnes sings it sturdily but a bit clumsily, so that it makes a clomping effect. "Mal per me," of course, is a different matter—a sensitive setting of a moment that is absolutely vital from the dramatic standpoint. It belongs in the scene, but the decision to remain consistent to the revised rendition is certainly understandable.

I was not happy with the sound of this recording. To begin with, my pressings are afflicted with a strong persistent pre-echo. But I also found many of the bass-heavy passages (especially those involving percussion and low brass) productive of only a large, rumbly noise, ample but unmusical, and the dynamic range simply too wide for home consumption—the scene between the Doctor and Gentilewoman and the mezze-voce sections of the "Orta di morte" duet pretty well vanish at a setting that can accom-

VILLA-LOBOS: Piano Works. Roberto Szidon, piano. [Cord Garben and Rainer Brock, prod.] Deutsche Grammophon 2530 634, $7.98.

Roberto Szidon is one of the younger generation of knock-'em-down, drag-'em-out keyboard artists—as demonstrated earlier in his 1970 Gershwin and MacDowell concert. 1971 lives sonatas, and 1974 Liszt rhapsodies. But while he was partly trained in this country and concertizes most actively in Europe, he is Brazilian-born and the dynamic range simply too wide for home consumption—the scene between the Doctor and Gentilewoman and the mezze-voce sections of the "Orta di morte" duet pretty well vanish at a setting that can accommodate. The accompanying booklet is literate and attractive, with well-selected notes and illustrations. C.L.O.

I'm glad that 1976 didn't pass with the centenary of Ernanno Wolf-Ferrari's birth quite unobserved by the compilers. His music (except in the sensational I Gioielli dello Madonna) may be slender, but it is captivating. Half-German, half-Italian, he made his name in Munich (Il Segreto di Susanna was the third of his operas to have its première there). Rheinberger trained him; study under that composer of sound, thorough organ sonatas seems an odd preparation for light, sparkling operatic comedies, but it may account for the excellence of Wolf-Ferrari's musical craftsmanship; he is one of the most delicate and precise of composers. Among his musical ancestors we can discern, on the German side, Mozart and Schubert and, on the Italian, Rossini (for high-spirited invention) and Bellini (for purity of lyric melody). I'm not placing him on their level, only suggesting that qualities they have, he shares. And, in the words of The Record Guide, "Wolf-Ferrari wrote for the voice with a Mozartean delicacy unknown to the rest of the modern Italian school."

Today, this opera would have to carry a warning from the surgeon general. Susanna's secret is that she smokes. Her husband's tobacco smoke in the house and suspects her of receiving a lover in his absence; she, delightful innocent, is to the last unaware of that. ("I have to do something to pass the time while you're at your club." Shameless woman. I'll tell your mother about you." Oh, good God, for all I know she's right.) If Il Segreto di Susanna's little "perfumed vice" is revealed, and the relieved Gil joins her in a cigarette.

Between 1912 and 1927 four of Wolf-Ferrari's operas—Le Donne curiose, Il Segreto, L'Amore medico, and I Gioielli—were taken up by the Met. None survived more than two seasons except Il Segreto. In 1912-13, with Farrar and Scotti, it was paired with Peg or played as a curtain-raiser to La Bohème. In 1913-14 it formed a Wolf-Ferrari double bill with the two-act L'Amore medico. It was revived 1920-22, with Bori and Scotti, as curtain-raiser or afterpiece. Farrar recorded Susanna's first aria and (with Amato) the duet "Il dolce idillio". Alida, Muzio, and Bori all recorded Susanna's "Oh gioia, la nube leggera."
Meanwhile at Covent Garden for several seasons the regular Gil was Sammarco, with various, less celebrated Susans.

Citydeborne played the opera in 1958 as a curtain-raiser to Ariodante, and in 1960 with La Voix humaine and Busoni’s Artocchina. But nowadays, one-acters seem hard to place. La Bohème, Salome, and Ariodante are deemed Abendfüllen. Cav goes with Pag. II Tristano is kept as a triptych. Yet any company with some of, say, Dido, Didone, Rienzi, L’Education maiguite, Erwartung, La Voix humaine, L’Enfant et les sortilèges, Bluebeard’s Castle, and Down in the Valley in its repertory might well consider adding Susanna’s Secret. It’s as lighthearted and as easy to stage as the Telephone, and musically far more distinguished. And unless opera companies maintain a stock of one-acters, from which to deal various triple bills, a good deal of excellent music is likely to remain unperformed. Ballet companies have the right idea.

The London performance is delightful. Mariasinhara is limpid and lyrical. Bernd Weikl, adding Italian to his recorded languages (Russian, French, German), sings with spirit and style. It’s a gentle and intimate account of the piece. Even when the duet is marked to mount to a fortissimo, the singers don’t really sing particularly loudly. In the theater, I think I would want a little more dash and brio, and a little more bluster (elegantly polished bluster, of course) and ferocity from Gil when he bursts unexpectedly into the smoke-filled room. These singers don’t have quite the piquancy or wit that the best of their predecessors brought to the roles. But they do have charm— they are sweet and tender, and they make very pleasing sounds.

Lamberto Gardelli’s conducting is delicate, buoyant, and refined, as is apparent from the start of the “ouverture in miniature—on four themes” (carefully numbered in the score, so that with a smile we can appreciate the composer’s skill in combining them). The Covent Garden players are excellent. The recording is carefully balanced: the perspective of Susanna’s off-stage piano—playing and Gil’s on-stage commentary is just right: there are one or two Ping-Pongy moments (a stage direction that justifies the effect, “Gil paces up and down,” has been omitted from the album list).

Omar Godknow, as the mute servant Sante, also gets star billing. He is a Decca/London artist whose name often springs to the lips of Christopher Rennard, the producer of this set: he made his debut, if I remember rightly, as Klaus, the mute slave in Die Entführung. To II Segreto his contribution is a single, well-timed “Fff,” as he puffs out the candle just before the curtain falls.

I understand why II Segreto was chosen for the centenary recording—Wolff-Ferrari’s only one-acter, his best-known opera, and only two singers needed. Nevertheless, it has been recorded at least twice before, and not badly, even if those versions are now some twenty years old. I welcome this set, which also welcome choice excerpts from L’Amore medico, from Le Donnina curiose, and above all from II Campiello—deleteable operas all. A.P.

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The late Walter Piston's 1930 flute sonata is a masterpiece, blending in unique fashion a neoclassical structure and forward movement, a romantic lyricism, an impressionistic use of harmonic color, and a very Pistonian brand of acidity. The instruments continually weave their way through paths traced by the other. In the second movement, for instance, a rather morose flute theme keeps bumping into parts of the piano's hypnotically persistent octave filigree, only to reach ephemeral consonance a few seconds later. (A well-known flutist with whom I once played through this work)

The listings above, like the Nonesuch jacket, give the composers' names in alphabetical order, but the chronology of the works is Stravinsky, Bartok, Busoni, Messiaen, and it all sounds better that way.

The late Walter Piston's 1930 flute sonata is a masterpiece, blending in unique fashion a neoclassical structure and forward movement, a romantic lyricism, an impressionistic use of harmonic color, and a very Pistonian brand of acidity. The instruments continually weave their way through paths traced by the other. In the second movement, for instance, a rather morose flute theme keeps bumping into parts of the piano's hypnotically persistent octave filigree, only to reach ephemeral consonance a few seconds later. (A well-known flutist with whom I once played through this work)

Keith Bryan and Karen Keys perform all four works with exceptionally good timbre balance and a good deal of spirit. The Copland Duo comes off best, but Columbia has an outstanding version by the late Elaine Shaffer, with the composer at the piano (M 32737). The performance of the Piston sonata is a bit glib, with the dryness of the first movement somewhat obscuring its moody, pastoral quality and the finale short on excitement—Bryan is a bit imprecise in the difficult passagework at the end. But the renditions of this generally interesting repertoire are more than satisfactory. Excellent sound quality also helps—for once the piano has been given equal attention in the recorded balance.

R.S.B.


The listings above, like the Nonesuch jacket, give the composers' names in alphabetical order, but the chronology of the works is Stravinsky, Bartok, Busoni, Messiaen, and it all sounds better that way.

Buson's Six Short Pieces for the Development of Polyphonic Playing, although written as late as 1922, stem from nineteenth-century concepts of transcendental virtuosity. But they are very much to the point, full of fiendish ingenuity in the keyboard problems they posit, and admirably calculated to make one sit up and take notice of the hands on that keyboard. Oddly, the last study of the six is an almost literal transcription of the chorale sung by the two
Armed Men in the trials by fire and water of shape than all the serialism in the world. Wonderful things here, too—tunes from siaen, the serialism maunders on until one pect of it, and, as is often the case with Mes-splexities of the music than to any other as-smuch more attention to the serial com-longest and most pretentious piece on the J. S. Bace: Chromatic Fantasia and Fugue, in D minor, Tape: V* 3310 326, $7.98. [Heinz Wildhagen and Andreas Hol-schneider, prod.] ARCHIV 2533 326, chord. [Heinz Wildhagen and Andreas Hol-

CouN TILNEY: astonishing, his prose is warm and illuminating, and the two aspects of his musical person-alty come together in interpretations that especially for Archiv's admirably realistic recording of an exceptionally fine instru-ment: the five-octave unfretted clavic-chord. The justification for including the fantasia exemplar, partly by its reminder of the music's importance as an influential early fantasia and partly in such unfamiliar guise does provide a fascinating new slant on it.

In general, Tilney's playing is a bit too de-liberate and carefully articulated, but when he loosens up he is capable of both genuine feeling and bravura flair. Yet it is the superbly authentic clavichord sound that makes this release an outstanding addi-tion to the instrument's still too scant discography.


Unlike the plethora and variety of harpsichord recordings available today (four full double-columned pages are demanded by the 1976 Schiéomm Artist Issue listings), only a handful are devoted to the clavi-chord. Yet for some three centuries that was the most popular home and practice in-strument, if only briefly—in the last half of the eighteenth century—a serious concert rival of either the harpsichord or the early square piano. So there should be a warm welcome for the present release by Tilney, especially for Archiv's admirably realistic recording of an exceptionally fine instru-ment: the five-octave unfretted clavi-chord built by Hieronymus Albrecht Klaus of Hamburg in 1742 and restored in 1953 and 1975.

The sonic attractions here are perhaps particularly significant in that they give a more accurate notion of how a late-eighteenth-century clavichord actually sounded to its players and close-by listen-ers—with considerably more sonority than the small, even ethereal, tonal qualities with which it usually is credited in music-appreciation books. Although any clavi-chord is of course somewhat duller in tone than even quite small pianos, the bigger ones are not too dissimilarly from early-nineteenth-century square parlor pianos, while still communicating distinctive differences.

That the instrument's peculiar potentials were best exploited musically by Carl Philipp Emanuel Bach long has been generally accepted and is convincingly demonstrated in the present three, often unexpectedly eloquent, well-varied examples of his fan-tasias. The nimble Capriccio Fantasia by his elder brother, Wilhelm Friedemann, is scarcely less representative, but it is more suggestive (in its fugal sections) of Father Bach's keyboard writing. While still unmis-takably freer in idiom and more obvious in its showmanship,

At first thought, neither of the two other works properly belongs in a clavichord pro-gram: Johann Sebastian's mighty Chroma-tic Fantasia and Fugue was patently written for double-manual harpsichord, and Mozart's K. 397 Fantasia of c. 1782 is specif-ically labeled "pour le pianoforte." But the former's inclusion is justified partly by the music's importance as an influential early fantasia exemplar, partly by its reminder that the composer and his pupils must have studied and practiced it on a clavichord as often as, if not more often than, on a harpsichord. The justification for including the Mozart piece is thinner, but Tilney's liner notes remind us that there was a clavichord in the Mozart's Salzburg home and that an eighteenth-century clavichord certainly comes closer to the sound of Mozart's piano than anything built in the nineteenth cen-tury. In any case, hearing this familiar mu-sic in such unfamiliar guise does provide a fascinating new slant on it.

In general, Tilney's playing is a bit too de-liberate and carefully articulated, but when he loosens up he is capable of both genuine feeling and bravura flair. Yet it is the superbly authentic clavichord sound that makes this release an outstanding addi-tion to the instrument's still too scant discography.

R.D.D.

High Fidelity Magazine
Closing the Dolby circle. As the last of the majors, RCA, has finally made it by adopting the Dolby-B noise-reduction system, the music-cassette plants a milestone in its astonishingly short, irresistibly triumphant history. In 1965, when Philips first brought us its barely two-year-old invention, who could believe that a 1-ips tape format ever could even remotely approach disc and 7½-ips open-reel technologies? After all, it was only a few years earlier that cassettes' prototype model—RCA Victor's 1958 double-size, double-speed so-called cartridge—had failed to catch on. At best, the tiny new format seemed destined to be limited to talk and pop materials for playback on battery-powered portables.

Well, as we all know, the tape size and speed handicaps were challenges that audio engineers rejoiced to meet. And since 1971, when Ray M. Dolby's quietening system enabled the formidable noise problem to be substantially solved, cassettes have advanced spectacularly as first Columbia, then English Decca/London, then Deutsche Grammophon and Philips began contributing to the mushrooming Dolby music-cassette repertory. After all the major European producers had joined the parade, the sole American taggards had to follow: Angel/Capitol last fall, now RCA. Moreover, as the severely wounded open-reel format is struggling to be born again, Dolby processing has been adopted by both Barclay-Crocker (whose first Musical Heritage programs are in production) and Stereotape-Magtec (whose renamed RCA-program releases have just been augmented by the first Londons, soon to be followed by DGs).

Already Dolby is seeking new-broadcast, maybe even disc—worlds to conquer: The world of tape is won.

Levine and Mahler lead off. RCA's new cassette policy is exemplified by a large batch of classical as well as pop releases, of which the first to reach me is Mahler's Third Symphony by James Levine, the Chicago Symphony Orchestra and Chorus, Marilyn Horne, and the Glen Ellyn Children's Chorus: RCA Red Seal CRK/CRS 2-1757, two Dolby cassettes/non-Dolby cartridges, $15.95 each set. This Third is everything promised by the 1975 Levine/Chicago Mahler Fourth: romantically warm and fervent, yetsearchingly lucid and beautifully played, sung, and recorded, with admirably effective Dolby quietening.

It needs all these distinctive attractions too, for it has to face the toughest possible competition in the acclaimed 1974 Horenstein version (Nonesuch/Advent E 1009), less sensuously rich in its 1971 sonics but more tautly dramatic and economically more enticing since its faster pacing needs only a single (ninety-minute) $7.95 cassette. But how lucky we are to have such richly complementary choices as these:

“Concert of the Century.” If the title is sheer puffery, Columbia's documentation of the festive commemoration of Carnegie Hall's eighty-fifth anniversary does present a dazzling galaxy of stars. Parts of the bouillabaisse program are eminently forgettable: the Bernstein Beethoven Leonore Overture, No. 3, the Menuhin/Stern Bernstein Bach double concerto, the Oratorio Society's Tchaikovsky and Handel choruses. But no Horowitz aficionado can afford to miss his playing in a movement each from the Tchaikovsky A minor Trio (with Stern and Rostropovich) and Rachmaninoff G minor Cello Sonata (with Rostropovich), or—especially—the complete Schumann Dichterliebe cycle with Fischer-Dieskau: Columbia M2T 34256, two Dolby cassettes, $15.98.

Pianistic spectrum. Horowitz isn't the only legendary virtuoso starring in current cassettes. Columbia (MT/MA 34218, Dolby cassette/cassette, $7.98 each) presents the fabulous Lazar Berman in a remake of the Beethoven Appassionate, which in its hard-driven bravura and somewhat brittle tonal qualities pleases me much less than his engaging, nimblly lilting performance of the less famous E flat Sonata, Op. 31, No. 2. Other Beethoven sonatas—the Waldstein and Op. 110 (plus the gracious Andante favor)—are played by a very different kind of virtuoso, the aesthetically aristocratic Alfred Brendel, in Philips 7300 351, Dolby cassette. $7.98. He is at his magisterial and poetic best; the recorded tonal qualities are exemplary: and this tape edition is filled out with the Schubert E flat Impromptu.

Then the unique Alicia de Larrocha demonstrates anew that she can excel in other than Spanish programs. Her Mostly Mozart, Vol. 2 (London C55 7008, Dolby cassette, $7.95) includes the K. 397 Fantasy, K. 311 and K. 330 Sonatas, plus Haydn's great F minor Variations. These are all played and recorded with such jeweled sparkle that it is perhaps carping to suggest that the tragic depths of the fantasy and variations are scarcely glimpsed. Garrick Ohlsson, representing the younger generation, rounds out our quadriovial piano virtuosos in his tape debut: Angel 4XS 37145, Dolby/XDR cassette, $7.98. He plays, with the New Philharmonia under Moshe Atzmon, the two Liszt concertos, completely unfazed by the long monopoly held on them by Richter (with Kondrashin on Philips). He is brilliantly and robustly recorded too, slightly overdominating his more reticent conductor and orchestra.

Paths to music's inner gardens. Cassettes, like open reels before them, try to pay at least occasional lip service to chamber music. So it's not really surprising to get two disparately rewarding examples in one month. The familiar Schubert Trout Quintet is played and recorded with exceptional poetic grace and restraint by the Beaux Arts Trio with violist Rhodes and bassist Hortnagel in Philips 7300 481, Dolby cassette, $7.95. Then the rarely heard, precocious, frankly Brahmsian Op. 13 Piano Quartet by Richard Strauss is done by Irma Vallecillo and the Los Angeles String Trio in Desmar/Advent E 1049. Dolby/chromium-dioxide cassette, $7.95. Oddly, the objections I had to the performance vehemences and stridencies in the 1976 disc edition bother me less now—undoubtedly thanks to Advent's superlatively deluxe processing.

What is startling is the appearance in a single month of no fewer than three chamber masterpieces in RCA Red Seal (regrettably pre-Dolby) cassettes and cartridges, $7.95 each: Brahms's clarinet quintet by Richard Stoltzman and the Cleveland Quartet (ARK/ARS 1-1993; Dvorak's American Quartet and Op. 97 Quintet (with Trampler) by the Guarneri Quartet (ARK/ARS 1-1791); and the Guarneri again in Schubert's Death and the Maiden Quartet and Wolf's Italian Serenade (ARK/ARS 1-1994). Shockingly, none of these works is otherwise currently available on tape, so there are no competitive challenges. The tautly vibrant Schubert/Wolf coupling is first-rate, while the Guarneri's Dvorak coupling, despite comparably attractive sonics, lacks comparable dramatic conviction. The Brahms quintet is tantalizingly ambivalent: indulgently overromanticized, even languid on the part of the strings; sheerly angelic for clarinetist Stoltzman's poetic sensibility.
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George Jones: 
“I’m Never Gonna Sell Pop” 
by Nick Tosches

"I have used strings," says George Jones in the same way that one would say "I have sinned." It is not penance, but regret. "I went along with the record company against my better judgment. I didn't wanna do it, but I let them put strings on my sessions just out of curiosity, more or less, just to see what they might do."

The country-music industry has long lusted after the pop market. Country singers—sometimes of their own will, but more often at the urgings of their producers and managers—have diluted their natural sounds with the desire to cross over to pop dollars. Usually the result has been homogenized mush: bland lyrics, blander music. Even one of Jones's idols, Ernest Tubb, the founding father of modern honky-tonk, succumbed. In 1949 Decca conned him into recording a duet with the Andrews Sisters. It was silly.

"Country music is something you love," says Jones. "Like I love it, like Ernest Tubb loves it. I think Hank Williams loved it. It's a music you love. When you use strings and horns and all these things, you just don't have country music anymore ... you abuse it. To try to sell two or three hundred thousand more records ... hell, a man could always use the money, but I wouldn't go out of my way to have that big a production on my records, because I'm never gonna sell pop."

These are warrior's words, coming not from a progressive-country ingenue, but from a man who has been making records for twenty-five years, the man most commonly thought of as the greatest country singer alive.

George Jones was born in Saratoga, Texas, on September 12, 1931. The east Texas area in which he
A frequent touring/recording duo—Jones and ex-wife, Tammy Wynette

was raised is an important one historically for it was in the beer joints and dance halls of these oil-boom towns that honky-tonk was born. George cut his teeth on this music: loud, driving, rough songs of whiskey and sex, stuff of drastic fatalism, such as Floyd Tillman's *It Makes No Difference Now* and Ted Daf-fan's *Born to Lose.*

While performing at a radio station in Beaumont, "Country music is the last music to gain credence from the culture barons."

Texas, in the early Fifties, George met Hank Williams—the archetypal king of country music who drank himself to death with one, long, fifteen-year gulp. "I was playing with a husband-and-wife team. The husband played the guitar and harmonica and she played the bull bass. I played the electric lead guitar and did a little singing on some of the shows. Hank was working in Beaumont one night. He came by to the four o'clock radio show that we had and did one song on the air with us called *Wedding Bells.*" He was very thrilled that he was gonna get to play behind him on that song, and I was so scared that I froze up and never hit a lick."


"There was no such thing as production at Starday. We'd go in with the band, we'd go over the song, I'd look over and tell the steel player to take a break or kick it off, and I'd get the fiddle to play the turn-around in the middle. I'd just let them know if we were gonna tag it or not. We'd just go through it. We didn't take the pains of making several takes. Back then, over three or four takes, they'd say, well, my God, this is costing us money. So we'd just get it down as good as we could. If we went a little flat or sharp in a place or two, they'd say the public ain't gonna notice that, so put it out. So we did, and it wasn't too successful, so I think maybe the public did notice it," he laughs. There were two Starday studios. George recalls. One was in Beaumont, the other in Houston. Both were living rooms walled with egg cartons.

In 1957, Art Talmadge brought George to Mercury Records, where he had eighteen country hits over the next five years. One of these, *White Lightning,* was a minor pop success. It was a rockabilly piece written by J.P. Richardson, a friend of George's from Beaumont, better known to the rock world as the Big Bopper.

Talmadge left Mercury for United Artists in late 1961 and took George with him. It was during his "Ten years from now my children won't be able to hear country music unless they put one of the old records on..."

years at U.A. that Jones made his first truly monumental records, such as *She Thinks I Still Care,* one of the best and bitterest love songs ever created, *Open Pit Mine,* an epic of sex, jealousy, and murder powerful enough to make your skin crawl, and *Warm Red Wine,* a grim tale of bibulousness and compulsion that both Bob Wills and Ernest Tubb had recorded in 1949.
The remarkable thing about most of George's records is his voice. Unlike most country singers, there is no cheap melodrama in his singing. He works his rough Texas voice with a noble gravity, wringing from every word its full color and power. He has a poet's sense of rhythm: the most pedestrian lyrics emerge from his mouth with teutonic dignity.

George had sixteen Top 40 country singles with United Artists. In 1964, Art Talmadge formed Musicor Records in New York, and again George followed. Although twenty-two of his singles with Musicor made it onto the country charts, some of them were not quite so good. George is not fond of his work with the label. There were too many records done too fast, some of them so awful their titles alone can effect shudders. *(The Poor Chinee is an example).*

Through all these years and record companies (the Musicor masters were later leased to RCA), Pappy Daily remained George's producer. In 1971, Epic Records bought George out of his contract, and united him with Billy Sherrill, one of Nashville's most gifted producers. Every record George has released with Epic has made it to the country charts. Top 40 singles include *We Can Make It* ('72), *Once You've Had the Best* ('73), *The Battle* ('76), and *Her Name Is...* ('77).

And still, says George, it is not all right. "Billy Sherrill has always done what he thought would be best for me. He always has. And the sound he's given me is great. The strings, the big productions—Billy thought this was the best thing. But we've talked about it, and we're gonna get back to a more hard-core sound."

The most wondrous part of George's sentiments is that they are more than a little risky. He doesn't need to change his sound, for he is among the most consistently successful country artists alive. He merely wants to slash the frills because he doesn't think country music needs them. "If it keeps going like it's going now, ten years from now my children probably won't be able to hear country music unless they put one of the old records on the turntable."

There are no fake down-homey trappings in George's performances. He hates that sort of nonsense, that sort of bleached Uncle Tom act. "For so many years we've had to live down the word 'hillbilly.' It makes me mad for somebody to come up and call me a hillbilly, simply because they used to think we were uneducated, dumb-ass people wearing nothing but overalls, that we lived out in the woods and we didn't know a damn thing."

George is right. Country music is the last music to gain credence from the culture barons. In a 1969 interview with Bob Dylan, *Rolling Stone* asked him what recent records he enjoyed. Dylan mentioned George Jones's *Small-Time Laboring Man*. *Rolling Stone* was so ill informed about who or what he was referring to that it quoted the title of the record as *Small Town Laboring Man*. It was in matters such as this that Dylan really was ahead of his time. In 1977, *Rolling Stone* gave George Jones its award for Country Artist of the Year.

Of course, it isn't awards that matter to George: He thinks the annual Country Music Association's are a sham, and he is, to put it lightly, not media-conscious. Once, three minutes into an interview with a writer from a major music publication, George rose, announced he was going to the bathroom, and disappeared for two days. What are the pleasures of good press compared to those of drinking with your friends? For George, the idea of being a star is silly, like putting cellos in country records is silly. "I don't know, for some reason being a star or anything like that never did really enter my mind. If they hadn't paid me for singing, I woulda still done it, long as I coulda got enough to eat somewhere. It don't matter to me that much," he laughs.

George has no idea how many albums he's had released, nor does anyone else. The biggest collectors of his records (George's own collection has long since dwindled at the hands of family and friends) say there are well over a hundred albums, well over a hundred singles. The bulk doesn't matter so much as its content, for the best of it will take its place next to the legacies of Jimmie Rodgers, Hank Williams, and a few others. And, if George has his way, and he will have his way, the best is yet to come.
A music industry ritual takes place every Wednesday and Thursday in the offices of the major music trade publications. Ringing telephones dominate the air as record company executives, hands on promotion throttles, call Billboard, Cashbox, and Record World for advance information on the top LP and singles charts to be published in their pages the following Monday. For major labels, the conversation can last several minutes as the positioning of their product is broken down: top 100-150 singles; top 200 LPs and tapes; country singles and LPs; r&b/soul singles and LPs; disco and easy listening singles; jazz, gospel, classical, and Latin LPs; and international reports. Good news is a new release making it onto the national charts for the first time. Better still is a record continuing its upward climb from last week, possibly picking up or maintaining a bullet or star. (Record World and Cashbox use bullets to designate the week's standout sellers; Billboard opts for stars, using bullets and triangles to indicate 500,000 and one million units sold, respectively.) Bad news can be a record that has held its own but dropped its bullet/star in the process, dropped in position or—worst of all—fallen off the charts completely.

The winners go away happy, ready to shift marketing and promotion gears to capitalize on their new positions. Show a record store owner a bullet or star and he might double the order. A radio-station programmer might add an upwardly mobile record to the playlist, or not reduce airplay on a song that has been out for a while.

The losers may stay on the phone to vehemently argue their case, based on their own in-house sales figures. In some instances this has caused the chart department to take a second look. It has not been unknown for advance listings to change by the time the publication date rolls around. Some will take the time to retaliate for what they consider inaccurate calculations by cancelling advertising in the offending magazines.

Is chart positioning influenced by advertising dollars? "No way," says Billboard's chart director, Bill Wardlow. "Absolutely not," agrees Cashbox's editor-in-chief, Gary Cohen. "You can get record companies who threaten, but it doesn't influence our decisions." Cohen also feels that such tactics on the part of labels have diminished in recent years. Record World's research editor, Toni Profera, also rejects the notion of advertising influences. The consensus at each trade is that the stakes are too high, and, over both the long and short run, chart credibility is worth more than any ad dollars they might receive by catering to an individual label's whims.

Each will also emphasize that the methodology used is designed to give as accurate a national reflection of record sales as possible. Take for example the top 100 singles (150 in the case of Record World). Here, radio plays a key role in positioning the lower portion of the charts because—with the exception of crossovers from the country, jazz, and r&b charts—a new record takes time to develop a reportable sales history. Rather than waiting the extra few weeks for it to surface on dealer reports, the chart departments assume that airplay will automatically produce substantial sales. Each week Cashbox contacts 92 radio stations, Billboard 128, and Record World 40-plus in both major and secondary markets. (Major markets include New York City, Los Angeles, San Francisco, Dallas/Fort Worth, Chicago, Boston, Philadelphia/D.C., Cleveland, and Atlanta.) Whether by direct telephone contact or by return mail questionnaires, the queries put to the broadcasters are pretty much the same from all three trades. They generally ask for a...
breakdown of the playlist—what records have been added or dropped, and which are currently on top.

"A pure white pop record has the hardest time of all making it onto our singles chart," says Record World's Profera. She explains that a disc must have substantial airplay in at least three major markets before appearing on the lower portion of the chart. Wardlow says that a new pop single can make it onto Billboard's chart in a number of ways: sales alone, sales and radio play, radio play alone, and even disco exposure. (Each week some 100 national discotheques are surveyed to put together the magazine's "Disco Action" chart; that information is considered in positioning the pop singles chart.) Airplay is weighted differently by each trade, but generally speaking a sliding curve is used by all, with the radio factor tapering off as you move up the chart. Radio does not have a role in tabulating procedures for any of the pop LP charts.

A similar canvassing process takes place with record retail chains, individual store owners, one-stops—whose primary function is to provide product to jukebox operators and mama-papa operations—and rackjobbers who stock major department stores and other limited record merchandisers. The aim in this case is to gather sales results that are used for positioning the upper portions on all of the charts. And, while each of the publications is concerned with records actually sold rather than shipped by a manufacturer to an account (overstock is returned if not sold), cash register rings on individual singles titles are accepted in varying degrees.

"For the singles chart our survey covers approximately 3,000 retail locations," Wardlow says. In a given week Billboard tracks some 180 different singles, aside from following the progress of the previous week's 100. the additional 80 are culled from new release lists and radio play. Nearly 280 LP titles are tracked, and a total of 1,500 for all of the charts combined. Cohen explains that Cashbox canvasses some 800 retail operations (many of which are chain-store enterprises) and that rackjobber research covers anywhere from 10,000 to 15,000 accounts. Profera declines to give an off-the-top-of-the-head number of locations surveyed by Record World, but says the magazine places major emphasis on rackjobber data.
Incentive for sources to cooperate with the surveys is usually a year's free subscription. Sources also don't mind letting the labels know that they are responding to the trades, for this can mean receiving free goods and promotional advertising allowances. Both Record World and Cashbox will identify their retail sources, while at Billboard they are kept confidential—a policy that Wardlow would like to see changed. "There's no harm in letting the industry know which accounts we are checking," he says. "When it comes to free records, every label plays its own game. If they want to hype, may the best man win."

Many of the same sources are used by the three trades, but the kind of information sought and how the replies are weighted sometimes produce different results as between magazines. Record World probably does place the most emphasis on getting as exact a piece sales count as possible, especially on the top thirty positions of its singles charts. Toni Profera feels that Billboard's charts contain a "basic fallacy" because they don't rely more on such sales tallies. Billboard describes its charts as "qualitative"—sources are rated for their importance—and counters that Record World's claims that its charts are the most "quantitatively" accurate—based on actual piece counts, equal in value from all sources—are at best suspect.

Both actual sales counts and a system of point values for dealer ratings and radio playlists are used by Billboard: fifteen points to the top pick, fourteen to
the next, and so on. Additionally, dealers and radio stations are rated for their relative importance both to their own marketplace and to the overall picture. Cashbox also bases its charts on generalized field reports and sales figures. There is general agreement that chart accuracy will increase with the development of bar coding and computerization at the cash-register level. It should also be noted that weekly chart results for all the trades are based on a competitive rating for that week only, not on a cumulative sales basis. "One of the hardest things for labels to understand is that we are working with a new market every week," Wardlow says.

Billboard, which budgets some $300,000 each year for its chart operations, offers auditability of its ratings through weekly justification reports by the chart director. These are used to answer queries and complaints from individual labels. The magazine also provides weekly reports—for a fee—detailing its research findings in twenty-two markets. (This service generated $150,000 in revenues for the magazine last year, according to Wardlow.) Record World and Cashbox also open their research findings to labels, but do not provide a service similar to Billboard's.

Would the trades agree to run an all-industry chart and pool their individual approaches? "Yes," they say. "Cashbox would like to pioneer an all-industry chart and make it available to the competition," Cohen says. Billboard has a long-standing offer to contribute its entire chart budget for such a move, and Record World can be counted on as well. It all sounds good—but don't look for it to happen for some time, if ever.

As for the record companies, looking good on the national charts can be awfully important. And, whatever their success or lack of it, most aren't above reproach when it comes to trying for chart influence. In addition to year-round wining and dining at some of the plusher restaurants, some trade employees are proffered heaps of goodies at Christmas time. Neither Cashbox nor Record World has any specific policy governing these practices, although both frown on the acceptance of gifts that cannot be classified as mere tokens. "We have no formal policy," says Cohen, "but any gift would have to be within reason. The dollar limit would be about $25." Toni Profera's response was similar. "There is no official policy, but no one accepts expensive gifts," Wardlow, on the other hand, says Billboard's policy limits record company generosity to mealtimes. "We cannot accept anything other than occasional lunches and dinners, and dinners are confined to myself and my assistant, Bob White [Billboard's chart manager]."

Still, stories about attempts to influence the charts are numerous. One tale has a publication's employee selling positions to labels for $50 to $100 each week. Only thing was, though, the positions he was "selling" had already been determined. He only approached those labels whose product he knew from advance listings would be climbing on the next published chart.

In another incident, a midwestern graduate student in statistics recently wrote one of the trades question ing the validity of its standout-seller research on the pop chart. He claimed that most of the records garnering and maintaining standout status moved up exactly ten positions each week, and, given the number of variables involved in putting together a national chart, the laws of probability were violated by the emerging pattern. The student based his observations on two to three months of consecutively published charts. While it would be difficult to draw any valid conclusions from the incident, one week following the letter's receipt this pattern suddenly ceased.

Well, then, should we put our faith in these revered listings? The answer is yes, but not blindly. Some record execs are strong believers, even when their own discs aren't necessarily enjoying strong chart popularity. Others say they are misled and cut only the interests of the larger companies. Perhaps the latter is true at times, but at least one of the top five record companies also views disc-ranking from all three trades as shaky at best. Quite often record positioning on the chart's doesn't mesh with hard in-house sales figures. Of course, this includes instances where a disc should be lower on the listings than the trades report. But who's going to complain on that count?)

Will label execs put their opinions on record? Not on your life! My queries prompted such replies as "Are you kidding?" "No way." and "I don't want to say something that's going to come back to haunt me." How do the chart directors respond to these vehement reactions? "I never worry what labels think of me, or if they pull ads," Wardlow says. He adds that his main concern is for the artist. "Most labels don't want to choose sides [among the trades]." He feels that they do. in fact, accurately reflect what's happening at the retail level. He adds, however, that since his is one of the largest record chains, the charts are of little use to him. He adds that the methodology used in putting the charts together is confusing to some labels.

Ben Karol, co-owner of the well known King Karol record chain (surveyed by both Record World and Cashbox) in New York City, views the charts as being "very good for what they do"—he feels that they do, in fact, accurately reflect what's happening at the retail level. He adds, however, that since his is one of the largest record chains, the charts are of little use to King Karol. "We are sort of on the front line, and if we had to look at the charts to do business we would have closed our doors a long time ago."

But the usefulness of the charts cannot be denied. Smaller radio stations use them as a valuable guide in programming. Retailers use them as a barometer of current musical tastes, and artists can use them when it comes time to renegotiate a recording contract. One of the licensing organizations, SESAC, even refers to them in helping to determine royalty payouts. They are intended as a reflection of what's happening in musical trends and record sales, not as end-all marketing surveys. Of course industry opinion is divided. But no one goes so far as to ignore them.
Noise Reduction: Choosing Your Options

Recently, Dolby Laboratories celebrated the tenth anniversary of the famous Dolby "A" Noise Reduction System's public introduction. When first introduced, the gadget was treated with suspicion, but once Ray Dolby convinced the recording industry that noise reduction would not hurt (and this took some doing), the idea caught on quickly. Now, hardly a day seems to go by without the announcement of some new system guaranteed to banish noise—or at least reduce it by a few dB.

The significant differences among the various rival systems currently on the market make most of them incompatible one with another. Therefore—unless you're quite well off—you must decide which is best for you, and avoid the others as much as possible.

These systems may be classified as complementary or non-complementary. The former require that noise reduction be used during recording, and an equal-and-opposite (complementary) system used for playback. The non-complementary system is for playback only. It is the complementary type that causes compatibility problems, for a tape recorded with one manufacturer's system will sound quite strange when played back through another. It will also sound odd when monitored through no noise reduction setup at all. The tape used may indeed be impressively noise-free, but you may not have the proper equipment to enjoy it.

How do noise reduction systems distinguish signal from noise? Quite simply, they don't. Although you and I know noise when we hear it, the complementary noise reduction system cannot tell one from the other. It operates in a manner requiring no brain power—it boosts all low-level signals, before they get to the tape recorder. Therefore these signals are recorded at a higher than normal level, well above that of the residual noise of the tape itself. If this were played back directly, the listener would hear a program with a compressed dynamic range and no noise reduction at all. But when the tape is reproduced through the appropriate playback system, the low-level segments of the signal are restored to their proper place. Since the system regards tape noise as just another low-level signal, it is likewise attenuated—not to its "proper place," but to a level that is perhaps ten or more dB lower than normal. This delightful circumstance occurs because the tape noise was not processed earlier.

Since the complementary noise reduction system operates by first compressing the dynamic range of the program (before recording), and then later expanding the program (before playback), it is often referred to as a "compander"—short for compressor/expander—and incompatibility arises from the different means used by different manufacturers to compress and expand.

The Dolby A System. Dolby feels that a high-level program does not require noise reduction. The music itself masks the noise sufficiently. Therefore the system functions only at low levels, in the manner described above. As a further refinement, the signal is first divided into four frequency bands, with each band processed separately. (This is because noise within one frequency band may be perceived when the music is for the most part, within some other frequency range—as may happen, for example, during solo passages.) In a typical situation, this band splitting allows noise reduction to occur at high and low frequencies during the presence of a comparatively high-level signal within the mid-frequency range.

 Needless to say, Dolby's A system is not cheap ($795 per channel), and so a B system was developed at a significant reduction in cost. Found mostly as a built-in feature in consumer tape recorders and receivers (for Dolby broadcasts), the B operates only in the high-frequency range, where tape and FM hiss is found. Dolby prerecorded tapes all use the B system.

The DBX System. The rival DBX system operates at once over the entire audio bandwidth and—in addition to raising low-level signals—also brings down high-level signals. Although it may be argued that this additional compression is unnecessary for noise reduction, it does enable the user to accommodate programs with a wider dynamic range, without fear of high-level tape saturation.

DBX has enjoyed considerable success in the semi-pro marketplace, and Teac/Tascam offers the system as a built-in option in several of its top-of-the-line tape recorders. In addition, there is a small but growing number of DBX-encoded discs on the market, bringing noise reduction to the phonograph record, which in so many cases needs all the help it can get.*

Of course, the complementary systems just described will be of no help whatsoever in reducing the noise on material that was recorded without benefit of noise reduction in the first place. However, a non-complementary system may do an impressive job here, and Burwen Research's Dynamic Noise Filter 1201A is an excellent example of such a device. The dynamic noise filter takes advantage of the fact that quietly played music usually contains a somewhat reduced upper harmonic structure. In terms of noise reduction, this means that at low levels the audio system's high-frequency response may be attenuated, thereby filtering out the noise without materially affecting the music. However, the device continuously monitors the level music source, rhythm unit, etc., to increases the filtering action is withdrawn. At the same time, the music begins masking the noise anyway. Although my brief explanation may not sound entirely convincing, such filtering devices go a long way in improving the apparent noise level of a variety of program sources.

But for professional and semi-pro recording, the complementary systems have become so close to universal that the need for after-the-fact noise elimination has been obviated to a large extent.


Stylophone 350S. Originally designed as a child's toy, the Stylophone has grown up into an almost indescribable hybrid. In one sense, it is still a musical instrument that children can use. But in another
there is a light-activated photo switch that can be used to regulate vibrato, swell, or wah-wah. There are outputs for external amplification and for the substitution of a pedal for the photo switch, and an input for the addition of a line level music source. A rhythm unit, etc., to be played through the unit's speaker. The whole package weighs less than five pounds with its two 9-volt batteries, and it's about the size of a small portable typewriter.

How does it work? With unbelievable simplicity and accuracy. You can manipulate the stylus as fast as you can a pencil. A bit of practice with one's free hand over the photo cell can result in an incredible range of both expressive and percussive effects. The woodwind sounds are the best of the tone controls, but like most electronic instruments—the Stylophone works best when used to create its own sounds. The manufacturers inform me that David Bowie used the instrument on "Space Oddity," and that most of the studio musicians in Los Angeles are grabbing it up as fast as they can. I've talked to several who have used it on gigs or for recording and they seem to find it most useful as a filler and backer—thickening textures, adding color, and putting an unusual bite on the edge of a familiar sound.

I agree. And I also found the wah-wah control particularly effective in creating low-pitched rhythm sounds for overdubbing, and the high woodwind sound almost indistinguishable from a real piccolo. As a film composer who does an awful lot of last minute shifting, changing, overdubbing, and coloration, it seems to me that this little instrument could do a lot of things more easily and more quickly than some of its high-priced, admittedly more complex competitors.

And I'll bet the instrument is being used by musicians' kids, too. My four-year-old daughter took no longer than ten seconds to figure out how to get some intriguing sounds out of the 350S, and she is now experimenting with it in a way that she never has with either our piano or guitar. No doubt the size and simplicity of operation make it easier for her to exercise her basic creative instincts—and that's all to the good.

Finally, and most remarkable of all, the Stylophone 350S—currently available by mail only—is selling for the quite reasonable price of $200.

DON HECKMAN
CIRCLE 127 ON READER-SERVICE CARD

Zipper Envelope Follower. Electro-Harmonix' new Zipper produces synthesizer-like wah-wah effects in conjunction with guitar, bass, or clarinet. The RANGE control varies the frequency response, making the effect more or less pronounced in relation to the basic sound of the instrument, and a two-position ATTACK switch determines whether the wah-wah will be fast or slow. An adjustment on the back marked LP/BP (low pass/band pass) increases or decreases the high-frequency content of the output signal. Its function is similar to that of a bright switch often found on instrument amplifiers. A foot-activated bypass switch allows the user to return to normal sound at any time.

Field testing showed that the Zipper interfaces well into the audio signal path, causing none of the usual foot-pedal insertion losses and introducing no unwanted noises. Sturdy construction is not a plus factor here. The bottom of the printed circuit board rests on a piece of Styrofoam, rather than being secured to the housing in any way. The unit can be powered by an internal 9-volt battery or through an optional AC adapter. Input and output connections are via standard ¼-inch phone jacks, and the suggested list price is $79.95.

DAN HECKMAN
CIRCLE 126 ON READER-SERVICE CARD

HPR-12 Magnum by RTR

The Efficiency Expert

1 watt drives the system to 92 dB

How do you judge an efficient speaker? Audiophiles conclude speaker system efficiency reflects the total output of all components. And that's what makes the new HPR-12 Magnum by RTR a remarkably efficient system.

The speaker can handle 100 watts of program material—one watt will drive it to 92dB. That's efficiency!

HPR-12 Magnum displays equally impressive linearity performance characteristics. The 12" Helmholtz-driven passive radiator combines with an active 12" woofer and 3" voice coil to deliver the power of many ported systems while maintaining a solid bottom end. High frequencies handled by two tweeters and one piezo-electric super tweeter complete the overall balance and smoothness. A rarity in a super efficient speaker.

If efficiency, smoothness and balance are your goals, audition the new HPR-12 Magnum by your RTR dealer.
**Zildjian Crotales.** Since ba-a-da-da has come to mean good and it's in to be out, it seems only logical that something very old should be new. In the Bronze Age it was discovered that empty vinegar cups made a pleasant sound when struck together. From these evolved the finger cymbals and from them the crotales—ancestors of the cymbals and the gong. Berlioz, Debussy, Stravinsky, and several modern composers have used crotales and they are now available in a two-octave range from middle C upwards (they sound two octaves higher than scored) from the Avedis Zildjian Company. Accessories include a crotales bar, which accommodates one full octave, and a single crotales holder. Both will attach to a standard cymbal stand. The instruments are electronically tuned (A-442 Hz) and sound excellent. If you like special effects in your drum kit, these should be a welcome addition. A single crotales costs $20 and any combination of sizes and pitches is available.

**MXR Envelope Filter.** By now you've probably heard one or more of the new envelope-shaping "voice boxes" that are becoming increasingly popular among rock musicians. In concept, these are low-pass filter devices, which create a sort of wah-wah effect. The filters do their job by way of a plastic tube that transmits an amplified signal to the performer's mouth. A nearby microphone picks up the vocally processed signal, which is again amplified to create the effect.

Of all the things people have put in their mouths, 100 watts of screaming electric guitar may indeed be among the most bizarre. And these dental delights may prove to be shocking to the teeth. Dynamic and filtering action is determined with the **THRESHOLD control:** attack varies the **onset of the effect.**

Sturdy and reliable construction is a plus factor: the Envelope Filter sounds good, is almost noise-free, and won't shake your teeth loose. Dynamic and filtering capabilities have quite so much power capability. The only problem, of course, is the total removal of all reverberation, but I guess you can't have everything. Suggested list price for MXR Audio's Envelope Filter is $79.95.

**Ice Cube.** This sustain device is designed specifically for use with Fender amplifiers. When plugged into the vibrato and reverb inputs, the Ice Cube replaces both of the amp's reverb functions for increased sustain and overdrive. The footswitch turns it on and off, allowing preset levels to be set for rhythm and lead playing, and the reverb knob controls the amount of sustain. We tried it on Fender's Pro Reverb and Twin Reverb, and it works well. I never knew the reverb electronics had quite so much power capability. The only problem, of course, is the total removal of reverb capabilities, but I guess you can't have everything. Suggested list price for Fender's Ice Cube Sustain Coupler is $19.95.

**Synare Percussion Synthesizer.** If you listen closely, you'll notice that new percussion sounds are on the rise in the Seventies. The Synare from Star Instruments is a complete synthesizer, played with drumsticks (although fingers work too). Four rubber pads—they look like practice pads—act as separate controllers, and each has three zones for pitch, tone color, and dynamics. The synthesizer itself contains a voltage-controlled oscillator that generates sawtooth, square, or pulse waveforms. Other controls include a low-frequency oscillator (for tremolo, wah-wah, and trill effects), white- and pink-noise generators, envelope generator, ring modulator, low-pass filter with a 24-db-per-octave slope, and two voltage-controlled amplifiers. The instrument makes an impressive array of sounds: rainstorms, chimes, timpani, woodblocks, wind, etc. Perhaps the nicest part of the Synare is that you don't have to be a keyboard player to use it. It's a natural accessory instrument for drummers, and recording studios will find it a useful sound-effects tool. Low- and high-level output jacks, a stereo headphone jack, and power cord are all located on the back panel. Shipping weight is 18 pounds, and the suggested list price is $695.

**Master Control Volume Unit.** If you drive your amplifier with all the controls wide open you can expect an immediate visit from your landlord—although you may not hear him knocking. Many musicians seek the tonal qualities of a full-blast amp, and if excessive loudness were not such a problem the effect would surely be used more often. The Master Control Volume Unit is designed to solve the dilemma by allowing the performer to overdrive any section of his electronics without tiring his speakers (or walls) apart. It is simply a variable resistor, with foot-activated bypass, and is inserted between the power amplifier and the speakers. The device comes equipped with standard 1/4-inch phone jacks for input and output and costs $60.
The Band: Islands in the Mainstream

"Islands" is a maverick triumph, a relaxed and deceptively informal collection of songs used by The Band to sidestep the sense of occasion the record's release suggests. Their last album for Capitol, the group's label since making the transition from accompanists to self-contained performers, was completed in the wake of their formal retirement from live performing and in advance of several solo records that will inhibit, if not preclude, frequent studio reunions. More significantly, their most influential records have grappled with the very idea of history, especially in terms of those events and observations signalling the end of epochs: Given the epochal character of their own work, which has sustained both personal style and thematic coherence throughout, we might well expect an attempt at a stern, ambitious summary of their music in line with that same identity.

Instead, "Islands" is arguably their least ambitious record, its ten songs neither memorializing nor advancing the group's style. In contrast to their previous studio album, the generally solemn and musically subdued "Northern Lights/Southern Cross," the current set minimizes both interior thematic connections and links to the prevailing concerns of its predecessors. While there are ample references, both instrumental and lyric, to their earlier songs, the overall looseness of the collection seeks to shift emphasis away from grand designs, and instead utilizes individual tunes as armatures for The Band's richly detailed ensemble playing and passionate singing.

Where "Cahoots" and "Northern Lights..." placed a premium on narratives laced with social observation, "Islands" restricts that approach considerably while affording uncharacteristic space to love songs and classic upbeat rock performances.

The ebullient feel that emerges most closely resembles their third album, "Stage Fright" (1970), one of their most critically maligned yet ultimately durable records. Greil Marcus shrewdly described that LP as the perfect anticlimax because of its refusal to extend or elaborate on its carefully organized, perceptually consistent predecessor. "The Band." That was their most popular effort, achieving its impact through a singularity of theme and diction: "Stage Fright," violated that process, providing multiple viewpoints and styles. High seriousness was mitigated by the free-wheeling spirit of the playing.

That change disappointed some of their admirers and "Islands" will likewise disappoint anyone still hoping for another conceptually unified masterpiece. Yet the new record's lack of pretension and consistent spirit prove far more satisfying and attractive than the forced moralism of "Northern Lights..." or "Cahoots" often lobared observations on the emotional and moral consequences of modern life.

In lieu of an outwardly buoyant but essentially a sermon like Forbidden Fruit ("Northern Lights..."), their opening cut is a gentle love song, Right as Rain. Robbie Robertson's tendency to transform cliches into more serious conclusions seems far better served in this context than in his more abstracted social commentaries; the net effect is genuinely engaging, as is Richard Manuel's warm baritone. Street Walker, which follows, has its share of pointed lines aimed at evoking the toughness of city life. Yet Robertson's lyric is more restrained than much of his recent work, and the limber syncopation of the rhythm section and sly contrapuntal piano style make the track a delight.

Less obvious but equally important to that song is the use of horn charts that simply but effectively accent the melody. Recent albums had employed a more elaborate use of overdubbing, with horn player Garth Hudson attempting to singlehandedly graft the intricacy of Dixieland solos onto the band's subtle, variegated ensemble style. On "Islands," he turns in smoother, more melodic saxophone solos and limits overdubs to simple, rhythmic chord changes. That leaves more room for Robertson to display his wiry, sharp-edged guitar play-
ing—more prominent here than on most recent outings—while Hudson himself is more extroverted on organ and piano. Where his keyboard work on "Northern Lights," was often restricted to textural effects rather than solos, the stripped-down arrangements here enable him to play in a freer style.

If there is a shift toward an instrumental focus and a corresponding move away from weightier thematic underpinnings, the album still offers several Robertson songs that dovetail with more cerebral predecessors. The Saga is a somewhat muddled parable with sci-fi overtones that is saved by a romping chorus; Knockin' Lost John is a more successful fable for the Depression that could have appeared on "The Band." Rockefeller songs that dovetail with more pinnings, the album still offers several recent outings—while Hudson himself is more subdued on recent tours, and here Georgia on My Mind approximates that same ragged, weary tone that implied his powers were failing. But his vocal work on Right as Rain is relaxed and confident, while Let the Night Fall, one of the album's best songs, features a stunning balance between his controlled singing on the verses and the more desperate, pleading rasp he affects on the choruses.

Production values are generally excellent, striking a nice balance between the more polished, studio-slick sound of recent albums, and the stark, unvarnished feel of "The Band" whose past tense vantage point was underscored by eschewing equalization, echo, and other effects. Robertson's more aggressive guitar work is enhanced by a slightly gritty feel appropriate to his style, and Helm's drumming is captured with a clarity that doesn't sacrifice punch for polish.


While Brian Wilson's return to the Beach Boys's ranks and painful public confessions about his years as a recluse coincided with last year's release of "15 Big Ones," his real regeneration is clearly witnessed on this album. The songs are all Wilson originals, as opposed to the last effort's array of oldies and collaborations. That new energy isn't really a smooth resurrection of his most celebrated late Sixties work, largely because many of his most highly touted songs were written with Van Dyke Parks. Jack Nielson, and various members of the band, leading to a broader and more convoluted range of lyric ideas. Here, Wilson himself is the lyricist on all but three cuts, and the resulting tension between an affected naivete and a more cryptic underlying rebelliousness is reminiscent of the brief, quirky fragments that gave classic Beach Boys albums like "Smiley Smile," "20/20," and "Friends" much of their charm.

Musically, the new songs are deliberate reworkings of the simple ballads and chant-like rockers Wilson became identified with during the group's earliest singles. In arranging them, he has employed the massed keyboard textures and eccentric percussion effects that became a later trademark: Organ and piano parts are doubled and intermixed to become indistinguishable from full horn sections, while chimes, wood blocks, and more arcane percussive touches remind us how powerfully Wilson was influenced by Phil Spector (who is lovingly honored and specifically mentioned in Mona, one of the set's simplest but most infectious songs).

Vocal arranging is predictably emphasized, but the individual soloists are often overshadowed by the bizarre lyrics they're singing. Wilson attempts to recreate the carefree protagonists of his earliest songs, but there are some intriguing and often funny wrinkles. On Roller Skating Child, he slyly tells us of making sweet love with his ingenious skating partner, adding "We'll even do more when her mama's not around," leading to some confusion about just what forbidden game might be left. On Feel Good, his observation that a new love may collapse painfully doesn't really mesh with the song's rolling good spirits.

On first listen, Wilson's alarmingly hoarse vocals and time-warped lyrics and arrangements may be unsettling to listeners already familiar with his private torments. But the vitality of the music, superior in every respect to "15 Big Ones" and more unified than much of the Beach Boys's work in the Seventies, finally wins. Special mention must be made of Johnny Carson, a tribute to the nighttime television host that neatly encapsulates the mood of the man and his show.

Unpredictable? Well, hardly. Not only does this album deviate very little from the pattern cut by her first two discs, but Natalie's and her producers' stylistic resources are more apparent than ever. Aside from the omnipresent Aretha Franklin vocal influence the album is a veritable pastiche of mid-Sixties Motown riffs.

That said, all I can add is three cheers for regression. If the lyrics provided by her producers are dated in reflecting (celebrating, actually) total sexual subjugation, her delivery of this unexceptional and occasionally offensive material is old-fashioned in the most refreshing way. She sounds excited with the clichés she's handed; the result is exciting listening, a real tonic after all the forced whoop-ups of ersatz disco and the bland tissues of Marilyn McCoo & Billy Davis Jr. Unlike the majority of current R&B-oriented singers, she transcends the lethal awareness of formula and derivativeness through sheer spirit. There's something to be said, after all, for simply recognizing your undigested influences and going ahead and doing it with all the verve you can muster. In soul music, feeling is at least as important as originality.

Which is not to say that this album is going to blow you out of your shoes. Ms. Cole's Aretha is heavily tempered by Nancy Wilson, resulting in something much closer to supper-club music than sweet soul and a universe apart from the guttiness of Franklin at her peak. If she could find that in herself, she might begin to validate the title of this album and become a force to reckon with on the soul horizon rather than a spirited journeywoman.

L.B.

The Kinks: Sleepwalker. R. D. Davies, producer. Arista AL 4106, $6.98. Tape: 4X0 4106, 8X0 4106, $7.98.

Spinoffs: the art of the Seventies. At their worst, spinoffs are a form of self-parody. Everyone's doing it—Dylan, the Stones, John Updike—so there's no reason to single Ray Davies out for special disciplinary action. Like most of his peers, he's just another schoolboy in distress. And whether or not you had the patience to indulge him the group's three volumes of the concept-quasi-fable "Preservation" when their earlier "Village Green Preservation Society" (1968) was quite enough, has more to do with your tolerance than absolute standards.

As an old-line Kinks fan (meaning, no self-aggrandizement intended, that I bought the "You Really Got Me" album when it came out) I haven't been able to

Continued on page 118
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.
The Musical Paradox of Kate & Anna McGarrigle

McGarrigle’s *The Work Song* continues to haunt. Its dreamy nostalgia for the “songs that my daddy taught me” and clear-sighted criticism of those songs’ tainted origins in racism and slavery (“You worked so hard you died standing up”) remain a unique and almost-contradictory combination, forged with deep feeling and great wit. Shortly after Muldaur recorded a song by Kate’s sister Anna (the elder by a year) for her second album, the two were offered a contract of their own. “Kate & Anna McGarrigle” (Warner Bros. BS 2862), released in late 1975, and the new “Dancer with Bruised Knees” are also unique, almost-contradictory, and haunting.

The musical paradox is more striking on the first LP, which sounds at once cloistered and adventurous. Although they are in their thirties, the Canadian sisters (born and raised in Quebec) sing for the most part in girlish sopranos as if gathered around the family piano on a wintry evening twenty years ago. Yet the homey feel of the vocals is belied by the wide-ranging eclecticism of the material. A ditty delivered in French jostles a Bahamian gospel number. Anna’s songs draw mainly on country- and folk-music idioms, while Kate’s tend toward blues and jazz. And both women recall the tunefulness of classic American songwriters such as Stephen Foster, George Gershwin, and Hoagy Carmichael. The singers sound young and innocent, out of their melodies sound old and experienced, steeped in the history and geography of our continent.

Thematically as well, the McGarrigles unite opposites. “Dancer with Bruised Knees” points out the polarity by following one traditional French song, *Blanche Comme la Neige*, with another, *Perrine Etait Servante*. The first is decorous and demure: a young maiden feigns death to preserve her virginity and is reunited with her father. The second is a ribald, up-tempo tune about illicit love. Generally speaking, Anna’s songs are metaphorical and romantic. One verse of her *Heart Like a Wheel* is so mawkish that even Linda Ronstadt omitted it on her 1974 album of the same name. (Ronstadt’s version remains the most widely known of the McGarrigles’ songs.) Anna sings that even death is better than an untrue lover with such seeming naiveté.


*The Work Song © 1973 by Kate McGarrigle, Garden Court Music Corp. Used by permission.*
and conviction that the most hardened heart melts. Most of Kate's contributions, on the other hand, are earthen and realistically detailed—almost tart. She hungrily anticipates a one-night stand ("I wanna kiss you till my mouth gets numb") and recounts "the times I got laid."

It may not be stretching a point to suggest that the frankness of Kate's songs owes to her fondness for black music, and Anna's sentimentality to her base in white balladry. But whatever their sources, the differences between the sisters' songwriting sensibilities (which are not quite so diametrically opposed as this schematicskelet may suggest) evoke the dualities conventionally imposed on women: virgin/whore, goddess/bitch, etc. Together, the McGarrigles dramatize the conflict between daddy's little girl and the independent woman, between abject dependence on a man and self-respecting freedom. "Kate & Anna McGarrigle" tips the scales toward the first of these dichotomies; "Dancer with Bruised Knees" inclines toward the second, perhaps partly as a result of the breakup of Kate's marriage to singer/songwriter Loudon Wainwright.

But the McGarrigles cannot be reduced to case studies in feminine roles, for their music is all their own. Having sung together not only as children, but also in sundry folk groups in the '60s, the McGarrigles render close harmonies with chiming, telepathic precision. Between them they play piano, guitar, banjo, recorder, and button accordion, and a third sister, Janie McGarrigle-Dow, occasionally sits in on organ. Their arrangements are endearingly eccentric (Heart Like a Wheel pairs banjo and organ) and range from delicately orchestral to dramatically stark. Almost all of the songs on the first album (produced by Joe Boyd and Greg Prestopino) are about heartache, but they are extremely various in instrumentation, even featuring a couple of jazz combos. The reverse is true of "Dancer with Bruised Knees" (produced by Boyd alone), which broadens its thematic scope but narrows the musical focus to casual folk/rock (for want of a better term) ensembles.

The McGarrigles' new album is slightly disappointing because its melodies aren't as exquisitely crafted as its predecessor's. (Such is often the case with a second album.) Since the tunes are weaker and the subject matter more diverse, "Dancer with Bruised Knees" lacks the single-minded intensity of "Kate & Anna McGarrigle," but it scarcely detracts from the sisters' talents—which should win a wider audience as they tour America for the first time this spring.

Continued from page 115

K.E.


No musician of Mulligan's generation (he just turned fifty) has clung so consistently to the roots of jazz and used them as openly and successfully in relatively contemporary terms. Recently he has been lying somewhat fallow—living in Italy and, before that, making occasional tours with Dave Brubeck (an alliance that did relatively little for either participant). But last summer he formed his first group in several years and got firmly back in the groove.

This disc is evidence of where he is now: just where he always was, with his roots sunk deep and his antennae picking up whatever new vibrations interest him. In the Something Old-vein, there are reworkings of old Mulligan—Bernie's Tune reincarnated but still full of joyful swagger, Idol Gossip, and a new version of Mulligan's moving and warmly melodic Song for Strayhorn, titiled Strayhorn 2. Something Blue is a bit of generic foot-kicking funk appropriately called Out Back of the Barn. And for Something New, we find Mulligan on soprano saxophone playing with an airy elan that sets him into the same positively swinging groove that he gets with the grumpy tones of his baritone. New also are several Mulligan compositions with a fresh outlook, notably North Atlantic Run, which skims the water as though it were a hip variation of Flying Down to Rio—Mulligan pursuing Fred Astaire's dancing feet.

The group is present essentially as ensemble and support. Dave Samuels' vibes provide an effective light-toned counterpart to Mulligan's rugged baritone, and Mike Santiago has provocative but fleeting moments on guitar. The rhythm engine behind them is Tom Fay on piano, George Davivier on bass, and Bobby Rosengarden on drums, but even with their efforts, the momentum and the stimulus lie primarily with Mulligan.

J.S.W.
To create a full featured cassette recorder at an affordable price. Well, our engineers out did themselves. To them, advance meant creating our Exclusive Biaset feature. A continuously adjustable recording bias control that lets you set the bias best suited for the formulation of any cassette tape. From normal to chrome and ferrichrome tapes. As a matter of fact, Dokorder engineers built into this Biaset feature a setting for tapes that haven't even been produced yet!

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Album covers, titles, and liner notes usually don't interest me all that much since it is, after all, the music within that matters. But in this case, the title and garish cover drawing by artist Al Hirschfeld are more to the point than anyone may have intended. Byrd's trumpet playing has indeed become a caricature of the crisp inventiveness of his earlier years. One cannot fault him for wanting to grab the bucks while he can, but turning himself into a jazzed-up version of Isaac Hayes and Barry White (complete with soul-stirring, deep voice narrations) is pushing things a bit far. "Caricatures" will no doubt receive some chart action, but the picture is still nothing like the real thing, baby.


Bass-playing band leaders seem to be the thing these days. I'll bet I've heard at least four or five new albums recently that featured groups led by bass men. Unlike most of the others, however, Ron Carter has chosen to stick with his instrument. He doesn't sing, talk, tap dance, or play the synthesizer. He does play acoustic bass (and piccolo bass) brilliantly throughout. Carter also has composed several delightful pieces: One Bass Rag is a kind of upside-down (from the bass player's point of view) look at a contemporary ragtime tune; 12 + 12 reveals the writer's roots in New York blues. The other cuts leave something to be desired: Pastels is too reminiscent of Rodrigo's Concierto de Aranjuez, and the lengthy Ballad (as well as several other pieces) has been given too liberal a dosage of Don Sebesky's string arrangements. Nonetheless, Carter's performance confirms his pre-eminence as a musician and an artist.


Curson shook up the New York jazz scene in 1976 with this octet. But his first record with them is a less than satisfying representation of what the group can do. One selection, Ari's Tune, captures the high-spirited drive of the ensemble and the electricity of the solos, and a couple of other pieces are suggestive of it. But a poorly balanced live session, taking up one side, obscures the group's full value.


Teddy Edwards is a refreshing relief from the hard-toned saxophonists that have proliferated over the past twenty years in jazz. He is warm, light but firm, melodic and swinging, with occasional suggestions of Zoot Sims or Stan Getz but with a darker feeling that goes back to Ben Webster and Chu Berry. Duke Jordan on piano is as much the star on this disc as Edwards (but with less space), and their combined performances have shape, structure, and some emotional involvement.
LUX proudly introduces the
Laboratory Reference Series.
...resolving elusive problems of distortion
with innovative new techniques.

The newly developed Laboratory Reference Series comprises a coordinated system of components whose performance characteristics represent a significant step forward in the state of the audio art.

Consider, for example, just two specifications of the direct-coupled DC power amplifier. At full rated power, intermodulation and total harmonic distortion are no more than 0.008 per cent, a figure previously associated only with the finest preamplifiers.

Even more significant, the various sources of the elusive—but audibly crucial—transient intermodulation distortion (TIM) have been isolated and dealt with. As part of the LRS research program, LUX audiophile/engineers developed an innovative technique for precise measurement of TIM. With the LRS amplifier, it is 0.05 per cent.

THD and IM distortion are conventionally measured with sine waves, which are inherently symmetrical and repetitive, unlike musical signals which are irregularly shaped, rapidly changing transients.

The large amounts of negative feedback normally used to reduce THD and IM distortion actually worsen TIM.

Negative feedback involves returning a portion of the output signal—out of phase—to the input. When the signal is a sine wave, generated and measured by test instruments, this technique is effective.

However, with the constantly changing transients typical of music, the feedback signal returns to the input too late for the desired effect. It either “corrects” the wrong part of the waveform or—far worse—fails to provide the instantaneous reduction of the signal required by the feedback-controlled circuits.

Result: the amplifier is driven into momentary clipping and overload—the aspect of TIM that is most audible and disturbing.

A reduction of the feedback and signal transit time so that TIM distortion effects would be significantly reduced is precisely what LUX sought, and has now achieved, with the LRS amplifiers.

LRS vs. TIM.

Capacitors are necessary in conventional circuits to avoid bias-upsetting DC. However, they slow the audio signal (appearing as phase-shift lags), particularly in the lower bass range. A new type of solid-state device developed for the LRS amplifier—a Dual Monolithic Linear Integrated Circuit—has enabled LUX to eliminate all capacitors from the signal path.

The transistors commonly found in even the finest amplifiers are too slow (usually 4 microseconds) to cope adequately with transients. The recently developed (and very expensive) transistors in the LRS amplifier can switch in 0.5 microsecond.

Class B and Class A amplifiers have well-recognized limitations: Class B introducing “crossover” distortion; Class A with power limitations and gross inefficiency. The LRS amplifier, is able to employ a bias point (in effect, Class AB) that achieves the best of both operating modes.

For more on LRS

All of the above are just high points of one LRS component, the Luxman 5M21 power amplifier, shown above with other current and future models.

We invite you to write for the new LRS literature. In the near future only a few audiophiles are likely to own these newest LUX achievements. But all can appreciate what they represent.

Blondie's premiere album is sheer fun. The group embraces the whole history of rock & roll by pilfering everybody from The Ventures to Thelonious Monk, and focusing almost entirely on adolescent preoccupations. They pull off this feat through enthusiasm, respect for their sources, and a pulpy sensibility so exaggerated that it borders on camp, but never succumbs.


Buffett is one of the most overlooked singer/songwriters. His material is too self-mocking to be Outlaw machismo. too cynical to fall into folkie sentimentality. With the aid of producer Norbert Putnam, Buffett turns in another pleasant—though hardly arresting—performance.


Carter appears to be in that long line of women singers who function as fodder for so many producers. This is her debut album, and for the most part her warm vocals manage to transcend the elaborate facades Massenburg has constructed for her. Still, on only one cut—Ooh Child—does she actually soar.


"Sweet Evil" is a disappointment. Rick Derringer has long threatened to become one of hard rock's master performers, but he fails here to come up with suitable songs or arrangements for his adrenaline-charged guitar work. Tedium is too often the result.


Rich used to be one of the great voices in rock & roll. His songs had the emotional authority of blues and the passion of rock-ability. You'd never know it by listening to "Take Me," a meager collection of countrypolitan pablum.

Rufus: Ask Rufus. Rufus, producer. ABC AB 975, $6.98. Tape: • 7975. • 8975. $7.98.

Lead vocalist Chaka Khan owns one of the most arresting voices in modern r&b; she uses it to such extraordinary effect here that one wonders how long she'll remain with Rufus—a competent, but unimaginative arranger and producer. Her voice almost makes up for the dross she's been given to sing.

Stallion. Dik Darnell, producer. Casablanca NBLP 7040, $6.98. Tape: • NBLP 57040. • NBLP 87040. $7.98.

Stallion's mediocrity would be acceptable if it weren't so slick and ultimately cynical. The band is to rock & roll what Las Vegas dealers are to gambling: professional opportunists. This is vacuous pop of the worst sort.

Television: Marquee Moon. Andy Johns and Tom Verlaine, producers. Elektra 7E 1098, $6.98. Tape: • TC5 1098. • ET8 1098. $7.97.

Television has been accurately described as the abstract expressionist of New York rock bands. The stance is cool, distant, and ironic, but the music is a searing amalgam of rich, brightly colored textures. Leader Tom Verlaine's lyrics are all but indecipherable, but it doesn't matter—the music more than makes up for it.


Volunteers, singer/songwriter Wayne Berry's newest outfit, blend romantic bromides and musical clichés with the skill of dim-witted soda jerks. An inoffensive drink, but not worth the price.
HOW NOT TO RUIN YOUR RECORDS

PART I

Don't "play" over micro-dust

THE PROBLEM:
The greatest cause of record degeneration is micro-dust. All records possess a static charge which attracts a very fine, virtually invisible micro-dust from room air. A record may "look clean" but contain a fine coating of micro-dust. When you play over this coating, even at one grain of stylus pressure, you grind the micro-dust into the record walls, often forever. Your record then gets "noisy."

COMMON ERRORS:
Most record cleaners are "pushers," and simply line up dirt without removing it from the disc. Skating a pusher off the record only spreads micro-dust into a tangent line of danger. Extra arm devices and all cloths are too coarse to do anything but pass over micro-dust—or gently spread it out.

AN ANSWER FROM RESEARCH:
The exclusive Discwasher System removes micro-dust better than any other method.
1. The slanted pile lifts up rather than lines up debris. The pile fibers are fixed in the fabric better than any other record cleaner, and "track" record grooves rather than scrape them (see figure 1).
2. Alternating "open rows" of highly absorbent backing hold micro-dust taken off the record, and demonstrate Discwasher's effectiveness over long term use (see figure 2).
3. The inherently safe D3 fluid delivery system and capillary fluid removal allows the most researched record cleaner to be the world's best.

Fig. 1 Line of micro-dust removed from a 'clean' record.

Fig. 2 Accumulated micro-dust from long, effective use of the Discwasher System.

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The A-170S transport system utilizes design innovations and many precision parts from more expensive Teac decks. Features include extremely hard, high-density heads for distortion-free playback and recording. Built in Dolby noise reduction system. Separate bias and equalization switches, auto-stop, variable slide controls, expanded range level meters and convenient front access jacks.

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The Bee Gees: Children of the World.
*Warner Bros. Publications, 10 songs, $5.95.*

Friends of the Bee Gees will welcome their new piano-vocal folio, "Children of the World," which includes fresh musical ideas direct from the stately discos of England. But the book's arranger does them a disservice by over-complicating the bass-line notation. The musically progressive brothers are both literate and prolix: Within the confines of one bar of medium, four-beat rock, they frequently imprison as many as thirteen sung syllables. When the piano left-hand is ambushed by too many variations in a set rhythmic pattern, the music cannot swing easily, and the folio therefore falls short of the high standard set by its LP companion.

George Gershwin's Greatest Hits.
*Warner Bros. Publications, 26 songs, $5.95.*

For approximately twenty-three cents per song, you can own this tasty collection, which is, incidentally, an exact reprint of a reprint. Containing twenty-six of the sixty-two selections published in the $17.95 *The Gershwin Years in Song* (Quadrangle/The New York Times Book Company, 1973), it's a fantastic bargain. The songs range alphabetically from "Bidin' My Time to Who Cares," and chronologically from 1919 ("Swanee") to 1938 ("Love Is Here To Stay"). The folio's art-deco cover by Kim Whitesides is a striking reminiscence of that era when New York City was the biggest Apple in the world. But even the antiques intelligently curio cabinet, along with your B-flat recorder and George Gershwin's music, was at its core.

Daryl Hall & John Oates: Bigger Than Both of Us.
*Chappell Music, 9 songs, $5.95.*

Hall and Oates here present a self-written program in which they struggle for profundity and the transcriber struggles for accuracy. All hands are lost. Perhaps we can forgive the artists by virtue of their good intentions. But the overly abstract piano notation becomes even less tolerable when a 3/4 bar in *Room to Breathe* is stretched to conform to the song's 4/4 meter signature. Adding insult to injury, the error is repeated four times since the measure in question is part of a hook phrase. The printed music follows the sequence of the recording—too bad the transcriber couldn't have done the same.

Joni Mitchell: Hejira.
*Warner Bros. Publications, 9 songs, $6.95.*

I have taken this "hejira" with Ms. Mitchell, and it is tough sledding indeed. The folio is a distressing picture of self-immolation: the songs destroying the singer, verses shoved upon dreary verses like so much gravel, the composer unable to control the interpreter. No less than nine pages of printed lyrics share space with an equal number of stop-action, brooding landscape photos showing a bony-faced, black-caped Joni metamorphosing into a crow (also the name she has chosen for her publishing company).

If only she did not take herself so seriously. There is nothing of value here for either the professional or the home musician. Mitchell's love affair with her own words is unrequited; her spastic vocal phrasing is impossible and unrewarding to duplicate; and the flat, juiceless music, consisting of oddball guitar tunings endlessly repeated, cannot be satisfactorily reproduced for piano. Travelers' advisories here.

The Best of Neil Sedaka.

Music and lyrics by this polished craftsman and his two co-writers, Howard Greenfield and Phil Cody, are here transcribed in a collection of extraordinary merit. Each of the songs is given its best possible piano setting, unblemished and fat-free. Some of this material has been published in earlier folios, such as "Sedaka's Back," so check the table of contents before making your purchase.

Wings Over America.
*Big 3 Music, 29 songs, $6.95.*

Paul McCartney's eloquent editor has created a masterpiece. The piano score sparkles as it is played: The left hand jogs along in contemporary, easy-to-read bass patterns, while the right hand's melodic line is spiced with just the right amount of rhythmic punctuation. The inclusion of some earlier standards, written in collaboration with John Lennon, (Yesterday, Long and Winding Road) serves to point up the steady musical growth of melodist McCartney. Three words about the photographs, layout, and design of the book by Allan Sanford: slick, slick, slick. A sure winner, all the way.

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Continued from page 118

enough, eventually somebody's got to start paying attention to you." —Anonymous.

Progressive rock has always been more welcome on that side of the Atlantic than it has on this side, a fact that is largely accountable for Pink Floyd's ability to survive long enough to enjoy huge international success over the last couple of years. For when the band started more than ten years ago it was definitely "progressive." Which is to say, it was extremely odd. The first single (Arnold Layne) was about a transvestite; the group was among the first anywhere to work with extensive feedback and other special effects; it was the first band to tour regularly with a quadraphonic sound system; and its music often took the form of lengthy, meandering instrumental jams. British and European fans were able to put up with all of that, perhaps because they were able to enjoy the perversity of it all. (And, not so incidentally, it takes a lot fewer fans to keep a band running there than it does here.)

1973 proved to be the most significant year in Pink Floyd's career, due to the release of "Dark Side of the Moon," their eighth album. Bassist Roger Waters had stronger control than he had earlier, and some of his songs proved to be—dare I say it?—commercial. The single, "Money," and the album became huge international best-sellers. "Money," significantly, sounded considerably more like prime John Lennon than any previous Floyd track.

"Animals" is Pink Floyd's second album to be released since "Dark Side." Since they found commercial acceptance, they've been getting back to earlier Floyd. This LP has five tracks—"songs" is inappropriate terminology—lasting a total of just under forty-five minutes. Two of them, "Dogs" and "Pigs (Three Different Ones)" are particularly long: two; "Pigs on the Wing, Parts 1 and 11," are particularly short. There is a concept here: a theme unites Waters' lyrics (something about dividing mankind into three animal analogs: pigs, dogs, and sheep), but chances are that hardly anybody will follow them or miss anything by not doing so.

What matters is the instrumental work. And, like that on Floyd's previous albums, it's consistently fascinating. Dave Gilmour is certainly one of rock's most underrated major guitar figures. The imagination and style of his improvisations shame most of the better-known players. Likewise, Nick Mason's drums, Waters' bass, and Rick Wright's keyboards (mostly synthesizers) are excellent. Perhaps more important than their sheer virtuosity is the way their improvisations work together; meshing seamlessly as if the compositions and arrangements were the work of a single highly imaginative mind. That mind's influences have been obscured by the ages; Lennon's impact—most apparent on She's So Heavy and Side 2—is the only one I can clearly discern.

"Animals" isn't the Monkees or the Byrds, and it certainly isn't Cat Stevens. And it isn't even a particularly good value: For $6.98 "Dark Side of the Moon" (currently back on the charts) is a longer, better album. But for fans of rock's spacier reaches, "Animals" is a fine work, planned and produced by masters of the idiom.

T.E.


**Mary MacGregor: Torn Between Two Lovers.** Peter Yarrow & Barry Beckett, producers. Arista America SMAS 50015. $6.98. Tape: • 4XT 50015, • 8XT 50015, $7.98.

There are few places where the punch of women's liberation has been more strongly felt than in the record business. Not that women are getting better jobs or better pay in the industry than they did a few years ago, but they are recording more. Many radio stations, particularly of the Top 40 variety, kept a policy of limiting play of records by female artists to one or two per hour. This practice lasted until quite recently, and is still enforced in some markets. But, as more opportunity for air time has become available to women, more women are becoming strong forces in the pop market—from Karen Carpenter and Toni Tennille to the lush vocals of Karen Carpenter and Toni Tennille to Dorothy Moore and Thelma Houston; from Abba to Rose Royce to Fleetwood Mac (a recent Billboard survey found six of the Top 20 singles featuring female singers) to Joni Mitchell.

Jennifer Warnes has been trying to get her career off the ground for years; this is her third major label since the late Sixties. Back in the days when she was calling herself simply "Jennifer," Warnes was a protege of Tom Smothers, appearing in the L.A. road company of Hair (in which he was an investor), and a frequent guest on the Smothers Brothers television show. All to no avail. Now that female vocalists are "in," she seems to have a good shot at stardom.

It's hard to tell, though, from this album. There are two credited producers, and evidence that Arista president Clive Davis had more than a word or two in guiding the proceedings. The result is something of a hodgepodge, the strongest cut from which is a recent commercial success (Right Time of the Night) but by no means typical of the whole.

Warnes's predilection in the past has been toward rock & roll as art song: the kind of attack by which she'd take a Rolling Stones or Who composition and treat it with her approximation of bel canto. Often, it would work—her fans from those days are relatively few, but strongly convinced of their high-flown tastes. For those people, Warnes and producer Jim Price have included the Stones' Shine a Light and the old Everly Brothers recent Nazareth hit, Love Hurts. For those who take her really seriously, Warnes has included St. Alphonso Liquor's O Bello Dio del Paradiso. She sings them all as though she has her fists clenched, both arms straight down at her sides, staring intently at the microphone.

The single, on the other hand, boasts a much more powerful vocal treatment (when I first heard it on the radio I thought that it was Darlene Love!) that sounds great, but may not be the kind of thing that Warnes wants to be identified with. It, and a nice treatment of Richard Kerr's and Gary Osborne's I'm Dreaming, were produced by Jim Ed Norman.

Mary MacGregor's Torn Between Two Lovers was a substantial hit earlier this year, is an entrant in the Olivia Newton-John sound-alike sweepstakes. Her voice is breathy and light, the persona given her by the material is that of a youngish, not-too-bright girl, and the instrumental accompaniment slick and generally faceless. The whole thing is ever-so-tastefully produced and played by Peter Yarrow and the Muscle Shoals studio crew.

There must be something, other than their sex, that Warnes and MacGregor have in common. Both albums include versions of Steve Ferguson's You're the One, and both feature a slightly top-heavy selection of tunes by writers who are friends of (or, in MacGregor's case, who are) the producer. And both albums boast pleasant hit singles. As for continued success, I'd rate Warnes as having the most potential—if she and her record company can agree on a strong artistic direction—and MacGregor as having the greatest likelihood. On the other hand, since both vocalists are so much too of their producers, there's always the chance that these albums are the last we'll hear of either.

T.E.

Department of three left feet: In our March review of "30 Years of Jazz Guitar," we quoted the price as $9.98, the producer as Michael Bennett, and "another early electric guitarist" as Leon McAllister. The price is actually $5.98, the producer Michael Brooks, and that guitarist was Leon McAlifife.
"...in the same class with a number of more expensive products, including many of the direct-drive record players we have seen."

This quote, from the Hirsch-Houck Labs report in Stereo Review, refers to the Dual 510, a semi-automatic belt-drive turntable. Since direct-drive models (especially our own) are accepted as the standard of performance, Hirsch-Houck’s comparison is not to be taken lightly.

The 510 also benefits from comparison with other semi-automatic turntables. Dual’s unique sensor locates the 12-inch and 7-inch lead-in grooves for you. There’s no way to drop the tonearm accidentally; the cue-control lifts it automatically at the end of play and supports it until you release it.

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Dual 502. Similar except less sensor, pitch-control and strobe. Less than $160.

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